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REAL ESTATE INVESTMENT AND THE ART OF PUTTING ONE'S EGGS IN MANY BASKETS

By

Abel OLALEYE

Professor of Estate Management

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1. PREAMBLE

Mr. Vice Chancellor Sir, the Registrar, Renowned Scholars and Colleagues here gathered, Students of this great University, Distinguished Ladies and Gentlemen; it is with a high sense of humility, fulfillment and gratitude to the Almighty God that I stand before this esteemed gathering this evening to deliver the 293rd Inaugural Lecture of the Obafemi Awolowo University and the 3rd of its kind in the Department of Estate Management. With a very humble background and a childhood development that had little prospect of a successful man and career, who would have thought that I would be where I am today? I never thought of becoming a University Lecturer let alone becoming a Professor. Therefore, it is not by my own making; it is God, who gives gift to whosoever He wills. He remembered me in my low estate. It is for this reason that I want to start by paying homage to the All Sufficient God (the El-Shadai), the great provider, who has not only made a way where there seems to be none; but has spared my life to see this day and has guided my steps and choices leading to this Inaugural Lecture. He is the main reason why I am able to stand before you this evening as a living being and as a Professor of Estate Management in the Obafemi Awolowo University.

Mr. Vice Chancellor Sir, it is exactly 26years ago that I came into this University as a direct entry student to study Estate Management after obtaining National Diploma in Town Planning from Yaba College of Technology, Yaba, Lagos. During this period, I came across individuals: my teachers, supervisors; mentors and advisers as well as spiritual fathers; who one way or the other have allowed God to use them for my progress and who acted as the shoulders upon which I stood to be able to see and do a number of things. I am indeed appreciative of their contributions in the course of my journey in this great University. My coming here to start a career in academics was motivated by Prof. C. A. Ajayi who encouraged me to join the system immediately after my National Youth Service in 1996. Without his insistence and encouragement, I might not have been here to stand before you today presenting this lecture. Prof. Sir, I am indeed very grateful.

2. INTRODUCTION

The foundation of today's Inaugural Lecture was laid almost two decades ago, precisely, in 1997, when I chose to delve into a new area of Estate Management as a postgraduate student and young lecturer in the Department. Then, little or nothing had been done in the area of real estate investment portfolio and diversification in Nigeria. Most researchers largely focused on the traditional real estate investment appraisal and risk analysis where assets are appraised individually and as stand-alone; but I resolved to study a challenging and under-researched area. Besides, as at then, a number of developments in the Nigerian property market calling for paradigm shift in real estate investment analysis and management were apparent. The changes in the market (though gradual) suggested an increasing involvement of sophisticated clientele and changing investment climate coupled with advances in technology.

Therefore, with the increasing activities and sophistication of market players coupled with the prevalence of risk and uncertainties in the Nigerian property market in the 1990s, the main concern of both the real estate investors and advisers pointed towards the provision of expert services that not only focus on appraising real estate investments when combined, but analyse the performance of real estate vis-a-vis other asset types. This inaugural lecturer took up the challenge and went ahead to conduct researches in this area of estate management leading to the award of a Ph.D degree in 2005 and equally earned a promotion to the status of Professor of Estate Management in 2011. For these efforts, I become the pioneering expert in the area of real estate portfolio management and diversification in Nigeria. Mr. Vice Chancellor Sir, my research activities, which have focused primarily in this area of estate management, culminated into this inaugural lecture titled: **"Real Estate Investment and the Art of Putting One's Eggs in Many Baskets".** My concern has been the provision of a better risk management in investment decisions in the face of risk and uncertainty. As it is expected therefore, this lecture is a public pronouncement of my contributions to

knowledge and an opportunity to share my academic achievements in my research area.

3. INVESTMENT ASPECTS OF REAL ESTATE

Investment in real estate is an economic activity that involves commodifying interest in landed property as one would with fixed interest securities or company stocks and shares. Also, it involves the development of a bare, but ripe site, or redevelopment, conversion, or alteration of a developed site. Therefore, investments in real property market can basically be classified into two:

- Direct investment and Financial or Indirect investment

Direct investment in property involves actual selection or development of a property or properties for ownership. It involves the creation of real estate products through the direct purchase or financing of existing properties under construction and new developments by single investor or joint ventures. Direct investment vehicle has been the preferred type of vehicle for many investors as it affords them the opportunity of direct involvement in day-to-day acquisition, leasing, management, financing and disposition of real estate.

Financial or indirect real estate investment involves investment in Real Estate Investment Trusts (REITs) and other open-ended and closed-ended funds which give investors the opportunity to purchase units in a pool that owns either real estate equity (Equity REIT) or debt-oriented mortgage funds (Mortgage REIT), or a combination of equity and debt investments (Hybrid REIT). Investments of this kind do not differ greatly from other financial investment, such as the purchase of stocks or shares. Examples of this type of financial investment in Nigeria are Skye Shelter Fund, Union Homes Hybrid REIT and UACN REIT. In addition to REITs however, investors often have the option of investing in property companies that are listed in the Stock Exchange market, such as the UACN Property Development Company Share that is being traded in the Nigerian Stock Exchange. This type of

investment vehicle is usually referred to as securitised property or listed property share. Financial real estate investment vehicles allow investors to diversify investments without allocating an enormous amount of capital to real estate and to own property without the management burden. However, they do not allow individual investors/participants direct control over the real estate they purchase.

