

Critical Issues in Economic Risks Consideration by Commercial Property Investors and Valuers in Nigeria: The Case of Lagos

Abayomi Ibiyemi, Ezekiel Tella

Abstract- Rationality in property investment valuation is predicated on a coherent valuation theory and practice, generally acceptable methodology framework, and explicitness in risks appraisal and rental growth rates. This study hypothesises that Lagos real estate firms do not account for economic risks explicitly in property investment valuation practice. Many firms use the Payback Period, Residual, Discounted Cash Flow (DCF), and the conventional Risk Adjusted Discount Factor (RADF) that increases the discount rate implicitly, depending on the perceived volatility of the project relative to the risk-free rate of return. A questionnaire survey, using stratified sampling, recently asked 110 valuation firms and 40 Commercial property investors in Lagos Metropolis about comprehensive economic risks techniques applications, and perception of risks respectively. The data provided verified the hypothesis. The results, based on chi-square goodness of fit test, indicated statistical differences between theory and observed proportions. The conclusion of the study is that investment valuations are not explicitly influenced by comprehensive risk considerations. The firms lack the understanding of the methods and procedures of the contemporary risk models, hence, it is difficult for them to apply. Investors' perception of risks is poor, so they are unable to query the Valuers' valuation rationale. The implication of the findings is that economic risks may be understated: Future investment performance measurements must be qualified on the platform of comprehensiveness of risks appraisal. The paper recommends that application of comprehensive models be made mandatory by the Real Estate Professional Body, with a reliable property data bank that complies with international valuation best practices. Commercial property investors should be encouraged to diversify, share, or spread their risks accordingly.

Keywords: risk analysis, market risks, perception, valuation rationality, best practices, appraisal, Nigeria

I. INTRODUCTION

[1] described accuracy of valuations as an aim that should neither be expected nor necessarily sought to be achieved because a valuation that matches a market price would rather be considered anomalous. With market distortions such as lack of a central register of sales, property heterogeneity, and confidentiality of information, valuation accuracy is improbable [2]. However, since property valuation is central to performance measurement, there has been a number of negligent cases in UK with acceptable margin of error ranging from 5 – 15% with valuers themselves expecting between 5-10% margin of error [3] [4] Expectations of the UK courts are less onerous when compared with valuers' expectations of inaccuracies in valuations [5].

Manuscript received October, 2013.

Abayomi O. Ibiyemi, He is also a Principal Partner in the firm of Abayomi Ibiyemi & Co., Estate Surveyors and Valuers, based in Lagos, Nigeria.

Ezekiel Tella, He is a Lecturer in the Department of Estate Management and Valuation, Lagos State Polytechnic, Lagos, Nigeria.

Divergence between valuation and transaction prices underscores the inaccuracy of property valuation, while the divergence between two or more valuers working on the same property at the same time and for the same purpose is a measure of valuation variance. Reasons adduced for valuation inaccuracy, variance, and high margin of error include the nature of the property [6] [1], valuation assumptions [7], behavioural characteristics of the valuer [8] [9], type of property [10] Obsolete valuation methods [10] [11] Lack of reliable data bank [4] . One of the major problems is that the convention implicit valuation model rely upon single inputs (net income and all-risks yield) which are non-probabilistic whereas uncertainty and risks are probability-driven.

The economic recessions of the 80s together with the government structural adjustment programmes, led to the downward trend in the level of economic activities, with the property market having its fair share. High cost of building materials, long void periods, low occupancy rates and high vacancy rates characterised the property market. Within this period, real estate valuation practitioners in Nigeria began to have problem with the use of prescribed methods of investment valuation. They began to adopt the position that the economy was too volatile and unstable to support, and this led to the investment method invariably producing estimates less than realisable market prices [12] [13]. In reaction to this, the Nigerian Institution of Estate Surveyors and Valuers commissioned a research on valuation methods with special reference to Years Purchase to be adopted in Nigeria property market [14]. However, the general response was a preference for cost method of valuation for investment property which had attracted a lot of criticisms especially from the academia [15]. [13] then advised the Nigerian valuers to revise the yields they employ in recession times downwards to compensate for investors expectations of income growth in order to minimise resultant reverse yield gaps and integrate the Discounted Cash Flow framework.

The new dimension of the valuation problem is the irrationality in the conventional investment valuation with largely subjective risk analyses and adjustment systems with their implicit assumptions. Optimum investment decision making must pay special attention to demand and trends, cost inputs and rate of return, appropriate timing and sensitivities, finance and charges, associated risks, enabling laws and compliance, voids and occupancy rate, scale of development and phasing, site location, assembly and unification of interests. It is concerned largely, with optimising return, minimising costs, and the investment risk return trade-off, since prudent investors are high information seekers wishing to fully identify the risk attributes of any potential investment. In the property market, valuers often

play a multiple role by preparing a market valuation that provides the investment commentary including an assessment of the inherent risks to the client, and a follow-up appraisal. However, there has been concern over the way in which the profession has communicated risk to these clients. [16] highlighted the need for more rigorous risk assessment measures within the broad property investment industry. More specifically they emphasised that more effective toolkit of risk analysis techniques is required.

Generally the amount of risk an investor is prepared to shoulder to secure a given level of return is a question of value. A prudent investor should formally define his investment goals, identify, and quantify all possible risks; eliminating certainty of risk, transfer some, and curtail the rest. It is expected that valuation service users in Lagos may soon be driven by the prevailing liberalisation of foreign investments in Nigeria, to investigate detailed property investment fundamentals that will enable them demand rational valuation reports, explicit risk adjustments and rental growth.

