

ANALYSIS OF THE PERFORMANCE AND ACCEPTANCE OF REAL  
ESTATE INVESTMENT TRUSTS (REITs) IN NIGERIA.

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## ABSTRACT

The over fifty (50) years existence of Real Estate Investment Trust (REIT) and its global adoption as a collective investment instrument for real estate sector development and growth testifies to the high return investment vehicle REIT is. The instruments in most REIT markets of America, Europe and Asia have recorded high and superior dividend yield with outstanding outperformance to their markets as widely reported by literatures and in the European Public Real Estate Association (EPRA) Global REIT surveys. The enactment of the Nigeria Investment and Securities Act (ISA) in 2007 heralded the introduction of REIT in Nigeria. However, the adoption of REIT in Nigeria in 2007 (same year with the United Kingdom and Germany) has not attracted any study either locally or internationally. The emerging African REIT regimes are yet to attract the coverage of global REIT markets surveys as well, except for the PUT & PLS of South Africa that just legislated in favour of the modern REIT. Nigeria with an economy of US\$521bn in GDP, the largest in Africa, 8.5% growth rate and a population of over 170 million people presents a ready market for real estate products that can grow the property market. In the absence or availability of any study of Nigeria REIT (N-REIT) in its seven years of existence, it becomes inevitable to undertake an empirical study of the performance of Nigerian REIT. Such a study will bring Nigeria REIT to global awareness and will also be useful for the foreign direct investment decision into the Nigerian property market. The objectives of this research include assessment of N-REIT performance, identifying key factors affecting performance and their effect size on yield and an appraisal of real estate development financing as investment diversification option for N-REIT in the face of an acute shortage of development fund in the country. The research adopted mixed methods of secondary data analysis and a questionnaire survey. N-REIT outperforms the market and have low dividend but underperforms the property company. The Nigerian investors' awareness of REIT is low resulting in low participation of both individual and

institutional investors in Nigeria REIT market. There are 13 variables of influence that affect REIT return. The principal component analysis and correlation statistics reduced the variables to 5 most important variables with a significant 90% effect size as shown by the regression analysis. The study further found a diversifier benefit in real estate development financing to N-REIT at 85% and 15% real estate acquisition and financing asset allocation. The study gives an insight into Nigeria REIT market and its characteristics. The findings of the research are expected to guide investors in real estate securities of REITs, property trusts and property company shares. The limitation of the findings of this study is the REIT sample of 3 REIT companies and lack of previous study on Nigeria REIT which prevents this pioneering research from including mixed asset portfolio assessment.

## ABSTRAK

Kewujudan Real Estate Investment Trust (REIT) selama lebih lima puluh (50) tahun serta penggunaannya secara global sebagai instrumen pelaburan kolektif untuk sektor pembangunan harta tanah dan pertumbuhannya membuktikan pulangan REIT yang tinggi sebagai peneraju pelaburan. Instrumen di kebanyakan pasaran REIT di Amerika, Eropah dan Asia telah mencatatkan pulangan dividen yang tinggi dengan prestasi yang cemerlang seperti dilaporkan secara meluas oleh kesusasteraan dan dalam kajiselidik global oleh *European Public Real Estate Association* (EPRA) Enakmen *Nigeria Investment and Securities Act* (ISA) 2007 menandakan permulaan REIT di Nigeria. Walaubagaimanapun, penjenamaan REIT di Nigeria pada tahun 2007 (sama tahun dengan United Kingdom dan Jerman) tidak mencetuskan sebarang kajian sama ada peringkat tempatan atau antarabangsa. Kemunculan rejim amanah harta tanah di Afrika belum mencetus kajiselidik pasaran REIT secara global, kecuali PUT & PLS dari Afrika Selatan yang baru digubal untuk memihak kepada REIT moden. Nigeria dengan ekonomi US\$521bn dalam KDNK, terbesar di Afrika, , kadar pertumbuhan 8.5% dan penduduk berjumlah lebih 170 juta orang mewujudkan pasaran tersedia produk harta tanah yang membantu pertumbuhan pasaran. Dengan ketiadaan sebarang kajian ke atas REIT Nigeria (N-REIT) selama tujuh tahun kewujudannya, ini memerlukan satu kajian empirikal dijalankan ke atas prestasi REIT Nigeria. Kajian sedemikian akan memberi kesedaran global ke atas REIT Nigeria malah membantu pembuatan keputusan pelaburan asing secara langsung ke atas pasaran harta tanah Nigeria. Objektif kajian ini termasuk penilaian prestasi N-REIT, mengenalpasti faktor-faktor utama yang mempengaruhi prestasi serta kesan saiz terhadap pulangan, dan menilai pentaksiran pembiayaan pembangunan harta tanah sebagai opsyen kepelbagaian pelaburan untuk N-REIT dalam menghadapi kekurangan dana pembangunan di Nigeria. Kajian ini menggunakan kaedah analisis campuran antara data sekunder dan soal selidik. Prestasi N-REIT melebihi

pasaran dan menawarkan saham rendah tetapi prestasi yang lebih rendah berbanding syarikat harta tanah. Tahap kesedaran pelabur Nigeria terhadap REIT adalah rendah yang menyebabkan penyertaan yang rendah di kalangan pelabur individu dan institusi dalam pasaran REIT Nigeria. Terdapat 13 pembolehubah yang mempengaruhi pulangan REIT. Analisis komponen utama dan korelasi perangkaan mengurangkan pembolehubah kepada 5 pembolehubah terpenting dengan signifikan saiz 90% seperti yang ditunjukkan oleh analisis regresi. Kajian seterusnya mendapati manfaat diversifikasi dalam pembiayaan pembangunan hartanah untuk N-REIT pada 85% dan 15% pemerolehan harta tanah dan pembiayaan alokasi aset. Kajian ini memberi wawasan ke atas pasaran REIT Nigeria dan karakteristiknya. Hasil kajian ini dijangka memberi panduan kepada pelabur-pelabur dalam sekuriti harta tanah REITs, amanah harta tanah dan saham syarikat harta tanah. Had kepada dapatan kajian ini adalah sampel tiga kompeni REIT dan kekurangan kajian sebelumnya ke atas REIT Nigeria telah membuatkan kajian perintis ini tidak memasukkan pentaksiran campuran -portfolio aset.

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## TABLE OF CONTENTS

Title Page	i
Original Literary Work Declaration	ii
Abstract	iii
Abstrak	v
Aknowledgements	vii
Table of Contents	ix
List of Figures	xiv
List of Tables	xvi
List of Abbreviations	xviii
List of Appendixes	xxi
<b>CHAPTER 1: INTRODUCTION</b>	<b>1</b>
1.1 Background to the Study	1
1.2 Statement of the Research Problem	6
1.3 Research Gaps	9
1.4 Research Question	10
1.5 Aim and Objectives of the Research	11
1.6 Research Methodology	12
1.7 Scope of the Study	14
1.8 Justification	15
1.9 Structure of the Thesis	17
1.10 Summary	19
<b>CHAPTER 2: REAL ESTATE INVESTMENT TRUST (REIT)</b>	<b>20</b>
2.1 Introduction	20
2.2 Securitisation	21
2.3 Real Estate Investment Trust (REIT)	26
2.3.1 Structure of REIT	30
2.4 History and Development of REIT	31
2.4.1 REIT in North America	32
2.4.2 REIT in South America	34
2.4.3 REIT in Europe	35
2.4.4 REIT in Australia and New Zealand (Pacific)	37
2.4.5 REIT in Asia and Middle East	39
	ix

2.4.6 REIT in Africa	43
2.4.7 REIT in Nigeria	45
2.5 Types of REIT	46
2.5.1 Equity REIT	47
2.5.2 Mortgage REIT	47
2.5.3 Hybrid REIT	47
2.6 Advantages of REIT	49
2.6.1 High and Reliable Income (Yield)	50
2.6.2 Simple Tax Treatment	51
2.6.3 Liquidity and Diversification	52
2.6.4 Economic Growth	53
2.7 Disadvantages of REIT	56
2.8 Operations and Regulatory Framework of REIT	57
2.9 REIT Performance	61
2.10 Factors Affecting REIT Performance	66
2.10.1 Internal Factors	66
2.10.2 External Factors	73
2.10.3 Management Style (Advisor Puzzle)	77
2.11 REIT Performance Measurement and Analysis	78
2.11.1 Index Computation and Risk Adjusted Return (ICRAR) Analysis	80
2.12 Index and Benchmarks	82
2.13 Summary	86
<b>CHAPTER 3: REAL ESTATE FINANCE AND REITS</b>	<b>88</b>
3.1 Introduction	88
3.2 Real Estate System	89
3.3 Real Estate Finance	91
3.4 Construction Loans	95
3.5 Types and Sources of Finance to Real Estate	97
3.5.1 State Finance System	97
3.5.2 Mortgage Finance Model	99
3.5.3 Primary Mortgage Market	100
3.5.4 Secondary Mortgage Market.	102
3.5.5 Mortgage Bond System	107
3.6 REIT Investment and Direct Real Estate Financing	108

3.7 The Need for REIT Financing Real Estate Development.	115
3.8 Summary	117
<b>CHAPTER 4: CASE STUDY</b>	<b>119</b>
4.1 Introduction	119
4.2 Case Study – Nigeria	120
4.3 Economic Ranking of Nigeria Market	121
4.4 Nigeria Property Market	122
4.5 Nigeria Stock Exchange	125
4.6 Nigeria REIT Sector	128
4.7 Significance of Nigeria Property Market and Africa Real Estate Fund	131
4.8 Summary	133
<b>CHAPTER 5: RESEARCH METHODOLOGY</b>	<b>135</b>
5.1 Introduction	135
5.2 Re-Statement of Research Question and Objectives	136
5.3. Conceptual Framework	136
5.4 Research Design	138
5.5 Research Method	139
5.6 Research Process	142
5.7 Sources of Data	143
5.8 Data Collection	144
5.8.1 Primary Data- Questionnaire Survey	144
5.8.2 Secondary Data	152
5.8.3 Interview	153
5.9 Methods of Data Analysis	154
5.9.1 N-REIT Performance – ICRAR	155
5.9.1.1 Sharpe Ratio	156
5.9.1.2 Treynor Ratio	157
5.9.1.3 Jensen’s Alpha	158
5.9.2 REIT Diversification to Real Estate Financing	159
5.9.3 Asset (Fund) Allocation Theory	160
5.9.4 Analysis of Questionnaire Survey Responses	163
5.10 Pilot Study	164
5.10.1 Secondary Data Analysis	164

5.10.2 Pilot Survey	165
5.11 Summary	167
<b>CHAPTER 6: SECONDART DATA PRESENTATION, ANALYSIS AND RESULT</b>	<b>169</b>
6.1 Introduction	169
6.2 Secondary Data Analysis	170
6.2.1 Performance and Acceptability of REIT in Nigeria	170
6.2.2 N-REIT Performance Analysis	171
6.2.3 REIT Fund Allocation to Property Development Financing	175
6.3 Summary	181
<b>CHAPTER 7: PRIMARY DATA PRESENTATION, ANALYSIS AND RESULT</b>	<b>183</b>
7.1 Introduction	183
7.2 Descriptive Analysis of the Survey Respondents	184
7.3 Statistical Test for Instrument Reliability and Inter Correlation Between Variables	187
7.4 Descriptive Statistics of Survey Response	190
7.4.1 Analysis of REIT performance in Nigeria - Objective 1	190
7.4.2 Factors and sub-factors affecting REIT performance - Objective 3	191
7.4.3 Level of Agreement and significance of the sub-factors to REIT performance - Objective 4	193
7.4.4 REIT diversification to real estate development financing - Objective 6	194
7.5 Principal Component Analysis	194
7.6 Multiple Regression Analysis Using Structural Equation Modelling (SEM)	198
7.7 Content Analysis of Interview Data	203
7.8 Summary	207
<b>CHAPTER 8: DISCUSSION OF FINDINGS</b>	<b>208</b>
8.1 Introduction	208
8.2 Triangulation of Results of the Analyses	209
8.3 Discussion of Findings	210
8.3.1 Performance and Acceptability of REIT in Nigeria (Objectives 1 and 2)	211
8.3.2 Factors Affecting REIT Performance (Objective 3)	215
8.3.3 Main Factors Affecting Nigeria REIT Performance (Objective 4)	222
8.3.4 Developing a REIT Performance Model (Objective 5)	224

8.3.5 REIT Fund Allocation to Property Development Financing (Objective 6)	227
8.4 Summary	228
<b>CHAPTER 9: CONCLUSIONS, CONTRIBUTIONS AND RECOMMENDATIONS</b>	<b>230</b>
9.1 Introduction	230
9.2 Conclusions of Main Research	230
9.2.1 Performance and Acceptability of REIT in Nigeria	232
9.2.2 Main Factors Affecting REIT Performance	235
9.2.3 REIT Investment Diversification to Real Estate Development Financing	237
9.3 Contributions to Knowledge	239
9.3.1 Theoretical Contributions	239
9.3.2 Practical Contributions	240
9.4 Limitation of the Study	241
9.5 Recommendation for Future Research	243
<b>REFERENCES</b>	<b>245</b>
<b>LIST OF PUBLICATIONS AND CONFERENCE PAPERS PRESENTED</b>	<b>260</b>
<b>APPENDIX</b>	<b>262</b>

## LIST OF FIGURES

Figure 1.1	Map of Nigeria	15
Figure 1.2	Structure of the Thesis	19
Figure 2.1	Structure and positioning of chapter 2	21
Figure 2.2	Securitisation Process	22
Figure 2.3	Participants in Securitisation	25
Figure 2.4	Typical Structure of Externally Managed REIT	31
Figure 2.5	NAV and Share Price of Skye Shelter REIT (2008-2013)	69
Figure 3.1	Structure and Positioning of Chapter 3	89
Figure 3.2	Real Estate System	90
Figure 3.3	Circular flow of Money	92
Figure 3.4	Unbundled Mortgage Delivery System	103
Figure 3.5	Direct Sale of Mortgage Loan at Secondary Market	103
Figure 3.6	Secondary Mortgage Market with a Conduit	104
Figure 3.7	Investment Diversification Option	110
Figure 4.1	Structure and Positioning of Chapter 4	119
Figure 4.2	Top Improver Markets on Regional Basis	125
Figure 4.3	Structure of the Nigerian Stock Exchange	126
Figure 4.4	Nigeria Stock Exchange Capitalisation 2008-2015	127
Figure 4.5	Asset allocation and Geographical Spread of Skye Shelter REIT	129
Figure 4.6	Asset Allocation of UPDC REIT	130
Figure 4.7	Property Portfolio of Skye Shelter REIT	130
Figure 4.8	Property Portfolio of UPDC REIT	131
Figure 5.1	Structure and positioning of Chapter 5	135
Figure 5.2	Conceptual Framework – SEM Regression Model	137
Figure 5.3	Research Paradigm of the Study	139

Figure 5.4	Research Phases and Procedure for Sequential Mixed Method	141
Figure 5.5	Flowchart of the Research Process	142
Figure 5.6	Sources of Data	144
Figure 5.7	Procedure for Drawing Research Sample	147
Figure 5.8	Flowchart of Stages in Data Analysis Process	154
Figure 5.9	Return-Risk Utility Curve	160
Figure 5.10	Markowitz's Efficient Portfolio	161
Figure 5.11	Hypothetical Mean-Variance Efficient Frontier	163
Figure 6.1	Structure and Positioning of Chapter 6	170
Figure 6.2	Index Series Graph for NSE-ASI, REIT and Property Company	172
Figure 6.3	N-REIT and Property Company share of the Nigerian Stocks Exchange Market Capitalisation	173
Figure 6.4	N-REIT shares Prices (2007 – 2015)	173
Figure 6.5	Proposed REIT Asset Allocation between Real Estate Acquisition and Real Estate Financing	180
Figure 6.6	Return- Risk Analysis for Proposed REIT Asset Allocation	180
Figure 6.7	Efficient Frontier Curve for the proposed Asset Combinations	181
Figure 7.1	Structure and Positioning of Chapter 7	184
Figure 7.2	Demographic Characteristics of the Respondents	187
Figure 7.3	Performance of REIT in Nigeria	191
Figure 7.4	Factors Affecting REIT performance in Nigeria	192
Figure 7.5	Diversification of REIT Investment to Real Estate Financing	194
Figure 7.6	Screen Plot of the Principal Component Analysis	197
Figure 7.7	Initial Test Model	200
Figure 7.8	Modified Test Model	201
Figure 8.1	Structure and Positioning of Chapter 8	209

## LIST OF TABLES

Table 2.1	An Overview of Global REIT Regimes and Structure	29
Table 2.2	Continental Outlook of Global REIT and Ranking	46
Table 2.3	Developed and Emerging REIT market Capitalisation	49
Table 2.4	Develop Markets REIT and Non-REIT Capitalisation and Return	55
Table 2.5	REIT Requirements and Operational Guideline of different Countries	59
Table 2.6	Top REITs in Selected REIT Markets	63
Table 4.1	Socio-Economic Statistics of Nigeria	120
Table 4.2	Economic Rating of Nigeria	121
Table 4.3	World Bank Global Ranking of African Economies on Ease of Doing Business (June 2014)	122
Table 4.4	Global Real Estate Transparency Index of selected Countries	123
Table 4.5	Regional Changes in Transparency Average Score 2004 – 2014	124
Table 4.6	Nigeria Stock Exchange Equity Sector Capitalisation	127
Table 4.7	Nigerian REIT Regulatory Structure and Characteristics	128
Table 4.8	Nigeria REITs Profile	129
Table 4.9	Africa Real Estate Funds' Capitalisation and Investment Target	133
Table 5.1	Research Question and Objectives Re-stated	136
Table 5.2	Qualitative versus Quantitative Research	140
Table 5.3	Research Procedure	142
Table 6.1	Raw Trading Data from Nigerian Stock Exchange (Appendix C)	267
Table 6.2	Descriptive Statistics for Normality Test of Stock Market Data	171
Table 6.3	Risk Adjusted Return Analysis	174
Table 6.4	Correlation Matrix of the Weekly Returns (Market, N-REIT and Property Company)	174



Table 6.5	Property Income Return Analysis 2008 – 2014	175
Table 6.6	Income Analysis for Real Estate Finance and Time Deposit	176
Table 6.7	Current N-REIT Fund Allocation Possibilities and Return Analysis	178
Table 6.8	Proposed REIT Asset Allocation Risk-Return Analysis	179
Table 7.1	Questionnaire Distribution and Response Rate	185
Table 7.2	Demographic Characteristics of Respondents	186
Table 7.3	Reliability Statistics of the Research Instrument	188
Table 7.4	Spearman Rho Correlation Test of Significance	189
Table 7.5	Main Factors Affecting REIT Performance in Nigeria	192
Table 7.6	Respondents Level of Agreements to Factors Affecting N-REIT and Significant Values	193
Table 7.7	Correlation Matrix for Factor Analysis	195
Table 7.8	KMO and Bartlett’s Test of Sample Adequacy and Factorability	195
Table 7.9	Total Variance Explained for Principal Component Analysis	196
Table 7.10	Pattern Matrix of Principal Component Analysis	198
Table 7.11	Structure Matrix of Principal Component Analysis	198
Table 7.12	Standardised Regression Weights of the Model	202
Table 7.13	Summary of Interview Responses	204
Table 8.1	Convergence of Results of Mixed Method Analysis	210

## LIST OF ABBREVIATIONS

ABS	Asset Backed Securities
A-REIT	Australian REIT
AOS	Acquire, Operate and Sell
ASI	All Share Index
ASIC	Asian Securitization and Investment Commission
ASX	Australian Securities Exchange
BS	Build and Sell
CAPM	Capital Asset Pricing Model
CBN	Central Bank of Nigeria
CFA	Critical Factor Analysis
CGT	Capital Gain Tax
CIS	Chartered Institute of Stockbrokers - Nigeria
CPI	Consumer Price Index
CTT	Capital Transfer Tax
EPRA	European Public Real Estate Association
ESF	European Securitization Forum
FDI	Foreign Direct Investment
FFO	Fund From Operation/Net Operating Income
FMBN	Federal Mortgage Bank of Nigeria
FMI	First Metro Investment Corporation, Philippine
FSB	Financial Services Board
GDP	Gross Domestic Product
GFC	Global Financial Crisis
HFC	Home Finance Company

HK-REIT	Hong Kong REIT
ICT	Information and Communication Technology
ICRAR	Index Computation and Risk Adjustment Analysis
IMF	International Monetary Fund
IPD	Investment Property Databank
IPO	Initial Public Offering
ISA	Investment and Securities Act-2007
ISAN	Independent Shareholders Association of Nigeria
J-REIT	Japan REIT
JLL	Jones Lang Lasalle
JSE	Johannesburg Securities Exchange
KLSE	Kuala Lumpur Stock Exchange
LPT	Listed Property Trust
M-REIT	Malaysia REIT
MAS	Monetary Authorities of Singapore
MBS	Mortgage Backed Securities
MRA	Multiple Regression Analysis
NAV	Net Asset Value
NAREIT	National Association of REITs
NCREIF	National Council of Real Estate Investment Fiduciaries
NIESV	Nigerian Institution of Estate Surveyors and Valuers
NMRC	Nigerian Mortgage Refinance Company
N-REIT	Nigeria REIT
NSE	Nigerian Stock Exchange
NYSE	New York Stock Exchange
PFA	Principal Factor Analysis

PIE	Property Investment Entity
PLS	Property Loans Stock
PMI	Primary Mortgage Institution
PPP	Public Private Partnership
PUT	Property Unit Trust
PTF	Property Trust Fund
REIT	Real Estate Investment Trust
RSI	Repeated Sales Index
S&P	Standard and Poor
SD	Stamp Duty
SEC	Securities and Exchange Commission
SEM	Structural Equation Modelling
SKYE REIT	Skye Shelter Real Estate Investment Trust
SGX	Singaporean Stock Exchange
SPV	Special Purpose Vehicle
UK	United Kingdom
UHOMREIT	Union Homes Real Estate Investment Trust
UPDC	UACN Property Development Company
UPDC REIT	UPDC Real Estate Investment Trust
US	Unites States of America
WHT	Withholding Tax

## LIST OF APPENDIXES

Appendix A	Research Questionnaire	263
Appendix B	Question Guide for the Interview	268
Appendix C	Raw Trading Data from the Nigerian Stock Exchange	269
Appendix D	List of Banks in Nigeria and Lending Rates	283
Appendix E	Structural Equation Modelling Model Fit Parameters	287

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## CHAPTER 1: INTRODUCTION

### 1.1 Background to the Study

Real Estate Investment Trust (REIT) is attracting global investors' attention more and more as its performance and advantages are recognized to be superior (Ong, The, & Chong, 2011). However, despite the pool of funds available for REIT and the world acceptability and adoption of REIT as an investment medium and a stimulant/catalyst for real estate sector development, the effect has not been much felt in some developing countries like Nigeria in the investment class specifically and in the real estate sector in general. The operations of Real Estate Investment Trust (REIT) is tailored towards investing on real estate products, especially investment (income generating) properties like offices, retail properties, industrial etc., on occasions, high rise income yielding residential properties (residential towers) do enjoy the patronage of REIT's funds. In so doing, REIT could be making the fund available (indirectly) for real estate development and thereby stimulating the real estate sector.

Real Estate Investment Trusts (REITs) are companies similar to mutual funds that hold portfolios of real estate and real estate related financial instruments for the benefit of their shareholders (Oreagba, 2010). REITs as a recent alternative investment medium for real estate have gained more recognition and acceptance in the developed (Western) world for a period now (Dittman, 2010; Sullivan, 2003). However, in the emerging economies of Africa and Asia, the adoption of REITs is more recent. The first REIT in Nigeria is the N2bn (US\$10m) Skye Shelter Fund launched in 2007 following the issuance of guidelines for registration and requirement for operation by the Securities and Exchange Commission (SEC) in the same year. REIT took a centre stage in Nigeria with the announcement of the launching of N50bn Union Homes Hybrid REIT in September 2008.

Since the existence of REIT in 2007, little achievements has been recorded unlike in other countries where REIT was adopted in the last fifteen years such as Singapore, Japan, Thailand, South Korean, Malaysia, Hong Kong, United Kingdom, Germany and even South Africa. For instance, S-REITS listed on the SGX with 20 REITS came into being in July 2002. M-REITS listed in Malaysia Stock Exchange with 17 REITS (both Islamic and Conventional REITS as at December, 2015) came into existence in 2005, and REIT in South Africa in the form of Property Unit Trust (PUT) and Property Loans Stock (PLS) was established in 2002 (Mathibe, 2012). The modern REIT law came into existence in South Africa in April, 2013 and hitherto existing PUTs and PLSs are expected to transform into REITs in South Africa (Smith, 2013).

Since the introduction of REIT in Africa in 1994, there has been little literature about Africa REITs. The Nigeria REIT in its seven years of existence has also not been assessed in term of its performance both in the market and on income distribution. Odunsi (2011) examined the challenges and performance of REIT as a strategy in real estate financing but could not measure N-REIT performance due to lack of REIT index. Olaleye and Ekemode (2014) in their study of real estate securities and non-real estate securities in Nigeria used property company (UPDC) securities as a proxy for REIT. Within the African REIT context, Nigeria REIT market since 2007 is long overdue for an assessment of its performance and an examination of REIT acceptance to the Nigeria investing populace. With the importance of Nigeria in Africa and West Africa due to economic size and population, it becomes inevitable to investigate the performance of Nigerian REIT. This is also informed by the local investors' high interest in direct real estate and stock of some construction companies in the Nigerian Stock Exchange (NSE). N-REIT could also be an important source of listed property securities exposure to both local and

international investors especially the institutional investors. The Nigerian REIT market will not gain international relevance, if its performance remained unmeasured.

The Nigeria real estate sector has consistently shown significant growth over the years. The National Bureau of Statistics (NBS) report released in February 2015 shows that the real estate sector contribution to the Nigeria Gross Domestic Products (GDP) rose from NGN4.9tn (7.56%) in 2010 to NGN6.677tn (US\$33.52bn) which translates to 8.01% of the GDP in 2013. The real estate sector also serves as a very important means of asset diversification thereby making it further attractive to both retail and institutional investors. With an estimated population strength of over 170 million people and being the African largest economy of US\$521 in 2014 (Khan, 2014), Nigeria is getting competitive in the Africa business environment. As the Sub-Sahara Africa real estate market is exhibiting a noticeable improvement in transparency, Nigeria market is among the top five and also a regional hub of attraction for international commercial property investments in Africa (JLL, 2014). The significance of Nigeria market in the Africa sub-region portended a growth in investment return for real estate investors. A successful REIT regime in Nigeria will therefore foster REIT development in Africa.

While there is abundance of research works on REIT performance in consideration of predicting economic variables (relationship study) and alternative investment options (risk-return comparison), there has been no convergence of main important factors influencing REIT returns. The reason could be the different preferences of each REIT market. Thus, despite available studies on performance, there is clearly limited research on the joint contribution of main important factors on REIT return (on a simultaneous basis). From the literature, it can be expected that different factors could play dominant roles in different markets, however, some factors are likely to be applicable in most



markets. As a result, making an enquiry into key factors/variables of sizeable significant effect on REIT Performance in Nigeria (being an emerging REIT market) can pose a challenge but it is worth undertaking as the African property market is attracting investors globally. This empirical investigation of N-REIT to assess performance and identify main determinant factors/variables is geared towards developing a model for N-REIT performance. The result will then be a tool for investor's decision making on N-REIT sector and Nigerian property market as a whole.

Development of land (real estate) requires huge capital that developers and investors (especially private ones) are not always able to provide alone but requiring credit financing from various sources (Ogedengbe & Adesope, 2003). It is no gainsaying that the most viable real estate development project irrespective of the scope and content will remain a daydream unless there is sufficient capital to concretize it (Ajoku & Nubi, 2009; Hemuka, 2007). Omirin (2002) and Omirin and Antwi (2004) observed that financing real estate development in recent times has become more problematic due to the complex interaction of several factors from high interest rates on loans, stringent repayment requirements, cumbersome loan requirements from lenders and availability of funds (as obtainable in Nigeria). Onyiuke (2002) recognised that the economic situation in Nigeria over the years is responsible for the inadequate funding of real estate development. As observed by Ajibola, Oloyede, and Oni (2009), Governments at all levels in Nigeria have come to realize that inadequate finance/funding has been the main hindrance to the achievement of various development programmes especially in the real estate sector and housing provision for the citizenry in particular. Ordinarily, the huge capital needed is not expected to be made available by individuals considering the various needs of man that have to be met with the subsistence income he earns, but from the various established sources of finance. The conventional sources include banks (commercial and mortgage),

pension funds, insurance companies; all of these are regarded as formal sources while the informal sources include equity contribution from personal savings, age group association, village development scheme and town's union, social club contribution etc.