4. The Investment Decision problem and Risk in Real Estate Investment

4.1 Investment Decision Problem

In my study of real estate investment and its analysis, I have realized that investors, in their investment decision making, are faced with a number of issues which may include budget constraint, market supply problem, liquidity and portfolio problems, among others. However, the primary problem faced by any investor is the assessment of desirability of the acquisition or disposal of an individual investment proposition. This problem generally involves three main fundamental issues. The first is the problem of investment selection which has to do with choosing investment alternative(s) which promises attractive returns at an acceptable level of risk. An investor needs to quantify and measure his expectations on each of the available investment alternatives with a view to resolving the selection problem. The second is the issue of investment or asset allocation. Having selected the investment alternatives, an investor has to decide the appropriate level of capital commitment, taking into consideration the degree of exposure to risk. The third problem relates to appropriate timing of the investment.

These problems arise because while it appears that all investors prefer more returns/yields to less, and less risk to more, as it is expected of any rational investor; this is seldom possible. The reasons for this are not far-fetched. First, the diversity or spectrum of investment opportunities available to investors, all with different investment characteristics, creates problem of choice in investment decisions. Second, investors' decisions do not always come out to

be rational as they are influenced or affected by the unexpected changes in the markets where investors operate and prone to follow fashion. Therefore, it is hard to consider any situation where changes in expectations do not play a role. As noted by Markowitz (1991), uncertainty is a salient feature of any investment since economic forces are not understood well enough for predictions to be beyond doubt. Ratcliffe and Stubbs (1996) have also opined that risk is the very business of property development and/or investment and uncertainty is the prevailing climate within which development takes place. The only thing certain about the future is its lack of certainty (Gold, 1996; Baum, Mackmin and Nunnington, 1997).

The problem of risk and uncertainty in real estate investment is compounded by the imperfect character of real estate market especially in developing markets like ours. Thus, the problem associated with changes in investors' returns and/or expectations, otherwise called risk in real estate investment scene (as with any other investment types), cannot be totally eliminated. It is for this reason that real estate investment selection and allocation decisions must involve thorough analysis of return and risk features of the different alternatives available to investors at any particular time.

The return/yield aspect of any investment is easier to perceive and measure as it is usually translated into money terms by finding the relationship between the capital paid or to be paid for the investment and the income derived or to be derived from such investment. The risk aspect however presents a serious conceptual and analytical problem in investment decision in terms of its measurement and reduction.

4.2 Risk in Real Estate Investment

Risk in the real estate investment scene, as with other investment types, describes the extent to which an actual outcome diverges from the expected. It portrays situations where some events are not known with certainty, but the alternative outcomes can be identified and measured. It is the extent of change identified as

probable outcomes of a decision and is often regarded as a measurable uncertainty. The prevalence of risky events means that there are lots of things that are not known at the current time. Two things are discernible from this idea. First, the idea of certainty of events is ruled out. Second, it suggests that time is a fundamental characteristic of risk; that is, sometimes, some events that are not known today may become known tomorrow.

Generally, risk has been described basically from two perspectives. The first refers to the degree to which actual performance may exceed or fall below expectation. In this regard, the possibility of achieving a higher return than expectation is called the 'upside potential/risk', while the possibility of achieving a lower return than expected is termed 'downside risk'. The second perspective/definition, as postulated by Sharpe (1963, 1964), describes total risk of an asset as comprising two components; namely, specific or unsystematic risk and systematic or market risk.

The unsystematic risk component is the probability that the price or return of an asset may decline due to an event that could specifically affect the asset but not the market as a whole. For example, a real estate development company may suffer a drastic reduction in its expected returns due to introduction of an obnoxious legislation in its business location and its stock price may be affected, while the rest of the market is not. In other words, unsystematic risk is a specific risk to a particular investment/asset. This type of risk portraits the variability of an asset's returns and can be reduced by investing in different investment alternatives. This risk component, in real estate, is usually characterised by such factors as tenants' problems, management errors or planning risk, sectoral issues, legal/legislation problems, taxation issues, structural problems among others.

Systematic risk (the overall risk that affects all assets) is a measure of asset's volatility and is characterised by changes in the economic, psychological and political environment which affect all assets. It is the general belief in investment theory that as specific

risk is reduced, the total risk of an asset as well reduces as depicted in Fig. 1. This is so because total risk of an asset is an addition of the systematic risk and unsystematic risk.