1.1 The Problem

The apparent financial stress faced by many commercial property investors in Lagos is the primary motivation for this study. Nigeria is an emerging market with prospects for international property investment opportunities. However, there are significant indications that international investors would have their risks grossly understated as they might be unable to fully comprehend our market peculiarities at the initial stages. The problem would be that investors would not have accurate information, because we do not have it. Local valuers are not also equipped with tools to account for risks comprehensively. Resultantly, the foreign investors and their trusted partners with deep local insights and experience may be unable to navigate the risk-opportunity tightrope, given the perceived variances between Appraisal Reports and Market Realities. [17] agreed that this is a valid research problem.

1.2 Objectives and Significance of Study

The study aim is to provide status quo statistical information about investors' perception of risks and elicit the extent to which property valuers reflect the market's view of the risk relating to investment properties. The objectives of study are (1) To investigate the level of understanding and application of risk analysis and adjustment models in valuation practice. (2) To elicit the significant use of the comprehensive risk models and (3) To investigate the level of risk perception by property investors. The study provides a benchmark for gauging the development of real estate valuation in Nigeria in the light of contemporary international standards and best practices. It sensitises property investors about risk perception and stimulates their consciousness; enhances valuation reliability, and helps to explain apparent "risk premium puzzle" in real estate.

1.3 Research Questions

The following questions were formulated to guide the study:

- (1) Do valuation firms understand and apply comprehensive risk models in their valuation practice?
- (2) Why are the property investment risk models in or not in significant use?
- (3) Do commercial property investors perceive and consider property investment risks comprehensively for decision-making?

These questions were developed on a compound of non-documented observation from valuation practice, and indications from theory and investment reports. However, I must warn that the accuracy of risk evaluation is difficult, and the general rule of 'the higher the risk, the higher the expected return' can be largely subjective to the extent that no dogmatic statement of precise relationship should be made.

II. REVIEW OF SOME RELATED STUDIES

Risk refers to the likelihood of not getting what is expected [18]. From the property investment perspective, it describes the extent to which actual outcome of an investment decision diverges from the expected outcomes, with the magnitude of divergence indicating the volatility of the investment [19]. The indication is that a weight can be attached to alternative expectations based on the comparable property information available, current and future market conditions, and specific inputs of the subject property. Uncertainty occurs where no such measure of probability can be assigned to any of the alternative outcomes [20] [21]. In the context of major classes of investment risks, three classes can be identified: Borrowing/Credit Risks, Project/Construction Risks, Market/Economic Risks, and Political Risks [21]. Borrowing or credit risks are associated with financing projects at the interim and permanent levels of financing, while project risks begin with land acquisition, increasing steadily through site location, design stages, physical construction, cost runs and delays. Thirdly, market or economic risks comprise those risks associated with liquidity, purchasing power, yields, voids, default, sector, and legislative, while political risks relate to government instability and rent seeking.

Economic risks, which is our primary concern in this study generally related to market demands, expectations of revenue, yields and voids. [20] emphasised that a property investment may be risky when (a) rents expected in the future may not be realised (b) increase in rent may not occur at the time expected or the property becoming vacant and void (c) the capital sum invested may not be realisable, or fall with time (d) inflation rate may cause a fall in money value of property income, and (e) other property investments may out-perform the subject property. These phenomena have been technically known as business, financial, liquidity, purchasing power, management, interest rate, legislative and sector risks. Market risk is fundamental in property investment because expects an acceptable return to compensate him for the risk taking and enterprise. [22] [23] and [24] restated that since individual investors are concerned with minimising risks, valuers are to seek to reflect the market's view of the risks relating to their specific properties. Contemporary approaches by valuers to analyse risks in investment valuations, according to [23] [19] are the Expected Net Present Value (ENPV), Sensitivity Analysis, Standard Deviation Technique, Monte-Carlo Simulation, and the Stochastic Decision Trees. Risk adjustment techniques include the conventional RADF, contemporary RADF, Certainty Equivalent Cash Flow, Sliced Income Approach, and the Portfolio Theory. Conventional RADF adjusts for risks by increasing the discount rate adopted in discounting the reversion depending on the perceived volatility of the project relative to the risk-free rate of return, but the contemporary model uses a combination of adjusted equated yield and computed

reversionary rent for its calculations. In the views of [24], risk adjustment approaches have the advantage of pointing out to the client that the valuers' estimates could be subject to volatility, while also providing an indication of the degree of that volatility particularly in unstable market situations. They may also be a way of avoiding the charge of inaccuracy under volatile conditions.

[22] [25] had observed a trend of request among UK investors for probabilistic valuation statements from their valuers, while [24] pre-empted a similar clamour in Nigeria in the face of problems of voids, tenants' defaults, mortgage repayment defaults which are affecting income forecasts of valuers, besides, valuation service users are expected to get sophisticated. [26] [27] added lack of environmental considerations as a value index to these series of problems. There is relative agreement among critics on the limited usefulness of the implicit valuation models on its seeming misrepresentation of the property market, and apparent isolation of property investment from other forms of investment. [19] identified the central issues as the need to properly account for growth and assess the correct yield with reference to the methodology in the other forms of investment.

