Inconsistency in Mortgage Valuation of Residential Property Market within Kaduna Metropolis

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Abstract: The paper identified acceptable margin of error in mortgage valuation among practitioners in the study area and established a nexus of factors influencing mortgage valuation inconsistency, such that the acceptable margin of error is used as a proxy of inconsistency. Data was collected from 57 registered estate surveyors and valuers practising in Kaduna metropolis using structured survey questionnaires. The analysis was done using Multiple Regression Analysis (MRA), perception index and Likert scale of measurement, with the aid of statistical package for social sciences (SPSS). Findings revealed that 5-10% was perceived by the valuers as a maximum acceptable margin of error in values of residential properties valuation. It also revealed that familiarization with the property market, clients' pressure on the valuers, absence of a national valuation standard on residential property mortgage valuation, dearth in relevant data/Regulatory framework and valuation approaches are the most influencing factors to valuation inconsistency within the study area. Hence, the study recommends that valuers should familiarize themselves with the property market and be objective with their assessment devoid of third-party influence.

Keywords: Inconsistency, Margin of Error, Mortgage, Valuation, Valuation firm.

INTRODUCTION

Inconsistency in valuations of real estate assets assumes a general consensus among the academia, professional and the courts (Babawale & Omirin, 2011). This is because real estate valuation is a complex task and its accuracy can be influenced at any stage of the valuation from inception to completion. Valuation assumes a critical part when exchanging genuine resources for ownership of property, providing or accessing financing and credit facility, tax related matters, investment guide, accounting purposes, efficient management control/record keeping and decisions on investment performance measurement (Babawale, 2008; Appraisal Institute, 2001). It is generally believed that valuation analysis ought to be accurate to provide reliable grounds for assessment.

Ajibola (2006) opined, real property market is heterogeneous in nature offering a diverse non-unified product as real property; thereby portraying difficulty in assessing the market cost of a property without engaging in valuation. Property market is characterised with defects thereby accounting for high variation among valuers and thus inconsistency between valuation and market price. Such inconsistency is not limited to a particular type of valuation, rather cut across the various purposes of valuation as sales, purchase, mortgage, rating, taxation and others (Effiong, 2015) with mortgage valuation not immune to the problem of inconsistency.

Various factors are adduced to causing mortgage valuation inconsistency as clients pressure (Nwuba, Egwuata, & Salawu, 2015), property characteristics, valuation environment, valuation process, and individual characteristics of valuers/valuation firms (Babawale & Omirin, 2012), the nature and state of the property market (Aluko, 1998) and other factors. Since there is a consensus on the existence of valuation inconsistency, and by extension mortgage valuation inconsistency, then of course efforts should focus on the margin of error to be tolerated. This has been a matter of court rulings and academic discourse cited in Adebayo and Iroham (2011) where in **Singer Friedlander Ltd v John D. Wood and Co {1977] EGLR 84**, it was ruled that:

"*the permissible margin of error to be generally accepted is ±10% of either side of the figure which can be said to be the right side of the figure. He further stated that 15% or a little more either way can be accepted as permissible*

margin of error in exceptional circumstances". (Page 5). There is however hardly a single report of a decided case by a Nigerian court in that respect, despite the increasing volume of mortgage transactions. However, the ruling of courts setting the maximum acceptable margin of error ±15% is criticized as defective on empirical evidence and therefore flawed (Crosby, Lavers, & Murdoch, 1998).

Performance of the mortgage industry in Nigeria is rated low compared with other nation, amidst mild growth in the sector. It was reported by Walley (2009) that the Nigerian mortgage industry generated barely 100,000 transactions from 1960 to 2009 (spanning about 50 years). Real property sector's aggregate loans fall below world best practice minimum benchmark of 70%. Residential mortgage to available loan funds for the average of five years as at 2009 was averaged 14.51% while the total mortgage market was barely ₦127 billion (translated to USD 850 million). While mortgage proportion of the Nigeria's GDP was insignificant, as seen by the real estate contribution standing at less than 5%, being cumulative of mortgage loans and advances at 0.5% of the then GDP figure. The Honourable Minister of the then Ministry of Lands, Housing and Urban Development further declared Nigeria's debt in relation to mortgage ratio at 4% as reported in Peeble (2012), the lowest in Africa and lower to that of South Africa (30%), Namibia (20%), Morocco (15%) and Tunisia (13%). This shows the need for mortgage valuation to be accurate and reliable so as to serve as surrogate of actual price and a catalyst to mortgage recapitalization.