However, the complex economic situation has made finance from informal sources grossly inadequate for a meaningful real estate development. The economic woe of many developing nations has led to non-viable mortgage sector and poor funding to real estate development. Mortgage loans become the critical source of finance to real estate development and it constitutes a single large demand for credits in developed countries. Financing for commercial property development as different from home ownership financing has been slower on the other hand because of the unique nature of commercial property loan. Developers remain under the mercy of the commercial and development banks and insurance companies for the short term construction loan (bridging finance). The failure of the mortgage system and other conventional sources (in general) to provide the required finance for real estate developments created the need for alternative sources like securitization, unitization and real estate investment trusts (REITs). In the face of acute shortage of real estate stock and lack of funds for development of real estate in Nigeria, the operations and performance of REITs are negatively affected. Therefore, this thesis also appraises the possibility of REIT financing real estate development project within the provisions of the existing guidelines, regulations and laws. The research hypothesises that, financing real estate development is a related investment option envisaged in the REIT investment guidelines and that the portfolio return of REITs can be enhanced if such investment is embraced on the basis of risk and return appraisal. As a pioneer study of Nigeria REIT, this research ushers Nigeria REIT into the Global REIT market study/survey.

The rest of this chapter discusses the research problem, research gap, research questions, aim and objectives, research methodology in brief, justification and scope of study in turn. The thesis structure is also presented, followed by the chapter summary.

## **1.2 Statement of the Research Problem**

In most countries (especially the developing ones), direct investment in the real estate sector is beyond the reach of most people and as an investment-grade asset class, it is usually traded through indirect instruments such as Real Estate Investment Trusts (REITs). There have been records of the success of REITs operations in most countries with a concession to superior performance over other investment assets and their respective markets as benchmarks. Nigeria developed a legal framework for operations of REIT a decade into the current millennium and the physical manifestations of the benefits of investing in REITs are yet to be seen in the Nigeria REIT market, the activities of Nigeria REIT in particular have not been reported. The influence of the investors on investment performance has been widely researched and reported viz-à-vis the investors' behavior, sentiment and acceptance. For every investment option, the perception and acceptance of the investment vehicle by the investors both local and international and more especially the institutional investors go a long way in determining the performance of any investment option (Ong et al., 2011). The need to evaluate Nigeria REIT market performance in the global context, identify the factors that can enhance the growth of the sector especially in the context of Nigeria and perhaps suggest measures of improvement to make N-REIT attract foreign direct investment (FDI) and become competitive both at continental and global level, is long overdue.

Proper financing is all important to successful real estate investment and development and calls for adequate funding at a reasonable low cost to the enterprise to operate

commercially and successfully. The availability and cost of fund for real estate development have a great influence on the viability of the real estate sector. In Nigeria (and most developing African nations) there is an acute shortage of funding for real estate assets and services. In the past much focus was on housing finance for home buyers while construction loans for the development of houses and other types of property like office and retail are wholly left for the commercial banks. According to Ogunba (2009), billions of Naira Housing Fund remained un-accessed and unutilized under the National Housing Policy where workers are expected to contribute 2.5% of their income to grant them access to the housing fund towards individual home ownership. The Pension Act of 2004 is believed, will make funds available for real estate development, the news is that, trillions of naira are stacked with little effect on real estate development/investment (Punch, 2012). Neither the Pension Act nor any other policy has provided guidelines towards the deployment of the pension fund to real estate sector financing (Odunsi, 2011). REIT was identified as a suitable product (investment outlet) to deploy the much required fund into real estate sector through the channel of the Pension Fund assets and also in other to further deepen the Nigerian Capital Market (Oreagba, 2010).

The Central Bank of Nigeria (CBN) has encouraged banks to support the development of real estate (housing) sector through credits policies by requesting the erstwhile commercial and merchant bank to allocate a stipulated minimum proportion of their credits to the housing/construction sector with 5%, 6% and 13% of their total annual loan to be deployed to real estate sector in 1979, 1980 and 1982 respectively (Sanusi, 2003). The preference accorded the real estate sector was withdrawn by the Central Bank of Nigeria following the deregulation policy and liberalization of the Nigerian financial sector in 1993 and the mandatory allocation was discontinued (Sanusi, 2003). The insurance companies as a source of funds to real estate sector did well in Nigeria in the

area of mortgage financing until the late 1980s when their performance in real estate financing began to decline (Sanusi, 2003). The Federal Mortgage Bank of Nigeria (FMBN), established in 1978 was the only mortgage institution in Nigeria and did not perform well in the discharge of its mandate. The emergence of primary mortgage institution (PMI) in 1993 even became a disaster in the history of mortgage financing in Nigeria as most of these PMIs after collecting deposits (savings) from the public folded up within the twinkle of an eye.

The emergence of the contemporary indirect sources of finance like securitization, unitization and real estate investment trusts (REITs) was seen to give respite to unavailability of huge capital required for real estate development. The primary focus of REIT was initially on property asset acquisition with investment restrictions in the various REIT laws across the REIT markets. However, between 1968 and 1970, a good number of new REITs in the United States of America were mortgage REITs with a focus on mortgage lending against direct property investment. Publicly funded REITs were set up to finance construction and developments. Mortgage REIT then has 75% of their assets in direct mortgage and short-term loans (Chan et al., 2003). In the global context, REITs laws and regulations restricted the extent of diversification of investment. At least 70% of a REIT fund must be invested in real estate assets (properties). In most REIT markets and in Nigeria, 75% is the minimum to be invested in real estate asset while the remaining 25% can be invested in real estate securities with a maximum of 10% of the fund in another investment vehicle. However, in an environment where there is an acute shortage of good quality property stock for purchase, what will REIT invest in? Therefore, REITs may have to carry an additional function and risk for significant direct investment in property development and construction in order to create a stock of real estate assets for

their portfolios. This could be possible only if REIT companies are allowed to participate in real estate project financing.

In the light of the above, the general problems of study are stated as follows:

- (i) Lack of study on the performance of Nigeria REIT as well as non-recognition of the establishment of REIT regime in Nigeria.
- (ii) Non-coverage of Nigeria REIT by the global real estate and REIT survey reports (e.g. NAREIT, EPRA Survey)
- (iii) Validation of the identified key factors affecting REIT performance and their simultaneous effect and size on REIT dividend return from the perception of the stakeholders.
- (iv) The paucity of property stock in Nigeria due to funding inadequacy and the impact of N-REIT on property development financing.

### **1.3 Research Gaps**

While most studies have been conducted on REIT performance in the developed, developing and emerging REIT markets, little has evolved in the African continent with South Africa been the focal point at all times. Despite numerous studies on real estate securities and portfolio management in Nigeria (Amidu, Aluko, Nuhu, & Saibu, 2008; Bello, 2003; Olaleye, 2000), none has focused on the Nigeria REIT sector in its seven years of existence. Nigeria REIT also, has never been in the coverage of the EPRA Global REIT report over the years even until now. The unreported and unknown status of the Nigerian REIT portends a danger to the growth and development of REIT in Nigeria. This is one gap that this research intends to fill.

Again where REIT performance has been studied in relation to contributing factors, it is mostly in correlation with the individual elements of formal/internal factors, perhaps to know the relationship between the variables, and the reports of the findings are mixed in most instances. The earlier studies have also adopted the real performance (economic) data. The perception of the market players has never been reported except by Chen (2007) on China REITs development. The interreaction in the market also suggests that all the variables of the contributing factors including external factors (that has been scantily investigated) are exerting influences on the return at the same time. Studies of the stakeholders perception of the REIT performance and the simultaneous effect of the predicting variables will no doubt validate the econometric analysis that abounds and also show the significance and joint effects of the predicting factors on REIT performance. This thesis in the absence of any study on the perception of the market by stakeholders, on REIT return intends to fill the gap

The promised dual advantages of REIT as identified, include the deepening of the Nigerian capital market and deployment of the fund into the real estate sector (which is ever lacking for funds for development financing). However, the impact of Nigeria REIT in effectively performing this function of stimulating real estate financing is yet to be noticed. Perhaps the rule and guidelines of 75% fund in real estate asset is the inhibiting factor. This is another area that needs to be investigated which constitute the third gap this research wishes to fill.

#### **1.4 RESEARCH QUESTION**

In view of the inadequacy of finance to real estate development in Nigeria (as an emerging economy) and despite the existence/establishment of various organizations to create fund for real estate development, the introduction of REITs in 2007 is expected to reinvigorate

real estate investment, financing and development in Nigeria, but this is yet to manifest in the reality. The following research questions are thus formulated to guide this thesis.

1. What is investment performance level of Nigeria REIT in terms of market and dividend returns?
2. How acceptable is REIT as an investment vehicle to Nigerian investors?
3. What are the factors responsible for N-REIT performance?
4. How significant is the effect of these factors on N-REIT performance?
5. Can N-REITs diversify their fund investment towards direct real estate development?

Therefore the main focus of this research is the assessment of performance and acceptability of REIT in the Nigerian market and possibility of REITs partaking in real estate development financing directly.

### **1.5 Aim and Objectives of the Research**

The aim of this research is to analyse the performance and acceptability of REITs in Nigeria towards a successful REIT market and growth of real estate sector in Nigeria.

Based on the existing literature on the development and adoption of REITS as alternative investment medium to real estate globally. The following objectives were set towards the achievement of the aim of the research.

1. To assess the overall performance of REIT in Nigeria.
2. To appraise the level of acceptability of investment in REIT by Nigerian investors
3. To identify the main factors of great influence on N-REIT performance from the perception of REIT market stakeholders.



4. To examine the size and effect of the predicting factors on N-REIT dividend return
5. To adopt the structural equation modelling regression to establish a return prediction equation for N-REIT performance
6. To create an asset allocation model for N-REITs that will accommodate direct real estate financing (a linear functional relationship model)

## **1.6 Research Methodology**

There are a number of different approaches that a research can adopt or be based upon within the paradigm of qualitative and quantitative research (Esteves, 2004; Gill & Johnson, 2010; Yin 2003, 2009). The research methods could be a case study, a focus group interview, structured interview, questionnaire survey or experiment among others. This research used a mix method approach. A mixed method of research involves the mixing of both quantitative and qualitative approaches to research. This could be achieved by the mix of methods or the mixed mode. In the mixed method, a researcher can use one method for a phase in the study and the other method for another phase of the research. In mixed mode on the other end, the researcher mixed both qualitative and quantitative approach within a stage of the study or across stages of the study. In this research, both mix method and mix model are applicable. This research was carried out in three (3) phases.

Phase One (1) of this research is devoted to an extensive literature search on REIT performance globally and to identify the likely factors affecting REIT return. Since this study also intends to know the joint effect of the most important factors of influence on REIT, a theoretical model relating REIT yield, to the sub-factors/variables through the mediating main factors (categories) was developed. Thirteen (13) factors were identified across three (3) categories/classifications providing an answer to objective 3. The model

follows a multiple regression model. (figure. 5.2 and eq. 2). A pilot study was also conducted in this phase.

The second phase (2) was the data collection stage. Following an adjustment to research instrument – questionnaire and its reliability certification through the pilot study, the questionnaire administration for the main study was conducted. The secondary sources data (mainly economic data from the stock market, central bank and REIT companies) were also collected. An interview section was also conducted with senior management officials of the REITs in this study (figure 5.4).

The third phase was dedicated to complete data analysis and interpretation of findings. Index computation and risk adjusted return (ICRAR) analysis were adopted for the stock market data analysis. REIT and property indexes were developed following the market weight capitalization approach. The weekly average return was calculated and the risk adjusted return estimated and compared with the market All Share Index (ASI) as a benchmark to measure N-REIT performance. A correlation study of the return was performed to identify any diversification benefit, then the indexes were plotted to identify trend and pattern in response to objective 1. Both correlation study and confirmatory principal factor analysis (PFA) were adopted to find the most important factors affecting REIT in Nigeria, reducing the thirteen identified factors to five (5) providing an answer to objective 4 and through the multiple regression analysis (MRA) using structural equation modelling (SEM) regression with the aid of IBM SPSSAmos 20 software), the joint effect and contribution of the main factors to N-REIT performance were determined and a model developed for N-REIT performance in answering objective 5. The modern portfolio theory of the return - risk (mean-variance) analysis was adopted for REIT investment model of real estate acquisition and direct property development financing in

line with Markowitz Efficient Frontier model. This is to see the possibility of REITs financing real estate development within the current regulatory framework in response to objective 6. An explanatory deductions and inference were made with respect to the interview data through transcription and content analysis to validate or otherwise, the findings of the quantitative analysis result (figure 5.8). The detail of the research methodology for this thesis is dealt with in chapter five (5).

### **1.7 Scope of the Study**

There are now many routes and vehicles that provide exposure to the commercial real estate market. Some are traded in private markets, some trade on public markets; some involve direct management of the underlying real estate, others are financial paper investment underpinned by real estate cash flow but with returns being influenced to a greater extent in the capital market.

The focus of this research is REIT as another investment vehicle for real estate assets in Nigeria. REIT has an advantage of special tax concession in comparison with other investment medium, with special rules/requirements among which is the distribution of 90% of income/revenue as a dividend to shareholders in order to qualify for the tax concession. This thesis therefore limits itself to the study of REIT performance and acceptability in Nigeria. The study in its scope covers (i) the examination of the history and development of REIT globally and locally in the study area through literature, (ii) assessment of performance of REIT in Nigeria, (iii) measurement of REIT performance through the use of index computation and risk adjusted return analysis, (iv) factors affecting REIT performance and (v) the diversification possibility of REIT to direct real estate development/construction finance. In a pioneer study of the performance of REIT in Nigeria, the availability of huge data is doubtful. Nigeria REIT since its existence in

2007 has only three REITs, Skye Shelter REIT, Union Homes Hybrid REIT and the UPDC REIT (which launched its initial public offer in February of the year 2013). However, this research has only two REIT companies as its coverage due to non-availability of trading data for the third REIT for a period up to one year. The market capitalization of the two REITs has witnessed depreciation in the effect of the 2007/2008 global financial crisis but gradually regaining since 2012. The research also investigated the opinion of relevant stakeholders in the REIT industry through a questionnaire survey with a focus on Lagos, Nigeria which is the hub of real estate (property) investment and transactions being the commercial nerve centre of Nigeria. Figure 1.1 is the map of Nigeria and its major cities.



**Figure 1.1:** Map of Nigeria with its four major cities

### **1.8 Justification**

The performance of real estate investment trust and real estate securities will depend primarily on the volume of funds available for deployment to the real estate sector in an economy as well as the proportion of such funds that can be actually mobilized toward

the development of the property sector (Ogedengbe and Adesope (2003)). In recognition of the need to make funds available for real estate development projects by various governments, a number of sources evolved to complement the equity capital of the developer(s). Such sources include commercial bank loans, mortgage loans, insurance fund and pension fund. However, the operations of the different lenders and the requirement coupled with interest rates on loan have made it difficult for individual and corporate developers to access building loan. The interest rate is high in most cases, the demand for land title (which is not available in a number of cases) and the requirement for state governor's consent to mortgage (in Nigeria), are all serving as deterring factor to real estate development, investment and finance. In some other cases, the fund is not just there or not enough for sustainable real estate development.

In this contemporary world, the introduction of securitization, bonds and REIT is expected to ease real estate funding because it creates a pool of money from investors who are accorded the opportunity of investing in real estate (projects) without having to go through the rigour of sourcing huge capital. The contemporary sources of funding have broken investment in real estate into small affordable units (in bits). Therefore it is not surprising that REIT as a form of pooling together, financial resources for real estate investment and development would get worldwide acceptability and adoption. Different developing countries like their developed counterpart have adopted REIT, the Asian REIT market has grown to be the second largest globally on continental basis, Africa countries are establishing REIT markets, some other developing countries have developed (and some are developing) legal framework for REIT's implementation. Unfortunately while the adoption and implementation are recording success in some of the emerging economies (e.g. Malaysia, Thailand, Taiwan and South Africa among

others), REIT seems to be new in many African countries and practically unknown in Nigeria.

The Nigeria REIT property portfolio is dominated by residential properties with concentration in Lagos, the nation's economic and commercial city as well as Abuja which is the political capital city of Nigeria, the Federal Capital Territory. Nigeria REIT also invests in hotels and commercial (office and retail) properties. The hybrid Union Homes REIT focusses more on mortgage REIT.

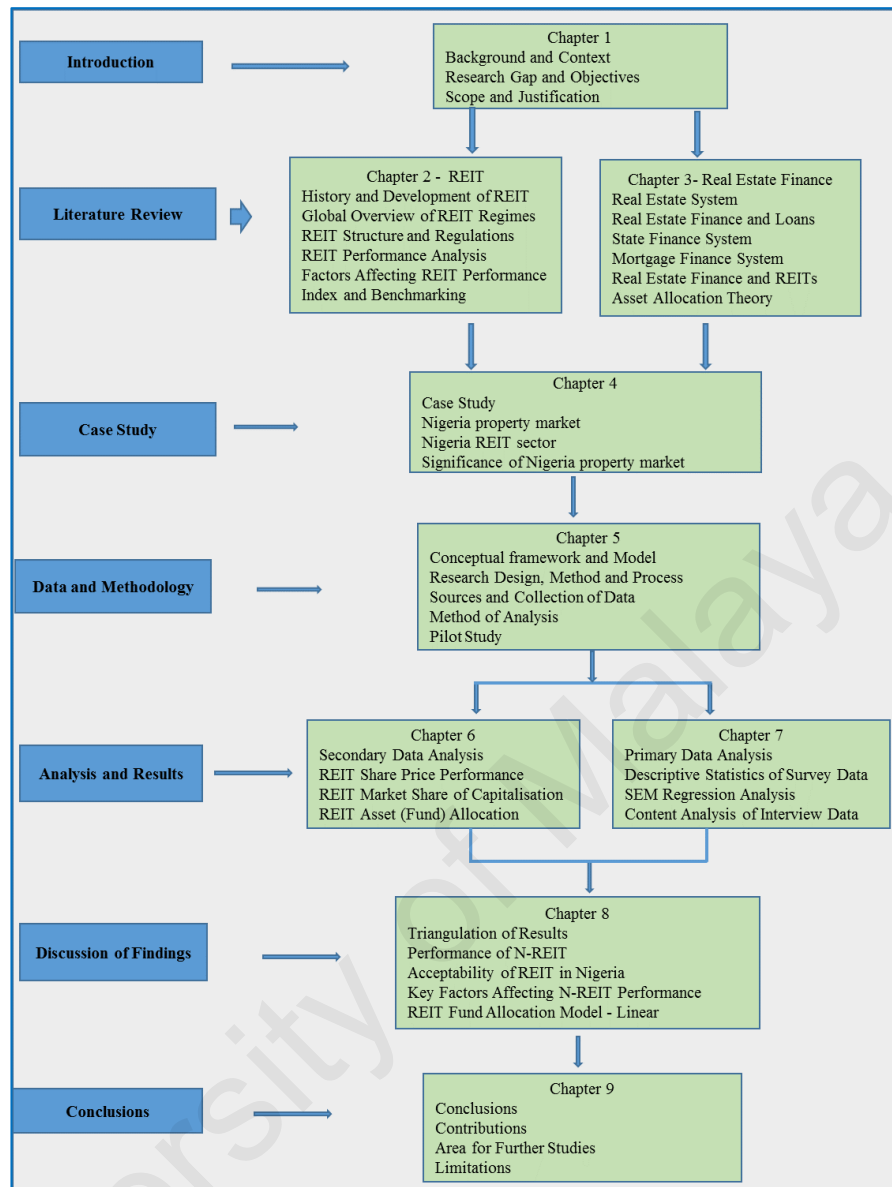
A number of reasons can be advanced for the importance or significance of pursuing a study on the performance of REIT in Nigeria. One is the unnoticed impact of REIT in Nigeria despite its seven years of operation since 2007. Could it be a problem of implementation or operation in Nigeria environment? This study also intends to reveal the extent of REIT development and growth in Nigeria as well as the factors affecting REIT performance. This research at the end made recommendations that will help in the establishment of more REITS companies for increasing real estate development activities and a more vibrant real estate sector in Nigeria.

### **1.9 Structure of the Thesis**

The thesis is presented in nine (9) chapters which broadly segments the work into three parts. Chapters 1 to 3 comprise a background to the work, the first chapter providing a general introduction to the study, research problem, research questions, aim and objectives. Chapter 2 provides the literature background of REIT, its history and development globally, factors affecting REIT performance, performance measurement and variables of concern. Chapter 3 concludes the background study with the literature review on real estate finance and the possible investment diversification of REIT into

direct real estate financing adopting the Markowitz efficient frontier for portfolio asset allocation.

The second part of this thesis spans the study area (Nigeria in a more detail context), research methodology and data analysis. Chapter 4 discussed Nigeria demographic and social statistics, economic ranking, the REIT sector and the property market in general including real estate funds. Chapter 5 give a description as to how the study is conducted and the character of the data employed for the research, the detail research method for this thesis showing the study population, sample and sampling methods, research instrument and design of survey instrument, the framework set out from the literature review. Chapter 6 was devoted to secondary data analysis and interpretation. Primary data of questionnaire survey and interview were analysed in chapter 7. The third part starts with chapter 8 presenting empirical finding and discussion. The conclusions, recommendations and contributions of this study are presented in Chapter 9. The Figure 1.2 below presents the graphical representation of the research structure.



**Figure 1.2:** Structure of the thesis

### 1.10 Summary

This introductory chapter deals with the research theme and the nature of the problem to be investigated. Others include the research problem, the aim, objectives, and justification of the study, the scope and the thesis structure. The next chapter dwells on the review of related literature on development and operations of REITs. The review of previous study on the performance evaluation of some REITs market is also presented.

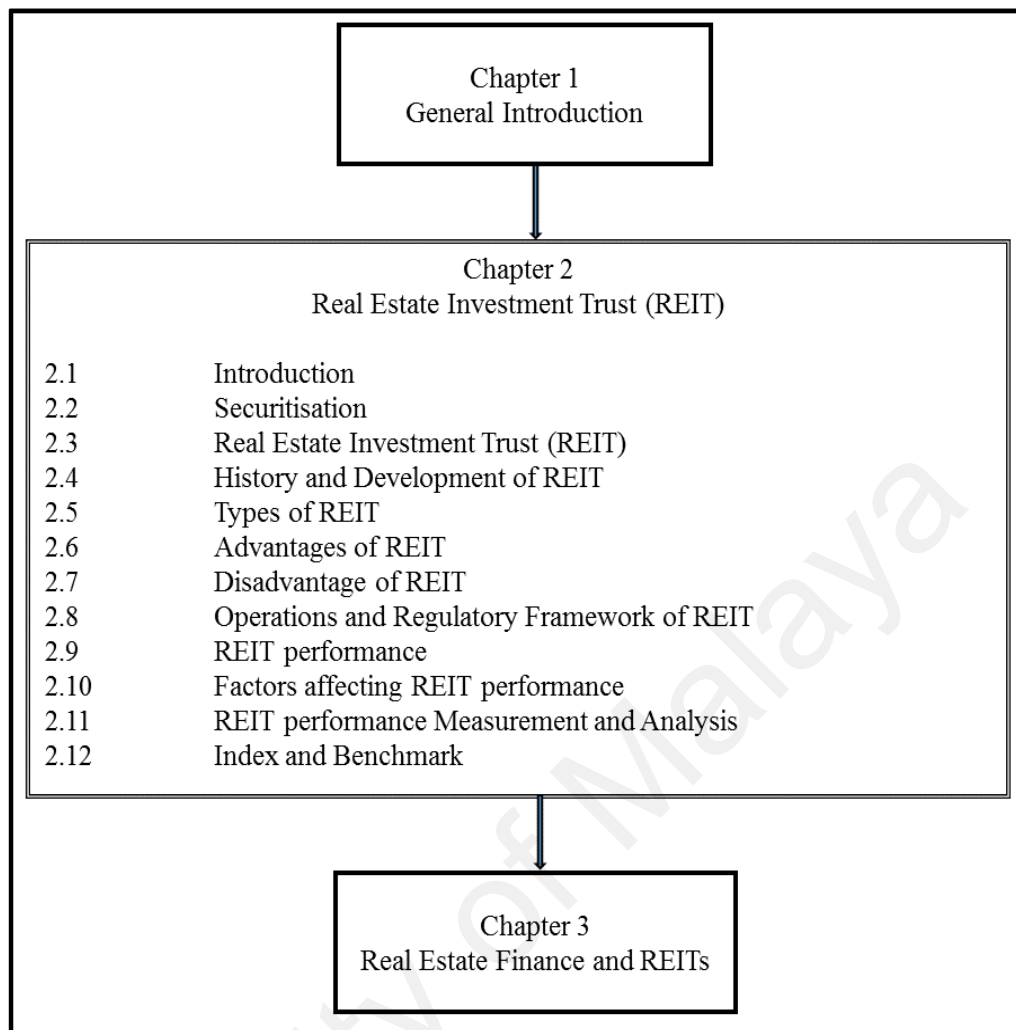


## **CHAPTER 2: REAL ESTATE INVESTMENT TRUST (REIT)**

### **2.1 Introduction**

This chapter provides the essential foundation for the study and covers both the academic and industry related literature. This chapter is mainly a review of the current published literature on real estate investment trust (REIT). Having presented the general introduction to the whole thesis in chapter one covering the research questions, objectives and justification for the study, this chapter discusses the meaning, history and development of REIT. The chapter also restates the key regulatory provisions for REIT in different countries and across markets, and the different view point put forward by different writers, published through professional journals, articles, academic papers and other relevant periodicals related to REIT performance, factors, measurement and analysis. The purpose of this review is to lay a theoretical framework through which the relevance of the subject of study needs to be established. The intention is to develop a more in-depth and holistic understanding of the subject of the research.

In the light of the above, a better understanding of REIT, its creation, history and development is important. The starting point of this chapter is to provide an overview of securitization, which is regarded as an offshoot for REIT (section 2.2). This section is followed by the full discussion on REIT, its meaning, benefits, types and development across the global markets. A summary section concludes the chapter. Figure 2.1 illustrates the structure and positioning of this chapter with respect to the preceding chapter 1 and the next chapter that follows.



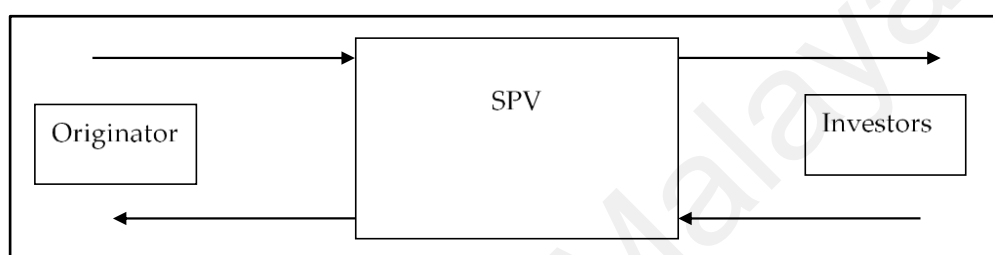
**Figure 2.1:** Structure and positioning of Chapter 2

## 2.2 Securitisation

One of the most prominent developments in international finance and one which is likely to assume even greater importance into the future is securitization. Securitization is the process of pooling and packaging homogeneous illiquid financial assets into marketable securities that can be sold to investors. The process of securitization leads to the creation of a financial entity known as ‘Special Purpose Vehicle’ (SPV) that represents ownership interests in, or is secured by a segregated income producing asset or pool of assets (Shenker & Colletta, 1991). These assets are generally secured by personal or real property (real estate, automobile, or equipment loan) and in few cases unsecured (e.g.

credit card debt or consumer loan). Generally, there are four basic steps in the securitization process which includes:

- i. Creation of Special Purpose Vehicle (SPV)
- ii. Sale of assets to SPV by the Originator
- iii. Issuance of Securities by SPV and distribution to investors of the securities
- iv. Payment to originator for the assets from the proceeds of sale of securities.