A major source of irrationality and perhaps, inaccuracies in valuation, according to [7] [28] [29] is in the concept of the conventional investment valuation as a method. Rising rental income is now a reality both in UK and Nigeria and it is therefore natural for investors to expect income growth. More so, expectations and anticipation is a cardinal principle of property valuation. The capitalisation rate, which is the all-risks yield, did not capture explicitly, investors' expectation of income growth, and the assumption made about risk and security serves to suggest that risk itself grows over time. Also the use of two rates for capitalising incomes in the same period in term and reversion valuations lead to error when two or more investments with varying lengths of subsisting leases are considered. According to [13] [30] [24] reverse yield gap relates to the confusion in determining appropriate yield in investment valuation. In inflationary times, there are wide variances between rule of thumb yields (RTY) and market-derived yields resulting in reverse yield gaps. The use of such RTY is the cause of lower than market price valuations. Since RTY are static, the use will be inappropriate in inflationary circumstances because market parameters from which the RTY (the base yield) is derived quickly becomes outdated. The solution lies in the in regularly revising the market yields in periods of inflation. [24] further observed that it is illogical to capitalise the term rent that is fixed at an all risks market-derived yield where the yield is not explicit about income growth rates when ironically, investors expect growth after the term they initially create. Similarly, the use of the reversionary full rental value as market rental value as at the date of valuation instead of reflecting growth in the rental value to the date of reversion also became irrational. In Nigeria, moreover, the investment method of valuation has a peculiar problem. The imported valuation table widely used assumes annual rent paid in arrears whereas rent is usually paid in two or three years in advance. The issue was the inconsistency between valuation figure arrived at using theories derived from UK literature and the actual property values presented by local market evidence, consequently, valuers resulted into the manipulation of capitalization coefficient to adjust theoretically computed property value to match the actual market prices [14]. This is the cause of

the disillusionment expressed by the Nigerian valuers over the inadequacy of property investment yields [31].

Aside from the intrinsic flaws in All Yield Risk investment methods of valuation, their appropriateness and correct application to the interest created by the Land Use Act is questionable. As a result of Land Use Decree No 6 of 1978, it was no longer possible to own land allodially, land itself becomes incapable of ownership and what can be owned is the right of occupancy [32]. [32]. Several writers agreed that the nature and quantum of estate conferred by a Right of Occupancy is less than freehold [32] [33]. It is an estate for term certain. However, the common practice is for the Estate Surveyors and Valuers to ignore the certainty nature of the term of the Right of Occupancy and treat this as an estate in fee simple in their valuation exercise. Also the practitioners are not incorporating the obligation to pay ground rent and premium (an obligation of a Right of Occupancy holder that further confirms it as an estate less than freehold) into their valuation inputs [34] [35].

Rational DCF based investment valuation models namely (i) Growth-explicit such as formulated in [36] Greaves (1972) and developed by Marshall's Equated Yield Analysis, EYA [37] (ii) Real Value Approaches as formulated by [38] and (iii) The Rational Valuation Model [39] developed as a hybrid version of the equated yield model have been proposed. Also the work of [38] has been remodelled and represented by [40] as a real value/equated yield model. The main difference between the real value and equated yield models, [19] explained, was that the real value looked at an income profile in terms of its purchasing power and discounted fixed income by a yield comprising real return, risk free yield and inflation while the equated yield model viewed growth in rent in monetary terms by increasing the rent at the end of the first year by g , and then discounting at the equated, e . Investors require to be fully briefed on the risk profile of their investments. The UK valuation profession has been criticised for inconsistencies and failures to reflect risk and this was reinforced by the study of [16] which highlighted the need for more rigorous risk assessment measures within the property profession as there has been a number of academic and practice based studies on valuation variance and valuation accuracy which have encouraged debate on the communication of this risk to clients [41] [42] [43] [44] [25] [45].

Using the yardstick of market openness, number of professionals, sophistication of professional services, property market liquidity, the level of research and real estate activities, risk perception, among others, the Nigerian property market has been classified as immature [46]. [46] found out that the Nigeria property valuation profession has not recorded any significant shift in over 50 years of its existence in spite of the enormous changes that the economy has witnessed. After over thirty years of formal recognition as an independent profession by the Nigerian Government, it is to be expected that indigenous professional practice procedures and methods would have evolved in response to the peculiar Nigerian valuation environment. Such methods would have been researched, documented, and presented as standards and guidelines for indigenous practice and made available to students through education and professional training institutions. This however has not been the case in Nigeria.

III. STUDY AREA

The study sample is drawn from Lagos Metropolis which today represents the hub of the Nigerian property market. According to [47], Lagos has ceased to be the seat of Federal Government of Nigeria since 1991, but the sprawling Metropolis retained its prime position in terms of concentration of real and potential industrial and commercial activities; concentration of financial institutions, largest and most patronized sea port, airport and capital market; and the highest concentration of professional offices, among others. More than 90% of the headquarters offices of post-consolidated banks and insurance companies were located within the Metropolis until recently. The mega city is said to have the most developed, most diversified and the most active property market with the highest average property values and stocks of investment [41] [48] Available records with the Nigerian Institution of Estate Surveyors and Valuers, one of the Nigerian regulatory bodies, puts it that 53% of the 779 registered firms of Estate Surveyors and Valuers have either their head office or at least a branch office within Lagos Metropolis. Besides, Lagos is a pace setter in the Nigerian real estate business: The proposed Atlantic City Project, Free Trade Zone, second Cargo Sea and Airports make Lagos incontrovertibly, a storehouse of massive potential commercial property development hub of Nigeria.

Most CPD and recognised professional real estate institutes operate in Lagos, hence, in terms of deepening real estate education, information, awareness and technology, Lagos has a towering hedge. [48] reaffirmed that the Metropolis has the highest concentration of both the providers and the end users of valuation reports. Lagos commercial property market and real estate practice therefore constitute significant areas of study which can also be fairly representative of the Nigerian Commercial Property Market and Real Estate Practice.

IV. METHODS

The study population comprises of Valuation firms in Lagos Metropolis using the ESVARBON Register of Firms as the sampling frame. Over 50% of headquarter Valuation Offices are located in Lagos. It adopted five economic nuclei in the stratification of Lagos Metropolis based on the expectations of very active property markets and resultant valuation briefs.