Previous research about the inconsistency of valuation in diverse perspectives as property type by Oduyemi (2016), purposes of valuation (Babawale, 2008), valuations for sale purpose (Ayedun, 2009). Whereas Jamilu (2015) studied factors responsible for inconsistency in valuation without concentrate on a specific purpose of valuation. Olaeye and Olojede (2013) reported dissatisfaction of users about reliability of mortgage valuation occasioned by inherent differences between opinion of value and resultant sales price of foreclosed properties. This signifies the role of client's feedback which according to Gallimore and Wolverton (2000) achieves valuation objective. Similarly, Chukwu & Osmund (2014) reported non-compliance to valuation standards by valuers while conducting the assignment occasioned by inadequate supervision by subordinates assigned by principals of the firm. Other factors included inadequacy of rental evidence as well as wrong application of capitalization rate (Ayedun, 2009). More devastating among the factor is the valuers abandonment of enshrined procedures of arriving at valuation opinion in an attempt to returning the mortgagor's predetermined value in exchange for gratification (Effiong, 2015; Munshifira, et al 2016; Babawale et al 2012).

Most of the previous studies were basically on valuation accuracy without extensively assessing factors responsible for the inconsistency in mortgage valuation, thus unable to establish a nexus on the valuers' perceived acceptable margin of error that could serve as a proxy of mortgage valuation inconsistency in Kaduna metropolis. It is worthy of note also that Crosby, Lavers & Murdoch (1998) further concluded that the margin of error principle as it is presently applied by the English courts lacks empirical basis thus the use of 11-15% as a means of establishing negligence by valuers on determining margin of error is fundamentally flawed. This paper therefore seeks to bridge the gap by establishing a nexus between acceptable margin of error in mortgage valuation and the influencing factors responsible for the inconsistency in valuation for mortgage in Kaduna metropolis with broader aim of achieving best qualitative valuation figure for mortgages by practicing valuers.

REVIEW OF RELATED LITERATURE

Valuation as advanced by International Valuation Standard Committee (IVSC, 2004) cited in Babawale (2007), says it is the amount for which a property could reasonably exchange hand on the said date of valuation between a willing buyer and a willing seller in an arm's length transaction after exhaustive marketing of the property allowing the parties to act knowledgeably and prudently without compulsion or cohesion. According to (Effiong, 2015), Valuation play an important role in determining value of properties either for a mortgage, sale, purchase, rental, compensation, insurance and rating etc. For value to serve it intended purpose, it must be accurate, for in-accurate valuation figure discredit the credibility of valuation exercise.

Valuation inconsistency is a threat to credibility and relevance of valuation profession, if

valuations have a limited likelihood of accuracy, clients may question why valuation is necessary at all and it could mean that performance measurement for investment properties would be a fruitless exercise (Brown, 1999). Valuation inconsistency is simply a deviation of the assessed value from the actual sale price. Wider difference signifies higher level of inconsistency and reverse of the case is more desirable. The degree of deviation represents the margin of error in the valuation exercise. Since the inevitability of inconsistency in valuation has become a consensus among the courts, academia and the professionals (Babawale & Omirin, 2011), the point of contention is on the margin of error to be tolerated (Ayedun, Oloyede, & Durodola, 2012).