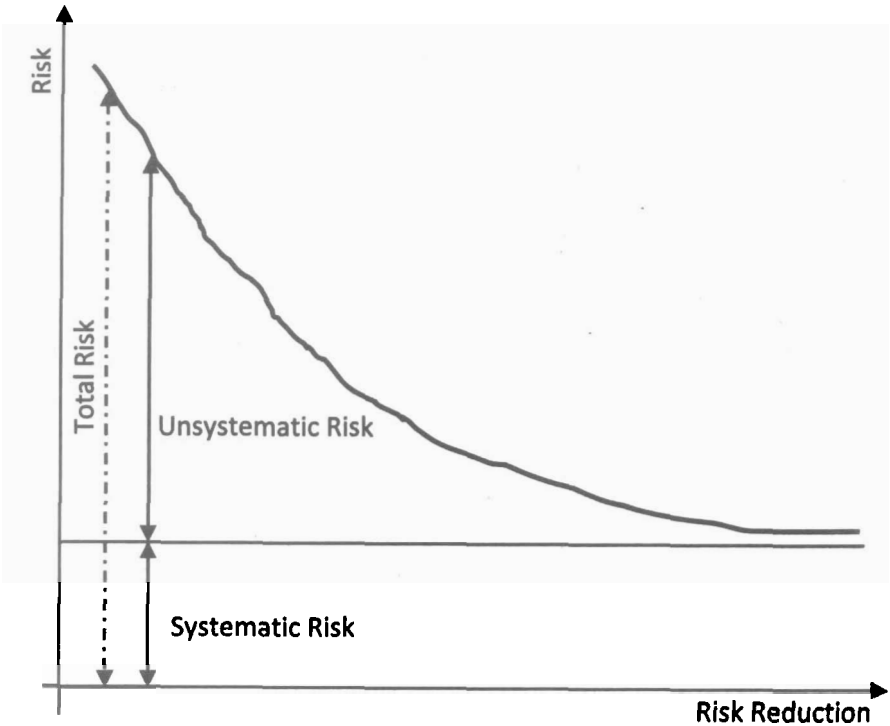

Fig. 1: Risk components of an Asset/Portfolio

5. How do Individuals Deal with the Problem of Risk in their Investment Decisions?

Throughout the ages, investors and analysts alike have approached the problems of risk reduction in investment or asset selection decisions in a number of ways. Some prefer the strategy, which according to Hargitay and Yu (1993) was formulated by Andrew Carnegie, whose maxim says "put all your eggs in one basket and then watch the basket". However, the dictum "do not put all your eggs in one basket" appears to be the belief of many. This is based on the belief that the risk of loss can be minimised by putting one's fund in many investments which apparently react to market conditions in different ways.

6. The Art of Putting One's Eggs in Many Baskets: What? Why? and How?

6.1 The What

Arising from the need to address the problems of risk in investment decision, the pattern of investment all over the world has changed substantially and investors are looking for opportunities to invest in different classes of assets by combining them into a portfolio even, on a global scale. This act of mixing a wide variety of investments within a portfolio or investing in different classes of assets is called diversification. It is a risk management technique in portfolio and investment theory that gives mathematical meaning to the idea of putting one's eggs (investment funds) in many baskets (assets) or the idea of not putting one's eggs in one basket. Diversification is the process of allocating capital in a way that reduces the exposure to risk. It is the distribution of one's capital across different investment vehicles and not placing all the capital solely in one investment type. The concept relies on the fact that risk in a portfolio can be reduced by spreading the amount of funds available for investment into a variety of opportunities, each in different risk classes.

Portfolio diversification can thus be described as the technique of investing in different investment possibilities in order to minimise the encompassed risks and maximise the return there from. It describes the combination of investments within the same asset class and achieves the same objectives as asset allocation.

6.2 Why Diversifying? (The Why)

The reason for investors' preference for diversification is to have risk reduction benefit. If done well, diversification creates more evenness and improves overall portfolio performance. It gives investors the benefit of varying investment possibilities in order to minimise the encompassed risks and maximise the return. The rationale for diversification is that a portfolio, of different types of investments will, on average, yield higher returns and pose a lower

risk than any individual investment found within the portfolio. Diversification strives to even out unsystematic or specific risks/events in a portfolio so that the positive performance of some investments will neutralize the negative performance of others.

In other words, if one aspect of the investment sector has poor performance and another is performing well and one's portfolio contains both, one is going to achieve a better result than if the portfolio just contained the poor performing investment. Although, it could be said that one would do all the better if it happened that one only held investments in the positively performing sector; this rarely happens especially on a consistent basis. Thus by diversifying, investors allow (to an extent) a margin of error within their investment decisions by covering as many angles as possible (Mindenhall, 2010).

However for diversification to be meaningful, investments to be combined must react differently to external influences, or in statistical language, the investments must be negatively correlated. In other words, the cyclical patterns of investments must move in opposite directions. If this happen, when the expected rate of return for asset A, for example, is high, it is counterbalanced by a low rate for asset B. In this way, combining assets A and B into a portfolio has the effect of eliminating much of the risks. Therefore when two assets have good and poor returns at opposite times, an investor can always find some combinations of these assets that yield the same return under all market conditions. Figure 2 gives a pictorial view of what will likely happen in the event that investments A and B, which are negatively correlated, are combined into portfolio.

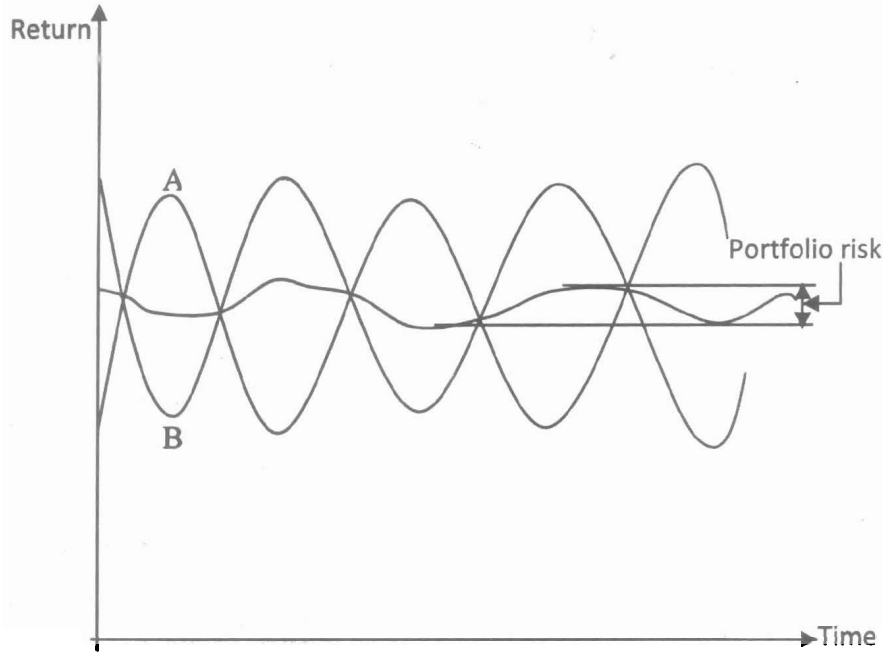

Fig. 2: Combination of two assets 'A' and 'B' which have counter cyclical returns

From this example, it will be seen that in order to assess the risk level of a portfolio, not only is it necessary to know the expected rate of return together with the measure of risk, but it is also important to know how the returns move in relation to each other over a period. By altering the proportions of the capital invested in each of the assets, a portfolio with zero risk may be produced. Whereas, constructing a portfolio which is composed of assets whose returns move in the same direction cannot eliminate risk.