**Figure 2.2:** Securitization process (adapted from ESF, 1999)

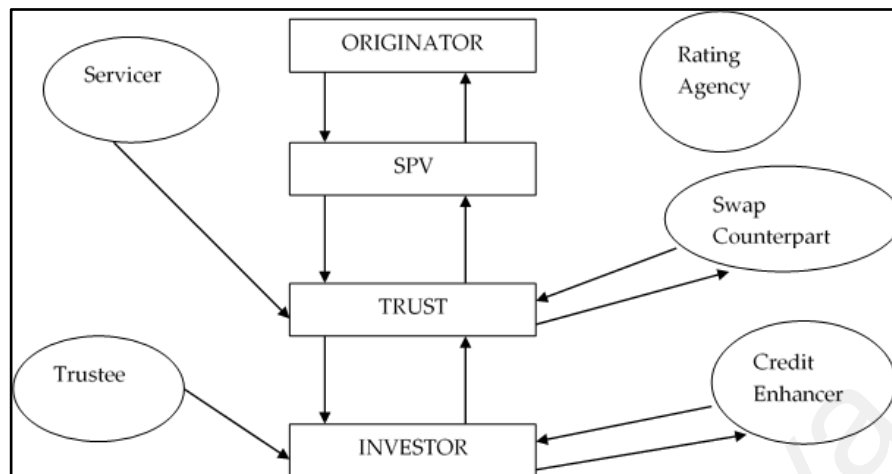
Securitization occurs in two ways, asset-backed or institutional-backed. The private sector mortgaged backed securities are referred to as Asset Backed while securitized mortgage for the government agencies is known as Institutional Backed but both follow the same process. Asset securitization is a structured process whereby interest in loans and other receivables are packaged, underwritten and sold in the form of “Asset Backed” securities (ESF, 1999). In the United States (US), mortgage loans are federally guaranteed and if securitized, it is regarded as institutional-backed securities. From the lenders’ perspective, securitization enables them to transfer some of the risks of ownership to parties more willing and able to manage them. Prior to the securitization era of the structuring of mortgage pools in the 1970s, banks were essentially portfolio lenders, they held loans until they matured or paid off and the loans were principally funded by deposits and sometimes debt fund (ESF, 1999). However, as a result of the inability of the depository institution to keep pace with the rising demand for credit for home ownership

at the end of the Second World War, banks and other financiers sought ways of increasing the sources of fund for the purpose of mortgage lending in anticipation of market opportunity. Investment bankers then came up with the idea of an investment vehicle (instrument) which isolated defined mortgage pools, segmented credit risk and structured cash flows from the underlying loans in order to attract investors' money (fund). Though it took a long time to develop efficient mortgage securitization structure, the loan originators fully realized the readily transferability feature of the process to other types of loans. In 1985, securitization techniques that were developed in the mortgage market were applied (introduced) to non-mortgage assets – automobile loans. Auto loans were a good match for structured finance because their maturities are considerably shorter than those of mortgages, thus, a more predictable cash flow timing coupled with a performance which gave investors the confidence. (Dembiermont, 2010). The institutional-backed securities could be in the form of mortgage bond or mortgage backed (MBS) as they could be backed by a government agency. The Asset-Backed Securities (ABS) neither takes exposure on the originator nor the SPV but on the asset that collateralizes the securities.

It is generally believed that securitization offers tremendous opportunities and significant benefits to issuers and investors as well as to citizens and government. To the issuer, securitization transform the illiquid financial asset to a liquid and tradable capital market instrument; provides more efficient and lower cost source of financing; facilitates removal of assets from organisation's balance sheet; and offers a flexible and adaptable form of financing. To investors, securitization offers significant yield over other government issues; low funding cost and increased the level of liquidity. Securities advantages to the socio-economic condition of a nation are efficient capital allocation or redistribution as well as economic growth stimulation. Even in the midst of global

economic/financial crisis, securitization remains an important concept in international finance (Strasser & Kinsky, 2010).

Securitization is the mobilization of illiquid asset and transferring credit risk away from the banks and it remains of great systemic importance (IMF, 2009). Securitization means a transaction or scheme whereby the credit of an asset or a pool of assets is transferred to an external undertaking (SPV) which then transfers this credit risk onwards to investors in securities issued by that undertaking. Securitization had been defined to mean a financial process involving the aggregation of a pool of cash flow generating assets and issuing securities backed by the asset pool to third parties (Strasser & Kinsky, 2010). It is also a strategy where portfolios of relatively illiquid assets are packaged into marketable securities that are sold into the capital market. Securitization implies every such process which converts a financial relation into a transaction (ASIC, 2004). It is a device of structured financing where an entity seeks to pool together its interest in identifiable cash-flows overtime, transfer the same to investors either with or without the support of further collaterals, and thereby achieve the purpose of financing. From the legal point of view, securitization is a purchase of primary rights by a special purpose entity that legally isolates such payment rights from a bankruptcy estate of the originator and results in the issuance of securities whose value is determined by payment rights so purchased (Lipson, 2012). Schwarcz (2012) in modification of Lipson's definition of securitization asserts that securitization is a financial transaction in which a special purpose entity issues securities to investors and directly or indirectly uses the proceeds to purchase rights to, or expectation of, payment and collections on the rights or expectations so purchased constitute the primary source of repayments of those securities. Figure 2.3 shows the participants in the securitization process.



**Figure 2.3:** Participant in Securitization (Source: ESF, 1999)

Investors in the securities may be either external investors, or the institution that originated the underlying assets. Securitization thus has the following characteristics (Strasser & Kinsky, 2010).

1. Transfer of risks
2. Issued securities do not represent payment obligation of the originator and
3. SPV is insulated from the risk of the originator.

REIT could be regarded as similar to securitization since it involves the issuance of shares/units by the trust to investors and pooling of investors' fund towards acquisition and management of real estate assets. However, there is a difference in the sense that REIT is not loan securitized asset-backed, rather it is a fund investment in real estate assets. REIT gain more recognition as an investment diversifier to reduce risk since real estate is negatively correlated to other financial investment.

### **2.3 Real Estate Investment Trust (REIT)**

A REIT is an entity that invests primarily in real estate and qualifies for special tax treatment, providing a conduit for earnings to be taxed at the investor level and not at the entity level (Oreagba, 2010 and EPRA, 2014). REITs are expected to own, operate, acquire, develop and manage real estate assets and/or provide related services. FMI (2010) and Oreagba (2010, pp 1) defines REIT as “a company that owns, and operates income producing real estate asset or properties such as office buildings, residential buildings, shopping malls, tourism related facilities, healthcare facilities, industrial facilities infrastructures and warehouses whose shares are publicly traded in a way similar to any other stock”. Corgel, McIntosh, and Ott (1995) defined REIT as an investment tool to create a flow of funds from investors to the real estate and property sector of the country. According to Wong (2004), REIT is a company or a trust that pools fund from individual investors, acquires and operates income generating real estate, and distributes the income derived from their owned properties as a dividend. Initially, REIT tendered to be similar to mutual funds allowing investors to pool capital and invest in diversified pools of real estate that are regarded as passive investments (EPRA, 2014). REIT has attributes of both stocks and bonds and it is thus regarded as a hybrid of stocks and bonds (Ong et al., 2011). REIT increase strength from the pool of resources gathered from investors and invests into high profile and high value property for greater return a lot of individual investors may not be able to invest in a huge real estate portfolio (Wong, 2004).

REIT is a security that sells like a stock on the major exchanges (stock/securities exchange market), and invests in a real estate directly, either through properties or mortgages. REIT typically offers investors high yield, receive special tax consideration and presents a highly liquid method of investing in real estate (Chin, Topintzi, Hobbs, Mansour, & Tan, 2007; FMI, 2010). Individuals can invest in REITs either by purchasing

their shares directly on an open exchange or by investing in a mutual fund that specializes in public real estate. An individual benefit for investing in REITs is the fact that many are accompanied by dividend re-investment plan (DRIP). Among other things, REITs invest in shopping malls, office buildings, apartments, warehouses and hotels.

Under the United States Federal Income Tax Law, a REIT is any corporation, trust or association that acts as an investment agent specializing in real estate and real estate mortgages. A REIT is entitled to deduct dividend paid to its owners (shareholders) before tax and therefore avoid incurring all or part of its liabilities for the U.S. Federal Income Tax, this is meant to avoid double taxation. REITs by law are required to distribute at least 90% of their taxable income as dividend unto the hands of the investors. From the foregoing, a REIT is a company that owns, and in most cases, operates different types of income producing real estates, ranging from offices to warehouses, hospitals, shopping centres, hotels, timberlands and apartments. Some REITs (hybrid or mortgage) engage in financing real estate though indirectly. However, the REIT structure is originally designed to provide a real estate investment structure similar to the structure of mutual funds to provide for investment in stocks (Cummings, 2008).

From past studies and literature, common to all definitions of REIT are some requirement for a company to qualify as REIT and for the benefit of tax exemption at the corporate level. Thus, REIT for the purpose of this thesis is defined as *“a company or corporation registered by stock exchange which invest its fund (in a manner like a mutual fund) but on income generating real state products (property), shares of property company and real estate mortgages, generates its income from the property investment and distribute almost all its revenue before tax (net income) to its investors in form of dividends with little provision for re-investment”*. The common features in the definitions for REIT are



- i. A registered company, association, trust or corporation
- ii. Investment in income yielding real estate properties, and or real estate mortgage
- iii. Generate revenue from real estate properties
- iv. Distribution of revenue before tax to investors in form of dividend

REIT is likened to a company that is quoted on the stock exchange but its core business is the ownership, purchase, sale and development of real estate (Oreagba, 2010). In other words, REITs are often referred to as property companies whose shares are publicly traded on the secondary market. The difference between an investment trust and a quoted company, however, is that the former must distribute a larger percentage of its profits to shareholders, and in return for distributing 90 percent of their annual profits as dividend to shareholders, REITs are free from corporate income tax. Table 2.1 presents an overview of the Global REIT regimes and their features.

**Table 2. 1: An Overview of Global REIT Regimes and Structure**

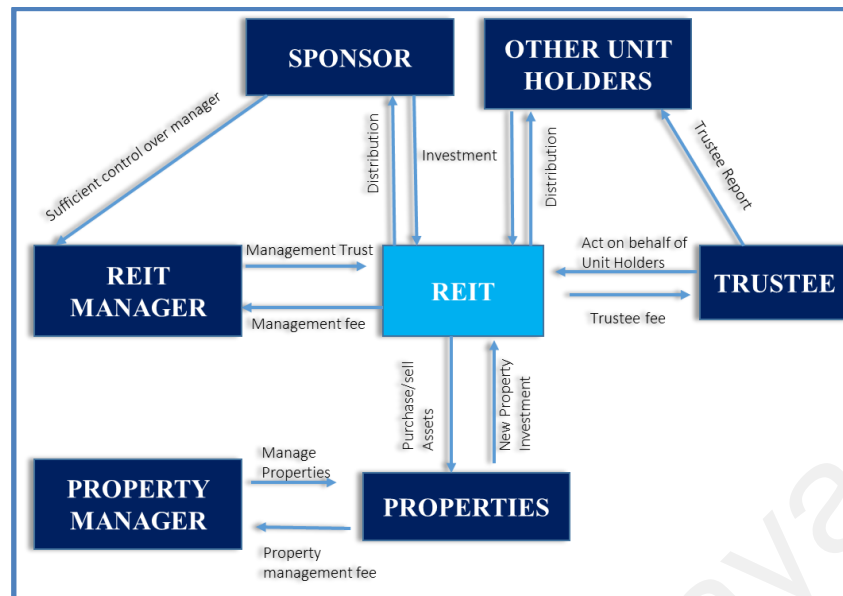
Continent	Country	Year	REIT Law	No. of REIT	Capitalization (US\$m)	Market Share (%)	Rank	
Europe	Belgium (SICAFI)	1995	Royal Decree of 07/10/2010, Law of May, 2014	8	8,742	0.75	13	
	Bulgaria (SPIC)	2004	Special purpose Investment Company Act, 2004	18	400	0.03	24	
	France (SIIC)	2003	Article 11 of the Finance Act for 2003	20	122,792	5.39	4	
	Germany (G-REIT)	2007	REIT Law 2007	4	41,254	0.11	21	
	Greece (REIC)	1999	REIC Law 2778/1999	3	2,033	0.1	22	
	Ireland (REIT)	2013	Finance Act, 2013	1	1,572	0.14	20	
	Italy (SIQ/SINQ)	2007	Italian Real Estate Investing Corporations with listed Shares or with Shares listed on non-regulated markets	2	5,992	0.15	19	
	Netherlands (FBI)	1969	Financial Investment Institution Regime FBI Art 28 CITA 1969	5	30,550	0.81	12	
	Spain (SOCIMI)	2009	Act 11/2009	10	50,295			
	Turkey (REIC)	1995	Capital Market Law, Communique on Principles Regarding Real Estate Investment Companies Serial III No 48.1	32	7,269	0.69	14	
	United Kingdom (UK-REIT)	2007	Finance Act, 2006	33	201,959	4.75	5	
	Americas	United States of America (US-REIT)	1960	Internal Revenue Code	409	898,408	59.3	1
		Canada (MFT)	1994	Income Tax Act	49	63,852	3.99	6
Mexico (FIBRAS)		2004	Mexican Income Tax Law	12	67,781	1.34	11	
Brazil (FII)		1993	Federal Law 8,668/93	190	17,367	1.44	10	
Australia	Australia (LPT)	1985	(Public) Unit Trust and Equity Law, Trust Income, Division 6, ITAA 1936, Tax Administration Act 1953	43	109,040	6.19	2	
	New Zealand (PIE)	2007	Income Tax Act 2007	4	4,028	0.24	17	
Asia	Hong Kong (HK-REIT)	2003	Code on Real Estate Investment Trusts	12	28,291	1.93	8	
	Japan (J-REIT)	2000	Investment Trust and Investment Corporation Law	46	301,578	6.04	3	
	Malaysia (M-REIT)	2005	Malaysian Income Tax Act of 1967, Capital Market Act 2007, SC guidelines on REITs 2012 (2005 for Islamic REIT)	16	35,069	0.51	16	
	Singapore (S-REIT)	1999	Securities and Futures Act (CAP 289), MAS Code on Collective investment Schemes, Property Fund Guidelines, Income Tax Act	37	113,656	3.74	7	
	South Korea (REIC)	2001	Real Estate Investment Company Act, 2001	5	1,364	0.06	23	
	Taiwan (REIT/REAT)	2003	Real Estate Securitisation Act 2003	6	2,615	0.19	18	
	Thailand (REIT/PFPO)	2007	Capital Market Act B.E.2550 (REIT) Securities and Exchange Act B.E.2535 (PFPO)	50	8,079	0.58	15	
Middle East	United Arab Emirate (Dubai)	2006	The Investment Trust Law No 5	1	201	0.01	26	
Africa	South Africa (Trust/Companies)	2013	Income Tax Act No 58 of 1962, Collective Investment Scheme Control Act No 45 of 2002, Companies Act No 71 Of 2008, JSE listing requirement	33	55,797	1.52	9	
	Nigeria (N-REIT)	2007	Investment and Security Act, 2007	3	200.7	0.02	25	
Total				1052	2,180,184.7	100		

Source: Authors Compilation from EPRA Global REIT Survey, 2015; ISA, 2007 and Nigeria Stock Exchange (EPRA 2015 Figures in EURO - €, were converted to United States Dollar – US\$)

REIT is a real estate investment vehicle designed to make fund available for real estate and stimulate real estate development and financing. This could be made possible in two ways. Firstly by making fund available for immediate acquisition of real estate products developed by property developers, who will have their money in bulk and in time and move on to develop more or payback their development loan thereby making such fund available for another project by developers. Secondly, REITs through mortgage REIT can buy mortgaged backed securities thereby releasing fund for mortgage activities. Although, the available studies has focused more on performance of Equity REIT (Newell & Peng, 2012; Ong et al., 2011; Okunev & Wilson, 2008; Ooi & Liow, 2004; Newell, Ting, & Archeampong, 2002; Ling, Naranjo, & Ryagaert, 2000; Mei & Liu, 1994), some REITs are reported to involve in real estate development to increase their portfolio. Nevertheless, the wish of every REIT Company is to buy real estate asset today that guarantees capital appreciation tomorrow while paying most of its yearly income out as a dividend.

### **2.3.1 Structure of REIT**

A model outlook of any REIT is developed in line with the creativity of the investment banker floating the REIT, the investors' need, local and jurisdictional rule, regulations and law guiding REIT establishment and operations. This is reflected in focus, sector or environment of REIT (Parker, 2011). REIT acquisition may target individual real estate owners, or property developers and even real estate fund. They could adopt internal or external management strategy and can be property sector specific or geographical locational focused (Chan et al., 2003). Irrespective of the focus or management strategy, a typical REIT structure is presented in figure 2.4



**Figure 2.4:** Typical structure of externally managed REIT  
 Source: Lecomte and OOi (2012) in Moss and Prima (2014)

## 2.4 History and Development of REIT

Table 2.1 above showed the summary of the commencement of the modern REIT regime across the world from 1960 and the features of the different REIT markets as provided by their respective REIT laws. However, practices of REIT like investment existed long for a time. Before the 1960 tax amendment by the US Congress, the underlying concept of REIT was already a century old. The historical concept of REIT can be traced to the **‘Massachusetts Business Trust’** created in Boston, Massachusetts during the 19<sup>th</sup> century. Real estate investment opportunities witnessed increased demand as a result of industrial revolution wealth of the mid-19<sup>th</sup> century. It was then impossible for a corporation to be an investment vehicle exclusively in real estate as state laws prevented such unless the property so invested on was an integral part of the corporation business. Massachusetts Trust, a legal entity designed as a response to state laws was the first allowed to invest in real estate. The trust eliminates taxation, distributes rent to individual free from tax. The US Supreme Court’s removal of Massachusetts Trust’s tax status in 1935 sent the Massachusetts Trust to its early death along with many similar trusts. The 1940 Investment Company Act created tax favoured close-end mutual funds and this led

to the resuscitation/revival of Massachusetts Trust concept in 1950 with the great lobby of the surviving trusts – Real Estate Trust of America, for similar tax treatment to the closed-end mutual fund. The amendment of the tax law in 1960 by the US Congress gives real estate trusts similar tax treatment and created the modern REIT (Chan et al., 2003). Since then more countries around the world have established REIT regimes at different times. The spread of the REIT approach to real estate investment around the world has also increased awareness and acceptance of investing in global real estate securities. According to EPRA (2012), as at mid-2012, the global index of REIT included 414 public (commercial) real estate companies from about 37 countries with a market capitalization of about US\$1trillion with approximately 68% of the capitalization coming from REITs. By the end of September 2015, the number of listed property securities including both REITs and property companies across 37 countries grew to 1050 with US\$2.18trillion capitalisation (EPRA, 2015), see Table 2.1. The following sections briefly discuss the establishment of REIT in America and the adoption of REIT by other continents. In the end, Table 2.2 presents the number of REITs and their capitalization on a continental basis and the ranking for the REIT regional markets according to the percentage contribution to the global REIT capitalization.

#### **2.4.1 REIT in North America**

According to Taylor and Bailey, 1936 (quoted by Ong et al., 2011), REIT was begun in Boston in the middle of 1880s. However, the significant event of REIT history can be traced to the signing of REIT Act into Law in 1960 by the US President Eisenhower. In 1961, the first REIT was created and in 1965, it was listed in New York Stock Exchange (NYSE) (Ling et al., 2000). By 2015, there were 409 REITs and property securities registered to trade in major US stock market with US\$898.41billion in market value (EPRA, 2015). REITs were created by the Congress (US legislative arm of government)

in order to give all investors the opportunity to invest in large-scale, diversified portfolios of income-producing real estate in the same way they typically invest in other asset classes – through the purchase and sale of liquid securities (Chan et al., 2003). Some REITs finance real estate. To qualify for REIT under U.S. tax rules, a company must.

- Be structured as a corporation, trust or association.
- Be managed by a ‘Board of Directors’ or Trustees.
- Have transferable shares or certificate of interest
- Otherwise be taxable as a domestic corporation
- Not be a financial institution or an insurance company
- Be jointly owned by 100 persons or more
- Have 95% of its income derived from dividends, interest and property income (rents)
- Pay dividend of at least 90% of the REIT’s taxable income
- Have no more than 50% of the shares held by five or fewer individuals during the last half of each taxable year (5/50 rule)
- Have at least 75% of its total asset invested in real estate
- Have no more than 25% of its total asset invested in taxable REIT subsidiaries.

In Canada, REIT was established in 1973. They are required to be configured as trusts and are not taxed if they distribute their net taxable income to shareholders. REITs were excluded from the Income Trust Tax legislation passed in 2007 budgets by the Canadian Conservative government. Many Canadian REITs have limited liability. On December 16, 2010, the Department of Finance proposed amendments to the rules defining qualifying REITs for Canadian tax purpose. As a result, qualifying REITs are exempt from the new entity-level ‘Specified Investment Flow-Through (SIFT)’ tax that all publicly traded income trusts and partnership are paying as from January 1, 2011 (Dittman, 2010). There are 49 listed REIT in Canada with US\$63.852bn capitalisation.

The North American REITs totals 458 with capitalisation of US\$962.26bn resulting in 44.14% of the global REIT capitalisation.

#### **2.4.2 REIT in South America**

According to the 2015 global REIT survey report by EPRA, South America accounted for 3.91% of global REIT capitalization having 202 listed REITs and US\$85.15bn. Brazil and Mexico are at the forefront of South America REIT.

REITs were introduced in Brazil in 1993 by the Law 8668/93 and initially ruled by the Instruction 205/94 and now by Instruction 472/08 from the Commission de Valores Mobiliarios (CVM), the Brazilian equivalent of Stock and Exchange Commission (SEC). Locally they are described as FIIs or Fundos de Investimento Imobiliarios. FII's dividend have been free of taxes for personal investors (not companies) since 2006, but only for the funds which have at least 50 investors and that are publicly traded in the stock market. FIIs referred to as REIT to correspond with the similar investment vehicle in the US, have been used either to own and operate independent property investment, associated with a single property or part property, or to own several real properties funded through the capital markets (EPRA, 2015).

Mexico passed the REIT legislation in 2004(Mexican Income Tax Law) to allow for the equivalent of REITs known as FIBRAs (Fideicomiso de Infraestructuray Bienes Raices) to be traded on the Mexican Stock Exchange. The first REIT in Mexico was launched in 2011 and is called FIBRA UNO (Luis, Trevino, & Vidal, 2013). Like REITs legislations in other countries, companies must qualify as FIBRA by complying with the following:

- At least 70% of assets must be invested in financing or owning of real estate assets, with the remaining amount invested in government-issued securities or debt instrument of mutual funds

- Acquired or developed real estate assets must be income generating and held for at least four (4) years.
- If shares, known as Certificate de Participacion Inmobiliarios (CPI) are issued privately, there must be more than ten unrelated investors in the FIBRA
- The FIBRA must distribute 95% of annual profit to investors.

Chile recently legislated in favour of REIT establishing public and private investment funds (FI and FIP respectively) in 2014 January to come into force in May, 2014. Costa Rica established two fund types with similar characteristics to REIT in 1997 and 2009 named Real Estate Investment Fund (REIF) and Real Estate Development Investment Fund (REDIF). Puerto Rico enacted REIT law in 1972 with an amendment in 2000, 2006, 2011 and 2014 (EPRA, 2015). There has been no available public reports of REITs operations in Chile, Costa Rica and Puerto Rico.

### **2.4.3 REIT in Europe**

Over the past few years, REIT regimes have been introduced in Europe to meet the growing demand from investors for tax-efficient real estate investment vehicles. The top-performing REIT and the largest publicly traded real estate company in Europe is the French **Unibail–Rodamco** SE (Packard, 2012; Wilmot, 2012). The French acronym for REIT is SIIC, established in 2003 through the Article 11 of the Finance Act for 2003. French REIT has 20 listed companies with US\$122.79bn in capitalization (EPRA, 2015)

Amidst political resistance, Germany introduced German REITs (G-REIT) in order to create a new type of real estate investment vehicle and to avoid capital flight problem that could result from a significant loss of investment capital to other countries. A law concerning G-REIT was enacted on June 1, 2007 and was retroactive to January 1, 2007 (O'Sullivan, 2007). German REIT law has the support of the changes in various tax laws,



the Income Tax Act and the Investment Tax Act. REIT law was amended in 2009 through the Tax Amendment Act of 2009, and in 2011, it was further amended by the UCIT IV Transformation Act. The German REIT law provides as follows:

- REITs will have to be established as a corporation REIT-AG
- At least 75% of its asset have to be invested in real estate
- At least 75% of G-REITs gross revenue must be real estate related
- At least 90% of REIT taxable income has to be distributed to its shareholders through dividend
- The corporation is income tax exempt, but individual shareholders will have to pay individual income tax on the dividend.
- Some restrictions apply in establishing residential REIT

By July 2015, there are four G-REITs listed with three companies registered at the Federal Central Tax Office as Pre-REIT. The capitalization of G-REIT is US\$41.25bn

In the United Kingdom (UK), the legislation for laying out the rules for REIT was enacted in the Finance Act 2006 and came into effect in January 2007 when the nine UK property companies converted to REIT status. As in other countries, British REITs have to distribute 90% of their income. They must be a close-ended investment trust and be UK resident and publicly listed on a stock exchange recognized by the Financial Services Authority (EPRA, 2014). The UK-REIT has 33 listed companies with capitalization of US\$201.96bn (EPRA, 2015). The Finance Act of 2012 brought five main changes to the REIT regime in the UK as follows.

- Abolition of 2% entry charge to join the regime
- Relaxation of listing requirement – reduced cost and more flexibility
- Introduction of 3 year grace period before full compliance to close company rules
- REIT will not be considered close if it can be closed by the inclusion of institutional investors
- Interest cover's test of 1.25 times finance costs is no more as onerous.

Spain introduced REIT vehicle to her real estate market through the Act 11/2009 governing the Sociedades Anonimas Cotizadas de Inversion en el Mercado Inmobiliario (SOCIMI). An enactment in December 2012 changed substantially the Spanish SOCIMI, effective from January, 2013 and led to the acceptance of Spanish system into European REITs regimes. Spain has 10 REITs with a capitalization of US\$50.3bn.

REIT regimes were established at different times with operational REIT firms in the other European countries of Bulgaria (8 REITs, US\$8.74bn); Belgium (18 REITs, US\$400m); Greece (3 REITs, US\$2.03bn); Italy (2 REITs, US\$5.99bn); Netherland (5 REITs, US\$30.55bn); Ireland (1 REIT, US\$1.57bn) and Turkey (32 REITs, US\$7.27bn). Despite the enactments for REIT in some European countries (Finland, Israel, Hungary, Lithuania, and Luxembourg), their REIT operations are yet to take off or yet to be reported. On the aggregate, European REIT has 136 REITs with capitalization of US\$472.86bn accounting for 20.52% of global REIT.

#### **2.4.4 REIT in Australia and New Zealand (Pacific)**

Australian Listed Property Trust (LPT) is the equivalent of REIT concept. It was launched in Australia in 1971. General Property Trust was the first Australian REIT on the Australian Stock Exchange (now the Australian Securities Exchange). Listed REITs on Australian exchange were known as Listed Property Trusts (LPT) until March 2008 to distinguish them from private REITs (unlisted Property Trusts). The listed property trusts are now renamed Australian REIT (A-REIT) in line with international practice (Singh, 2011). The requirement includes 50 minimum owners or 20% of the units to the institutional investor Superannuation, 75% gearing and 100% distribution. There are 43 REITs listed on the ASX with a market capitalization in excess of US\$109.04billion contributing 5% of the global REIT capitalisation (Baljeez, 2012).

In New Zealand, the Portfolio Investment Entity (PIE) was created through the Income Tax Act, 2007 with some similar characteristics of a REIT. The PIEs distribute their income to individual resident investors and the income is taxed only at the PIE level with no further tax at the individual investor's level. The tax rate is between 10.5% and 28% (EPRA, 2012, 2014). Initially unit trusts and companies were the ones investing in real property interests, any such Unit Trust or Company which invests in real property assets and meets the requirement may convert to PIE regime. There is no specific licence required to convert to PIE and no minimum or the maximum amount specified to be invested in real property interest. Unit Trust and companies are regulated and guided by the Trustee Act of 1956; Unit Trust Act of 1960 and Company Act of 1993. For the New Zealand residents investor is provided a fair tax treatment regime through the PIE as Collective Investment Vehicles/Options. Income is taxed at PIE level at a rate lower to the marginal rates of personal tax.

Unit Trusts were created by Trustee Act 1956 and where units of a Unit Trust are public offered, the Unit Trust Act 1960 applied and requires registration of the Trust Deed under Securities Act of 1978 and Securities Regulations of 2009 (from October 1, 2009) or Securities Regulations of 1983 (up till June 30, 2010). From August 29, 2011, the new provisions of the tax legislation created the opportunity for non-resident investment on unlisted PIEs which convert to 'Foreign Investment PIEs' with a zero tax rate and the implementation of a variable rate for foreign investment PIEs by April, 2012. The foreign investment PIEs may invest in land abroad only, but not in New Zealand land (EPRA, 2012, 2015). The income is taxable only at PIE level, no income generation restriction, and no stamp duty or gain tax for land disposal in the case of New Zealand PIE. The New Zealand REITlike PIE and Unit Trusts contributes 0.18% of the global REIT market capitalization to the sum of US\$4.03bn with 4 REITs/PIEs. The ownership structure of

PIEs restricts 100 units holders having more than 25% of the PIE units and 20 non-associated persons cannot hold more than 20%. Pacific REIT is the 4<sup>th</sup> largest REIT in the world (5.19%) with 47 REITs and US\$113.07bn capitalization (EPRA, 2015).