The issue of valuation variance was determined by a competent court of jurisdiction in **Singer Friedlander Ltd v John D. Wood and Co [1977] EGLR 84,** where it was ruled that: '*valuation of land by trained, competent and careful professional men is a task which rarely, if ever, admits precise conclusion. Often beyond certain well-founded facts so many imponderables confront the valuer that he is obliged to proceed on the basis of assumptions'* (page 5) cited in (Adebayo & Iroham, 2011). The valuer therefore ought not to suffer any blame for achieving the presumed erroneous values, because two experienced valuers may naturally arrive at varying values of one given property that hardly can anyone justify incompetency, failure to exercise reasonable care or questioning integrity of the valuer in carrying out the assignment. The judgement went further to state that *valuation is an art and not a science thus summarized evidence presented from expert witnesses as* "*the permissible margin of error to be generally accepted is ±10% of either side of the figure which can be said to be the right side of the figure. He further stated that 15% or a little more either way can be accepted as permissible margin of error in exceptional circumstances*". Although, the court did accept ±10% error in the valuation of large rural site preserved for developing residential houses, yet accepted ±15% on commercial property as was the case in Coris and Investment Ltd v Druce & Co [1978] 2 EGLR 86 cited in Ajibola (2010). However, pardonable error at ±15% on either side range of values was accepted by a different presiding judge in Private Bank/ Trust Co v S (UK) Ltd [1983] as cited in Adebayo and Iroham (2011)

Empirically, the margin of error reported in the Nigerian property market is high. For instance, Ajibola (2006) studied valuation accuracy in Lagos state which revealed margin of error in the valuations to be +24.82% and +51.54% for Ikoyi and Ojodu areas of Lagos State respectively, while Ogunba and Ajayi (1998) had earlier discovered margin of -33.43% and 36.47% for Victoria Island and Ikoyi. All these margins have exceeded the threshold of acceptable margin of error standing at +15% in other countries. The duo researches shown above, expresses wide range in the margin of error of valuation produced by Nigeria's practitioners.

Aluko (2000) reported that mortgage valuation and subsequent sale price of foreclosed properties used as collateral are within +12% margin of error.. Bank records of mortgage valuation conducted by fifty-nine (59) estate firms in Lagos Metropolis were examined, the Sale prices of those properties was put to comparison with their earlier valuation estimates and analysed using regression/ANOVA. The research concluded that, valuation figures are reliable proxy to price of properties in Nigeria.

According to (Aluko, Ajayi & Amidu 2004), valuation figures for mortgage purposes are reliable proxy to prices in Lagos municipality. The study had interview with 42 lending institutions in addition to 59 estate surveying and valuation firms using stratified samples. Open market values reported in mortgage valuation for the selected properties were regressed against its transaction prices aimed at testing reliability of the mortgage valuation figures, data was obtained regarding 121 fair sale transactions of foreclosed residential properties by the Nigeria Deposit Insurance Corporation (NDIC), other institutions of lending as well as practitioners in the market (firms). Data obtained and used ranges from January 1994 to December 2002. Thorough analysis revealed relationship between values and selling prices of properties used at 78% of assessed values and was significant at P-Value=0.0000. Finally, results from regression analysis revealed reasonable level of accuracy in valuation figures for mortgage purposes and can therefore be a reliable proxy for market prices. However, Nigeria's level of accuracy in valuation for mortgages may not be equal to

that in the UK, USA and Australia, but values could be summarised in range against single figure estimate and recommended the use of statistical analysis in conducting valuation by valuers as a strategy to enhancing accuracy in valuation and promote reliable value predication.

Conversely, (Oluwunmi, Ajayi, Olaleye & Fagbenle 2011) focused on deducing clients' satisfaction regarding mortgage valuation figures produced by practitioners in Nigeria; which deduced the necessity for mortgage valuation professionals to engage in thorough search for additional information to improve knowledge and best resultant figure from mortgage valuation assignment upon which the lending institution may depend to grant a mortgage facility. The research concluded that valuation assignments for mortgage purpose in the study area fell short of clients' satisfaction.