The study uses the survey technique to elicit information by administering questionnaires to sample Valuation Firms in Ikoyi, Victoria Island, Ikeja, Central Lagos, and Lagos Mainland (excluding Ikeja Area) with not less than ten years field practice. We asked about their understanding and application of comprehensive risk models in their investment valuations.

110 Valuation firms were sampled and a response rate of 90.90% was achieved. The questionnaires were completed by the Firms' Managing Partners in all cases. These respondents are the ones who we expected to have greater valuation knowledge base and are presumably frontliners in the credibility crusade. 40 active property investors were also sampled. A lot of effort was put into optimising the questionnaire before distribution. It was reviewed severally and the wordings were carefully considered to avoid any misleading and misunderstanding of questions. It was also pre-tested on sixteen selected respondents who were later telephone interviewed. The validity of the result of this

study should therefore be enhanced by these measures. Secondary data were extracted from published works and international networking. The Chi-squared goodness of fit test was used to analyse the primary data.

V. DATA PRESENTATION AND ANALYSES

5.1 Short Description of the Risk Appraisal Techniques:

5.1.1 Conventional RADF, Payback Periods, Residual, and DCF techniques:

The common approach by valuers to reflect risk in property valuation is to increase the discount rate by using the RADF approach. The rule is that the more risky an investment, the greater must be its expected return if investors are to be induced to undertake it. Hence, the valuer, in his objectivity, experience and knowledge of the market, carries out an adjustment by adding a risk premium to the risk-free yield to achieve an all risks yield. Such an adjustment may often be subjective, or even arbitrary. Secondly, by adding to the discount rate, it is implied that the risk itself grows over time. The Payback measures time recoupment of capital without considering the time-value of money. The Residual Approach is based on the valuation principle of balance to determine the amount payable for land prior to acquisition. The DCF refers to the simple discounting of returns to arrive at the net present values. All these techniques are implicit.

5.1.2 Contemporary RADF:

The contemporary RADF approach uses a combination and adjustment equated yield, and computed rent at reversion

5.1.3 Monte Carlo Simulation:

Monte Carlo technique uses a sampling procedure whereby complicated expressions involving one or more probability distributions may be evaluated. It identifies the variables and specifies those that are "control" (valuables that will have fixed values over time) and those variables that will take different values with the passage of time. Generally, basic language, such as FOTRAN, is used to write a computer programme as simulator for Monte Carlo

5.1.4 Certainty Equivalent Cash Flow:

This approach qualifies risks through income flow (not by subjective adjustment of the discount rate as in RADF). Certain cash equivalents (to which no risk are attached) are used instead of single point estimates of cash flows. This approach eliminates the problem of double counting for the time value of money and nearly side-steps the need for specific qualification of perceived risk. The cash equivalents are then discounted at the risk free rate. Standard deviation of the perceived normal distribution of the expected cash flows can be used to select the certainty equivalent income

5.1.5 The Sliced income Approach

This approach combines the element of the risk adjustment discount factor approach and the concept of the certainty equivalent model. In essence, it is a DCF model base on the layer/hardcore approach .the assumption is that the core income is guaranteed and certain while the future income flows are uncertain and must therefore involve risk. The approach thus separates the current cash flows from the future income cash flows .The former are discounted at a risks free rate in accordance with its certain nature .the additional incomes (top slices ,or overages) expected after

rent reviews or reversion are discounted at the risk adjusted rate to reflect their more risky top slice nature

5.1.6 Portfolio Theory:

The development of portfolio theory is based on the premise that an investor can reduce risk through diversification. [49] developed a basic model for risk attaching to a portfolio of investments, and showed that the risk is reduced in a portfolio by combining assets whose returns demonstrated positive correlations. His work laid the foundation for the development of capital market theory and the capital asset pricing model

5.1.7 Sensitivity Analysis:

The approach simulates three scenarios of the future – The Best Estimate, The Most Likely, and The Worst – and estimates the probabilities of each occurring. This approach is probabilistic. An experienced valuer may well be able to reduce the range of rents and yields, but in order to diminish the possible subjectivity of the valuer, the variability which is possible over the range within which the eventual selection should be made

5.1.8 Expected Net Present Value (ENPV):

ENPV expresses a range of possible outcomes for each variable together with their probabilities of occurrence. It is a hybrid of DCF and elements of probability.

5.1.9 The Standard Deviation Technique:

The STD technique. Attempts to measure inherent economic risks in an investment by measuring the likelihood that the actual performance may diverge from what is expected, statistically, the STD measures the relationship between the area under the normal distribution curve and the distribution of values around the mean points: 68% (+ 1STD); 95% (+ 2STD); 99% (+ 3STD). The general rule is that the smaller the STD, the less is the variability or return and thus the lower the risk and vice versa

5.1.10 Simulations and Decisions Trees:

The use of Stochastic Decision Trees is relatively new. However, there is potentials for the use in property development and investment. The stochastic decision trees technique of risk analysis builds on a decision trees and permits the use of subjective probability estimates or empirical frequency distributions for some or all factors affecting the decision, A decision tree is a diagrammatic representation of possible future outcomes, where at various moment of time, differing events may happen, resulting in a wide network of eventual possibilities

The results from the survey are presented as follows in Table 1 below:

Table1 - Summary of Responses retrieved from Valuation Firms and Property Investors

	never in use	seldom use	in occasional	always	
1. Application of Risk-Analyses and Adjustment Techniques					
(a) Risk Analyses Techniques					
(i) Expected Net Present	20	65	10	S	0