6.3 How to Diversify Real Estate Investment Portfolio

Mr. Vice Chancellor Sir, I have found in the course of our research that a wide range of approaches can be used to achieve portfolio diversification. These range from a simple rule of thumb to full-scale quantitative techniques. Meanwhile, the various approaches to real estate portfolio diversification and allocation can be divided into two main categories. The first is the one usually referred to as

the traditional approach or naive diversification, which simply looks at investor's objectives in terms of the need for income and/or capital appreciation and then selects those assets/securities which appear to be the most appropriate to meet these needs. The other approach is based on Modern Portfolio Theory (MPT) developed by Markowitz and others. In addition to these two however, mathematical programming is also used for direct real investment.

In applying these approaches (Naïve diversification, MPT and Mathematical Programming), two basic actions are involved. These are: the delineation of individual assets to be included in the portfolio and the selection of the optimal portfolio. Delineating individual assets involves critical analysis of the asset's characteristics together with the general market fundamentals. This is followed by the determination or calculation of return and risk of the available individual assets using appropriate methodologies. Selection of the optimal portfolio is done thereafter using appropriate methodologies as well. Figure 3 gives a schematic diagram of the methods that can be used in property portfolio diversification.

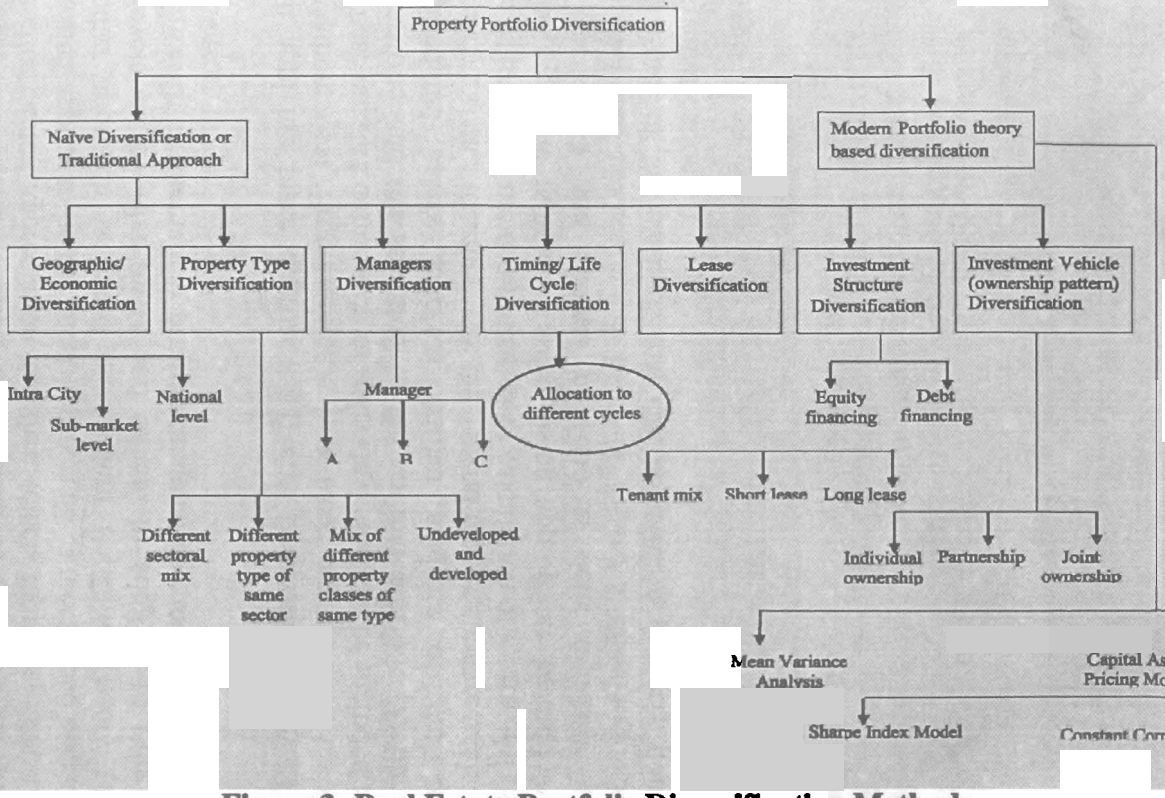

Figure 3: Real Estate Portfolio Diversification Methods

7. DELINEATING AND SELECTING OPTIMAL PORTFOLIO

7.1 Naive Diversification Approaches

Naive diversifications, otherwise called traditional portfolio selection strategies, involve the use of conventional wisdom, rule of thumb and intuition in delineating and selecting a portfolio. While the methods appear to have taken into consideration the basic two actions involved in portfolio diversification, all actions are done qualitatively. In other words, with naïve diversification, activities are regarded as an art, where intuition and 'feel' dominate decision-making and diversification is based purely on subjective estimate of the risks involved (Hargitay and Yu, 1993). In using these strategies, the most sought-after asset is an asset with high current income and with low risk profile as well as assets which have a high return and low-risk profile relative to the market. The success of this method is however hinged on a continuing monitoring and analysis of the behaviour of the market and interest rates.

Generally, real estate diversification has traditionally involved the use of two main approaches, namely, geographic/economic and property type diversifications (Del Casino, 1995; Olaleye, Aluko and Oloyede, 2008; and Olaleye, Ajayi and Mfam, 2011).