It is clear from the literature reviewed that bulk of the mortgage valuation accuracy research were basically for determination of open market value in residential property focusing on the causative factors of inconsistency in mortgage valuation with their influence on acceptable margin of error unknown. It is therefore necessary to bridge this gap by determining the extent to which mortgage valuation inconsistency relates to margin of error.

METHODOLOGY

The paper collected quantitative data using structured survey questionnaire from 67 estate surveying and valuation firms in Kaduna metropolis, 57 samples were selected after calculation using the Yamane's formula as thus.

$$Sample\ size = \frac{N}{1 + N(e)^2} = \frac{67}{1 + 67(0.05)^2} = 57 \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (I)$$

Simple random sampling technique was used in selecting the 57 respondents from population of the study. A structured close ended questionnaire was tested in a pilot survey, observations were taken from the pilot test, and enhancement was done and distributed to respondent. A total of 51 filled questionnaire representing 90% was adjudged valid for analysis. Reliability of the questionnaire instrument was put to test using the Cronbach's alpha coefficient which revealed reliability of the instrument by returning all items' alpha value of 0.75 higher than the recommended 0.7 (Pallant, 2011).

Data collected was analysed using descriptive and inferential statistics through the usage of percentages and presented in tables. Further analysis was done inferentially, using correlation and Multiple Regression Analysis (MRA).

Regression analysis is mostly carried out to find out the predictive capacity of independent variables in the model to explain the dependent variable. In general, the model fit is evaluated using the R squared which is called the coefficient of determination. It shows the amount of variance in the dependent variable that is explained by the independent variables (Tabachnick & Field, 2007; Field, 2009). Multiple Regression Analysis (MRA) is based on some assumptions as data normality, multi co-linearity, measurement scale and outliers that may affect the accuracy of analysis outcome (Pallant, 2011).

Based on the recommendation of George and Mallery (2010), data is normally distributed if the skewness and kurtosis value fall within the range of -2 and +2. The Skewness values of all the study variables were within the recommended range. The multi co-linearity of the independent variable are determined using the tolerance level and variance inflation factor (VIF). The tolerance level is required to be above 0.1 while the VIF is required to be less than 10 to avoid multi co-linearity problem (Field, 2009; Pallant, 2011). The correlation result of predictor shows that none of the pairs have a correlation of up to 0.7 for it stood at 0.55. Similarly, the tolerance level was all above 0.1 and the VIF are all below 10. Therefore, the data has no problem and satisfied the assumption of multi co-linearity.

There have been a lot of arguments about using ordinal data in multiple regression analysis. However, this study used Likert scale in multiple regression analysis based on the following assumptions. Firstly, the dependent variable of the study is continued and interval data which have equidistance between points. This satisfies the assumption of interval dependent variable (Tabbachnick & Fidell, 2007; Field, 2009). Secondly, MRA requires

that the data should be normally distributed. All the data for this study were normally distributed including the ordinal independent variables. Similarly, Owuor (2001) studied the implication of using Likert data in MRA and found that the feared bias is significantly minimal provided the data is normally distributed. In the same direction, Norman (2010) shows that MRA is very robust and can handle most of the assumption of MRA accurately. He pointed out that if data is normally distributed inferences can be drawn using MRA even though, in strict term, inferences may be difficult due to characteristics of the data reflected in Likert numbers, but it does not invalidate the earlier assertion (Gaito, 1980). Norman (2010) concluded that MRA can be correctly used with Likert data. Since this study satisfied all the stated assumptions, the use of MRA is considered appropriate for the study.

RESULTS

Respondents' Profile

This section presents the valuers' individual characteristics such as their educational and professional qualification, position occupied, membership of professional bodies and many more. The study found that majority of the respondents were degree holders followed by HND (National Higher Diploma) holders then those holding M.Sc. and Ph.D. most of whom are Associates of the Nigerian Institution of Estate Surveyors and Valuers (NIESV) followed by probationers of the institution. However, only few are FNIVS and PPNIVS members. Most of the respondents work in the valuation unit for a period of 1-5 years followed by those between 6 and 10 years, and carry out an average number of valuation between 0 and 10 monthly. All the respondents are NIESV members with 11 percent reported been equally RICS members. Majority of them update themselves by attending seminars, lectures, in-house training and continuous professional development programs.