#### **2.4.5 REIT in Asia and Middle East**

Historically, prior to 2001 introduction of REIT in Asia, Malaysia had been the first Asian country to develop REIT. Malaysia develops REIT as a valuable indirect real estate investment vehicle in 1988 and the first listed property trust fund in 1989 (Ong et al., 2011). Other Asian countries like Japan, Singapore, Korea and Hong Kong only accepted/adopted REIT following the consequences of the 1997 Asian financial crisis (Ong et al., 2011). According to FMI Report (2010), Japan pioneered the modern REIT's introduction in Asia in 2001 which was shortly followed by South Korea in the same year. In 2002, Singapore enacted its legislation, which was then followed in turn by Hong Kong, Taiwan, Thailand and Malaysia. The Asian financial crisis of 1997 was the impetus for the development of property funds in Thailand and South Korea. In Thailand, property funds were originally intended to be a vehicle to encourage the acquisition of distressed properties in the aftermath of the 1997 crisis. It is now being used to raise fund from the public (FMI, 2010). In South Korea, REITs were initially used to promote investment in real estate owned big corporations and financial institutions that were in dire need of restructuring. There are 173 listed REITs operating in seven Asian countries with capitalization in the tune of US\$490.85bn representing 22.51% of the global REIT (EPRA, 2015) making Asian REIT the second largest in term of capitalization, behind North America.

As mentioned earlier, REIT is not new in Malaysia, It was previously known as Property Trust Fund which had been in existence since 1986. Malaysian Property Trust Fund (PTF)

was developed in line with the Australian Listed Property Trust (LPT) model as a basis to set up the regulatory framework (Hwa, 2009). Bank Negara Malaysia (Malaysian Central Bank) approved the first regulatory framework under Company Act 1965 and Securities Commission Act of 1983, governed the establishment and operations of the Property Trust Funds (Rozali & Hamzah, 2006). The Securities Commission became regulator later on and further guidelines were published by the Securities Commission in 1995 and revised in 2002 (Hwa, 2009).. Malaysian REIT in modern form, came into existence in 2005 following the guidelines of the Securities Commission same year. The 2002 amendment particularly stated that the minimum fund size is RM100 million for a REIT to be formed in Malaysia. The management company has entitlement to foreign effective equity, limited to the maximum of 70 percent (Ong et al., 2011). Furthermore, real estate investment trust can either be listed or unlisted in Malaysian Stock Exchange. However, relevant listing and shareholding prerequisites issued by KLSE must be complied with by the listed REIT. According to the Finance Act 2004, which was gazetted in December, real estate investment trusts are enabled to indulge the tax treatment as followed:

1. The undistributed income will be taxed at 28 percent while distributed income will be tax exempted.
2. The tax payable at 28 percent will be withheld by real estate investment trusts for non-residents
3. Accumulated income that has been taxed and subsequently distributed is eligible for tax credit.

Besides, stamp duties are exempted on all transfer of real property for REITs as stated in the Finance Act 2004. Real property gains taxes are also exempted for property sale transaction from owners to REITs (Ahmad & Izah, 2010). Today, Malaysian REIT (M –

REIT) has seventeen (16) REITs companies out of which four (4) are Islamic REITs. Total M-REIT Capitalisation is US\$35.07bn (EPRA, 2015)

Japan is one of the handful countries in Asia with REIT Legislation since 2001. J-REIT securities are traded on the Tokyo Stock Exchange. Since the burst of the real estate bubble in 1990, property prices in Japan have seen steady drops through 2004, with signs of price stabilization and possible increase in 2005 and 2006 before the global economic and financial crisis of 2007. A J-REIT (a listed real estate investment trust) is strictly regulated under the Law Concerning Trusts and Investment Companies (LITIC) and established as an investment company under LITIC. The Japanese, in addition to REITs also provide for a parallel system of special purpose companies which can be used for securitization of particular properties on the private placement basis. Japan has the highest number of listed REITs (J-REIT) and accounts for 61.44% of Asian REIT market capitalization (46 REITs, US\$301.58bn). J-REIT market experienced dramatic growth but tumbled during the global financial and credit crisis of 2007 as financing for real estate companies became limited. The J-REIT market recovered slowly in 2009 as the Japanese government introduced safety nets to ensure that J-REIT companies were able to secure adequate funding. The safety net was the injection of fund/capital into Development Bank of Japan (EPRA, 2015; Newell & Peng, 2012).

Singapore was the second largest REIT Market (S-REIT) in Asia with 37 listed REITs and a market capitalization of US\$113.65billion (EPRA, 2015). In Singapore, REITs are listed in the Singapore Stock Exchange (SGX). The first REIT to be set up is the Capital Mall Trust in July, 2002. The S-REIT market continues to diversify as the asset holdings expanded to service apartments, healthcare facilities and hospitality. With the support of the government through relaxation of policies on REITs, Singapore has positioned itself

as the hub for cross-border REITs. Therefore, in addition to local property stocks S-REITs hold a variety of properties in other countries (Japan, China, Indonesia and Hong Kong) (HelveticInvestments, 2012). S-REITs are regulated as a collective investment scheme under the Monetary Authority of Singapore (MAS)'s code on collective investment schemes or alternatively as Business Trust.

REITs came into existence in Hong Kong in 2005 with the launching of the Link REIT by the Hong Kong Housing Authority on behalf of the government. Hong Kong became the third largest REIT market (HK-REIT) in Asia with US\$9.5billion in market capitalization in 2009. As at September 2015, Hong Kong REIT (HK-REIT) has 12 REIT listed with a market capitalization of approximately US\$28.29billion amounting to 1.3% of the total global REIT capitalization (EPRA, 2015). Taiwan Established REIT/REIT in 2003 and has 6 REITs (US\$2.62bn), Thailand in 2007 with 6 REITs and US\$8.08bn while South Korea the least among the seven leading Asian countries was established in 2001, having 5 REITs and a market capitalization of US\$1.36bn. United Arab Emirates (UAE) introduced REIT through the Investment Trust Law No.5 of 2006 with only one REIT Company (Emirates REIT) as at June 2014 listed on the NSADAQ Dubai in 2014. Dubai REIT is capitalized to the sum of US\$201bn (EPRA, 2014, 2015).

In Asia, there are other countries that are developing legal and structural frameworks for the establishment of REIT regimes. India REIT Act was enacted through the finance Act No. 2 of 2014 and was further amended by Finance Act of 2015 that was passed by the parliament in May, 2014. The Securities and Exchange Board of India (SEBI) earlier released the consultation paper with draft REIT regulation. The regulations after the modification were enacted in September, 2014. Pakistan developed REIT regulation in 2015 and two (2) REIT management companies have been established. Philippines has

enacted REIT laws since 2009 through the REIT Act of 2009 and Securities and Exchange Commission (SEC) approved implementing rules and regulations on May 2010.

#### **2.4.6 REIT in Africa**

In Africa, REIT came into existence in Ghana since 1994. The Home Finance Company, now HFC Bank, established the first REIT in Ghana in August 1994. HFC Bank has been at the forefront of mortgage financing in Ghana since 1993 (Odunsi, 2011). It has used various collective investment scheme as well as corporate bonds to finance its mortgage lending activities. Collective investment scheme of which the REIT is a part, is currently regulated by the Securities and Exchange Commission of Ghana. The Ghana REIT sector is still yet to be developed. Kenya legislated for the modern REIT in 2013.

In South Africa, until 2013, the existing local structures serving as investment vehicles for real estate are Property Loan Stocks (PLS) and Property Unit Trusts (PUT) which are unevenly regulated and subject to different tax treatments. A PUT holds immovable property and shares in property companies. A South African PUT is legally regulated by the Collective Investment Schemes Control Act No 45 of 2002 ('the Collective Investment Schemes Act'). The main difference between a PUT and a PLS company, is that a PLS company is a company regulated by the Companies Act No 71 of 2008 ('the Companies Act') and is not required to comply with the Collective Investment Schemes Act. Unlike a unit holder in a PUT, an investor in a linked unit in a PLS company holds both equity and a debenture. The South African National Treasury recently considered the introduction of the internationally adopted REIT structure into the South African environment. Key drivers in this process are observations that the existing property investment vehicles are "partly regulated and the regulatory framework is too restrictive and not internationally competitive" and that there are inconsistencies in the tax treatment



of PLS companies and PUTs (EPRA 2012). The National Treasury's proposal to introduce this listed property investment regime was aimed at aligning the South African listed property sector with its international counterparts, which will also create a more attractive investment structure to enhance international interests. The REIT legislation in South Africa came into effect on 1<sup>st</sup> April, 2013 and it is expected to transform the listed fund (PUT) to modern REIT and grow the property market (Smith, 2013). The new Real Estate Investment Trust (REIT) structure has fully become effectively operative with the benefit of growing the current local property structures and simultaneously increase foreign investment opportunities. The adoption of the REIT structure, which is recognised in most of the key property markets internationally, is set to revive the South Africa's systems of PLS and PUT through the introduction of a scheme that has been tried and tested internationally. The REIT regime simultaneously brought the much needed tax and regulatory changes that local property structures could certainly benefit from in the long term. A company wishing to register as a REIT must be listed or intend to list on the Johannesburg Securities Exchange (JSE), and comply with all listing regulations with a minimum gross holding of direct or indirect property assets of R300 million. Before now, there are no listing requirements for PUTs, but they are regulated closely by the Financial Services Board (FSB). A REIT must however distribute at least 70% of its profits annually and its gearing is limited to 60% of net asset value. A PLS, South Africa's more dominant vehicle for property structures is a share-linked debenture structure that is indivisibly tradable on the JSE and taxed at a normal rate of 28% with an effective CGT rate of 18.6%. Under the PLS structure, most profit is paid out to investors as interest, which is tax deductible in the PLS and taxable income in the hands of the investor (EPRA, 2014). Despite the introduction of REIT in Ghana and Nigeria, no report of the REITs in the two countries is available in the public domain. However, the South African REIT is globally reported to represent Africa REIT and property markets. As at the end of

September, 2015, there are 33 REIT companies with US\$55.80bn accounting for 2.56% of global REIT capitalization.

#### **2.4.7 REIT in Nigeria**

Nigeria as a developing nation and an emerging market in the economic world presents a non-matured property market. Akinbogun et al. (2014) and Dugeri (2012) found the market immaturity of the Nigeria property market in consideration of market maturity indicators. These factors include the volume of transactions in Nigeria property market, property right and land tenure system, real estate market characteristics including performance index or indices, availability of market information and planning standard and compliance. The market transparency report also characterised the Nigerian property market as non-matured, rating Nigeria in the opaque region. However, the Nigeria property market offers a positive economic perspective and a good real estate investment market choice as an improver market in the 2014 JLL ranking of market transparency.

In 2007, the Securities and Exchange Commission (SEC) of Nigeria issued the first set of guidelines for the registration and issuance of the requirements for the operations of REIT in Nigeria following the enactment of Investment and Securities Act (ISA) of 2007. The first REIT in Nigeria is the SKYE Shelter REIT launched by SKYE Bank Plc in 2007 with NGN2billion. Following this was the launching in 2008 of Union Homes Hybrid REIT by Union Homes (a subsidiary of Union Bank of Nigeria Plc) with a market capitalization of NGN50billion (Odunsi, 2011; Oreagba, 2010). Union Homes has been engaging in real estate acquisition, development, financing, leasing and management prior to the launching of its Hybrid REIT. Unfortunately, the IPO was under subscribed to due to the global economic and financial crisis of 2007/2008. Today, there are three REITs in Nigeria REIT (N-REIT). The recent entrant into Nigeria REIT is the UPDC

REIT launched by UAC Property Development Company (UPDC), a major player in the Nigerian real estate sector with NGN30billion entry. The Businessday of February 8, 2013 reported that UPDC planned to raise the N30 billion through an IPO of three billion nits of N10 each at par in the UPDC REIT. This could portray a demonstration of investor-confidence in not just a stock market that has suffered a serious crisis of confidence, but also in the Nigerian economy. The IPO, which opened on February 19, 2013 and closed on March 28, 2013, has the authorisation of the Securities and Exchange Commission (SEC) and the approval of Nigerian Stock Exchange (NSE) (Businessday, 2013). Nigeria has a total of 3 REITs with market capitalization of US\$200.7m

**Table 2.2:** Continental Outlook of Global REIT Market and Rank as at 30/09/2015

Continent	No. of REITs	Capitalisation (US\$'million)	Global Market Share (%)	Rank/ Position
North America	458	962,260	44.14	1
Asia and Middle East	174	490,853	22.51	2
Europe	136	472,858	21.69	3
Pacific – Australia and New Zealand	47	113,068	5.19	4
South America	202	85,148	3.91	5
Africa – South Africa and Nigeria	36	55,998	2.56	6
<b>Total</b>	<b>1050</b>	<b>2,180,184</b>	<b>100</b>	

Source: Author's compilation from EPRA Global REIT Survey, 2015 and NSE

## 2.5 Types of REIT

Generally, REITs provide a way for an individual investor to earn a share of the income produced by real estate ownership without going out to buy real estate properties. There are other property securities that provide an opportunity to invest in real estate indirectly, such as property development company shares, listed property funds and property unit trusts. These are regarded as non-REIT property securities because they do not benefit from the special tax exemption advantage of REIT. REITs are expected to register with Securities and Exchange Commission (SEC) and listed in the stock market. While many REITs are publicly traded on the stock exchange, some others are not. The publicly traded REITs are referred to as Listed REITs while the non-traded ones are referred to as

Unlisted REITs. This is an important distinction among various types of REITs which could affect both the benefit and risks to an investor. REITs also could be categorized as Conventional and Islamic REITs. While both have the same operational and regulation framework, the difference comes in the form/type of tenancy and/or activities/business conducted to generate income from the REIT acquired properties. Conventional REITs allow all legal trading/business activities while Islamic REITs allowed only Sharia-compliant activities and trading/business. For clarity, a tourist property that allowed or encouraged prostitution is not Sharia compliant, so also is business that attracts charging of interest (there are four Islamic REITs in Malaysia). This will also affect the benefit of a REIT to an investor. Broadly and conventionally, REITs are classified into three, Equity, Mortgage and Hybrid.

#### **2.5.1 Equity REIT:**

Equity REITs invest in and own properties, thereby are responsible for the equity or value of their real estate assets. Revenue is principally through the rents from the properties.

#### **2.5.2 Mortgage REIT:**

Mortgage REITs deal in investment and ownership of property mortgages. These REITs loan money for mortgages to owners of real estate, or purchase existing mortgages or mortgage-backed securities. Revenue accrues to Mortgage REITs from the interest that they earn on the mortgage loans.

#### **2.5.3 Hybrid REIT:**

Hybrid REITs combine the investment strategies of equity REITs and mortgage REITs. Hybrid REITs invest in both properties and mortgages. Revenue to Hybrid REIT comprises of rents from owned properties as well as interest from the mortgage loans.

The global REIT market is also divided into two namely developed and emerging markets. The developed market has well established REIT regimes in a matured real estate market with a developed real estate financing system (mortgage). The developed markets have REITs with high capitalization. US, UK, France, Australia, Hong Kong, Singapore, Canada and Spain are examples of developed markets. The emerging markets on the other hand are the newly established REIT markets with less capitalised REITs in the developing economies. Malaysia, South Africa, China, Brazil, Mexico, Poland, Turkey and Philippine are examples of emerging REIT markets. Table 2.3 presents the capitalization of developed REIT markets versus the emerging REIT markets.

University of Malaysia

**Table 2.3: Developed and Emerging REIT markets Capitalisation – December, 2014**

Developed REIT Market		Emerging REIT Market	
Country	Capitalisation (US\$'m)	Country	Capitalisation (US\$'m)
Australia	67,332.28	South Africa	16,062.68
New Zealand	895.25	China	45,440.63
Hong Kong	84,095.89	India	2,185.81
Japan	132,899.47	Indonesia	9,334.57
Singapore	37,111.43	Malaysia	6,089.44
France	14,265.58	Philippines	9,362.10
Germany	26,674.60	Poland	354.57
Greece	322.00	United Arab Emirates	10,110.89
Italy	896.35	Turkey	2,337.77
Netherland	30,939.40	Czech	754.30
Norway	916.17	Russia	3,009.48
Sweden	11,605.17	Brazil	9,667.12
Switzerland	9,131.95	Mexico	9,120.94
Spain	2,390.63	Taiwan	150.86
Israel	1,091.25	Thailand	5,647.87
United Kingdom	68,932.86		
Canada	37,015.63		
United States	604,718.21		

Source: Researcher's compilation from EPRA Monthly Statistical Bulletin, December 2014  
(The capitalization currency in Euro was converted to United States dollar by the researcher)

The total emerging REIT markets have 150 constituents with a capitalization of US\$183.52bn. The top 20 constituents contributes 50% of the emerging markets capitalization.

## 2.6 Advantages of REIT

REITs offer a great number of advantages as it provides cheaper and longer term capital for big ticket real estate transactions and broadens access to real estate ownership. REIT evolved in response to the need to create an avenue for people (other than the wealthy individuals and corporations), to invest in pools of significant real estate assets. In comparison with other investment tools such as stocks, REITs have some features to its advantage. REITs have been found to have low correlation with other asset class which help as a diversification investment tool, it also have low volatility in price changes (Lee & Ting, 2009; Liu, Grissom, & Hartzell, 1995; Newell & Osmadi, 2009; Newell et al., 2002; Ong et al., 2011; Ooi & Liow, 2004; Ooi & Ong, 2011) this means it does not respond sharply to changes in market factors that may affect its prices, its respond is slow and minimal to absorb market shocks in term of price movement. Though REITs have

low investment risk but tax exemption benefit at corporate level compensates for its yield to remain high and competitive. REIT provides a lot of advantages to the investors and the economy of a nation. The advantages are discussed in the following sub-sections.

### **2.6.1 High and Reliable Income (Yield)**

The purpose of any investment is to achieve some kind of return(s). Investment can best be compared by defining the measurable returns that are available in our economic system. The sources of returns differ and can be distinguished as (a) income, (b) capital appreciation and (c) value gain (Wiedemer & Goeters, 2003). Income represent the money return (in terms of currency) on investment, appreciation is a passive increase in investment value resulting from scarcity and price inflation while Value gain refers to the increase in real value of the investment above the mere increase in income and in term of appreciation.

Some investments mix all the three types of measurable returns. According to Wiedemer and Goeters (2003), a dividend paying stock could provide a steady income, some degree of appreciation from inflation and a possible, value gain from the profitable growth of company/business/venture which could be reflected in the Net Asset Value (per unit). Real estate as an investment covers a diverse range of properties where the three types of return can be found both separately and in combination. An investment in income generating property such as commercial properties or apartment buildings (condominium) reflects a combination of the three types of return. REITs own tangible assets and earn rents from tenants that sign leases (FMI, 2010). For many investors, the main attraction of REITs has been a dividend yield. The average global dividend yield for REITs was about 4.3% in September 2012, well above the yield of the S&P 500 index but below the longer term average REIT which has been trending in the 7-8% range. REIT

dividends are secured by stable rent from long-term leases (Havsy, 2012). The yield/return from REITs is also competitive, in 2009, the average dividend yield of Asian REIT ranged from 4.1 to 9.3%, which was higher than the interest rate given to traditional investment vehicles such as Savings and Time Deposits (FMI, 2010). According to the December 2014 edition of EPRA Monthly Statistical Bulletin, the global average dividend yield for REIT in 2014 is 3.71%, and in comparison with the non-REIT property securities, with average dividend yield of 1.96%. (Table 2.4)

### **2.6.2 Simple Tax Treatment**

Tax treatment of REITs is fairly straight forward unlike most partnerships or companies. The company income is not taxed when the statutorily required income are distributed to investors as a dividend (Brooking & Hallowes, 2013). The percentage of the income before tax to be distributed varies across countries/markets with majority specifying 90%, Greece having the minimum of 50%, South Africa 75%, Belgium and UAE 80%, Ireland and Italy 85%. The percentage of income to be distributed are not usually dictated to the non-REIT property companies and they can decided to distribute or not and how much. Such companies can withhold earnings for business expansion and re-investment. Non-REIT property companies are taxed before income distribution and the investors also pay income tax on the dividend they received- withholding tax. Investors in REIT are only tax at their income tax level through withholding tax as may be applicable in each country. There is no double taxation in REITs. The legal framework and operational guidelines offer tax benefits in exchange for the distribution of almost all income as dividend to investors (FMI, 2010). The tax exemption treatment of REIT is the greatest attraction to investors and with little difference(s) from one country to the other. The different REIT law in different countries specified clearly the treatment of tax at the REIT level. According to Brookings and Hallowes (2013), in Brazil, real estate related incomes are



fully exempted from tax while other incomes to a REIT are subjected to withholding tax. Capital gain is also exempted to tax payment. Fixed income tax rate ranges between 15% and 22.5% (based on time held), variable income tax ranges between 15% and 20% while withholding tax is set off against tax on distribution to investors. In Singapore, real estate income is exempted from tax. Income that is not distributed is subject to corporate tax. Gains made from a trading nature are taxed at 17% and the withholding tax is charged on receipt of local income. In South Africa, only income that is not distributed is subjected to a corporate tax of 40%. In Turkey, all income are exempted from tax. The First Metro Investment Report of 2010, reflects the tax treatment by the Philippine REIT law, real estate related income is exempted from corporate tax, a withholding tax rate of 1%, undistributed dividend at 10% and 50% charged capital gain tax on sales and transfers of assets to REITs. In Nigeria, distributed income is corporate tax exempted while dividend withholding tax of 5% is applicable at the investors' level. Undistributed income will be taxed at the corporate tax rate (Oreagba, 2010). In Malaysia, undistributed income is taxed at 28% while distributed income is exempted. Dividend from investment is also taxed at 28% rate. Capital gain and certain income are exempted from tax. Withholding tax is charged on dividend at the investors' level of 28% for non-resident and 10% for resident unit holders (Guidelines for REIT/PTF in Malaysia).

### **2.6.3 Liquidity and Diversification**

REIT shares are bought and sold on a stock exchange which is much easier than buying properties directly. REITs help property developers to redeploy their capital investment in other forms of opportunities. It also allows for holding investment in liquid form. Studies in the past had shown that adding REIT to a diversified investment portfolio increases return and reduce risk. From the perspective of diversification, Modern Portfolio Theory is also applied to REITs in terms of the different types of properties held

in the portfolio by the company. According to the theory, diversification is important as the risk is reduced without compromising the returns. In other words, the idea of the theory is to advise investors not to place all their funds solely into one investment type.

In the context of Real Estate Investment Trust, diversification could be in term of property types or geographical spread (location) or other real estate investment vehicles. REIT portfolio comprises of various properties and different property types at different locations thereby reducing risk and volatility of investments (FMI, 2010 and Alias & Soi Tho, 2011). Property types can be divided into several such as office, hotel, industrial, hospital, residential, plantation, retails, and warehouse. Different property types have different demand and supply in the market. By having different types of property in the portfolio, the exposure to the real market risk will be reduced, therefore retaining the stability of the income. For the diversification strategy of location, the risk of investment for REITs will be reduced by having properties in different locations. The cause of real estate performance being high is due to the low correlation with other assets. This is also a major advantage of investment in real estate. In fact, this has been a strategy of diversification for investors. Interestingly, REIT as a stock market investment possesses higher risk than the property companies. However, diversification to other investment options especially financing of real estate development is prohibited. This is discussed more in chapter three (3).

#### **2.6.4 Economic Growth**

The growth of REIT industry/sector leads to the stability of the economy and stimulates the economy for further growth. This was the experienced in Asia when REITs were used to cushion the effect of both Asian Economic Crisis of 1997 and the Global Financial Crisis of 2007. Most Asian countries develop their REIT between the two economic crisis

periods (1997 – 2007). Real estate sector is closely linked to three other sectors of Construction, Services and Consumer (FMI, 2012). A successful real estate investment industry generates ancillary benefits of employment opportunity and job creation (Brookings and Hallows, 2013). Construction is a labour intensive sector which uses both skilled and non-skilled labour. REIT also encourage savings that enable small time investors to participate in the real estate market. Low and medium income earners who are small time investors will not need to generate a large amount of money required for real estate development before they can invest in the property sector. The savings towards real estate investment in turn lead to general economic growth as construction activities create employment for both skilled and unskilled labour and in the service industry. The basic economic principle of Income (Y), Consumption (C), and Saving (S) will come to play in the economy.

where  $Y = C + S$ ; the saving is often invested to generate more income.

Thus  $Y = C + I$ ; where I is the investment and therefore giving  $S = I$

The real estate property quality as a hedge against inflation is equally present in REITs and this contributes to economic growth. Gyourko and Linneman (1989) found REITs providing partial protection against inflation. However, the finding of a study by Chatrath and Liang (1998) within the period 1972-1995 reported no inflation hedging ability of REITs. Glascock, Lu, and So (2002) concluded that the negative correlation manifest the changes in monetary policies. The consensus from the study of Lee and Lee (2011) was that following the 1990s structural change, REIT had long run positive hedge against expected inflation.

**Table 2.4:** Developed Markets REITs and Non-REITs Capitalisation and Return as at December 2014

Continent	Country	REIT				Non-REIT			
		Capitalisation (US\$'m)	Market Share (%)	Dividend Yield (%)	Total Return (%)	Capitalisation (US\$'m)	Market Share (%)	Dividend Yield (%)	Total Return (%)
Global	<b>Global</b>	<b>997,071.06</b>	<b>79.50</b>	<b>3.71</b>	<b>23.34</b>	<b>257,100.52</b>	<b>20.50</b>	<b>1.96</b>	<b>-5.89</b>
Asia	Hong Kong	16,668.75	18.06	3.86	32.79	75,722.71	81.94	3.04	9.94
	Japan	67,103.13	45.95	2.94	10.07	78,937.41	54.05	0.63	-27.73
	New Zealand	983.50	100	5.20	15.05	-	-	-	-
	Singapore	20,037.07	49.13	5.64	13.77	20,743.74	50.87	1.98	-1.20
	Australia	73,995.58	100	4.11	16.55	-	-	-	-
	<b>Asia Aggregate</b>	<b>178,808.03</b>	<b>50.48</b>	<b>3.83</b>	<b>15.32</b>	<b>175,403.86</b>	<b>49.52</b>	<b>1.83</b>	<b>-11.14</b>
	Europe	Austria	3,268.45	100	2.74	6.79	-	-	-
Belgium		5,521.75	100	5.48	5.60	-	-	-	-
Finland		-	-	-	-	2,294.69	100	3.19	-8.05
France		15,675.71	100	4.95	-0.81	-	-	-	-
Germany		1,292.05	4.41	4.88	2.54	28,019.66	95.59	1.83	27.47
Greece		354.76	100	2.41	0.98	-	-	-	-
Italy		984.97	100	3.71	5.80	-	-	-	-
Netherlands		33,998.75	100	4.40	5.46	-	-	-	-
Norway		-	-	-	-	1,006.80	100	0.00	13.46
Sweden		-	-	-	-	12,753.02	100	2.27	12.45
Switzerland		-	-	-	-	10,034.92	100	4.40	2.21
Spain		-	-	-	-	1,109.55	100	0.00	-9.24
United Kingdom		61,970.56	81.81	3.01	16.62	31,778.40	18.19	1.99	3.91
<b>Europe Aggregate</b>		<b>121,316.34</b>	<b>62.67</b>	<b>3.75</b>	<b>5.32</b>	<b>72,265.49</b>	<b>37.33</b>	<b>2.33</b>	<b>8.74</b>
	Israel	-	-	-	-	1,199.50	100	1.8	1.09
North America	Canada	38,335.89	94.25	5.77	1.31	2,340.19	5.75	5.43	1.39
	United States	658,610.80	99.11	3.55	30.56	5,891.48	0.89	0.00	11.59
	<b>America Aggregate</b>	<b>696,946.69</b>	<b>96.68</b>	<b>4.66</b>	<b>15.94</b>	<b>8231.67</b>	<b>3.32</b>	<b>2.72</b>	<b>6.49</b>

Source: Researcher's compilation from EPRA Monthly Statistical Bulletin, December 2014

## **2.7 Disadvantages of REIT**

Real Estate Investment Trusts do have its demerits or disadvantages. Firstly, there are revenue losses to the government since REIT law offer tax holiday as an incentive to REIT operators. The government is posed to loose huge amount of revenue that could accrue to its coffers in the form of taxes. Secondly, the dividend yield (returns) from REITs is dependent on fund from operations (FFO) which in turn is much dependent on the rise and fall of rental income of the underlying property assets (FMI, 2010; Ting & Mohd, 2007). There are a lot of factors that determine the rental income ranging from population, effective demand, locational attributes, infrastructure facilities and the economic propensity. Therefore the dividend is not guaranteed though properties are known to possess a hedge against inflation. The certainty of the rental income from properties could be forecasted and guaranteed to a greater degree of reality but the chances of fluctuation of the FFO is also there depending on the demand in the market as affected by the economy generally. The effect of the global financial crisis of 2008 really shows that fall in rent could arise at any time with high operating cost (outgoings) and that property will only continue to appreciate in value in a stable and conducive economy and operating environment. The FMI (2010) report affirmed that loss in capitalization is often set against the FFO and this will further reduce the dividend distribution. As a result of the requirement to distribute 90% of its distributable income as dividends, REIT does (and is bound to) experience a slow rate of growth because there is less or no profit to be reinvested after payment of dividend. During a booming period in an economy, business tends to re-invest their profit to make more income, capture market opportunity for growth and make an expansion. This seems impossible for REITs as it is mandatory to distribute income to investors up to 90% and the little retained profit cannot make a significant investment to capture market opportunity except through leverage which will increase expenditure in term of loan interest.