7.1.1 Geographic/Economic Diversification

Geographic/Economic diversification is the combination of different classes of real estate assets in different locations. The method is based on the idea that the returns and risks of real estate investments vary according to their locations, even if all other aspects, such as transaction structure, property type and size are similar. In adopting this method, investors need to consider the challenges and opportunities inherent in various geographic regions as well as considering the advantages of particular metropolitan areas/regions and cities. A traditional approach for defining geographic regions in United States of America,

according to Del Casino (1995), was in terms of Northeast, South, Midwest, and West. Other approaches used socio-economic dimension and others were in terms of metropolitan areas and cities with a variety of characteristics such as growing cities versus declining ones, large cities versus small ones among others. In Nigeria, Olaleye (2005), Olaleye, Aluko and Oloyede (2008) and Olaleye, Ajayi and Mfam (2011) showed that market players have focused on metropolitan areas and cities based on cities' economic activities and vibrancy of their property markets.

Our research activities have also shown that geographic diversification is often pursued on a variety of levels, including national, regional, metropolitan areas, and even smaller spatial definitions. For example, international investors often fulfil their economic/geographic diversification requirements at a national level by making investments in a few large cities of a particular nation, irrespective of the extent to which the cities represent national economic trends (Del Casino, 1995). Domestic investors view diversification on a much smaller scale, and some have a particular regional orientation and diversify by placing investments in a variety of metropolitan areas (Olaleye, 2005; and Olaleye, Ajayi and Mfam 2011). Other investors with a much broader perspective diversify at the state or regional market levels and others with a narrower perspective diversify at the sub-market or local market levels. However, investors should plan to diversify their investments with respect to geographic and regional economic vulnerabilities and opportunities. In other words, effective geographic/economic diversification results from selecting investments in areas that have fundamentally different economies, as against focussing on the basic geographical regions of a nation.

7.1.2 Property Type Diversification

Property type diversification involves investing in various types of property such as shopping centres, offices, warehouses, factory buildings, residential/apartments and hotels. Like

geographic/economic diversification, diversification by property type is usually attempted on several levels. Some investors diversify their real estate holdings at the broadest level by selecting a mix of residential and non-residential properties or a mix of developed and undeveloped real estate holdings. Others, especially institutional real estate investors, usually diversify at a more detailed level by differentiating among basic business categories such as office, industrial, shops/retail and hotel uses. Investors who deal in only one particular business category, such as office, retail or industrial can diversify based on regional or local markets they serve and the products they sell. For example, office property investors sometimes distinguish between downtown high-rise properties and sub-urban business parks as well as different quality classes of properties. Industrial property investors can differentiate among light and heavy manufacturing facilities, warehouses and distribution plants (Del Casino, 1995).

The basis of property diversification is that returns and risks vary according to the particular industries utilising various types of property. For example, office property generally responds to the needs of the financial and services-producing sectors; industrial property to the goods-producing sectors; shop property to the retail sector; and hotels to the travel and tourism sectors, employment growth, and the business cycle. Therefore as noted by Roulac (1996), adopting property type diversification requires understanding of the factors affecting each property type's user groups and investors should be aware of the range and variety of characteristics attributable to each category.

Other methods which are also in use and highlighted by authors (Cheng and Liang, 2000; Del Casino, 1995; Olaleye, 2005 and Olaleye and Aluko, 2007) include: managers diversification, timing (life and investment cycle) diversification, lease diversification, investment structure and investment vehicle diversification.

7.2 Modern Portfolio Theory based Methods

Modern Portfolio Theory (MPT) or quantitative diversification concept was pioneered by Markowitz (1952, 1959) who laid the foundation for the rational approach to the selection, analysis and management of investment portfolios. The MPT methods involve holistic approach to diversification and they are aimed at creating strategies which maximise the expected returns on a portfolio for a specified level of risk. Since Markowitz works however, other authors such as Sharpe (1963, 1964) have examined possible ways of diversifying within the stock market although two decades elapsed before MPT was first applied to real estate (Elton *et al.*, 2010; Reilly, 1994; Dubben and Sayce, 1991; Mueller, 1993; Sanders, Pagliari and Webb, 1995). Even at that, the applications of MPT approaches to real estate diversification in developing countries (including Nigeria) have been limited. The reason for this is discussed later in this lecture.

The methods usually used in real estate portfolio under MPT based diversification include the Markowitz's Mean Variance Analysis (MVA) and Sharpe's Capital Asset Pricing Model (CAPM) that comprises Single Index Model (SIM) and Constant Correlation Model (CCM). See authors such as, Elton et al., 2010; Reilly, 1994; Dubben and Sayce, 1991, Olaleye and Aluko, 2007 and Olaleye, Aluko and Oloyede, 2008, for details on how these methodologies can be applied to delineate assets and select optimal portfolio.

Commenting on the advantages of these models, Elton *et al* (2010), Olaleye (2005) and Olaleye and Aluko (2007) opined that they allow the portfolio manager to quantitatively (with near accuracy), quickly and easily determine the optimum portfolio, unlike the naive strategies which adopt rule of thumb or qualitative methods, with the attendant consequence of wrong portfolio selection decision. However, as perfect and useful as the MPT based diversification appear to be, their procedures assume that all capital assets are infinitely divisible, so that parts of an asset can be

bought. This assumption makes them difficult to be applied to direct real estate assets, which are indivisible. In addition, the models appear impracticable in developing countries like Nigeria, where data accessibility is a major problem; where market transparency is at its lowest and market remains imperfect (Olaleye, 2004; Olapade and Olaleye, 2016 and Jones Lang LaSalle, 2015); and where many market players have restricted knowledge of the quantitative models and detest complex calculations (Olaleye, Aluko and Ajayi, 2007). For these reasons, the use of other methods such as simple mathematical programming has been advocated in my teaching and research.