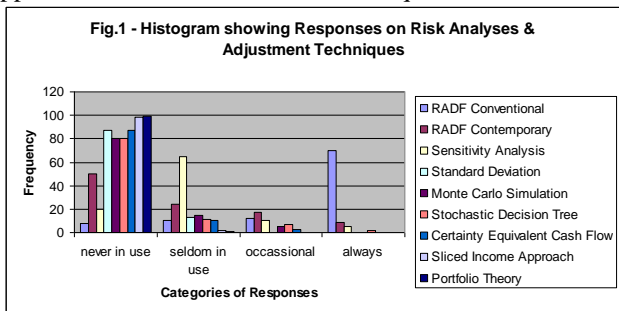
Value					
(ii) Sensitivity Analysis	20	65	10	S	0
(iii)Standard Deviation	87	13	0	S	0
(iv)Monte Carlo Simulation	80	15	5	S	0
(v) Stochastic Decision Trees	80	11	7	S	2
(b) Risk Adjustment Techniques					
(i) Conventional RADF model, Residual, Payback & DCF	8	10	12	NS	70
(ii) Contemporary RADF model	50	24	17	S	9
(iii) Certainty Equivalent Cash Flow	87	10	3	S	0
(iv) Sliced Income Approach	98	2	0	S	0
(v) Portfolio Theory	99	1	0	S	0
not know n		not understood	difficult to apply		
2 Reasons for level of application of the models	21	30			15
Data not Available		No software application s	Low fees to encourage		
the rigours	11	8	7		
Very important		low importance	Not important important		
3.Risk Consideration & Perception by Property Investors	17	19	S	1	3

S – Difference Significant; NS – Difference not Significant
Source: Field Survey, 2013

Research Question 1
Do valuation firms understand and apply comprehensive risk models in their valuation practice?
The results, shown in Table1(1) above and charted as Fig1 below indicate that 70% and 9% always use the conventional and the contemporary RADF techniques respectively; 8% and 50% never used the techniques: 65% seldom use the sensitivity analysis and ENPV. 80%, 87%, and 90% never used the Monte Carlo, Standard Deviation, Certainty Equivalent Cash Flows, and the Stochastic Decision Trees respectively. None of the valuation firms ever used the Sliced Income approach and the Portfolio



theory. 10% use the EYA valuation always. From Fig.1, it can be indicated that the conventional RADF, Payback Period, Residual, and DCF are the most preferred. However, 79% of the respondents agree that there are other more precise explicit techniques, but that the implicit techniques are least cumbersome to apply (69%). 70% of the respondent firms always use the implicit techniques. Consequently, the explicit techniques are either less used or sparingly used., The indication is that valuers would neither be explicit about risks nor adequately verify their application with other available techniques.



Source: Analysis of surveyed data, 2013

Research Question 2

Why are the property investment risk models in or not in significant use?

The result in Table1 (2) and charted as Fig.2 indicated that 21% of the respondents are totally unaware, 30% are aware, but do not understand how to use them, 25% find the methods difficult to apply. 11% are reluctant to apply the models because data is not available. 8% and 6% because computer software applications are not available, while 6% claimed that professional fees are too low to justify the rigours involved. The indication is that the comprehensive techniques are less used or sparingly used because data and software applications are not available. Some Firm Partners are not updated or lack the understanding of the models

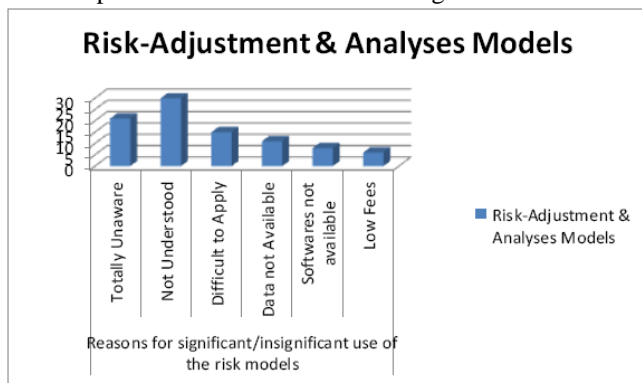


Fig 2 – Reasons Why Comprehensive Models are in use/not in Use

Source: Analysis of surveyed data, 2013

Research Question 3

Do commercial property investors consider property investment risks comprehensively for decision-making?

The results in Table1 (3) above and charted as Fig3 below showed that 2.5% considered risk as very important, 7.5% regarded it as important, while 42.5% and 47.5% considered it of low importance and not important respectively. The indication is that most property investors do not perceive risks as an important factor for consideration in making their investment decisions and by extension, would neither bother if valuers do not reflect these risks explicitly in their reports nor query the valuers rationale.

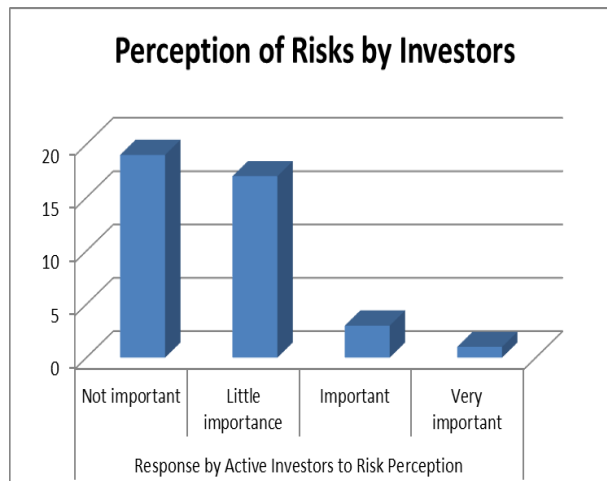


Fig3

Source: Analysis of surveyed data, 2013

The chi-square test result for significant level of risk and investors perception is shown in Table2 below:

Table2 – Chi-square Test Result for Significant Level of Risk & investors perception

	variables	d F	Chi-squarea	p-value	α	Decision
1.Do valuation firms understand and apply risk analyses and adjustment models in their valuation practice significantly?	RADF (Contemporary)	3	108.320	.000	.05	Significant (S)
	RADF (Conventional), Residual, Payback & DCF	3	4.673	.063	.05	Not Significant (NS)
	Sensitivity Analysis	3	90.000	.000	.05	S
	Standard Deviation	1	54.760	.000	.05	S
	ENPV	3	90.000	.000	.05	S
	Monte Carlo Simulation	2	99.500	.000	.05	S
	Stochastic Decision Tree	3	162.960	.000	.05	S
	Certainty Equivalent Cash Flow	2	130.340	.000	.05	S
	Sliced Income Approach	1	92.160	.000	.05	S
	Portfolio Theory	1	96.040	.000	.05	S
2.Perception of property investors about risks		3	206.960	.000	.05	S

Source: Analysis of surveyed data, 2013

Table 2 (1) showed that difference is significant for all the risk models for $P (.000) < \alpha (.05)$. except for RADF conventional, Residual, the Payback Period, and DCF where there is no significant difference since $P (.063) > \alpha (.05)$. Table 2 (1) showed that difference is significant between theory and observed proportions for $P (.000) < \alpha (.05)$ with regards to investors' perception.

VI. SUMMARY OF FINDINGS AND DISCUSSION

Rationality in property valuation is predicated on a coherent valuation theory and practice, generally acceptable methodology framework, and explicit market risks appraisal. The study addresses application of explicit risks appraisal which was investigated through the use of research questions on the understanding and application of the risk models in valuation practice in Lagos, Nigeria. The degree of knowledge and understanding of the models differ from firm to firm. However, the research questions were all answered. The analyses found statistical differences between theory and expected proportions within the three areas, meaning that investment valuations carried out by Lagos valuation firms are not influenced by comprehensive risk considerations. This is not surprising because investors are not of the sophisticated order and therefore cannot query the valuers' valuation rationale which are not explicit about investors' risk burdens. Besides, continuous professional development education mainly focus on social and economic developmental issues.

Conventional RADF and other implicit models showed no significant difference indicating that these models are significantly used by the firms for risk appraisal. Although the firms find it better understood, easy and convenient to use, it adjusts for risks by increasing the discount rate adopted in discounting the reversion depending on the perceived volatility of the project relative to the risk-free rate of return. The choice of the risk premium has been described as subjective, casual, and entirely dependent on the valuers' whims. Secondly, it tends to apply an increasing discount to future cash flows, in which case, long term investments that are potentially profitable may be rejected [20]

The implications of the findings have not been measured empirically, but it can be inferred that investors' risk burdens would be understated. Risk is related to return as the level of risk determines the level of return. Future performance measurements must then be qualified. When risks are understated, or overstated as the case may be, returns are often overstated, or understated respectively, and measurements should reflect the inadequacies to avoid misrepresentation [50]. Both scenarios are detrimental to the investor and his real estate business. [51] and [52] demonstrated that real estate return and market risks are investor-specific, varying over investors with different financial circumstances and holding periods. Also, the traditional valuation of real estate return and risk based on the return distribution without considering the probability distribution of possible outcomes underestimates risks and exaggerates estate returns leading to high financial distress. An empirical test of valuation irrationality could be an area for further research, the effects of which can (a) adversely influencing the relevance of the role of the valuer (b) adversely influence the credibility of the valuer (c) erode the confidence of stakeholders in the property market, and (d) damaging the operation of property indices because

performance and rankings may need to be qualified. According to [23] and [24] it was restated that since individual investors are concerned with minimising risks, the amount of risk an investor is prepared to shoulder to secure a given level of return is a question of value. A prudent investor should formally define his investment goals, identify, and quantify all possible risks; eliminating certainty of risk, diversify, and transfer some, and curtail the rest. The valuer's duty in this regard is to fully reflect the market's view of the risk relating to their specific properties.

VII. CONCLUSION

All the research questions have been answered, objectives fulfilled, the aim of research achieved. The study has revealed that property investors do not perceive risks sufficiently, hence cannot make robust investment decisions. Property investment valuations carried out by Lagos valuation firms are not influenced by comprehensive risk considerations. This is a prime pointer to failure in their duty of reflecting market views about risks to their clients. Many Estate Firms showed lack of full understanding of the techniques and procedures, and therefore could not apply the risk adjustments explicitly.

Firms staff need to be updated with Continuing Education and training in the use of the relevant software applications. This study agrees with the findings of [53] that the knowledge of the models is limited to the academia, and [54] that the property investment valuation techniques being used by valuation practitioners are incomprehensive and inadequate.

It also agrees with the submissions of [51] [52] on expected financial distress arising therefrom. The paper submits that integrating comprehensive market risks are much in line with financial asset performance measurements and best practices. The implication of not taking the appropriate steps immediately is to be prepared for imminent confrontation with investors and valuation service users who may eventually get dissatisfied with the implicit investment valuation techniques. Risks, under the present circumstances are either overstated or understated depending on the judgment and experience of the valuers, while investors are largely unaware of inherent imminent dangers of losing their investments through financial stress.

VIII. POLICY IMPLICATIONS

Mandatory application of rational investment valuation models for market valuations rather than depend on singular all-risks and implicit adjustment methods based on substitution. Property Valuers must embrace DCF models that capitalise the fixed income term at the equated yield, e , and also capture the growth of reversionary income instead of using market derived yield, k , and today's estimates of FRV for a future reversion. This task is put before the Institution of Surveyors in order to enhance valuation reliability and rationality.