A great challenge to REIT in some developing countries like Nigeria is the lack of good quality property stock for purchase. REIT will need to carry an additional function and risk for significant direct investment in property development and construction in order to create a sustaining stock of real estate assets for the portfolio. Lack of real estate asset management and facilities management expertise is another challenge REITs in Nigeria faces calling for foreign expertise to establish local operations and partnership. Nevertheless, advantages of REIT far overweigh the challenges and REIT can be said to be a better investment vehicle in real estate because of its income distribution and its diversification advantages.

## **2.8 Operations and Regulatory Framework of REIT**

REITs typically do not pay tax at the corporate level, subject to a set of qualifying rules which specify the nature of activities and asset base, ownership concentration, gearing structure and distribution policy. REIT rules vary by nation but common features are the requirement to be primarily a real estate investor and the requirement to distribute a high proportion of net operating income to shareholders. This restriction on retained earnings is intended to create returns that are closer to those of the underlying real estate market and less dependent on management decisions (Hoesli & Lizieri, 2007).

The rules guiding the operations of the REIT industry are similar but with differences for the development of REITs in their respective countries. Although Alias and Soi Tho (2011) observed that there is dissimilarity of REITs regulation among different countries, a close look at most regulations and operational guidelines of REITs across the countries of the world that have adopted REIT provides some similarities of guidelines, frameworks and legislations for REITs. The operations and operatives may however exhibit few differences. To qualify as a REIT to enjoy tax exemption advantage, there are conditions

to be fulfilled. These conditions are embedded (stated) in the REIT law of each country that has adopted REIT. The law then served as a guide to the development of regulatory and operational framework for REIT. The REIT laws of all countries follow the provision and guidelines in the 1960 enactment (law) of the United States for the development of REIT. The following section presents REIT legislations and requirements, and examines the REIT laws of some nation states to reflect the contents, similarities and differences in a tabular form (Table 2.5).

It was generally accepted that REITs were created by Congress in 1960 (Ong et al., 2011; Chan et al., 2003), to give all Americans, not just the affluent, the opportunity to invest in income-producing real estate in a manner similar to how many Americans invest in stocks and bonds through mutual funds. Income-producing real estate refers to land and the improvements on it – such as apartments, offices or hotels. REITs may invest in the properties themselves, generating income through the collection of rent, or they may invest in mortgages or mortgage securities tied to the properties, helping to finance the properties and generating interest income. REITs allow anyone to invest in portfolios of large-scale properties in the same way they invest in other industries – through the purchase of stock. In the same way shareholders benefit by owning stocks in other corporations, the stockholders of a REIT earn a share of the income produced through real estate investment – without actually having to go out and buy or finance the property. To qualify as a REIT under the American 1960 enactment, the pioneer law of REIT, the following conditions must be met. A REIT is generally required among other things to:

- i. Be a registered company, association, trust or corporation
- ii. Invest in income yielding real estate properties, and or real estate mortgage
- iii. Generate revenue from real estate properties
- iv. Distribute revenue before tax to investors in form of dividend

**Table 2.5:** REIT requirements and operational guidelines of different countries

Continent	Country	Requirement	Minimum initial capital	Real Estate Asset (%)	Leverage (%)	Distribution (%)	Tax
Europe	Belgium	Obtain Licence (FSMA), Register with Investment Institution, Listed in Stock Exchange	EUR 1.25m	Not specified	65	80	15/25% WHT on Shareholders
	Bulgaria	Licence from Financial Supervision Commission, Listed in Bulgarian Stock Exchange Authourisation, Depository Bank Mandatory	EUR 255,647	80	20	90	5% WHT on Shareholders
	France	Listed in European Union regulated Stock Exchange	EUR 15m	Not specified	50	I = 90 CG = 60 Div = 100	Up to 49% WHT on Shareholders
	Germany	Registration with Commercial Register, Registration with Federal Centre Tax Office	EUR 15m	75	66.25	I = 90 CG = 50	26-37.5% WHT on Shareholders
	Greece	Operating Licence from Hellenii Capital Market Commission, Listing with Stock Exchange mandatory	EUR 25m	80	75 (40% of value of devt. Property)	50	10% of ECB rate + 1%, 3.1% PTT
	Ireland	Filing of Notice, Listed on recognized Stock Exchange in EU	EUR 38,092	75	1.25:1 Profit Financing Ratio	85	33% CGT, 20% WHT on Shareholders
	Italy	Filling Election Form, Listed in Italian Stock Exchange Market or EU Exchange Market	EUR 40m	80	As stated in company by-laws	85	20% CGT, 22% SD, 26% WHT on Shareholders
	Netherland	Application for Corporate Income Tax Return	EUR 45m	Passive Portfolio Investment	60% of real estate value	I = 100%	15% WHT on Shareholders
	Spain	Mandatory listing with stock exchange	EUR 5m	80% in real estate assets	No restriction	I = 80% Div = 100% CG = 50%	Normal withholding tax 30% CGT if property sold within 3 years of holding
	Turkey	Listed with the Capital Market Board	TRY 30m	75 (50% in direct real estate)	5 x NAV and short term	Determined by REIC	15% WHT on Shareholders
Americas	United Kingdom	Listing on any Stock Exchange reecognised by UK	GBP 50,000	75	1.25:1 Profit Financing Ratio	90	1-7% SD, 20 % WHT on Shareholders
	United States of America	Any legal US entity, firm or corporation	No minimum	75	No legal restriction	90	23.8% WHT on Shareholders
	Canada	Listed in designated Stock Exchange in Canada	No minimum	80	No legal restriction	100	50% CG – not distributed, 1.5% SD



	Mexico	Incorporation under Mexican Law	No minimum	70	3:1 debt equity ratio	95	30% WHT on Shareholders
	Brazil	Approval from Brazillian Securities Commission, Listing not compulsory	No minimum	75	No restriction	I = 95 CG = 95	20% WHT on Shareholders
<b>Australia</b>	Australia	Established under MIS rules, Listing not mandatory	No minimum	No restriction	No limit subject to 60% Cap rule	100	4.7% CGT, 30% WHT on Shareholders
	New Zealand	Registration with Registrar of Companies		No restriction	No restriction	Not specific	28%
<b>Asia</b>	Hong Kong	Licence by SFC, Listed in Stock Exchange of Hong Kong	No minimum	70	45	90	0.25 – 1% SD on Lease and 15% SD on Sale
	Japan	Licence from Building List and Building Transaction Agent	JPY100m	Not stated	60	90	37-39% income tax, 15.3-20.3% WHT on Shareholders
	Malaysia	Registered Trust Management Company, Listing not mandatory	RM100m (US\$31m)	75% (50% in real estate asset and 25% in related securities)	50	90	10% WHT on Shareholders and 0.26% income tax,
	Singapore	Listing on Singapore Exchange	SGD300m	75	60	90	17% on corporate unit holder
	South Korea	Approval of the Ministry of Land Infrastructure and Transport	KRW 5b	70	2:1 Debt Equity ratio	90	15.4% WHT on Shareholders
	Taiwan	Public or Private Placed Company	NTS 300m	80	50	Based on REIT contract	10% WHT on Shareholders
	Thailand	Listing with the Security and Exchange of Thailand	Baht 500m	75	60	90	2% TT, 10-30% Income Tax, 10% WHT on Shareholders
<b>Middle East</b>	United Arab Emirate	Listing on Stock Exchange Market	No minimum	60	70	80	No Tax
<b>Africa</b>	South Africa	Listed in Johannesburg Stock Exchange under REIT	ZAR300m	80	60	75	WHT tax on Shareholders
	Nigeria	Listed on Nigerian Stock Exchange	NGN1bn	75	25	90	15% SD, 10% WHT on Shareholders

WHT=Withholding Tax, I=Income, CG=Capital Gain, CGT=Capital Gain Tax, Div=Dividend, ECB=European Central Bank, PTT=Property Transfer Tax, SD=Stamp Duty, NAV=Net Asset Value

Source: Authors Compilation from EPRA Global REIT survey, 2014; ISA, 2007 and Nigeria Stock Exchange REIT guidelines

## **2.9 REIT Performance**

The performance of REIT as a securitised real estate investment with real property or mortgages as its underlying asset has been related to two important factors which are (i) the pricing of REIT stocks in the stock market (share price) and (ii) the income from the underlying real property assets. While the share price movement in the stock market is an indication of value/capital appreciation, the income from underlying property assets determines the dividend distribution. The difference in the stock market and the property market is also reflected in the price movements. Prices moves (changes) in the stock market every minute but, it takes some time for prices of properties to change. The performance of REIT in term of returns over the years has been identified to be in cyclical trend with REIT outperforming the stock market at a specific time period with a risk adjusted return and underperform the stock market in the long run. This has been traced to the property market behaviour which exhibits a cyclical nature of return characterised with periods of boom, bull, recovery and recession (Chan et al., 2003). REIT performance is also a function of type, whether equity or mortgage. Equity REIT has been found to have superior performance over mortgage or hybrid (Grupe & DiRocco, 1999).

REIT performance can be literally explained in terms of its operational success which is revealed in its profitability to the investors. In other words, success of an investment is determined by its profitability. Returns from REITs are primarily derived from dividend yield and share price appreciation of the REIT. REIT markets have proved extremely successful in the United States of America (USA), Australia, and in the REIT markets of Asia and Europe (Hoesli & Lizieri, 2007). Operations of Real Estate Investment Trusts (REITs) in terms of investment properties are initially concentrated on income generating commercial properties – office and retail properties. However, recent trends show that REITs funds are invested in healthcare and hospitality facilities as well as high rise

income yielding residential properties (condominium), industrial and agricultural properties. REITs are diversified nowadays as income generating properties are the hallmark of superior performance of REITs (Wiederman & Goeters, 2003).

REIT performance has been extensively researched across the global REIT markets ensuing in mixed findings of both outperformance and underperformance of the stock market, the usual benchmark. Ong et al. (2011) in their study of Malaysia REIT find M-REIT having superior performance over other stocks and the market index and also reported that the superior performance can be sustained by M-REIT. Grupe and DiRocco (1999) earlier found a similar result in favour of equity REITs outperforming the market. According to Havsy (2012) REITs in the United States outperformed the S&P500 index with a long term yield of 7-8%. The dividend from the REIT sector in Asian markets is between 4.1% and 9.3% with most REITs outperforming their market indexes (FMI, 2010). In comparative studies of Malaysia and UK REITs, Alias and Soi Tho (2011) found a similar result with both markets. Pham (2013) could not agree less with the FMI report of 2010, he concluded that Asian REIT markets have higher returns with lower risks. Okunev and Wilson (2008) adopted a modelling approach to predict excess asset return and also concluded that REIT provides an excess return. Newell et al. (2013) studied the French REIT (SIIC), their findings was not different as SIIC delivered superior return compares with stock on a risk adjusted basis. Other studies that reported similar findings include Newell and Osmadi (2009) on Malaysia REIT; Newell and Peng (2012) on their study of Japan REIT and Newell et al. (2015) on Singapore REIT. The one year REIT operations in South Africa after the conversion of some PUT and PLS to modern REIT in 2013 presents a 5.5% return in 2014 (EPRA, 2014). This is higher than interest rates on deposits, an indication of a better yield. Olaleye and Ekemode (2014) conducted a study of the performance of real estate securities and non-real estate

securities in Nigeria using the UACN Property Development Company (UPDC) as a proxy for real estate securities. Their study found that real estate securities outperformed non-real estate securities and the result was believed to be the same for REITs (as a security for real estate investment in Nigeria. Table 2.6 presents the leading REITs in various markets with their corresponding dividend return and one (1) year total return for year 2015.

**Table 2.6: Top REITs in some REIT Markets as at 30 September, 2015**

Country	Market Type	Name of Company	Capitalisation (US\$'m)	Dividend (%)	Total Return (%)
Belgium	Developed	Cofinimmo****	2,174.80	6.52	12.24
		Warehouses De Pauw SCA***	1,453.54	4.67	33.56
		Befimmo SA*	1,413.90	5.95	5.04
		Aedifica****	814.86	2.95	11.89
		Wareldhave Belgium*	727.87	4.20	-2.41
France	Developed	Unibail Rodamco	26,436.74	3.94	23.82
		Klepierre*	14,146.65	3.87	15.82
		Gecina****	7,894.24	3.97	17.10
		Fonciere des Regions****	5,880.22	5.02	11.28
		Icade****	5,626.95	5.37	-1.88
Germany	Developed	Alstria Office REIT AG*	1,149.62	4.16	30.12
		Hambomer REIT AG****	652.99	3.37	19.37
Greece	Developed	Grivalia Properties REIC****	806.05	4.08	-18.42
Ireland	Developed	Green REIT Plc	1,167.23	0.59	26.09
Italy	Developed	Beni Stabili SPA*	1,860.97	2.95	27.45
		Immobiliare Granade Distribuzione*	705.85	4.42	2.23
Netherland	Developed	Wereldhave NV*	2,362.00	5.39	-7.78
		Eurocommercial Properties NV*	2,037.15	4.95	11.05
		Vastned Retail NV*	865.51	4.84	12.19
		Nieuwe Steen Investment NV****	579.21	6.79	-12.92
Spain	Developed	Merlin Properties SOCIMI****	3,457.65	0.00	7.09
		Hispania Activos Inmobiliarios, S.A	1,218.99	0.00	30.35
		Lar Espana	589.12	0.25	-
Turkey	Emerging	Emiak Konut**	3,576.58	3.76	-12.29
		Torunlar REIC	613.35	2.99	-8.22
		Is Gayrimenkul Yatirim Ortak****	431.66	4.04	20.34
		Dogus Gayrimenkul Yatirim Ortakigi*	284.10	0.00	-26.45
United Kingdom	Developed	Land Securities Group Plc****	15,885.39	1.85	24.77
		British Land Co Plc****	13,055.40	3.34	17.19
		Hammerson Plc*	7,832.58	3.18	9.40
		INTU Properties Plc*	6,812.90	4.11	7.96
		Derwent London Plc*	6,283.24	1.10	32.25
	Emerging	GrowthPoint Properties Ltd****	5,913.25	6.44	13.23
		Redefine Properties****	3,508.31	6.83	19.54

South Africa		Resilent Property Income Fund****	2,892.76	3.33	57.73
		Hyprop Investment Ltd*	2,447.89	3.98	56.26
		Capital Property Fund****	2,063.58	5.67	27.27
Canada	Developed	RioCan REIT*	6,466.03	5.31	0.04
		H&R REIT****	4,684.35	6.06	0.47
		Smart REIT	2,846.51	5.38	17.02
		Canadian Apartment Properties**	2,535.98	4.36	25.36
		Canadian REIT****	2,366.40	4.21	-5.15
Mexico	Emerging	Fibra Uno Admistracion S.A. de C.V****	6,913.11	4.27	-12.16
		Administradora Fibra Danhos S.A. de C.V****	2,879.54	3.87	3.05
		Macquarie Mexico Real Estate Management S.A de C.V***	1,116.58	6.94	-14.65
		Asesor de Activos Prisma S.A.P.I de C.V^^	507.64	4.73	-7.29
United States	Developed	Simon Property Group Inc*	57,628.31	3.25	11.00
		Public Storage Inc^^^	35,008.20	3.37	17.86
		Equity Residential Properties Trust**	27,260.41	2.96	16.47
		HealthCare REIT Inc^	23,879.84	4.87	9.83
		General Growth Properties Inc*	23,338.07	2.59	11.76
Australia	Developed	Westfield Corporation Limited*	14,336.05	3.66	27.00
		Federation Centres*	8,286.26	5.97	20.51
		Goodman Group****	8,096.86	3.51	25.57
		Stockland Trust Corporation****	7,179.59	5.77	7.84
		GPT Group****	5,668.79	4.94	13.75
Hong Kong	Developed	Link REIT*	13,450.72	4.02	8.31
		Champion REIT****	3,304.59	4.59	26.95
		Xui Xian REIT	2,898.26	7.27	-1.40
Japan	Developed	Nippon Building Fund of Japan*	6,338.30	2.78	-0.26
		Japan Real Estate Investment Corporation*	5,760.19	2.70	1.10
		Japan Retail Fund Investment Corporation*	4,805.48	3.43	11.71
		United Urban Investment****	3,586.49	3.28	11.10
		Nippon Prologis REIT***	3,210.99	3.32	0.03
Malaysia	Emerging	IGB REIT****	1,543.63	4.49	3.97
		Pavillion REIT*	1,543.63	3.99	7.86
		CapitaMalls Malaysia Trust (CMMT) REIT*	956.05	4.91	-7.33
New Zealand	Developed	Kiwi Property Group****	1,456.84	4.83	19.98
Singapore	Developed	CapitaMall Trust*	6,989.73	5.12	11.32
		Ascendas REIT***	5,622.51	5.89	11.74
		Capita Commercial Trust*	4,121.56	5.72	-6.31
		Suntec REIT****	4,068.92	5.43	-0.85
		Keppel REIT*	3,361.84	3.33	-8.22

Source: Researcher's Compilation from the EPRA Global REIT Survey Report, 2015

\*retail/office, \*\*residential, \*\*\*industrial, \*\*\*\*diversified, ^healthcare, ^^hotel/lodging, ^^others (logistics/storage)

On the contrary, some other studies found that REIT performance may not be superior all the times. Peng and Newell (2012) found Taiwan REIT underperforming the construction shares sector though outperform the shares on a risk adjustment return (adopting Sharpe ratio) basis. Osmadi (2007) researched on the performance of the then listed property funds (LPF) in Malaysia between 1991 and 2005 and concluded that Malaysia LPT underperforms the stock market (KLCI). The result was in agreement with Newell et al. (2002) on a similar study, only one out of the four (4) companies studied outperform the KLCI. Ooi and Liow (2003) reported the lack of any empirical evidence of higher returns from real estate stocks that is superior to other stocks in the Asian Markets. Ong et al. (2012) concluded that the outperformance of REIT is dependent on the type of measurement tools that is adopted in the analysis. The study stressed further that the adoption of Jensen Alpha in a risk adjusted return analysis of Malaysia REIT during and post global financial crisis of 2007-8 shows an outperformance of M-REIT over the stock market. However, the opposite result of underperformance was reported with the adoption of both Sharpe and Treynor ratio in the same study. The mixed findings of earlier studies and seemingly contradicting results point to some issues that should be of interest in the REIT industry. First is the fact that investment generally and REIT in particular does not behave same at different times, in different locations and under different methodology. Secondly there are factors that influence the performance of REITs and effect of these factors may differ across markets. Thirdly not only the stock market characteristics but also the operating environmental influences are worth consideration in REIT performance study. The following sections discussed the factors affecting REIT operation and performances.

## **2.10 Factors Affecting REIT Performance**

There are various factors affecting the performance of REITs. Baum (2008) and Baum and Murray (2010) classified these factors as formal and informal factors. Formal factors are regarded as economic and market factors (including investment attributes such as NAV, FFO, Size, Leverage, Share Price and Asset value and diversification) while informal factors are regarded as socio-political factors or operating environment factors (political risk, infrastructure, investors behaviour, social security). These factors can also be classified as internal (REIT investment attributes) and external (operating environment factors). Chan et al. (2003) added management style as an important factor also.

### **2.10.1 Internal Factors**

The main elements of internal factors which are predominantly business operation variables are discussed in this section in turn.

#### **2.10.1.1 Capitalisation (Size)**

The study of REIT size and performance is precipitated on the principle of economies of scale advantage that may accrue to large firms in terms of low operational costs and more capital and increased revenue. The various studies of REIT performance in terms of return that have related REIT return to size comes with mixed findings. Chan et al. (2003) stated that debate on REIT optimal size receives more attention after the study of Linneman (1997) in the REIT-Size hypothesis. The study found that large REITs have significant advantages of economies of scale than the small cap REITs. Ambrose and Linneman (2001) reinforced the economies of scale advantage of large size REIT. They found that a higher profit margin and a high ratio of rental to revenue and lower cost accrued to large REITs. Alias and Soi Tho (2011) agreed with Ambrose and Linneman (2001) and concluded that there is a positive relationship among REIT size, Revenue and Profit. The

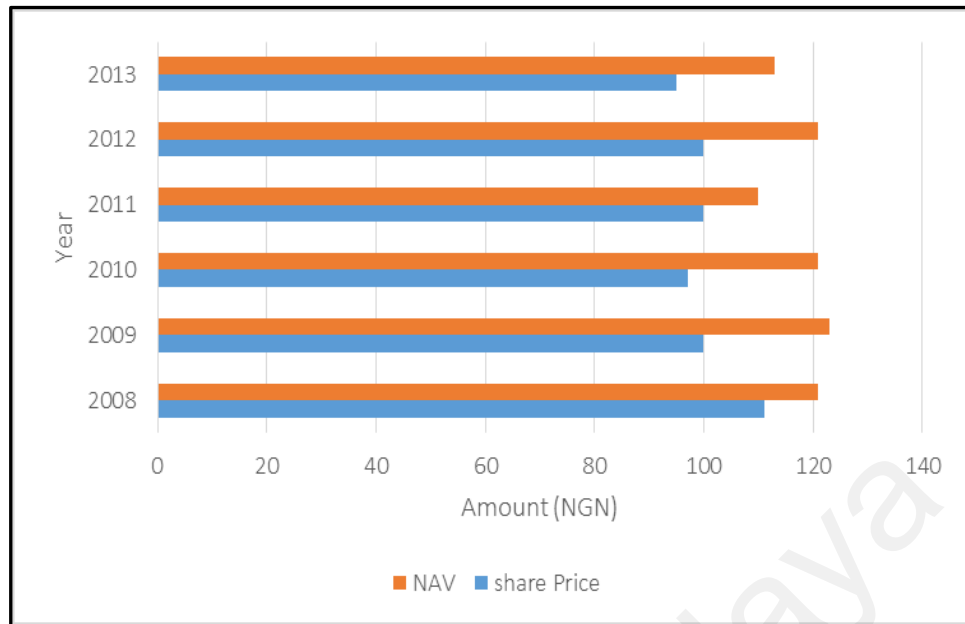
larger the size, the higher the rental income and profit margin therefore the better the yield. Brounen and Sjoerd (2012) also attributed REIT stock outperformance in Europe to size, specialisation and geographic focus. Ambrose et al. (2000) discarded the economies of scale argument, their study did not find any support in favour of positive size and return relationship.

Chan et al. (2003) related decision making and REIT size and posit that, a large REIT will likely involve a series of decision-making process levels which make a smaller REIT to take a faster decision whenever a potential is identified in the market. The argument about less operating cost in favour of larger REITs has also been faulted (Shan, Sing, & Tsai, 2009). While there could be cost savings in the merger or acquisition of REITs to form a large REIT, more positions are created and the remuneration is a function of the size of the corporation. Thus, operating cost in term of staff remuneration, training and development as other allowances will increase and possibly break down the cost saving economies of scale as REIT increases in size (Hardin III & Hill, 2008 and Hardin, 1998). Therefore, smaller corporations could have higher returns in comparison with big firms. Chen and Peiser (1999) in their findings agreed with McIntosh et al. (1991) and stated that small REITs earn higher return irrespective of model used. Size is therefore a pricing factor. Further studies that suggested an inverse relationship between returns and size imply that smaller REITs tend to yield more return than the larger REIT include Yong, Allen & Lim, 2009; Chaudhry, Maheshwari & Webb, 2004; Hamelink & Hoesli, 2004. The contradicting findings suggest that one cannot absolutely take a definite position on the effect of size on REIT performance. There should be some other factors inter-playing with size. Perhaps other factors like operating environment, insecurity or political factors. It could also be an interplay of multiple variables influencing REIT return, the joint effect of which will worth investigating.



### **2.10.1.2 Net Asset Value (NAV)**

In relating NAV to REIT size, Capozza and Lee (1995) found that small REIT stocks trade at a price lower than the NAV and thus make them a value stock (trading at a discount). Large REIT stock on the other hand trade at a higher price than the NAV – a premium stock. The NAV is a reflection of net property value spread over the units, and also a reflection of movement in the property market. Ong et al. (2011) studied the performance of Malaysian REITs from 2005 – 2010 using Net Asset Value (per unit) as valuation method. The study found that M-REIT trading in NAV premium with growth potentials. Clayton et al. (2007) discussed three REIT evaluation methods to include discounted cash flow (DCF), fund from operations (FFO) and Net Asset Value (NAV), a similar result was reported with respect to NAV that growth stock trade at NAV premium. An observation of the market report and a study of the financial reports of REIT companies reveal mixed findings on the relationship between REIT performance (in terms of dividend distribution to the investors) and the NAV. Some companies with low NAV give higher dividend while some have positive relationship (Ooi et al., 2006). Therefore NAV alone should not be used to determine REIT return especially when the share unit price is above the NAV, which rarely occurs. Nigeria REIT as shown by the Skye Shelter REIT could be regarded to be trading at NAV discount as the share price is lower than the NAV, thus N-REIT is a value stock stock (fig. 2.5)



**Figure 2.5:** NAV and Share Price of Skye Shelter REIT (Annual Reports 2008-2013)

### 2.10.1.3 Funds from Operation (FFO)

Real estate offers a variety of investment and the returns derived are generally not precise in measurement unlike fixed income investments such as savings, certificates or annuities. Real estate performance in terms of dividend returns is dependent on income from the underlying real estate assets and can be subjected to a number of factors like location, neighbourhood, facilities, services, uses and infrastructure in addition to socio-demographic characteristics of people. The return is also dependent on fluctuations in the conditions of the market in relation to capital appreciation of stocks (Wieldemer & Goeters, 2003). A larger percentage of REIT return is however dependent on the net income from the property assets. This is arrived at, when all operating expenses and depreciation had been deducted from the actual rental income from the property assets. The net income is regarded as “Funds From Operations” (FFO). It is the FFO that determines the dividend to investors/shareholders. The FFO however exhibits a mixed relationship as presented by empirical studies. Hwa and Abdul Rahman (2007) studied stability of dividend and FFO in Malaysia, the study concluded that the dividend (return) declared by REITs/Listed Property Trusts are not stable because it is affected by FFO (net

income) from the underlying property assets. This finding is supported by Alias and Soi Tho (2011). Hardin III and Hill (2008) stated that excess dividends are a function of a firm's capacity to generate FFO, a view that was supported by Feng, Price, and Sirmans (2011). Alias and Soi Tho (2011) concluded that FFOs could be affected by other economic factors, thus the mixed conclusions. The position of other factors effect on FFO was reinforced by Daud et al., (2012) that locational attributes' effect on property income will further affect dividend return from REIT. The reality is that not only formal economic factors determine the REIT return.

#### **2.10.1.4 Leverage/Gearing**

Going by REIT's laws that require REIT to distribute 90% of their income to shareholders/unit-holders as a dividend, REITs will have a little amount of retained earnings for growth. The remaining 10% earnings left after dividend distributions is grossly inadequate and relatively insignificant for any meaningful growth strategy. As a result REITs will have to look elsewhere for external funds for its planned growth especially where an opportunity comes in the market. There are two opportunities for external funds (i) issuance of new equity shares and (ii) loans from external sources. Where a REIT is a closed-end fund, the issuance of new equity may become difficult to actualise, as a result the only option will be gearing. Even for an open-ended fund, the past performance(s) will determine the success of a new issue. The importance of leverage or gearing to REIT growth is inevitable. REIT regulations also state the loan to value (gearing) ratio (which varies from one country to another) – see Table 2.3 above. In the boom era, loans will increase REIT financial leverage and yield more profitability. Higher level of gearing is not advisable in a declining market as high interest rates payment will erode the gains in the era of little income/revenue generation (Chan et al., 2003). Cheong et al. (2009) studied the behaviour of interest rates and stock market prices and examined

their sensitivity and importance, their study found that interest rates and market changes drive property securities price movements.

Generally, borrowing by companies gives a tax shelter for taxable income through the interest payment because the interest is paid and deducted from revenue before arriving at taxable income. It therefore reduces the tax burden of a company. However, REIT's income is exempted from tax at the corporate level and there is no justification for REIT to borrow as much like income paying tax corporations will do. REITs are mandated by their establishing laws and regulations to pay substantial income as dividend (90%), thus, the need for growth will be a viable reason for REITs to seek debt capital in order to actualise its growth plan. Chan et al. (2003) concluded that REITs have a lower debt to value ratio with a positive effect on REIT return. Hardin and Hill (2008) observed that the relationship between leverage and dividend distribution shows no fixed sign relationship. The degree of influence of leverage on returns could be significant. Leverage magnifies both positive and negative investment returns, resulting in pronounced gain and losses (Allen, Madura, and Springer (2000)). The study finds that the relationship between the leverage/gearing is positive for the long-term interest rate but not significant. Delcoure and Dickens (2004) agreed with (Allen et al., 2000) that a short-term interest rate has a negative relationship with return while long-term interest has a positive relationship with return. However, Ratcliffe and Dimowski (2007) in their study of a sample in Australia found a contrasting result that there is a significant negative relationship between long-term interest rates and returns, with an insignificant positive relationship with short-term interest rates. The arguments and findings of different studies in the past also present a mixed finding on the leverage-REIT return relationship. Despite acknowledging the positive relationship of leverage and return, Giacomini, Ling and Naranjo (2015) in their empirical study of the effects of leverage on the real estate market

also found a mixed effect. The study was conducted across eight countries. The mixed effect within, across and cross-country basis were accredited to differences in REIT capital structures, ownership, liquidity and market structure among others. Adopting the standard asset pricing model, the study found positive effects of leverage on return, significant in five countries. The study also found that a large leverage use in the global financial crisis (GFC) period (2007-2008) resulting in bigger fall in share prices indicating a significant negative impact both across countries and all countries basis. This finding agreed with Allen et al. (2000) of both positive and negative effects of leverage on return and more specifically with Chan et al. (2003) that leverage resulted in negative effect in the declining markets – a crisis period. Olaleye and Bello (2014) corroborated this with their study of macroeconomic perspective of determinants of listed property stock prices in Nigeria, their study found interest rates having highest effect on listed property return with a negative beta, thus a negative impact on listed real estate performance.