The youngest estate firm surveyed in Kaduna is 8 years old while the eldest is 25 years old. The median age of firm in Kaduna was 10 years while the average age of the firms was 13.5 years. Valuations mostly carried in Kaduna were for mortgage purposes followed by sales, rental, asset declaration, insurance, rating, probate and for balance sheet purpose ranked 1st to 8th respectively.

Acceptable Margin of Error

The respondent's perception about acceptable margin of error in mortgage valuation is presented in table 1 below.

Table1: Acceptable Margin of error in mortgage valuation

Margin of Error	Frequency	Percent
1-5 %	14	24.6
5-10 %	25	43.9
11-15 %	8	14.0
16-20	10	17.5
Total	57	100.0

Table 1 shows practitioners perceive margin of error in Mortgage valuation with 17.5% of the respondent said, the acceptable margin of error is 16 – 20% while 14% opined that the acceptable margin of error should be 11 – 15%. However, 43.9% and 24.6% consider a margin of error of 5-10% and 1-5% respectively. The result conforms to what is obtainable in new world property market valuation as found in the study of Matysiak (2017) who reported margin of error in valuation falling within 10%. However, studies in UK, USA and Australia as cited in Ajibola (2010) shows acceptable margin range of valuation in accuracy of between 5-10% for UK and USA. The research findings above also agreed with the finding of Effiong (2015) who reported a margin of error to be between 5-10% and further declared that falling beyond this range will not be reliable.

Nexus between Acceptable Margin of Error and Mortgage Valuation Inconsistency

The nexus between acceptable margin of errors and the $3e^0$ factors are determined using correlation analysis and MRA as presented in the tables below.

Table 2: Correlates of Acceptable Margin of Error

FACTORS	F1	F2	F3	F4	F5	F6	F7	F8	F9
Acceptable Margin of Error	1								
Valuation methodology	-.082	1							
Problems of relevant data	.527**	.007	1						
Client pressure	.106	.058	-.215	1					
Regulatory framework	.518**	-.084	.650**	-.299*	1				
National valuation standard	.653**	-.206	.300*	-.293*	.286*	1			
Skills, experience and judgement	.687**	-.294*	.597**	.006	.45**	.57**	1		
Characteristics of the market	.676**	-.136	.233	.130	.342*	.586**	.58**	1	
Valuation assumptions	.542**	-.294*	.100	.050	.251	.444**	.31*	.33*	1
Familiarity with property market	.612**	-.520**	.169	-.117	.214	.658**	.71**	.56**	.64**

*Significant at 0.05 level
**Significant at 0.01 level

Table 2 shows the correlation between factors. The result shows that most of the factors are related with one another. However, the relationship is within limit as none of the factors is having a correlation coefficient of up to 0.71 with any other factor. Therefore, the assumption of multi co-linearity is achieved. In order to develop a model for mortgage valuation accuracy in Kaduna residential property market, the valuers' perceived acceptable margin of error is proxied to represent mortgage valuation inconsistency. This is because the higher the error a valuer is willing to accept, the more prone the valuation is to inconsistency and vice versa. The study used Multiple Regression Analysis (MRA) to model the variables of the study.

Therefore, this study modeled the effect of those factors influencing mortgage valuation inconsistency on acceptable margin of error in mortgage valuation. The acceptable margin of error, the proxy of mortgage valuation inconsistency, is modeled as dependent variable of the study. The factors influencing mortgage valuation inconsistency, nine (9) predictors, were modeled as the independent variables of the study. The model is presented in tables below.

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.
1	0.906	0.821	0.781	0.26492	20.836	0.000

The model shows that 82.1 percent of the variance in acceptable margin of error, used as proxy of valuation inconsistency (R square 0.821), is explained by the factors influencing mortgage valuation inconsistency. The model shows an F statistic value of 20.836 which is significant at 0.1 level as shown by 0.000 p-value. The individual influence of each factor in influencing mortgage valuation inconsistency as presented in table 4 below.