7.3 Mathematical Programming for Direct Real Estate Portfolio Selection/Diversification

This method, which also follows the two basic actions involved in portfolio diversification in terms of procedure, is an attempt to simplify the process of portfolio selection as found in MPT based models and at the same time reduce the subjectivity problem of naive diversification. Given the number of properties or investments to select from, the starting point is to delineate the assets by calculating returns and risks and defining constraints that may affect decision. In selecting the optimal portfolio using this method, the totality of any asset that will be included in the optimal portfolio must be selected. This is because assets are assumed to be indivisible, unlike in the MPT based model where assets are assumed to be infinitely divisible.

Given that there are restrictions on expenditure (as usually is the case with direct real estate investment), the investors will not be able to invest in or select all available assets. Thus, a start could be made by eliminating any one of the assets at a time and seeing whether any combination of the remaining was feasible in terms of the budget restrictions. If this was not successful, the effect of eliminating a further project (2 assets at a time) and looking at the combination of the remaining could be tried. Following this process, combinations of assets would be found that fell within the

cost limitations. However, for best result, there is need to ensure that the number of combinations inspected is kept to a minimum and that the one eventually selected is certainly the best.

8. REAL ESTATE PORTFOLIO DIVERSIFICATION AND PERFORMANCE MEASUREMENT IN NIGERIA /CONTRIBUTION TO KNOWLEDGE

Mr. Vice Chancellor Sir, Distinguished Ladies and Gentlemen, on an occasion like this, it is necessary for me to state briefly my modest contributions to the discipline of estate management through my research endeavours. I have chosen to discuss these contributions under five main headings, namely, framework for understanding property portfolio management and diversification in Nigeria; evaluation of the diversification strategies used in practice, performance evaluation and role of real estate in domestic mixed-asset portfolio, challenges in the application of diversification theory and challenges of property data accessibility in Nigeria.

(i) Framework for understanding property portfolio management and diversification in Nigeria

It has been said that little or nothing is known about real estate portfolio diversification in the 1990s in Nigeria prior to our research activities. Our research efforts have been able to unravel and provide knowledge of the portfolio management and diversification issues in the Nigerian real estate market. Some of our works (Olaleye, 2000, 2005 and 2011a; Olaleye and Ajayi, 2004; Olaleye and Ajayi, 2009 and Olaleye, Ajayi and Mfam, 2011) have thrown up knowledge of the options open to investors and practitioners when thinking of diversifying within real estate. Our experiments with portfolio management and diversification in Nigeria revealed that, the practice have favoured the naive approaches. Specifically, Olaleye (2000, 2005), Olaleye and Ajayi (2009) and Olaleye, Ajayi and Mfam (2011), found that the market has been generally slow in accepting a wide range of the quantitative techniques involved in portfolio diversification and

management but rather preferred qualitative techniques. Olaleye (2005) and Olaleye, Ajayi and Mfam (2011) showed that property type and geographic naive diversification were the preferred strategies in Nigeria and that the market preferred to allocate not more than 31- 65% of their investment values into one property sector or metropolitan area. The studies however found evidence to support the fact that the risk and uncertainty problems in real estate investment were not adequately addressed in the diversification and property portfolio management practice in the Nigerian real estate market.

The findings of these studies, which provided a learning experience of what obtained in the Nigeria real estate market and a basis for which an acceptable framework could be developed, have been able to close the observed gaps in this area. Also, the studies are of benefits as they have provided opportunities to investors and practitioners to be familiar with, and knowledgeable in the theory and methodology of the divergence of diversification practice used and accepted in other investment media that could be used in the property market. This, no doubt, will assist investors in arriving at efficient decision when thinking of property diversification. Parts of the information provided are also useful, and are being used, in the current drive to introduce property portfolio management into the undergraduate estate management curriculum in our universities.

(ii) Evaluation of Real Estate Diversification Strategies

Arising from the seeming inadequacy of the naïve diversification strategies to provide adequate protection for investors' portfolio, as suggested by past studies (Mueller, 1993; Cheng and Liang, 2000), there was the need to examine the implications of the diversification methods given prominence by market players in the Nigerian property market. Therefore, parts of the works done were to examine whether portfolios developed using the naïve diversification strategies, could result in better portfolio performance when compared with the MPT based quantitative

methods. Olaleye (2005), Olaleye and Aluko (2007), Olaleye, Aluko and Oloyede (2006, 2008) and Olaleye, Ajayi and Mfam, (2011) dwelt on this area. While, the results of these works suggest that investors may derive more benefits, in terms of return/risk ratio, by choosing to diversify their investment portfolios using geographic diversification strategies, there were evidences to suggest that property type and geographic naïve diversification strategies underperformed most of the efficient portfolios constructed using constant correlation model. Most of the performance results were also found to be statistically significant at 0.05 level. The result however, opened the possibility that an efficient portfolio may not be more efficient than a naively diversified portfolio in all cases.

(iii) Performance Evaluation and Role of Real Estate in Domestic Mixed-Asset Portfolio

Other research works were also undertaken to examine the opportunity cost of investing in real estate investment when compared to other forms of investment as well as the benefit of adding real estate to a domestic mixed-assets portfolio. Olaleye, Adegoke and Oyewole (2010) examined the characteristics of direct property and listed property company in comparison with other securities in the Nigerian Stock Exchange over the 2001 through 2007 period. The results indicated that indirect and direct real estate investments outperformed other investment options on nominal return/risk basis and they seemed to offer significant diversification benefits for investors in a mixed-asset portfolio of real estate and stocks. The works of Olaleye (2011b), on South Africa market, found that adding listed property stock (indirect real estate) into mixed-asset portfolios might produce enhanced and statistically significant risk-adjusted returns but minimal and insignificant risk reduction benefit. However, Ayodele and Olaleye (2016), on Nigeria market, found that, for a naively diversified portfolio, the inclusion of securitized (listed) property in a mixed-asset portfolio offers less diversification benefits.