From the findings of earlier studies, the effect of every variable of the internal/formal factor on REIT performance (expressed in the amount of dividend distribution) is of no definitely agreed direction, negative or positive. The contradictions clearly indicate that one factor in the exclusion of other factors cannot determine the true actual return from an investment but all factors are impacting on REIT returns simultaneously. Therefore a study of the simultaneous effect of the identified prominent factors if not all and their relative significances will enhance accuracy and precision especially in REIT return forecast. Alias and Soi Thoi (2011) cautioned and stated in their conclusion that a detailed study has to be carried out before generalising on the factors affecting REITs performance.

### **2.10.2 External Factors**

There is an increasing range of factors that affect REIT performance which could be outside the REIT management team's control. Baum (2008) identified them as informal factors. Some of these factors are related to operating environment factors that affect the local economy and local real estate market conditions with great effect on the REIT sector. Baum and Murray (2010) and Daud *et al.* (2012) identified political risk, cultural risk, security, infrastructure and investors behaviour as informal factors affecting investment performance. David (2014) and Khan (2014) listed unemployment and transparency in addition to security and infrastructure. However, the relationship and association between external factors and REIT performance have been scantily reported.

#### **2.10.2.1 Political Leadership (Risk)**

A politically stable economy will always create a good and attractive investment market. In a study of 180 emerging markets, Baum (2008) reiterated that political risk may explain the shortage of investment funds in emerging economies. REIT however posits good medium for FDI into emerging economies for easy fund investment in real estate. Baum (2008) and Laposa (2007) concluded that FDI constitutes a major source of financing domestic property market through cross-border investment, supplying indirect finance to property sector through the capital market from developed countries to developing economies and their emerging property markets. Nigeria market attracted over US\$20bn in FDI between 2010 and 2013 (David, 2014) but the proportion of this sum to the real estate sector is not available. Nigeria is the 9<sup>th</sup> most populous country in the world, a good population to support investment in real estate due to increased demand for housing and other types of real properties. Despite the growth of the Nigerian economy, a large number of its citizens are unemployed, a good explanation for its low GDP per capital. The Nigerian Gross Domestic Product (GDP) grew at 7.9% between 1999 and 2012 and

8.5% in 2013. In 2014, Nigeria was declared the largest economy in Africa taking the lead from South Africa with a GDP per capital growth from US\$700 to US\$1,725 (Khan, 2014). The impact of all these economic improvements has not been tangibly noted in any sector including REIT market. The political risk in term of policy and transparency could be responsible for such.

#### **2.10.2.2 Investors' Sentiment (Behaviour)**

Investors' sentiment has been identified as a factor in REIT performance (return). Investors are of two kinds, individual and institutional. While individual investors may not have any significant effect on REIT stock prices and return, institutional investors have significant effect on REIT stock prices and performance (Chan et al., 2003). Ong et al. (2011) identified poor perception of REITs by institutional investors as another factor that has affected the growth of M-REIT. Downs (1998) studied the effect of 5/50 REIT industry regulation and stated that the rule constitutes a limiting factor for institutional investors in holding REIT stock. The effect of institutional investors on REIT return became prominent by the relaxation of the 5/50 rule through the Revenue Reconciliation Act of 1993 which facilitates the increase in participation of institutional investors in REITs (Lee & Lee, 2003). Institutional investors, because of their voting power and knowledge of the market, monitor the investment performance and decision of any corporation they have invested in. REITs that have a reputable institutional investor on its shareholders' book enjoy credibility and confidence of other investors including individual investors whose investment decisions are dependent on their perception and assessment of the investment share price. Stocks dominated by institutional investors outperform the stocks dominated by individual investors because of the monitoring of the investment performance and the availability of investment analysts. REITs trading at a high or low premium or even at a discount have been discovered to be a result of

investors' sentiments in most cases (Clayton & Mackinnon, 2001 and Ong et al., 2011). Information that are available to investors and their mood is likely to cause a change in the market scenario as a whole and impact on investment performance (Hiriyappa, 2008). Chan et.al. (2003) restated their observation of the REIT stock market players that institutional investors can affect REIT return. Portfolio of stocks that have the highest concentration of institutional investors will yield a higher return than those with a low number of institutional investors suggesting a positive relationship between institutional ownership and return. Chan et al. (2003) posits that price setting of stocks is greatly influenced by institutional investors because they are more sophisticated and knowledgeable of the market than the individual investors. The size of institutional investors' holding in REITs is increasing over time and this portends a direction towards more efficient REIT market in the future. The trend however shows that REITs with potential growth (traded in discount) are more preferable to institutional investors. Chan, Leung and Wang (2001) found that the negative Monday return theory does not apply to REIT stocks that have more reputable institutional investors. A high level institutional holding REIT will have a great number of analysts which in turn have a positive effect on REIT performance. Malaysia REIT was considered to be small cap which has not attracted huge investment from the institutional investors (Ong et al., 2011).

### **2.10.2.3 Infrastructure**

Daud et al. (2012) studied the impact of location attributes on REIT return. Their finding revealed a strong correlation between location attributes and REIT return. The argument is supported by the fact that REIT return is strongly determined by income from properties (FFO) (Alias & Soi Tho, 2011; Gore & Stott, 1998; Hwa & Abdul Rahman, 2007). Any factor that affects property income could regress or enhance REIT returns. To measure the advantage of location in real estate performance is the availability and adequacy of



supporting infrastructure. As the aftermath of the global financial crisis of 2007/2008, the conventional providers of finance to real estate and infrastructure have moved away from infrastructure financing being a long term finance package and to catch up with the expected global economic expansion between 2013 – 2030, there is an urgent need to resolve the challenges on infrastructure funding (Adair et al., 2014) to support property investment performance. With the forecast of 60% infrastructure investment over the amount spent (US\$36tn) in 1995-2012 (Della Croce & Yermo, 2013), infrastructure provision has been found to be beyond the responsibility of public investor (government). Della Croce and Yermo (2013) asserted that the Organisation for Economic Cooperation and Development (OECD) witnessed a decline in the ratio of infrastructure investment to Gross Domestic Product (GDP) from 4% in 1984 to 3% in 2005. In response to the multiplier effect of the benefit of infrastructure investment in the economy especially in job creation and real estate sector development, there have been calls for a new way of financing system for the development of infrastructure (Adair et al., 2014). Economist (2013) reported that 18,000 jobs are created from every US\$1bn spent on infrastructure and that a road project on completion typically increases economic activities 3-8 times its cost within eight (8) years. Increase in demand for basic infrastructure of energy, transport, water etc. is caused by population growth which could lead to increasing infrastructure facilities, job creation and economic growth on the part of the government. Therefore, a new way of creating infrastructure in Nigeria through the popular and tested PPP will be inevitable. More than 40 countries have adopted the PPP model for infrastructure procurement (Adair et al., 2014; Della Croce & Yermo, 2013; RICS, 2013). Although Nigeria has adopted PPP and concession in the provision of infrastructures such as in the aviation and power sectors, no significant impact has been seen on the Nigerian economy and the road sector has not recorded any success. Transparency could be a factor here, in terms of cost, operating finance and public spending on infrastructure

procurement will influence the private funds. Legal backing for the alternative funding system or sector development is also necessary. The legislative and political risks are also possible challenge to REIT growth and development in Nigeria.

#### **2.10.2.4 Social Security**

The recent trend of insecurity as a result of the terrorist insurgency is another worry for risk-averse investors. The September 11 bombing of World Trade Centre in America in 2001 resulted in a recess in the Dubai fast growing real estate sector before it regained its track in 2004 and after the 2007 global economic crisis. The Boko Haram threat to national security in Nigeria is a great challenge to a profitable real estate investment in many viable cities.

#### **2.10.3 Management Style (Advisor Puzzle)**

Management style or advisor puzzle is another factor that affects REIT performance in term of dividend return. The management style of REITs could be external (outsourced/consultancy) or internal (in-house). Before 1986, the REIT legislation had required the REIT manager to be externally sourced because REIT was envisioned similar to mutual funds as a passive investment vehicle (Chan et al., 2003). The amendment of the tax code in 1986 by the US Congress allows internal management of REIT portfolio. Despite the provisions of the Tax Reform Act that allows for direct management and selection of investment by REITs, there are still some REITs that are externally managed. Thus, there exist both internally and externally managed REITs. In the period 1990-1996, the externally managed REITs were seen to be aggressive in the pursuance of growth strategies through property development and acquisition (Ambrose & Linneman, 2001). In the real practical sense, an external manager is paid a compensation for his services in the form of a fee, a formula based compensation/remuneration plan and this results in a

cash outflow. An internal manager on the other hand is paid a discretionary based remuneration (in the form of salary), though the REIT Board of Directors can give bonus incentive. Therefore external manager becomes more expensive and paid more which reduces the profit of the company.

REIT management in Nigeria is internal. The management is not independent because the two REITs under study (Skye Bank Shelter REIT, Union Homes REIT and UPDC REIT) are subsidiaries of Banks and property company (Skye Bank, Union Bank and UACN Property Development Company respectively) to an extent that the Managing Director of the owner banks are executive chairman of the board of their respective REIT Company. It is not unlikely that in the financial storm of the Nigerian economy, mother banks can withdraw fund from their REIT subsidiaries to shore up their capital base.

### **2.11 REIT Performance Measurement and Analysis**

Performance measurement or return analysis can be in respect of individual property, asset class (comprising a number of properties) or a portfolio of different asset classes (property, mortgage, other stocks), but the principles and methods are similar. Performance measurement is an objective assessment of income, capital appreciation and investment risk in comparison with indices or benchmarks. These elements are quantitatively and accurately measured in most cases (Chan et al., 2003). Performance measurement is the process of ascertaining the degree at which organizational goals are met and how they are met (Lee, Gregory & Platts, 2005). Performance can be viewed from various perspectives such as quality service, customer satisfaction, cost efficiency, or income and return generation. Investment performance measurement or/and analysis can focus on how much it costs to provide a service and how much benefit is derived from the service/product provided. The difference between the cost and benefits set is then

analysed to assess the actual performance of the investment. The system of performance measurement explores issues such as internal, external, financial and non-financial to arrive at judgments (Lee et al., 2005). Since the performance of REITs is determined by the types of investment the companies focused on which is basically divided into Equity REIT, Mortgage REIT and Hybrid REIT (which invests in both equity and mortgage debts), income distribution in the form of dividend that is regarded as the reward to investors is thus a measure of performance of REIT as it is for any other investment in the stock/capital market and could be measured in percentages (%) or monetary units. Parker (2011), opined that the appropriate basis for performance measurement is the yield (rate of return).

Investment performance analysis could be done in many ways. Past studies adopted risk return approach, with emphasis on risk adjusted returns (Newell & Peng, 2012; Newell & Osmadi, 2009; Newell et al., 2002). There are lots of studies on the measurement of REIT performance across the global REIT markets. Some past studies have compared different REIT volatility with different indices like Sharpe ratio, Treynor index, S&P500 index, KLCI index or KLPI index. Some others find the correlations between the REIT and other investment vehicles while some discuss the contributions or the impact of different determining factors of REIT performance on the dividend (as a measure of performance). While Jensen, Sharpe and Treynor indexes measure performance on a risk adjusted basis, more studies adopted Jensen Alpha as a systematic risk adjusted method of performance measurement (Kim & Jang, 2012). Market portfolio is another factor in investment performance evaluation. Using a value weighted portfolio such as S&P 500 index as a proxy is not uncommon in REIT performance assessment but usually results in higher Jensen Index than the equity weighted portfolio (Han & Liang, 1995). REITs are also more of equity weighted than value weighted stock (Kim & Jang, 2012). Risk

adjusted return is widely employed in REIT performance analysis and this study adopted the same analysis as discussed in the following section.

### **2.11.1 Index Computation and Risk Adjusted Return (ICRAR) Analysis**

Previous researchers on REIT performance have suggested that REITs have similar characteristics of return and risk to the stocks in the capital market and performance can be assessed in the same way stock performance is assessed (Chan et al., 2003). Risk Adjusted Return following the computation of mean average return and the standard deviation is commonly adopted in REIT performance measurement (Lee & Chiang, 2010; and Mueller & Mueller, 2003; Glascock et.al., 2000; Han & Liang, 1995; Cannon & Vogt, 1995). The view of REIT behaving more like direct property and less like stock was put forward in post 1990s following the tax changes in Revenue Reconciliation Act of 1993 and REIT modernization Act of 1999.

Clayton and Mackinnon (2003) found REITs to be more like property because it appears less liquid than stocks but with the level of increased institutional investors in REITs. The REIT performance analysis involves the processing of financial data relating to REIT transaction from index computation using the market transaction data, assessment of the average return, standard deviation to risk adjusted return calculation, the return is compared with an index or the respective stock market index as a benchmark in order to assess REIT performance (Newell and Osmadi, 2009; Newell and Peng, 2012; Newell et al, 2002, Ong et al, 2012). Some other studies adopted risk volatility to assess performance and diversification of investment to REITs (Han & Liang, 1995 and Kim & Jang, 2012). Others studies assessed the correlation between the elements of formal factors and dividend return (Brounen & Sjoerd, 2012; Daud et al., 2012; Feng et al., 2011;

Shan et al., 2009; Stevenson et al., 2009; Hardin & Hill, 2008; Clayton et al., 2007; and Ambrose & Linneman, 2001;).

Newell and Osmadi (2009) in a similar study computed the REIT index for M-REITs and assessed the risk adjusted return. Newell and Peng (2012) did similar assessment on J-REIT. Newell, Pham, and Ooi (2015) also used the risk adjusted return on their study of S-REIT performance in a mixed asset portfolio while Pham (2011) adopted same method in his study of Asian REIT performance in a mixed asset portfolio. This research also adopted index computation and risk adjusted return to assess N-REIT performance. In the situation of a non-existent index series for Nigeria REIT, the researcher computed a market weighted REIT index. The index computation follows the NSE Market Weighted methodology such that each stock represented in the index contributes to the index proportionally to its market capitalization. The index value is calculated by dividing the total sum of Current Market Value (closing price x number of listed shares) of the two constituent companies with their Base Market Value and multiply by 100 (the market weight). The Index was calculated using the formula below:

$$\text{Index} = \sum_{i=1}^n (P_c Q_c) / (P_b Q_b) \times 100 \quad (1)$$

Where:

$P_c$  = Current market unit price of an ordinary share

$Q_c$  = Current number of listed ordinary shares

$P_b$  = Market unit price of an ordinary share as at the base date

$Q_b$  = Number of listed shares as at the base date

$i = 1, 2, \dots, n$

$n$  = Number of REITs to be included in the index.

## **2.12 Index and Benchmarks**

Comparative analysis and forecast are usually employed in investment return performance evaluation by fund managers, investment decision makers and executioners. The asset management and portfolio teams of a REIT company also use comparative and forecast to monitor investment performance (Parker, 2011). Hiriyappa (2008) said that the ability of investors to forecast performance help both investors and managers in decision making. Parker (2011) further affirmed that REIT performance is related to benchmark or market index and stated that the ability of a real estate portfolio manager to match or surpass an index or benchmark is affected by the heterogeneous nature of the property market and the information asymmetric of the market.

The rate of return performance of a REIT is not the most important but the reliability of the performance in absolute term to a relevant index or benchmark is the key issue of interest to assess REIT index or benchmark (Parker, 2011). In the capital markets, real estate has been identified as one of the late entries in relation to index and benchmarks (Property Indexes) developments for measuring performance. The US-NCREIF Property Index was developed in 1978 followed by various other ones (UK-IPD Index, NAREIT Index etc.) (Clayton et al., 2007). Index and benchmark are often used interchangeably and are yardsticks to assess performances of an entity. Index measures a defined segment in the stock market (e.g. REIT sector) while benchmark measures specific participant(s) within a market segment (e.g. Office REIT in a REIT sector) (Parker, 2011). Index could also provide a benchmark for participants in a segment. In benchmarking, a clear understanding of the nature of samples that created an index is essentially important. For instance, the All Share Index (ASI), or KLCI or American highest capitalised stock index, S&P500 or FBMKLCI30 index may not be created by investment/stock of the same characteristics with REIT. Parker (2011) illustrated with UK-IPD index which is based

on institutional grade commercial real estate of about 11,000 samples in the UK. He warned that the sample might not create an index for the entire UK commercial property market because the sample did not include all properties in the market. Such an index is not indicative of the entire real estate market as the sample was defined to represent institutional grade commercial properties in the UK (Geltner et al., 2007). In the same spirit, a conventional REIT index may not serve a good benchmark for Islamic REIT.

Benchmarking is seen as a means of identifying improvement opportunities as well as monitoring the performance of competitors. It is a continuous process of measuring products, services and practices against competitor. Benchmarking aims at identifying competitive targets and establishing means of improvement. To measure portfolio performance, studies have traditionally employed performance measures that compare the returns of a managed portfolio to the returns of a benchmark like S&P500 index, NYSE Composite, NAIRET Index, Composite Price Index (CPI), KLCI, ASI (Amidu et al., 2008). A portfolio that delivers a higher return than the benchmark is considered to have outperformed the benchmark, and a portfolio that gives lower return than the benchmark is regarded to have underperformed.

Selection of appropriate index or benchmark is therefore an important task. In order to offer an evidence of abnormal performance (if any), a benchmark needs to be representative of the asset class it measures (Brown & Matysiak, 2000 and Parker, 2011). For instance, benchmarking REIT performance with stock market price index that is based solely on share price movement may possess a challenge to REIT good performance judgement. Parker puts it this way

*“....it is challenging to develop a property portfolio strategy to achieve a goal of top quarter performance without knowing what range of performance the top*



*quartile may comprise. The challenge is magnified by the relevant index being a share price index which, by definition, is based on movement in or performance of share prices. As such performance is yet to occur, reliance has to be placed on forecast of share prices or values requiring some form of assessments of how competing REIT may perform. Effectively, this is akin to the performance forecasting undertaken by equity fund managers or real estate securities managers who may endeavour to select REITs to form a portfolio that will outperform an index or peer group” (Parker, 2011, pp49)*

Chan et al. (2003) reported financial literature on the predictability of REIT stock returns that real estate related security performance can be predicted better than small stocks but added that timing is essential. Cooper, Downs, and Patterson (2000) supported the predictability of REIT return based on past performance. A forecast of return and risk may be a worthy attempt for the development of benchmark and index for REIT performance. The forecast using past performance record will estimate the future period expected return which can serve as benchmark to provide a basis for comparing the actual realised return and measure performance (Brown & Matysiak, 2000; parker, 2011).

The need for performance index stems from the quest for certainty about market performance, dispersion and risk (Freeman, 2007). An index is also a performance yardstick among investments, either direct real estate or real estate securities including REIT or the stock market itself. Studies have analysed fund allocation between direct real estate and real estate securities (Hoesli, MacCgregor, Adair, & McGreal, 2002; Worzala & Sirmans, 2003), and the real estate securities market was found to have performance index (Chin et al., 2007). Real estate index has been identified to be central to development of derivative trading across assets. Topintzi, Chin, & Hobbs (2008)

examined the rising need for global REIT performance benchmark/index and admitted there are many challenges to the construction of a global index especially, the lack of data quality across countries. Nevertheless, individual countries REIT index can help in finding the aggregate that could represent the global index. The UK-IPD consistently researched into property markets in some countries and made available reliable and consistent data series for the countries studied, a good move towards achieving global index for the property market and for the global REIT. The study focused more on general real estate performance index and not REIT index. The importance of indices in real estate performance evaluation was further stressed by Boudry et al. (2013) with special focus on commercial properties and portfolios. Their study of 12,427 repeat sales spanned Q4 2000 to Q2 2011 and found that real estate index at macro level is inevitable in tracking real return especially for a portfolio of about 20 properties or more. The aggregate index is found to be an effective tool in performance evaluation and provides low tracking error in diversification. The construction of indices in real estate transaction started from residential real estate Hedonic Index (Rosen, 1974) following the Repeated Sales Indices – RSI of Barley, Muth, & Nourse (1963) which was modified by Case & Shiller (1989). Commercial real estate indices construction evolved in the early 2000s as a result of the availability of large databases by CoStar and Real Capital Analytics (Boudry et al., 2013). The Hoag (1980) Commercial Real Estate (CRE) indices were based on Hedonic Index applied to industrial properties. In 2007, quarterly transaction index was developed by Fisher, Geltner, and Pollakowski (2007) and it was based on property investment performance level. The establishment of indices is indispensable for its pivotal role in the return and performance evaluation of real estate investment (Boudry et al., 2013).

The heterogeneity of the real estate assets alone is enough to accrue for a magnitude of differences in performance of REIT and other investment vehicles and this should be

reflected in the performance measurement/analysis. While there is need for a yardstick to be set in REIT performance analysis, this research believed that such yardstick/benchmark is expected to be dictated or forecast by the workings of the determining factors of REIT return. Since it has been proved that REIT return depends on NAV, FFO, Size, Gearing and Asset Value, the relationship between these component factor determinants and REIT return should be established to make a more realistic prediction of an expected return. Similarly, investment yield is precipitated on the peculiar investment features/characteristics. In case of REIT, features like Size (in term of capitalization), Gearing (leverage), Property Value, Net Asset Value and Income (FFO), all having simultaneous effect on REIT return and a regression analysis can develop a model for REIT performance.

### **2.13 Summary**

The discussions in this chapter examined the past literature on REIT in order to set a comprehensive start for the full understanding of the focus of this thesis – REIT acceptability and performance. The essence of REIT as an offshoot of the securitization process opened the discussion in this chapter. The meaning, history and development of REIT on a global view were discussed. Effort was made to highlight the types, advantages and disadvantage of REIT. The chapter further presents the operation and regulatory guidelines of REIT. The performance and evaluation of REIT return have a fair share of the discussion in this chapter including the factors that affect performance both internal (economic variables) and external (operating environment factors). Index computation for risk adjusted return evaluation and setting of benchmark for REIT performance measurement and the prominent risk adjusted return methods for performance evaluation were also discussed. The index computation and risk adjusted return analysis is adopted

for Nigeria REIT performance measurement in this research. The details are presented in Chapter Five.

Having presented the full introduction to REIT market development and performance assessment, the next chapter (3) is devoted to REITs participation in direct real estate project financing apart from the mortgage REIT concept of indirect financing (secondary mortgage market system). This is triggered from the observed lack of real estate development funds in some emerging markets where the cost of finance (interest rate) is on a high side. Finance with no gainsaying is at the heart of real estate investment and development.

University of Malaysia

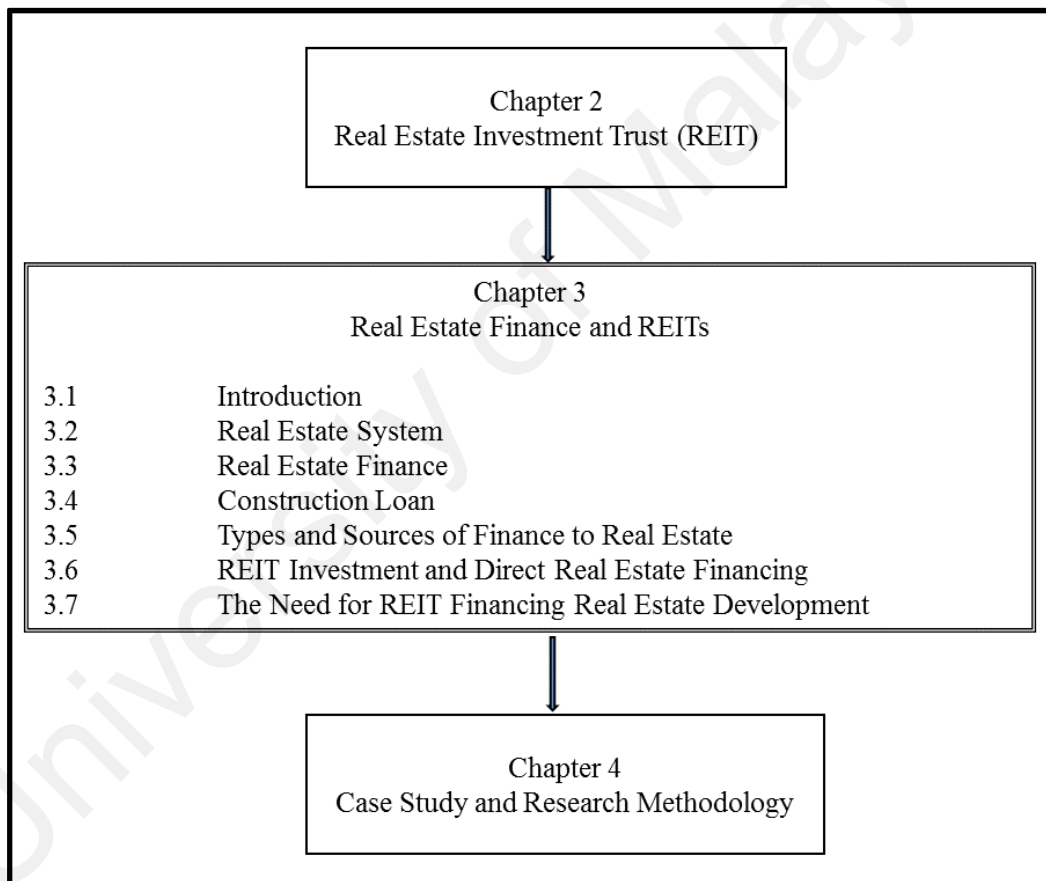
## CHAPTER 3: REAL ESTATE FINANCE AND REITS

### 3.1 Introduction

This chapter, as an extension of the review of past studies and literature focused on the real estate finance and REITs. The previous chapter (Chapter 2) discussed REIT, its history, types, advantages and operational guidelines. A number of factors affecting REIT performance were identified in the course of REIT performance and analysis. One of the expectations of REIT is the revival and or boosting of the real estate development and financing. Through acquisition of real estate products, REIT will foster the real estate development sector, however, where there is not enough capital for the real estate development activities, there will be little stock of property to be acquired with REIT fund. No doubt Mortgage REIT indirectly finance real estate through the secondary mortgage market, but such is most applicable to home buyers. Construction financing is equally important to create real estate stock. Therefore, this chapter supplies the basic understanding of real estate finance in the relevant context of REITs and in relation to objective 5 of this thesis (section 1.5).

The chapter begins with the concept of the real estate system and real estate finance (sections 3.2 and 3.3 respectively), followed by a section on construction loan (section 3.4). Real estate finance is mostly related to housing finance and it practically follows the same principle across countries but with modifications and innovations in each market. This chapter discusses types and sources of finance to real estate development and investment including both primary and secondary mortgage market in section 3.5 and its subsections. REIT investment and direct investment in real estate financing as a form of diversification was also discussed (section 3.6) and the need for REIT in absolute real estate development financing is reiterated (section 3.7). The chapter go further to discuss

the investment diversification of REIT and asset allocation model with a view of REIT diversifying into real estate financing to boost the stock of real estate asset for a vibrant real estate sector and REIT Industry in Nigeria (section 3.8). The intention is to create a more in-depth knowledge of REITs as another source of finance to real estate development. A summary section concludes this chapter. Figure 3.1 below illustrates the structure and positioning of this chapter in relation to its preceding chapter and the next chapter after.