Investors who are not sure about their risk burdens should diversify in order to create asset portfolio, share their risks through joint ventures, or transfer them to comprehensive risk bearing companies.

A reliable property data bank that can provide property indices, accuracy tests, and performance measurement similar to the UK (IPD) should either be set up by NIESV or private-sector driven.

Stakeholders Forum should be organised regularly with

REDAN and other Developers and Investors to strengthen the property market. More researches should be sponsored in all the directions that will improve the valuers' valuation methods.

Investors should begin to monitor discrepancies between their appraisal reports and market realities, while Valuers should follow up their appraisal to realise projected revenues and other pre-determined indices.

Investors should improve their perception of investment risks by upgrading their knowledge content about real estate investment and 'port' to a level where they can query the valuers valuation rationale like their counterparts in Asia, Europe, and the US

REFERENCES

- [1] Millington A.F. Accuracy and the role of the valuer, Estate Gazette, 9th November, (276): 603, 1985
- [2] Royal Institution of Chartered Surveyors, The Mallinson Report, London 1995
- [3] Bretten, J. and Wyatt, P. Variance in property valuations for commercial lending, Research Papers 4: 9, 2002.
- [4] Babawale, G.K. Valuers' liability for negligence. The Estate Surveyor and Valuer, 30 (1):49-56, 2007
- [5] Crosby, Neil. Valuation accuracy, variation and bias in the context of standards and expectations. Journal of Property Investment and Finance Vol. 18, No. 2, 2000.
- [6] Downs, A. Appraisal practices need revision. The Appraisal Journal, October, 454-458, 1991
- [7] Baum, A and Crosby, N. Property investment appraisal, Routledge, London, 1988
- [8] Levy, D. and Schuck, E. The Influence of clients on valuations, Journal of Property Investment and Finance. 17: 4, 1999
- [9] White, J.R. The real estate appraisers – The elusive goal of professionalism. The Appraisal Journal, July, 325-377, 1987
- [10] Waldy, B Valuation accuracy, 6th FIG permanent committee meeting and international symposium, Singapore, 1997
- [11] Ogunba, O. A. and Ajayi, C. A. An assessment of the accuracy of valuations in the residential property market of Lagos. The Estate Surveyor and Valuer. 2 (2):19-22, 1998
- [12] Ogunba, O.A. A study of Valuation and Pricing Practices in the Residential Property Market in Lagos Metropolis. M.Sc Thesis submitted to The Department of Estate Management, Obafemi Awolowo University, Ile-Ife, 1997
- [13] Ogunba, O.A; Ajayi, C. A, and Aluko, B. T. Substitution versus anticipation: A resolution of the Nigerian Valuation Practice Paradox. Journal of Land use and Development Studies, 1, (1), 1 – 10, 2005
- [14] Igboko, N. P. Research project on Valuation Methods in Nigeria with special reference to Years Purchase. Research report for the Nigeria Institution of Estate Surveyors and Valuers, 1 – 43, 1992
- [15] Ogunba, O.A; and Ajayi, C. A. A Critique of the Conduct of Valuation in Lagos Metropolis; Contemporary issues in Real Estate. Journal of the Department of Estate Management University of Lagos, 2000
- [16] Investment Property Forum/IPD. The Assessment and Management of Risk in the Property Investment Industry, Investment Property Forum/Investment Property Databank, London. 34-47, 2000.
- [17] Broadmap, Harry. Navigating the risks and opportunities in emerging markets: Pearls, Pitfalls, and Possibilities. Marketmap, Issue 1, 2011
- [18] Wikipedia, <http://en.wikipedia.org/wiki/Risk>. 2013
- [19] Ajayi, C. A. Property investment and analysis. Ibadan: De-Ayo Publications, 1998
- [20] Baum, A and Mackmin, D. The income approach to property valuation, 3rd ed, Thompson, London, 1996
- [21] Brueggeman, W.B. and Fisher, J.D. Real estate finance: Theory and practice. Cincinnati, South West publishing, 2001
- [22] Baum, A. Risk-explicit appraisal: A sliced income approach. Journal of valuation, 5:250-270, 1987
- [23] Baum, A. A critical examination of measurement of property investment risk. Working Paper No.22, University of Cambridge, Department of Land Economy, 1988
- [24] Ogunba, O.A and Ojo, O. Resolving reliability, consistency and rationality problems of professionally prepared valuation in Nigerian practice. The Estate Surveyor and Valuer, 30 (1):39-48, 2007
- [25] Mallinson, M. and French, N. Uncertainty in property valuation, Journal of Property Investment and Finance, 18 (1):13-32, 2000.
- [26] Ibiyemi, A.O. Valuation model for eco-compliance in the assessment of value-in-use for going concern industrial processes in Nigeria, The Estate Surveyor & Valuer, 27 (1): 5-24, 2004
- [27] Ibiyemi, A.O. Application of Property Valuation and Analysis to Green Buildings, Lagos Journal of Environmental Studies, 6 (1):47-54, 2007
- [28] Baum, A and Crosby, N. Property investment appraisal, Routledge, London, 2nd edition, 1995
- [29] Baum, A and Macgregor, B. The initial yield revealed: Explicit valuations and the future of property investments. Journal of Property Valuation and investment. 10 (4):709-726, 1992
- [30] Ojo, O. Reliability, consistency and rationality of professionally prepared valuations: Suggestions for resolving the problems in Nigerian, practice. CPD Training Workshop. Organised by the NIESV in Lagos, Kaduna and Enugu, 2004
- [31] Leramo, G. A. The Groundwork of property valuation. Kaduna Polytechnic Press, Kaduna, 1, 1 – 3, 1992.
- [32] Olawoye, C. O. Statutory Shaping of Land Law and Land Administration up to the Land Use Act. In J. A. Omotola (eds). The land use Act. The Report of a National Workshop, Lagos University Press, 14 – 22, 1981.
- [33] Umezurike, O. N. The land use Decree, 1978: A Critical Analysis. FAB Educational Books, Jos, Nigeria, 1989
- [34] Bello, O. M. The Analysis and Valuation of Investment Property in the Context of the Land Use Act (No. 6 Of 1978) Of The Federal Republic of Nigeria. Land Management in Africa – BEST PAPER PRIZE awarded by African Real Estate Society and the Royal Institute of Chartered Surveyors, United Kingdom, 2001
- [35] Bello, O. M. Real Estate Values, Valuation Practice and Urban Land Market under the Nigerian Land Law. African Region Castle Conference on Sustainable Land Management Conference on Sustainable Land Management in Africa, 14 – 17 March, Bagamoyo, Tanzania, 329 – 340, 2006.
- [36] Greaves, M. The investment method of valuation and analysis: An examination of some of its problems. Ph.D. Thesis, University of Reading, 1972
- [37] Marshall, A. Equated yield analysis. Estate Gazette, 9th November, (276): 603, 1976
- [38] Wood, E. Property investment: A real value approach. Ph.D.Thesis, University of Reading, 1972
- [39] Sykes, S. Property valuation: A rational model. The Investment Analyst. 61:20-26, 1981
- [40] Crosby, Neil. The investment method of valuation: A real value approach, Journal of Property Valuation and Investment, Vol. 1 Iss: 4, pp.341 – 350, 1983
- [41] Matysiak, G.A and Wang, P. Commercial property market prices and valuations: analysing the correspondence, Journal of Property Research, 12(3): 181-202, 1995
- [42] Adair, A.S, Hutschinson, N.E., Macgregor, BD, McGreal, S, Nanthakumaran, N.(1996). An analysis of valuation variation in the UK commercial property market, Journal of Valuation and Investment, 14 (5):34-47
- [44] Carsberg Report. Property valuation, Royal Institution of Chartered Surveyors, London, 2002.
- [45] Hutschinson, N., Adair, N. and Leheny, I. Property risk scoring: The report of investment risks to clients. RICS Research Paper Series, 7:1, 2007
- [46] Dugeri, T.M. Valuation of the Nigerian maturity of the property market. PhD Thesis submitted to the Department of Estate Management, University of Lagos, Nigeria, 2011.
- [47] Falade, J.B. Globalisation, culture and the Nigerian Built Environment: problem, Challenges, and Benefits. Paper delivered at the Conference on Globalisation, Culture, and the Nigerian Built Environment, Obafemi Awolowo University, Ile-Ife, 2005
- [48] Babawale, G.K. & Koleoso, H. Real Estate Valuation Practice in Nigeria: Implication in a Globalization World", Paper Presented at the International Conference on the Built Environment: Innovation, Policy, and Sustainable Development, Covenant University, Ota, Nigeria, 2006
- [49] Markowitz. Harry. Efficient diversification of investments. John Wiley & Sons, Inc., New York Chapman & Hall, Limited, London 1959.
- [50] Crystalake . <http://crystalake.wordpress.com/2010/12/25/property-investment-in-Singapore>, 2010
- [51] Lin, Zhenguo and Liu, Yingehun. Real estate returns and risks with heterogeneous investors. http://google.inclineglobal.com/google_rom_search_results.html?q=What+are+the+effects+of+overstating+or+understating+property+investment+risk&cx=partner-pub-6697027465779297%3A3144322079&cof=FORID%3A10&ie=UTF-