Table 4. Model Coefficients

Model	Unstandardized Coefficients			t	Sig.	Tolerance	VIF
	B	Std. Error	Beta				
(Constant)	-1.35	.591		-2.286	.027	.662	1.510
Valuation methodology	.170	.072	.193	2.375	.022	.336	2.973
Problems of relevant data	.221	.082	.305	2.677	.011	.471	2.125
Client pressure	.304	.081	.360	3.734	.001	.410	2.439
Regulatory framework	.165	.068	.252	2.441	.019	.365	2.737
Absence of national valuation standard	.215	.070	.338	3.092	.004	.172	5.798
Skills, experience and judgment of the valuer	-.060	.082	-.117	-.737	.465	.409	2.447
Characteristics of the property market	.092	.077	.125	1.204	.235	.384	2.607
Valuation assumptions	.043	.052	.088	.822	.416	.140	7.148
familiarity with property market	.188	.087	.383	2.165	.036	.662	1.510

Table 4 shows the specific influence of each factor on acceptable margin of error. The result shows that the most significant factor influencing inconsistency is familiarity with property market with standardized beta coefficient of 0.383 which is significant as shown by a t-value of 2.165 followed by client pressure with beta of 0.360 and t-value of 3.734. Other factors significantly influencing mortgage valuation inconsistency are absence of national valuation standard, problem of relevant data, regulatory framework and valuation methodology with standardized beta coefficients of 0.338, 0.305, 0.252 and 0.193 with t-values of 3.092, 2.677, 2.441 and 2.375 all above the recommended threshold of 2 respectively.

However, skills, experience and judgment of the valuer, characteristics of the property market and valuation assumption were not statistically significant in determining mortgage valuation inconsistency as shown by standardized beta values of -.117, 0.125, and 0.088 with t-values of -.737, 1.204, and 0.822 below the recommended threshold of 2 respectively.

However, skills, experience and judgment of the valuer, characteristics of the property market and valuation assumption were also not statistically significant in determining mortgage valuation inconsistency as shown by standardized beta values of -.117, 0.125, and 0.088 with p-values of 0.465, 0.235, and 0.416 above the recommended 0.05 respectively.

As the model is statistically significant, it can be presented in linear multiple regression equation as shown below.

Acceptable Margin of error (Inconsistency) = $-1.351+0.170(x_1)+0.221(x_2)+0.304(x_3)+0.165(x_4)+0.215(x_5)-0.060(x_6)+0.092(x_7)+0.043(x_8)+0.188(x_9)$

Where:
X1= Valuation methodology
X2= Problems of relevant data
X3= Client pressure
X4= Regulatory framework
X5= Absence of national valuation standard
X6= Skills, experience and judgment of the valuer
X7= Characteristics of the property market
X8= Valuation assumptions
X9= Familiarity with property market

CONCLUSION

The inevitability of inconsistency in valuations of real estate assumes a general consensus among the academia, professional practitioners and the courts. Since there is a consensus on the inevitability of valuation inconsistency, and by extension mortgage valuation inconsistency, the onus of current debate lies on the margin of error to be tolerated. This study assessed the acceptable margin of error in mortgage valuation and established a nexus between it and the factors affecting valuation inconsistency. Generally, the perceived margin of error within the case study is 5 to 10%, while the most significant factors influencing acceptable margin of error (inconsistency) were familiarity with property market, client pressure and valuation methodology. While the insignificant factors were skills, experience and judgment, characteristic of property market and valuation assumptions. The model is also significant at 0.1 level as shown by a P-Value of 0.000. The lower the p-value is, the stronger the level of relationship. The study recommends that valuers should familiarize themselves with the property market and be objective with their assessment devoid of any third-party influence. The study contributes to body of knowledge on mortgage valuation inconsistency and has practical implication to practitioners and policy makers.

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