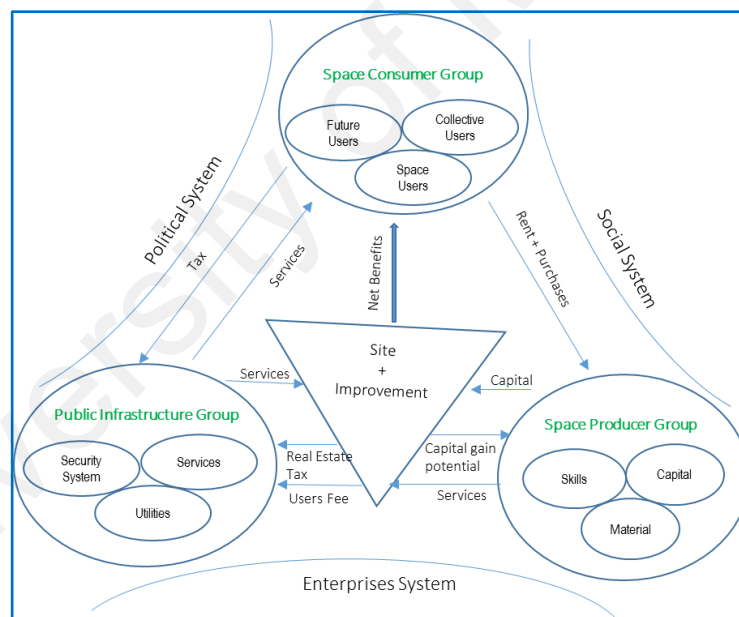


**Figure 3.1:** Structure and positioning of Chapter 3

### 3.2 Real Estate System

Real estate system is an interwoven complex concept of development, investment and consumption in which every developed unit of land space is accompanied with public

investment in services and infrastructure and must be used in order to justify both the development and investment cost. Real estate development is thus a process involving three distinct groups of (i) users, (ii) developers and (iii) public infrastructure investors (Graaskamp, 1989). Common challenge to each of the groups is finance – a cash cycle enterprise. The user/consumer needs money to pay for lease or purchase of developed property, while the developer needs money to create the real estate products. The public infrastructure also requires a huge amount of money to construct. Therefore a challenge to all the group is of insolvency. However, each of these groups does benefit from one another in the real estate system. Figure 3.2 presents the complex interrelationship between the three principal groups in a real estate development system.



**Figure 3.2:** Real estate system (adapted from Graaskamp, 1989)

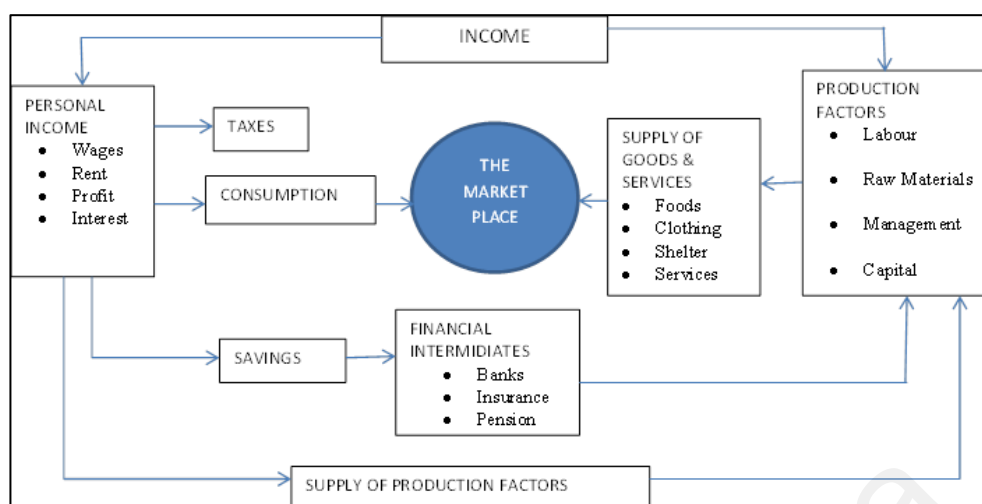
Space users include every individual that requires space for shelter, business, market store, or production purposes. The users seek to maximize their satisfaction and ensure their security within their financial resources. The real estate production group (developers) in the real estate system includes every individual that is involved in the site

identification/selection, design, finance and actual construction of building products. The third group is the infrastructure investors for the provision of road network, educational system, electricity, telecommunication, land registration, regulation or adjudication as well as sewers and sewerage. While some activities within these groups and subgroups may be profit motivated like a developer of business space, occupier or user, some others are not profit driven but for social and or economies of scale benefits. There is however, a certain level of financial need for survival and the cash requirement and it is common to all the groups.

### **3.3 Real Estate Finance**

Investment in real estate is a medium of great wealth creation but an expensive investment that few people can make enough savings to acquire. To an extent, the investment in real estate depends on the ability to raise fund through the financing mechanism that may be available, without which no tangible investment in real property will take place (Bond *et al.*, 2011). In the United States, as any other developed or developing countries alike, investment in real estate in the form of land and improvements contributes substantially to the net worth of national assets. The real estate sector (or industry) is also a job creating sector employing a number of people and engaging a lot of professionals and suppliers, creating incomes for millions of people and investors (Cumming, 2008 and Bond *et.al*, 2011). However, the real estate circle is characterized by both boom and busts periods. Real estate financing calls for a developer/buyer to find a loan at financial institutions. The interest rates and lending terms are usually dictated by the money and mortgage market. The fund for real estate financing is raised by the individual savings of income earners and accumulates through the process of “Circular Flow of Economy” (Bond et.al. 2011 pp 9).





**Figure 3.3:** Circular flow of economy (Adapted from Bond et.al, 2011 pp 9)

From the above figure 3.3, the net income after tax is divided into savings and consumption, the savings go into the financial intermediaries and most of it is made available as loans to real estate buyers, builders or developers. This in turn generates income and profit to real estate market participants and fosters the growth of the real estate sector of any country. It really stimulates the real estate market (Cumming, 2008). “Real estate finance is the key factor in most real estate transaction. When mortgage funds are available, real estate sales take place and if the mortgage money is scarce, activity in the real estate market declines” (Bond et.al, 2011, pp 27).

Finance in general terms is referred to as the branch of economics that deal with the management of money and other assets. It involves credit management and banking towards making funds available for investment and capital development. Finance is an important feature of business ventures and its pivotal role cannot be over emphasized, thus the high regard for it as capital in the production process. Real estate finance therefore is the branch of finance that provides money and investment capital into the real estate business sector of an economy. Raising funds, capital (or wealth) for investment in real estate also requires a balance between risk and profitability (return) as does other

business corporation (EconomyWatch, 2009). Real estate financing offers gains in terms of capital appreciation and income generating capability of the asset which also appreciates over time. Real estate financing is a long term one and indivisibly linked to real estate investment.

In the words of Ogedengbe and Adesope, (2003), 'development of real estate asset requires huge capital that developer and investors (especially private ones) are not always able to provide alone but requiring credit financing from various sources'. This position was supported by various authors and researchers (Hemuka 2007, Ajoku & Nubi 2009). Investment in real estate often involves borrowing a portion of the required capital sum from a finance company or bank (Wiedemer & Goethers, 2003). Proper financing is important to successful real estate investment and development. Various forms of finance on varying terms from different agencies are available to the property market. The various sources of the needed funding for real estate development include banks (commercial, development and mortgage), pension funds, and insurance fund. Mortgage loans however comprise the major source of finance to real estate development and it constitutes a large single demand for credits in developed countries.

Real estate asset offers good collateral for credit (loan) advancement because of its fixity in location, long life, permanency, record of the title, and laws that guide the transfer or conveyance of properties. However, mortgage loan could be short term (in the case of construction loan/ bridging finance) or long term (in the case of home financing). Long term loan carries along with it, special risks and higher interest rates. In spite of these, long term loans have not proven adequate for many lenders (Wiedemer & Goeters, 2003). As a result, some of the historic/conventional sources of mortgage loan are withdrawing from granting long-term loans and diversifying their credit facilities to less risky ventures

mostly on a short-term basis. Omirin and Antwi (2004) observed that real estate development in recent times has become more problematic to finance in the sense that there are complex interactions of several factors ranging from high interest rates on loans, stringent repayment requirements, cumbersome loan requirements from lenders and availability of funds (as obtainable in Nigeria). Ogunba (2009) added the lack of access to the National Housing Fund (NHF) by primary mortgage institutions (PMI) to the problem of real estate financing in Nigeria. Kama et al. (2013), contrary to Ogunba (2009), expressed an improvement of the access to National Housing Fund in 2010 and stated that “the NHF constituted 92% of the mortgage loan in 2010”.

Apart from the cost of mortgages (interest rates), there are other charges imported to a mortgage transaction that increases the interest rate and take the loan beyond the affordable range of a house buyer. These charges or fees include loan discount, application fee, origination fee (finance fee), commitment fee, funding fee, renewal fee, assumption fee and warehouse fee – where applicable (King, 2009). In the past, most mortgage loans especially home ownership loans (residential mortgage loans) were made by savings institutions that hold deposit assets. As this source began to shrink, the financial market through the Mortgage Backed Securities makes money available for mortgage loans. Onyiuke (2002) recognized that the economic situation in Nigeria over the years influenced the non-availability of funding for real estate development. As observed by Ajibola et al. (2009), governments at all levels in Nigeria have come to realize that inadequate finance/funding had been the main hindrance to the achievement of various development programmes especially housing provision for the citizenry with its resulting effect on economic development. In the past, the Central Bank of Nigeria has encouraged banks to support the development of real estate (housing) sector through credit policies by requesting the erstwhile commercial and merchant bank to allocate a

stipulated minimum proportion of their credits to the housing/construction sector (Sanusi, 2003). Globally, real estate development involves huge capital expenditures that require a well thought out financing system. There is need to make funds available and at reasonable low cost to the enterprise to operate commercially and successfully. The availability and cost of funding for real estate development therefore have a great influence on the viability of the real estate sector.

As a result of the importance of finance to real estate development and economic development, the need for a continuous source of long-term funds for real estate sector lead to the involvement of capital markets and the establishment of secondary mortgage market through securitization process in many economics. Surprisingly, the secondary mortgage bank is not in existence in Nigeria (Kama et al., 2013), as the recently established Nigerian Mortgage Refinance Company (NMRC) is still in its infancy. The NMRC was established on 24<sup>th</sup> June, 2013 as the country's secondary mortgage institution and has just recently launched its bond in the Nigerian capital market.

### **3.4 Construction Loans**

Financing for commercial property development has lagged behind because of the unique nature of commercial property loan. Developers remain under the mercy of the commercial and development banks and insurance companies for the short term construction loan (bridging finance). Building project finance/loans refers to the provision of funds for the purchase of construction materials and payment for labour and relevant fees in the process of developing new property or renovation/rehabilitation or adaptation of existing buildings. Building project financing could come from two sources (i) the line of credit of developers with their financial institutions, materials suppliers or subcontractors and (ii) construction loan that is secured by a mortgage (or what is known

as 'trust deed'). While a line of personal credit of a developer has to do with relationship with a financial institution, suppliers and contractors, construction loan is a kind of mortgage financing and can be applicable to commercial property development (Bond et al., 2011). Cumming (2008) advocated a good relationship between financial institutions and borrowers in order to have a favourable mortgage deal.

As a bridging finance for property development, construction loan is usually for a short term ranging from nine (9) to twelve (12) months for a single family residence, and eighteen (18) to twenty-four (24) months for apartment house constructions (Bond et al, 2011). It may be up to three years for massive commercial developments (Cummings, 2008). This loan is not released in a lump sum to the borrower, it is advanced at different stages of construction as work progresses and certified by the project supervisor (in some cases). The loan is not amortised but interest on the loan is payable periodically on the loan amount. The sources of building project loans are local financiers, banks and credit unions. The current wave of financing commercial real estate development projects traces the source of commercial loan to the commercial banks forming a consortium. A commercial loan is an unsecured (non-collaterised) loan, usually for short period and rarely extends beyond three (3) years. Such loan is restricted to high credit rated borrowers (Bond et al, 2011; Cummings, 2008 and King, 2009). Real Estate Investment Trust (REIT) is another feature in the real estate cycle associated with real estate financing (indirectly though), but the laws and regulations guiding the operations of REITs practically prohibit real estate financing by REITs. In the words of Cummings (2008), REITs fall into the same category of lending institution as insurance companies as a prime source for funds, but their access is remote and distant, (perhaps through Mortgage REITs).

### **3.5 Types and Sources of Finance to Real Estate**

Since real estate developers (individual, corporate or public) in most cases are not able to raise the required amount of money from their savings/surpluses, the need to raise funds becomes inescapable. Most property buyers normally have little funds from their unspent income, therefore the need to be aware of the various available sources of funding to actualize their property ownership dreams remains a common need for all. The formal sources of funding for real estate financing are banks, financial institutions and capital market. These sources operate a mortgage system either primary or secondary market system. The home finance system is seen in many societies as a social good and a state financial system exists for housing provision as a source of funds for real estate development. The following sections discuss these sources further.

#### **3.5.1 State Finance System**

Some countries or states (especially non capitalist economies) developed some home ownership and home finance programmes that make loans directly at low and preferred interest rates to their citizenry. The target beneficiaries are those who have not owned a house or have no access to private institutions for loan. One of the conditions for the state home ownership scheme is for the applicant to be resident of the country/state for a determined period of time and a first time home buyer. Between 1979 and 1983, the then Governor of Lagos state in Nigeria established the Lagos Building Investment Corporation (LBIC) to cater for housing finance of the state's public servants who were granted loan to buy apartments from the government public housing development of the Lagos State Development and Property Corporation (LSDPC). The LBIC has transformed to full commercial mortgage company.

In Turkey, public institutions and state owned banks are the key suppliers of funding for mortgage financing and home ownership and there is no secondary mortgage institution (Erbas & Nothaft, 2005). The Turkish mass housing fund was brought to an end in 2001 and mortgage law was developed between 2005 and 2007 (Sur, 2012). Prior to 2005, mortgage was provided by the commercial banks on a short-term basis. However, home finance has been more of the state system (Kizilsu, 2006). Home ownership in Turkey accounts for about 68.2% and leasehold interest of 31.9%, suggesting that Turkish are more home owners than holding tenancies/leases and the source of fund for housing ownership is family resources with outstanding mortgage loan constituting 0.22% of Turkish GDP in 2003 (Ozsan & Karakas, 2005). According to YenerCoskum (2011), the government housing policies will be financially and politically unsustainable in the future as reflected by the 6 million housing unit deficit arising from the failure of both market and social housing supply system. Prior to 2004, housing finance in Turkey was based on the traditional method of owners savings and borrowings from family friends or co-operatives, house loans were rarely sourced from the banks as a result of the high interest rates and short term tenure of the loan. As the Turkish economy improved from the 2001 crisis, banks were able to offer loans from 2004 to the high income group of the society on longer terms (Topintzi et al., 2008). Ozsan and Karakas (2005) reiterated the need for longer term sources of funding through debt and investment tools for the real estate market. The study by YenerCoskum (2011) found that 40% of the housing stock in the Turkish urban area are with questionable quality. The short term deposit source of funding for mortgaging finance was recognized to be an asset liability incompatible and there is need for a long term source of fund, the need for a secondary mortgage market in Turkey.

### **3.5.2 Mortgage Finance Model**

Kama et al. (2013) reiterated the different types of financing models that have been identified in the literature to include Bundled, Unbundled, Depository and Secondary model. Bundled mortgage finance system rests solely on deposits as its source of funds and it is a single entity lender structure. The single actor performs all roles of mortgage services from loan origination, lending to risk management. The system is associated with risk of liquidity and high interest rates because borrowers are seeking for a long-term loan while the source of funds to the lender is short-term deposit, a mismatch. The efficiency and expertise required in a credit system are also lacking. In contrast, the unbundled system allows the interplay of all market participants in the financial system to play their different roles in the origination and execution of the mortgage process. The potential borrower approaches a mortgage banker who sources for funds from investors (depositors and secondary market). Each loan originated passes through the process of underwriting, marketing, packaging and risk management. While the unbundled mortgage system seems to promote market discipline, the cost effectiveness can diminish if many players are involved due to their fees and more bureaucracy will be created for the process (Kama et al., 2013). The depository based system of mortgage finance occurs when deposit banks created a mortgage unit/desks or diversify to mortgage lending business. The problem associated with this system is a mismatch of loan tenure (short term) and a high interest rate. The secondary market system is a long-term liquidity system for the housing market and finance. It involves loan origination, warehousing and securitization process through a special purpose vehicle (SPV) and packaged for sale to investors. The proceeds from sale of the investment are ploughed back into the system for new mortgage creation, thereby widening the market and increasing housing stock in the property market. The secondary market is discussed further later in this chapter.



A lot of economies are transferring into the capitalist model and this leads to the establishment of conventional mortgage institutions in the countries that hitherto operate state finance system in order to meet the ever increasing demand in the housing market. Turkey passed a new mortgage law in 2007 that would enable the development of the mortgage system (Topintzi et al, 2008). The 2007 mortgage law created a foundation for globally adopted stable mortgage lending system for home finance through its provision for adjustable rates and the secondary mortgage market (Demir, Kurt, & Cagdas, 2003 and Topintzi et al, 2008).

### **3.5.3 Primary Mortgage Market**

The primary mortgage market is where loans are originated. It is the market where borrowers negotiate with lenders in relation to cost of loan (interest rate), term of loan and other conditions. The primary sources of funding for mortgage financing include Savings and Loans Companies or Building Societies, Commercial Banks and Financial Institutions. The primary sources are regarded as the conventional sources of finance to real estate (Cummings, 2008).

Savings and loans firms and Building Societies are the most important creators of mortgages, making funds available for real estate financing especially home ownership. These firms are the bulk of primary mortgage sector in Nigeria creating home loans for single family real estate which usually spanned more than 10 years and at 66% (2/3) loan to value ratio. Commercial banks are also a good source of funds for real estate finance in the category of the depository. Most commercial banks have a mortgage section or unit that gives loan to individuals for home ownership purpose. However, development/construction loan is more attractive to commercial banks because it is a short term loan (1/2 – 3 years). This loan helps in the development of real estate products

to meet the need of the citizens be it in residential, commercial (office or retail) or industrial. Practically in Nigeria, the mortgage credit culture is almost non-existent, the cash and carry or institutional incremental home development is pervasive (Kama *et.al.*, 2003) with only 4 (about 2%) of the existing commercial banks in 2008 being involved in mortgage related transactions.

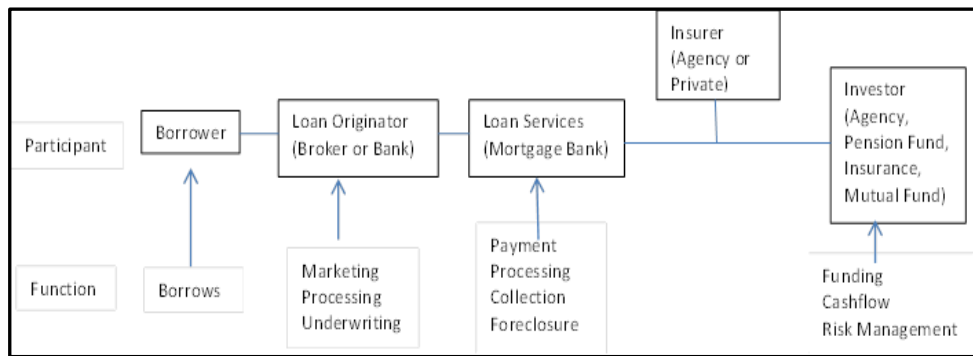
Insurance companies and pension funds are typical financial institutions who have also played important role in the supply of funding to real estate through the life insurance scheme and long-term provident funds respectively (Sanusi, 2003). Financial institutions do not deal directly with borrowers, but through the middlemen which could be mortgage brokers or bankers. Insurance companies fund large scale project mortgage packages. Pension funds historically invest their funds on securities (stocks and bonds). The growth in funding and impressive yield of real estate has presented a new outlet for pension funds. Financial institutions also engage in the development of real estate for sale to the public and their staff (Cummings, 2008; Kama et al., 2013). In Nigeria, the pension fund has not been active in real estate financing in the past years. Odunsi (2011) asserted that the Pension Reform Act of 2004 in Nigeria is fashioned similar to the Pension Law of Chile with restriction on investment of the fund on different asset classes including real estate, therefore, financing real estate development with pension funds is not clearly provided for in the Nigerian Pension Reform Act of 2004. As at the end of October 2012, the accumulated fund to the pension through contributory pension scheme had amounted to N3.02tn (Three trillion naira) but the reviewed investment guidelines by the National Pension Commission (PenCom) stated that investment in units of funds including REITs must be through public offerings or private placement (Punch, 2012). Such restrictions reduce the funding of real estate activities by the financial institutions in Nigeria. Section 73 of the Nigerian Pension Reform Act 2004 is the section that permits the Pension Fund

Administrators (PFAs) to engage in real estate investment and by the end of October, 2010, N170.52bn (5.6% of the accumulated fund) had been invested in the real estate sector and aggregate loan and advances to mortgage banks standing at N126.6bn (4.2%) in December, 2011 (Kama et al., 2013).

#### **3.5.4 Secondary Mortgage Market.**

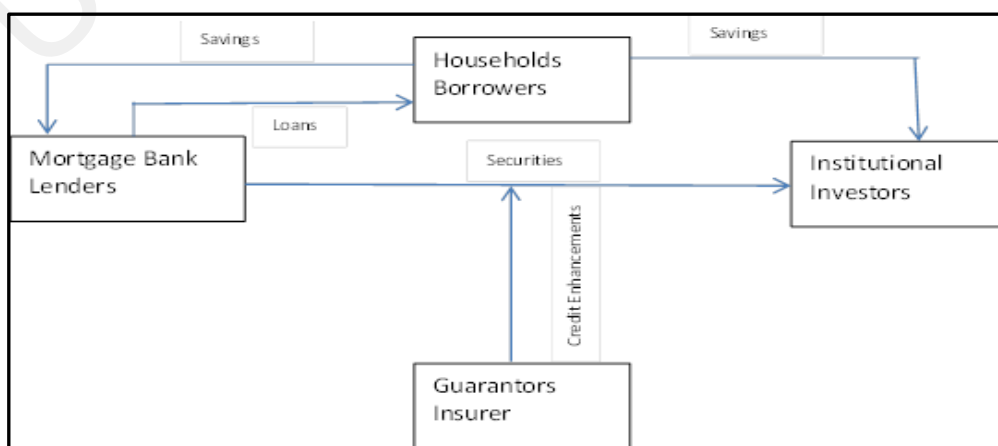
In the effort to provide a guarantee for the loans originated at the primary mortgage market and ensure continuity in housing finance, the secondary mortgage market evolves. The supply of funds for real estate development and investment can be greatly affected by economic conditions. In times of financial crisis, little or no fund is available to create mortgages or fund projects and the few mortgages may attract high interest rates. Mortgage loans are illiquid especially in term of emergency and urgent need to recoup cash, and it becomes difficult for the loan to be liquidated within a short time. This reason created the need for a market to sell loans and raise funds even before the maturity date of the loan (Watanabe, 1998). The secondary mortgage market presents itself to meet this need.

Secondary mortgage system started in the United States through the creation of the Federal National Mortgage Association (FNMA) and known as 'Fannie Mae' by the American Congress in 1938. The main purpose is to provide a market for loans issued by the Federal Housing Administration. Fannie Mae had a modest growth and was divided in 1968 with a part becoming the Government National Mortgage Association (Ginnie Mae) while the other part retained the name Fannie Mae and became a private corporation (chartered). Fannie Mae as a private corporation could enter the conventional mortgage market and provided funding for a sizeable proportion of the American residential mortgage market



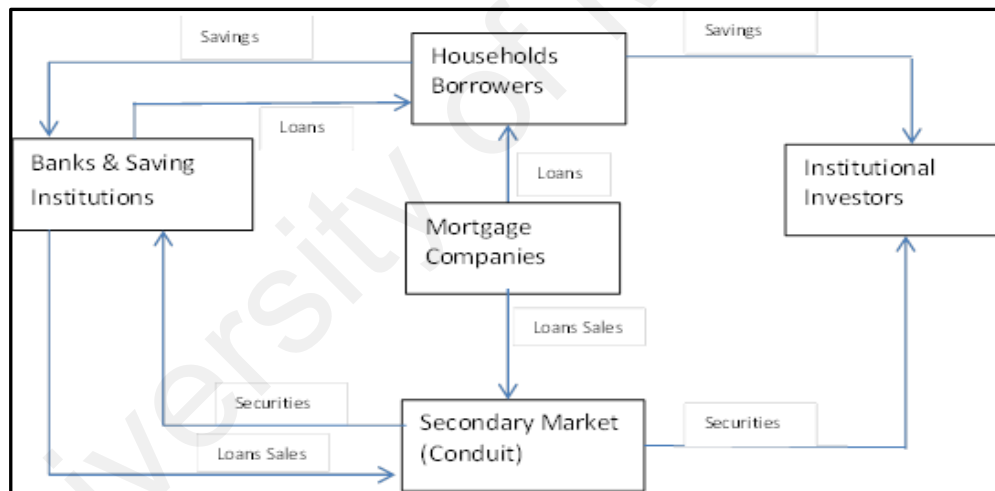
**Figure 3.4:** The Unbundled Mortgage Delivery System (Watanabe, 1998)

In the secondary mortgage market, existing loans are bought and sold (Cumming, 2008 and Bond et al, 2011). A loan originator (lender) grants a loan directly to the borrower at the primary mortgage market level (fig 3.4), the loan is sold in the secondary mortgage market by the loan originator in order to raise more money for the business of loan creation. In the secondary market are a number of private and institutional lenders, investors and government agencies as participants. The purpose of the secondary market is to move surplus (excess) money from a sector to where there is shortage of funds and therefore making available, funds for loan (Bond et al, 2011). The Secondary mortgage market is a vehicle for fund mobilisation in the housing sector. It is an arrangement of both the public and private sector all over the countries of the world, perhaps with different models as may be suitable for each county (Watanabe, 1998).



**Figure 3.5:** Direct Sale of Mortgage Loan at Secondary Market (Watanabe, 1998)

In the secondary mortgage market, Mortgage Backed Securities (MBS) are issued on the pools of mortgages where investors received pro-rata shares of cash-flows. The issuer sells mortgage assets to an SPV or trust which in turn issue securities to an institution which buys the mortgage from various loan originator and issue securities upon the pool of loans. The mortgage-backed securities (MBS) ease investing in mortgages in the same way stocks and bonds are purchased in the capital market (Cummings, 2008). Real Estate Investment Trust follows the similar process of SPV and unit's allotment to investor to raise funds that can serve indirect real estate financing purpose or function especially Mortgage REIT.



**Figure 3.6:** Secondary Mortgage Market with a Conduit (Watanabe, 1998)

Secondary mortgage market operators buy loans from the loan originator (primary mortgage banks, building society, Savings and Loan companies) in one end acquires into the investors' portfolio, and at the other end assembles a pool of mortgage loan as collateral to back an issue of securities. The securities are then sold to others, therefore, the purchaser of the securities provides funding for the loans and they benefit from the cash flow produced by the underlying block of mortgages. Securities backed by a

mortgage pool must then compete with other kinds of investment to attract investors' money. As a result of the development of secondary mortgage market, more participants enter the primary mortgage market sector. Canada created *Cannie Mae*, mortgage backed securities market in the model of America *Ginnie Mae*. The Canada Mortgage and Housing Corporation was then authorised to guarantee timely payment in the pool of insured federal loans (Kusmiarso, 2006).

Australia mortgage backed secondary market developed as the official programme to housing and the state government took a leading role in 1985. The initial step was the issue of promissory notes by National Mortgage Market Corporation, followed by the establishment of the First Australian National Mortgage Acceptance Corporation by the government of the New South Wales State in 1986, the first state institution to issue long-term securities in Australia (Kusmiarso, 2006). The two earlier institutions are partly owned by the public and partly private sector owned. The European mortgage-backed secondary markets were developed through the centralised mortgage lenders in the United Kingdom with their entrance into the market in the mid-1980s. MBS were first issued in France and Spain in 1991. Belgium Germany, Ireland and Netherlands joined in 1996 and by 1997, there were in existence a number of large MBS issued in France, Netherland and United Kingdom (watanabe, 1998; Kusmiarso, 2006). Mortgage backed securities market developed through private sector in Europe without any direct involvement of government.

Argentina and Colombia are first in the range of developing countries to establish secondary mortgage markets. Mortgaged backed securities were first issued in 1995 by Colombia Savings and Loans Corporation. The government owned National Mortgage Bank of Argentina issued its first MBS in 1996 after its restructure in early 1990s to

provide long term home financing. The Bank acts as a conduit in a similar way to Fannie Mae buying mortgages from loan originators, and pool into SPV for the issuance of bonds to investors.

In Asian continent, Malaysia's secondary mortgage market is the foremost, established in 1987 and christened "Cagamas" in the aftermath of the country's macro-economic crisis (NG, 2006). The Malaysian secondary mortgage market has been able to develop a stable primary mortgage market and regulatory guidelines and procedures for housing finance through the capital market. Cagamas was founded on a public private partnership model, a model being adopted by many developing countries today (Cheng, 1998; Ng, 2006). The primary mortgage market of Hong Kong is such a developed one with a good legal framework for regulation. The housing funding sector was however dominated by the deposit funded banks (Watanabe, 1998). In 1997, Hong Kong Mortgage Corporation, a secondary mortgage institution for the country was created with three main objectives of improving banking and monetary stability, home ownership corporation and development of local debt (bond) markets. In Hong Kong, MBS were issued by private banks with the country's Monetary Authority (HKMA) creating a conduit in the model of Fannie Mae to purchase the pool of mortgages. The Japanese housing finance is a good example of a developed state with largest mortgage in terms of mortgage assets (Watanabe, 1998). Japanese Government's Housing and Loan Corporation was the largest mortgage institution in 1996, prior to the Asian financial crisis of 1997.