8&sa=Search&siteurl=http%3A%2F%2Fgoogle.inklineglobal.com%2F%3FMB, 2013

- [52] Gilbert, Gary D . Alternative Investment: What they are. Investment and Invsting Articles, Profures Inc, Austin, Texas, 2013
- [53] Ogunba, O.A; and Ajayi, C. A. The response of Nigerian valuers to increasing sophistication in investors' requirements. Journal of Property Investment and Finance, 25, (1), 43-61, 2007
- [54] Bello, M.O and Bello, V.O. Strategic Integration of Surveying Services, FIG Working Week 2007, Hong Kong SAR, China 13-17 May 2007



Abayomi O. Ibiyemi

The author is a Chief Lecturer in Property Valuation, Real Estate Appraisal and Research Methods in the Department of Estate Management, Lagos State Polytechnic, Lagos, Nigeria. He is a former Head of Department and External Assessor to some Polytechnics in Nigeria. He is also a Principal Partner in the firm of Abayomi Ibiyemi & Co., Estate Surveyors and Valuers, based in Lagos, Nigeria.

He holds MSc degrees in Estate Management and Environmental Management from the University of Lagos and the Lagos State University respectively, and also the Higher National Diploma in Estate Management from Auchi Polytechnic, Auchi, Nigeria. He is an Associate Member of the Nigerian Institution of Estate Surveyors and Valuers (ANIVS), a registered Surveyor and Valuer (RSV), and Member of the Nigerian Institute of Management (MNIM), and the Institute of Entrepreneurship Educators (MIEE). To date, he has over twenty academic publications in reputable international journals



The co-author holds Msc Degree in Housing Development and Management from the Premier University of Ibadan and a Higher National Diploma in Estate Management from The Polytechnic, Ibadan. He is an Associate Member of the Institute of Supervision and Leadership (ISL) and after passing all the professional qualifying examinations, he is currently writing his Professional thesis for his induction into the Associate Membership cadre of the prestigious Nigeria Institution of Estate Surveyors and Valuers (NIESV). He is a Lecturer in the Department of Estate Management and Valuation, Lagos State Polytechnic, Lagos, Nigeria.