Our researches have also examined the integration or linkage between real estate equity and non real estate equity in the Nigerian capital market (Olaleye and Ekemode, 2014); analysed the convergence between direct and indirect real estate investments in Nigeria (Ekemode and Olaleye, 2016) and the risk adjusted performance of public (securitized) and private (direct) real estate (Ayodele and Olaleye, 2015 and Ekemode and Olaleye, 2015). We have also examined the determinants of the prices of listed property stock in Nigeria (Olaleye, Bello and Ayodele, 2015).

The information provided by these researches become very important arising from the need to provide investors and portfolio managers, in the Nigerian real estate market, with information and knowledge that will aid the making of well informed portfolio allocation decisions. The results of the studies not only provide access to real estate performance information that could assist investors in their portfolio investment decision, they help to encourage and assist market players in their choice of investment(s) and diversification strategies.

(iv) Challenges in the application of Diversification theory

Towards improvement in the quality of the diversification practice in Nigeria, Olaleye (2005, 2008a) and Olaleye, Aluko and Ajayi (2007) investigated the challenges in the application of diversification theory vis-a-vis the factors influencing the choice of naive diversification. Findings from these studies suggest that the difficulties with the application of MPT resulted mainly from the lack of transaction information or recognised market index from which the measure of market return and other trends data can be obtained. Lack of information however portrays the market as unserious and often discourages investment. This is because investors may not be able to come up with accurate decisions when investing with the attendant consequences on their businesses and the Nigerian economy at large.

In addition, Olaleye (2005, 2008a) and Olaleye *et al* (2007) found that practitioners' low level of knowledge and training in

quantitative techniques of diversification, coupled with their conservatism and investors' detestation of complex calculations have been responsible for the choice of naive diversification in Nigeria. Part of the problems of the low knowledge of practitioners was the deficiency in the body of knowledge for estate management at the undergraduate level. It was noted that, until recently, curricula of estate management in the Nigerian Universities had nothing on portfolio management and diversification theory; whereas only few of the practitioners had postgraduate degrees since the practices do not demand it. Even at that, until recently only few postgraduate programmes had portfolio management as part of their curricula.

(v) Challenges of property data accessibility in Nigeria

Considering the significance of property data to property investment decisions and real estate practice in general, our researches (Olaleye, 2004; Olaleye, Ekemode and Olapade, 2015 and Olapade and Olaleye, 2016) focused on addressing the lack of data accessibility in the Nigerian property market. Olaleye (2004), which was among the early studies that examined the challenges of lack of data in the market, established that secrecy attached to transaction data was a major problem and advocated the development of property databanks in Nigeria. Similarly, Olapade and Olaleye (2016) found that the confidentiality attached to property information and the huge capitals involved in the production of databank contributed significantly to the problem of lack of data in the property market. Given, the secrecy problem, Olaleye, Ekemode and Olapade (2015) considered the prospect of obtaining sale's value data from the readily available asking (listing) prices of properties by analyzing the predictive capacity of asking prices and time on market of residential properties on sales prices in the Lagos property market. The results ($R = 0.995$, $P < 0.01$) suggested that it might be possible to use asking price to predict sale's price of residential properties in the Lagos property market.

Other Areas of Contribution to Knowledge

Mr. Vice Chancellor Sir, it is noteworthy to mention that although much of the works in my areas of research have focused on advocating for best real estate investment decision making, I have also contributed to knowledge in the area of real estate development and finance. Our works in this area (Ogunba, Olaleye and Oloyede, 2002; Olaleye, Aluko and Amidu, 2004; Olaleye and Adegoke, 2007 and Olaleye, Oladokun and Odebode, 2010) have focused on solving housing development conundrum by advocating the use of contemporary finance methods such as the securitization and unitization vehicles.

Mr. Vice Chancellor Sir, I can say, to the glory of God, that we have made progress in sensitizing the stakeholders about the outcomes of these works through publications and presentations in different gatherings.

First, we have been able to sensitize the academics on the need to include the body of knowledge in property portfolio management into the curriculum of our postgraduate studies, and now some of our universities have included it into their undergraduate curricula. Second, investors have also been sensitized on the implications of investing in a particular way, or of choosing a particular investment strategy in portfolio diversification in the country. Third, the practitioners appeared to have been sensitized as well and have seen the need to improve on their practices. For example, efforts are on to reduce the problems of lack of accessibility to transaction data in the property market. However for now, the profession appears to be conservative in embracing the practice of quantitative approaches to portfolio management. It is our hope that with the gradual inclusion of the body of knowledge in portfolio management into the undergraduate curricula, estate management graduates will become sufficiently equipped to influence real estate portfolio investment decision analysis in the near future. Besides, the influence of globalisation with its attendant consequences on investors' demand, coupled with the

influence of technology are expected to drive the acceptance of quantitative approaches in portfolio diversification.

9. RECOMMENDATIONS

In order for the Nigerian real estate industry's practice to be relevant to global practices and to the changing economic environment, it is important for the stakeholders to address the main and fundamental issues bothering on real estate portfolio investment and management services. I have identified two main issues to be addressed.

First, there is need for a change in the core focus or direction of estate management curriculum in the Nigerian universities. It will be recalled that the focus of estate management curriculum in Nigeria currently lays emphasis on real estate in a brick and mortal form and stresses knowledge in the area of building construction and architecture, law, town planning, surveying and economics with little on business and finance areas. It will be important to model the estate management curriculum as an inter-disciplinary programme embracing the brick and mortar (direct) components of real estate as well as the finance and business (indirect) aspects; and taking into consideration international standards, while not loosening the local contents. This approach to undergraduate curriculum development will allow real estate practitioners to have skills and appreciate their roles in property development processes, legal and planning framework and building construction techniques as well as developing needed skills in applied corporate finance and business management areas; giving them the opportunity to be able to deal properly with the two main aspects of real estate: the brick and mortar (direct) and the indirect (securitized) formats.

Moreover, much of the problem of data accessibility in the Nigeria property market has to do with the secrecy attached to transaction data in the market. It appears data sharing is seen as exercises in privacy and therefore makes data gathering, in form of databank,

very difficult if not impossible. Given this problem, it becomes necessary to come up with alternative strategies and actions that will serve to reduce, if not totally address, these problems. First, a research partnership between NIESV and the academia synonymous with the one between Royal Institute of Chartered Surveyors (RICS) and Investment Property Databank (IPD) Limited in the U.K., to provide property indices is being advocated. As noted earlier by Ajayi (2010), the Nigerian Institution of Estate Surveyors and Valuers NIESV may want to look into the development of such a town and gown research collaboration. Second, given the fact that information on asking (listing) prices of property on sale are readily available in the market, using them as basis of predicting sales or rental prices may not be out of place. In other words, it is believed that developing models on the relationships between sales or rental prices of properties and asking/listing prices for different markets/locations and for different property types could be a solution to the complexity in the property transaction data availability in the Nigerian market. If the predictive capacities of asking prices on eventual rental or sales prices are found to be high, it means that the property profession may want to observe asking prices and use them as basis for predicting eventual rentals and sales price of properties; thereby making data available for further analysis. Our work (Olaleye, Ekemode and Olapade, 2016) started in this regard by developing a model which can be used to predict sale prices of residential properties in the Lagos property market.

10. COMMUNITY ENGAGEMENT AND MENTORING

Mr. Vice Chancellor Sir, I have not only contributed to academic knowledge in the course of my little sojourning in Obafemi Awolowo University, I have also contributed to human capacity development and provided mentorships at various scales. I have successfully supervised many postgraduate research theses, while eight (8) are ongoing. I served on various committees at the Department, Faculty and the University levels. I was the Department's Postgraduate Coordinator from 2003/2004 session to

2006/2007 and 2008/2009 sessions. Also, I was Acting Head of Department between August, 2012 and July, 2014 and a member of the University Committee on Students' Assessment of Lecturers since 2012 to date. My being Acting Head of Department also gave me the opportunity to serve on many statutory committees of the Faculty and the University. I was instrumental to the successful review of the Department's undergraduate programme which was approved by the University Senate in March, 2016. For my services, I have been given commendation letters at the Department and Faculty levels.

I have also served on several committees of my professional body (the Nigerian Institution of Estate Surveyors and Valuers) at the State and National levels, while I have also served as resource person in Mandatory Continuous Professional Development (MCPD) workshops and seminars organized by branches of NIESV in conjunction with the Estate Surveyors and Valuers Registration Board of Nigeria (ESVARBON). I have served as Chief Invigilator for NIESV's professional examinations and served as external moderator for the body's examination in the past. I am a registered estate surveyor and valuer; a member of the African Real Estate Society (AfRES) since 2008 and an Academic member of the American Real Estate Society (ARES) since 2007.

In addition, I have served as external examiner at undergraduate and postgraduate levels on the Estate Management programme at several universities in Nigeria and abroad, including the University of Witwatersrand, South Africa. I also serve as reviewer for local, national and international journals in the built environment, such as Journal of Financial Management of Property and Construction, International Journal of Strategic Property Management and Smart and Sustainable Built Environment among others. I have also served (and still serving) as external assessors for promotion cases in Universities and Polytechnics in Nigeria. By the grace of God, I am an Elder in The Apostolic Church, Lagos Western and Northern (LAWNA) Territory, Nigeria since 2001 and the Sunday School Secretary of the Church in Oke-Ado Area, Ibadan, Nigeria,

from 2010 to 2013 as well as the Deputy Leader of Sunday School from 2013 to date.

11. CONCLUDING REMARKS

Mr. Vice Chancellor Sir, I have, by the grace of God, spent a period of 26 years in this great University as a student and staff in the Department of Estate Management. During this period, I also had the opportunity of gathering experiences in two other Universities: the University of Lagos, Lagos, Nigeria and the University of KwaZulu-Natal, Durban, South Africa. These Universities have served as additional platforms from which I gathered experiences in my teaching, research and community services (as academic). In the course of my academic career, I have taught and conducted researches in my areas of specialization.

With a sense of humility and by the divine grace of God, I wish to state that I pioneered and initiated research in property portfolio analysis/diversification and performance measurement in Nigeria. I have more than forty publications in local and international journals and in learned conference proceedings, while my book on real estate portfolio analysis and diversification **(probably the first of such from a Nigerian author)** will soon be published. I have won several awards in the course of my teaching, research and services at different times; among which are the U.K. based Emerald Literati Network Awards for Excellence in 2008; Best Lecturer award in the Property Development Programme at the University of KwaZulu-Natal, Durban, South Africa in 2010; Dr. Olawande Oni's Memorial Prize for the best Paper on Valuation presented at the 15th African Real Estate Society (AfRES) Conference, Ghana in 2015 and best paper award on Real Estate Finance and Investment presented at the 2016 (16th) AfRES Conference in Ethiopia.

I want to thank the University for providing me with the necessary and conducive intellectual atmosphere for teaching, research and community services. I am highly grateful to everyone (without

exemption) that God has used for me to be able to attain the highest academic status in this university. Special appreciation goes to my parents and siblings; my wife and children, I am highly appreciative of your invaluable support and contributions, in keeping the home front anytime I am away. Above all, I give all honour and glory to God for all He has done for me.

Mr. Vice Chancellor Sir, Distinguished Guest, Ladies and Gentlemen, I thank you all for your attention.

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