Korean mortgage and housing finance system is a successful system. Finance is provided by the Korea Housing Bank and the National Housing Fund (both are government institutions). Commercial banks made entry into the housing finance system in 1996 with instalment finance companies in 1997. Korean Housing Bank was privatised in 1997

paving ways for development of the secondary market as there was intense competition among the mortgage providers (Lee & Lee, 1998). The Korean secondary mortgage market came into existence with the establishment of Korean Mortgage Corporation (KoMoCo) a private corporation in 1999. Korean Housing Finance Corporation (KHFC) was a product of the merger of KoMoCo and the nation's Housing Loan Guarantee Fund and it was re-organised as a public corporation. KHFC purchases mortgage loans originated by commercial banks and packaged them into MBS (Yoo, 2006).

In Nigeria, the secondary mortgage bank was established on 24<sup>th</sup> June, 2013 and named Nigerian Mortgage Refinance Company (NMRC). The company is still in its infancy state and yet to have an impact on the Nigerian mortgage market.

### **3.5.5 Mortgage Bond System**

The mortgage bond system is another form of the secondary mortgage market. The system came into existence in Europe in two different phases with different fundamental features. The first phase in Poland similar to a rural cooperative society mortgage system was created in 1970 while the second known as Credit Foncier de France has a model of a centralised mortgage bank (Kusmiarso, 2006). The Polish model of mortgage bond is reliant on collateral for credit advancement. Mortgage bond provides (only) credit enhancement (security). For the countries that adopted this model, specialised institutions were created by governments to grant loans to real estate wholly secured. Bond holders then have priority claim on collaterals. In Denmark, private mortgage banks dominate mortgage lending funded largely through bond issuance and the bond market is ranked as one of the largest. In the strictly regulated Danish bond market, the mortgage institutions secure the borrowers' loans through the sale of bonds in capital markets with Pension Funds and Insurance Companies being the key investors as against the government bond



usually bought by foreign investors. Most central European countries modelled their mortgage bond law after the German system. However, the interest on the mortgage bond is tax exempt to create a level playing ground within the dominating bank and reduce cost of housing finance. In Chile, mortgage bonds serve as an important vehicle to finance housing and bonds are issued by commercial and mortgage banks in a similar model to Denmark system. Until 1966, the French's Credit Foncier is a lending institution and the only authorised to issue mortgage bond. In 1996, the government announced the breaking of the Credit Foncier and the merger of the core residential loan with another public institution. Spain established a centralised mortgage banking system which remains the only mortgage bond issuer until 1980. The 1991 merger of the State Mortgage Bank with other Public Credit Institutions created the **Argentaria Group** which is partially privatised and breaks the monopoly of the only bond issuer. In the United States, as well as some other countries, depository institutions are the issuers of mortgage bond. Nigeria has her fair share of mortgage backed bond issuance. Bond Series 1 was issued in 2007 and redeemed in May, 2012 while the Series 2 with a maturity date of 5 years was issued in April, 2012.

### **3.6 REIT Investment and Direct Real Estate Financing**

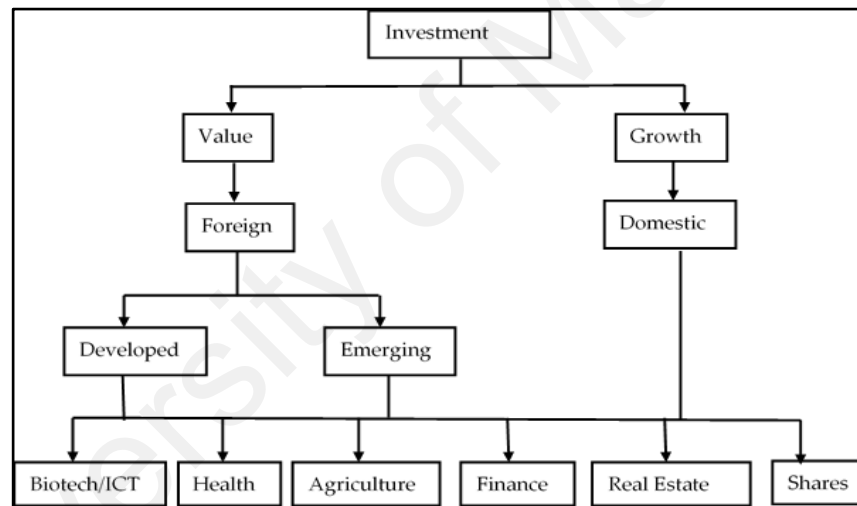
Diversification is a familiar word/term in the investment circle. The meaning is based on the sentiment of a phrase – don't put all of your eggs in one basket – which provides little guidance on the practical implication of the role of diversification in investor's portfolio and offers no insight into how a diversified portfolio is actually created (McWhinney, 2012). In the investment market, investors have a full range of options (numerous alternatives) where funds could be invested. These include shares, bonds, unit trusts, bank deposit and real estate assets. The choices of investment options for diversification purpose are expected to take into account the characteristics of the various assets and

linkages among them (Amidu et al., 2008; Hoesli & MacGregor, 2000; Hoesli, MacGregor, Adair, & McGreal, 2002). Investment funds are always channeled to the sector (or option) that promises an attractive return in light of expected risks. Therefore, diversification of investment portfolio is a function of Return/Risk trade off.

Diversification of investment provides room for the spreading of investment risk. The idea is to create a portfolio that includes multiple investment choices in order to reduce risk. If an investment consists only of stock issued by a single company, it puts the investor at the risk of losing all when such company suffers a serious downturn. Investors use to develop an asset allocation strategy for their portfolio distributed on stocks, bonds and other investment options, but it is never a bad idea to keep a portion of invested assets in cash or short term money-market securities (Amidu et al., 2008;). Investors with very large sums of money often require strategies designed to address the more complex needs. Real estate investment requires large sum of money, therefore, it will require more balanced strategies that will consider minimising taxes (capital gain tax, real estate duties) and give higher and reliable income. The liquidity potential of investment vehicles is also assessed before deciding on the choice of investment as well as investment diversifiers. Investment in a mutual fund can create opportunity for diversification as the fund invests in basic asset classes of stocks, bonds and cash could have low correlation with real estate (Hoesli & Oikarinen (2012). However, portfolio diversification goes beyond the basic asset categories.

Investment diversification is more pronounced when it goes across sectors such as a combination of financial, manufacturing, real estate, oil & gas and trading and this calls for detailed analyses and calculations to make a wise and balanced choice of investment combination. With stocks investment can be focussed on one category or a combination

of large, mid, or small caps. In each category also is growth or value stocks. It could also be domestic or foreign and foreign stocks can be developed or emerging markets (McWhinney, 2012). REIT diversification is confined to real property diversification or geographical real estate asset diversification. This means diversification for REIT can go across various property types and cross boundary. Therefore there are property sector specific REITs known as specialized REITs. The property diversified REITs are simply referred to as diversified REIT. Geographical diversified REIT operated in the same system and strategy as multinational companies but only with investment on real estate assets across national boundaries. See Table 2.6.



**Figure 3.7:** Investment diversification options

Both foreign and domestic investment choices go across sectors like Biotechnology, Health, Finance (Insurance, banking pension fund or trusts), real estate, stocks and shares etc. While stocks and bonds represent the traditional investment choices for portfolio construction, a sectoral alternative investment provides better opportunity for further diversification. Real estate assets and REITs and other investments provide opportunities to invest in vehicles that do not move in the same direction with traditional financial markets. REITs have low correlation with the stock market and other financial

investments options (Amidu et al., 2008) and thus offer another avenue for portfolio diversification. REITs for instance have the added advantage of tax concession though upon fulfilment of certain conditions (distribution of 90% of profit/income as dividend to investors and investing a substantial amount of its fund on real estate assets). McWhinney (2012) stated that time horizon, risk tolerance, investment goals, financial means and experience of investor play a major role in dictating investment mix. Therefore an advice from a specialist financial services advisor becomes inevitable to assist an investor in portfolio diversification exercise.

Real estate securities have been argued in the past studies to be a reasonable substitute for direct real estate investment. They however possess similar characteristics which could make them positively correlated (Amidu et al., 2008). The real estate investment (direct or indirect) has low correlation with the security markets equities and offers a diversifier to other sector investments like bonds, stocks etc. Studies have also examined the characteristics of property or real estate companies (Amidu & Aluko, 2006; Amidu et al., 2008; Bond, Karolyi, & Sanders, 2003; Ling & Naranjo, 2002; Ooi & Liow, 2004). The overall conclusion from the past literature is that direct investment in real estate assets provides superior returns and also serves as an important diversification tool when included in a large portfolio (Amidu et al, 2008). The resurgence of securitisation has shifted attention towards measuring the performance of real estate securities. The historical performance of REITs has been analysed by different authors to a conclusion that REITs offer superior returns, indicating that it is a diversification investment option (Ong et al., 2011). Newell, Liow, Ooi, and Zhu (2005) stated that real estate has become a major capital asset comparable to the common stock capitalization in many world markets and agreed the diversification advantage of real estate securities including REITs, in a mixed asset portfolio. This assertion was also highlighted in Conover, Friday, and

Sirmans (2002) and (Steinert & Crowe, 2001) and supported by Liow and Webb (2009). Ooi and Liow (2004) however concluded that risk adjusted returns of real estate stocks in developing economies of the Asian region are dictated to a large extent by macroeconomics factors. A large body of empirical studies in real estate literature clearly point to the fact that real estate securities are not a good substitute for direct real estate investment and not a good diversifier for direct real estate investment and vice-versa (Amidu et al., 2008).

In the modern day banking system, banks in developing countries (emerging markets) are diversifying into real estate development, acquisition and investment, suggesting that financing and real estate presents an inverse relationship and possess low correlation. Consequently, REITs could diversify to short term real estate development financing where necessary, which will enhance the portfolio return and performance. Diversification of investment has been described as a way to spread risk and increase earnings from a variety of investment assets which lead to construction of the investment portfolio. For REITs, the regulation has limited the extent of diversification since the substantial amount of the REIT fund is mandated to be invested in real estate assets. The minimum varies across the REIT markets with the minimum being 60% of REIT asset (United Arab Emirates). South Korea, Hong Kong and Mexico have minimum of 70%. Majority of the market have 75% of REIT asset as minimum to be invested in real estate acquisition. Taiwan, Bulgaria, Greece, Italy, Spain, Canada and South Africa specified 80% REIT asset as minimum on real estate acquisitions and related securities. However, diversification option of REIT goes on the various types of real estate property and different markets. Therefore, REITS have liberty to diversify within property types and on different geographical locations (or markets). While some REITs could be regarded as focused/specified or diversified based on the percentage of investment in different

property types, investing in more than one property type irrespective of the percentage, has the characteristics of diversification (Chan et.al, 2003).

Some REITs are sector specified. As noticed in table 2.6 in chapter two, the retail/office sector focused REIT includes Simon Propertygroup Inc and General Growth Properties of U.S.A.; Westfield Corporation and Federation Centres in Australia; Nippon Building Fund and Japan Real Estate Investment Corporation in Japan; Link REIT in Hong Kong; CapitaMall Trust and Kepple REIT in Singapore; Pavillion REIT and CMMT REIT in Malaysia; RioCan REIT in Canada; Hyprop REIT in South Africa; Hammerson Plc and Derment London Plc in U.K.; Vastned Retail NV in Netherland; Beni Stabili SPA in Italy; Klepierre in France and Befimmo SA in Belgium. There are also residential focused REITs; Emiak Konut in Turkey; Canadian Apartment properties of Canada and Equity Residential Properties Trust of USA. REIT can also be industrial specialised. Nippon Prologis REIT in Japan; Ascendas REIT in Singapore; Goodman Group in Australia and Warehouse De Pauw SCA in Belgium are industrial strategised REITs. Hospitality, healthcare, agriculture and Storage/logistics are other specialised focus of some other REITs. Property diversified REITs on the other hand spread there asset across the different property types. Cofinimmo and Aedifica in Belgium; Gecina and Icade in France; Hambomer REIT in Germany; Merlin Properties SOCIMI in Spain; Land Securities Group Plc and British Land Co. Plc in UK; Growthpoint Properties, Redefine Properties and Resilent Property Income Fund in South Africa; H&R REIT and GPT Gropu in Australia; Champion REIT in Hong Kong; United Urban Investment in Japan; Kiwi Properties in New Zealand; IGB REIT in Malaysia and Suntec REIT of Singapore are all diversified REIT (Table 2.6). In terms of geographical diversification, REITs invest in properties beyond national boundaries. Examples of geographically diversified REIT include the CapitaMall Trust of Singapore that invest in Singapore and Malaysia,

and YTL REIT (a hotel specialised REIT) in Malaysia that also invest outside the boundaries of Malaysia. REIT has also created cross boundary investment across Europe.

The remaining 25% of REITs fund can also be invested in other forms of investment in a way of diversification. Chan et.al (2003) cautioned that REIT investors will get the same pay off under any form of diversification be it property type or across location. Benefield, Anderson, and Zumpano (2009) on the contrary, in their study of the performance of specialised and property diversified REITs found diversified REIT to have higher returns, with specialised REIT performing better only during unfavourable market conditions. Further empirical studies on the cross volatility spillover across countries show a minimal co-integration and weak insignificant mean transmission between Asian and European securitized real estate (Bond et al., 2003; Hamelink & Hoesli, 2004; Ling & Naranjo, 2002; Liow *et al.*, 2005; Stevenson, 2002; Worzala & Sirmans, 2003). The implication is that international geographical diversification of real estate stock investment would accrue benefits to investors, especially between Asian and European markets.

Decision to invest in real estate assets across regions/markets or among property types takes a process involving the use of a model like CAPM, intuition and tools like spreadsheets, sensitivity analysis and scenarios (Parker, 2011). Investing in real estate today could be in a similar way to other forms of investment especially in the capital market but with direct and peculiar investment in the real estate asset (Geltner et al., 2007). “Shares of the major REITs are publicly traded in the stock exchange just as operating firms and valued as actively operating companies and not as passive portfolio of real estate properties. Thus REITs are valued in essentially the same way other publicly traded firms are valued” (Parker, 2011 pp 3, quoting Geltner et al., 2007). REIT

diversification can be treated in the same way of diversification of an investment portfolio of various assets.

However, in some economies where there is less property stock for REIT to acquire/invest, diversification to direct real estate financing to bring up property stock is worth investigating in the present face of REIT legislations that limit financing by REIT to secondary mortgage market. For REITS, the laws and regulations restrict the extent of diversification of investment. At least 70% of a REIT fund must be invested in real estate assets (i.e. real properties). In most economies, 75% is the minimum (see Table 2.4).

### **3.7 The Need for REIT Financing Real Estate Development**

In most developed economies and developing economies alike, there exists a good mortgage system that provides financing of real estate development projects at moderate interest rates (usually a single digit). In such economy, the problem is not of development fund or financing, but more of sale of final products to enable developers recoup his money, pay back mortgage loan to the financier (together with interest) and move on with their property development business. It is known worldwide that real estate development calls for huge amount of money (a capital intensive undertaking) and the consumers of real estate products often do not have the entire money required to purchase the house of their choice but will again depend on mortgage loan to be provided by either their employer, a bank or co-operative body or on the alternative take a tenancy or a lease of the desired unit (either business space or dwelling unit). A developer does not have access to long term loan so as to wait until he could recoup the money invested in developing a property through piecemeal payment that could span twenty (20) to twenty-five (25) years, this translates that after one good project, developer will be out of business as a developer and become a manager (even only if situation permits), Since the consumer of



real estate can only have access to loan to buy houses or take a lease, it would not come profitable to a developer to wait so long before recouping his development capital, with its consequential multiplier effect on the economy. The only expected option is for the developer to sell out the developed product immediately on completion if not before completion. Thus there is a need for an outright purchaser to buy out the final product from a developer. This is where the REITs come into importance. At least 70% of a REIT fund are mandated to be invested in real estate assets. The REIT fund therefore is expected to rescue real estate developer through acquisition of the real estate products, the REIT then manages the acquired property for periodic income from which the dividend is paid to the investors. REIT therefore operates in a similar way securitization (discussed in chapter 2) rescued the mortgage originator(s).

In underdeveloped economies and some developing countries like Nigeria, the fund to develop real estate products is practically non-existent and where it is available, it comes with stringent conditions that either make it inaccessible or unprofitable to obtain (Omirin, 2002). The development loan in Nigeria for example, comes with double digit interest rates (between 22-26% per annum depending on the financial institution) and for a short period for which development/construction of the product will still be ongoing. Ordinarily, 22% loan interest would render a building development project unprofitable in an environment that is not transparent in its real estate activity and has lower return on property investment to finance cost (interest rate). As a result of financial impropriety that prevails in such environment, the products (if completed) come to market after completion at outrageous prices that are even beyond the purchasing power of potential targets, thus such property becomes unoccupied due to high rent/price. On the other hand, some projects could remain uncompleted in the face of ever increasing inflation especially when the cost of financing is not at fixed interest rate. This is the experience of Nigeria

real estate sector including REIT that there are situations where properties to be acquired with REIT fund are considered to be expensive and unprofitable. Some properties already acquired have low patronage for the same reason and low income is generated. Where the REIT companies are allowed to finance a project, REIT fund that could hitherto remain dormant (or diverted to unauthorised investment) can be deployed into real estate financing even at a lower rate than the exorbitant interest rates witnessed in the market, to stimulate development in the real estate sector by contributing into the creation of real estate assets.

However, one problem is about the tax concession/exemption advantage of REIT. Investors always want to maximise their profit while minimising cost. Tax payment is a huge cost to investors but in the face of a greater return, it is worth undertaking. REIT laws regarded profit/income made from non-real estate investment as “Bad Income” if it exceeds 5% of the total income (Cunningham & Ramey, 2006) and thus will be liable to tax. Payment of tax for Bad Income may be worth it, if the portfolio return will be higher than return from real estate investment only. Within the existing law and regulation, part or all of the remaining 25% of REIT fund after the mandatory 75% property acquisition can be deployed to finance real estate projects at the current interest rate to benefit from the high rate of return in the financing sector by Nigeria REITs. The question then is the allocation of assets for optimum performance. This is discussed in the following section.

### **3.8 Summary**

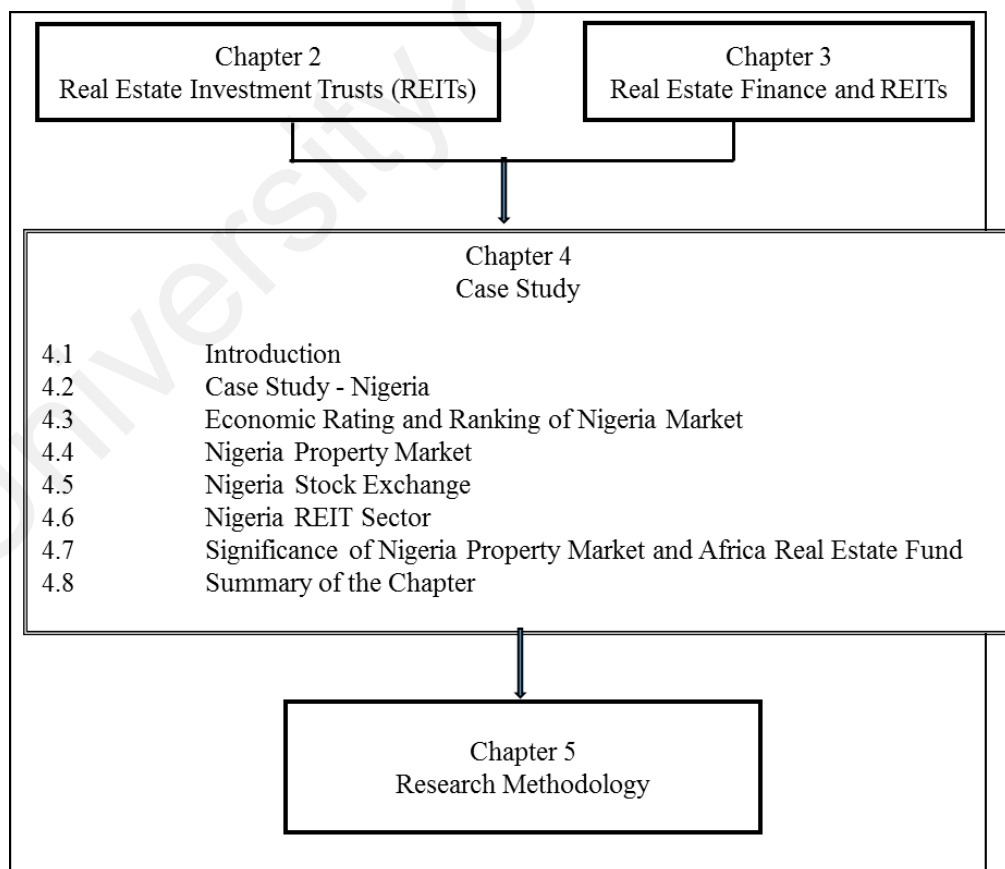
This chapter discussed comprehensively the real estate finance system, sources of fund and REIT diversification to direct real estate financing. The accumulation of (or access to) required financial requirement of real estate development calls for availability of loans from financial institutions at affordable cost (interest rate) and encouraging lending terms.

This is a function of money and mortgage markets. However, because real estate finance request for a long term loan (though with a higher interest rate as a reward for the higher risk of long term), conventional sources of fund (mortgages) are withdrawing from granting loan and therefore diversifying their risk. Construction loan is also experiencing a shortage of funding as a result of such diversification by loan originators. REIT as an investment scheme to bail real estate sector from shortage of development fund can also diversify into direct real estate financing if the laws and regulations are modified accordingly. This will undoubtedly grow the real estate sector of developing countries where lack of funding and low property stock thrives. The chapter also presented literature on the asset allocation strategy using the Markowitz mean-variance efficient frontier model and other portfolio analysis methods to support the REIT diversification to real estate financing. The Markowitz's efficient frontier model shall be used in the creation of REIT asset allocation model for REIT diversification (Objective 5). The next chapter (4) is devoted to the full discussion about research methodology and research methods adopted in this research. The structure of Nigerian REIT, case study and research model is further discussed in the next chapter.

## CHAPTER 4: CASE STUDY

### 4.1 Introduction

This chapter presents an overview of the study area – Nigeria. Section 4.3 discusses the socio-demography and economic statistics of Nigeria. The place of the case study in the world economic ranking using various economic indexes is covered in section 4.3. The Nigeria property market is the focus of section 4.4 while section 4.5 dwells on the Nigeria Stock Exchange. Section 4.6 discusses the Nigerian REIT market. The significance of the Nigerian property market was highlighted in section 4.7 which also mentioned the real estate funds (both local and foreign) that are investing in Nigeria market. Figure 4.1 below illustrates the structure and position of this chapter in relation to the preceding chapters (2 and 3) and the next chapter 5



**Figure 4.1:** Structure and positioning of Chapter 4

## 4.2 Case Study - Nigeria

Nigeria is a fast growing emerging market with great potential. Nigeria has a total land area of 983,213 square kilometres of which 773,783 square kilometres are in the savanna zones 75,707 square kilometres are in the derived savanna zones and 133,717 square kilometres are in the forest zone. Nigerian population based on the 2006 census is 140 million people while the 2015 estimate puts the population at 170 million people. The Nigeria Gross Domestic Product (GDP) grew at 7.9% between 1999 and 2012 and 8.5% in 2014 (Table 4.1). Recently in 2014, Nigeria was declared the largest economy in Africa taking the lead from South Africa with a GDP per capita growth moving from US\$700 to US\$1,725 (Khan, 2014). Baum (2006, 2008) declared Nigeria as a potential destination for Foreign Direct Investment (FDI). Nigeria market attracted over US\$20 billion in FDI between 2010 and 2013 (David, 2014) but the proportion of this sum to real estate sector is not available. Baum (2008) found that population and GDP per capita constitute the attracting variables for FDI. The study predicted three funds for Nigeria economy while observed data show that no fund is interested in Nigeria market.

**Table 4.1: Socio-economic Statistics of Nigeria as at 31-12-2015**

<b>Co-ordinates:</b>		9 <sup>o</sup> 4'N, 7 <sup>o</sup> 28'E
<b>Area:</b>	Total	923,768 sq km (356,667 sq mi)
	Land	910,771 sq km (351,649 sq mi)
	Water	12,997 sq km (5,018 sq mi)= 1.4%
<b>Population:</b>	2014 Estimate	173,6m
	Census	140,431,790 (2006)
<b>Government:</b>		Presidential System with Bicameral Legislature
<b>Major Cities:</b>		Lagos, Abuja, Kano, PortHarcourt, Kaduna
<b>Economics (2014):</b>	GDP – Estimate	\$521.8bn
	Per Capital	\$2,710
	GDP - Nominal	\$268.708bn
	Per Capital	\$1,725
	Growth Rate	5.4%
	Inflation Rate	8.5%
<b>REITS (2015):</b>	REIT Company	3
	Capitalisation	NGN39.989bn (\$200.7m)
<b>Stock Market (2015):</b>	NSE listed equity	203
	Capitalisation	NGN9.85tn (US\$49.44bn)

Source: NSE, CBN, [www.cashcraft.com](http://www.cashcraft.com), [www.nigeria.gov.ng](http://www.nigeria.gov.ng),

### 4.3 Economic Ranking of Nigeria Market

Nigeria, the 9<sup>th</sup> most populous country in the world, has a good population to support investment in real estate through increased demand for housing and other types of real properties. However, despite the growth of the Nigerian economy, a large number of its citizens are unemployed, the reason for its low GDP per capita. The position of Nigeria in the global economic terrain is another possible factor for economic concern. Doing Business Report ranked Nigeria 170 out of 189 countries, a setback from 147<sup>th</sup> position in 2013. Economic Freedom placed the country at 129 out of 175 nations, the World Economic Forum ranking of global business competitiveness places Nigeria at 124 out of 140 countries evaluated and Transparency International, a corruption watchdog in 2013 *Corruption Perception Index* ranked Nigeria 144 out of 177 countries (David, 2014). Table 4.2 is a summary of the rating of the Nigerian economy and Table 4.3 gives more detail of the World Bank ease of doing business report for Africa economies and some key considerations for the ranking.

**Table 4.2: Economic Rating of Nigeria**

S/N	Economic Report	Number of Countries ranked	Nigeria Position
1	Doing Business Report 2014	189	170
	Doing Business Report 2013	189	147
2	Economic Freedom 2013	175	129
3	Corruption Perception Index (TI) 2013	177	144
4	Emerging Markets' GDP (Baum, 2008)	180	136
5	World Economic Forum ranking on global business competitiveness	140	124

Source: Author Compilation (CBN, Baum, 2008; David, 2014; and Khan, 2014, WEF, 2016)

**Table 4.3: World Bank ranking of African economies on the Ease of Doing Business – June 2014**

Africa Ranking	Economy	Some of the key Parameters for Ranking							
		Global Ranking	Starting business	Devt. Permit	Electricity	Land Title	Loan	Taxes	Contracts Enforcement
1	Mauritius	28	29	117	41	98	36	13	44
2	South Africa	43	61	32	158	97	52	19	46
3	Tunisia	60	100	85	38	71	116	82	78
4	Ghana	70	96	106	71	43	36	101	96
6	Botswana	74	149	93	103	51	61	67	61
7	Namibia	88	156	25	66	173	61	85	53
9	Zambia	111	68	99	126	152	23	78	98
10	Egypt	112	73	142	106	84	71	149	152
12	Tanzania	131	124	169	87	123	151	148	145
14	Kenya	136	143	95	151	136	116	102	137
18	Mali	146	169	97	132	133	131	145	128
19	Cote d'Ivoire	147	44	180	161	124	131	175	72
21	Uganda	150	166	163	184	125	131	104	80
25	Algeria	154	141	127	147	157	171	176	120
27	Cameroon	158	133	166	52	172	116	181	159
29	Senegal	161	90	151	183	167	131	183	142
36	Nigeria	170	129	171	187	185	52	179	140
37	Zimbabwe	171	180	176	153	94	104	143	157
39	Mauritania	176	164	77	169	66	171	187	86
42	Angola	181	174	67	157	164	180	144	187
47	Libya	188	144	189	65	189	185	157	126

Source: Author compilation from 2014 World Bank Doing Business Report

#### 4.4 Nigeria Property Market

Dugeri (2012) and Akinbogun et al. (2014) concluded that Nigerian property market is not mature considering the criteria for market evaluation which include market transparency, professionalism in real estate practice, property right, effective land use and planning, information flow and access to property finance. Akinbogun et al. (2014) emphasized poor land right registration system as the bane of property market inefficiency in Nigeria. Both formal and informal land titles co-exist in Nigeria, creating problems of market information and data inconsistencies

African property market in general has received low attention from the international property investors and Nigeria market in particular has not been featuring in the global property market report. Similarly, there has been little research on the Nigeria market

(and Africa in general). The emerging European markets as well as Asian markets in contrast have continued to attract investment fund from the international property investors of the developed economies due to their steady growth and availability of research reports on those markets (Dugeri, 2012). However, there are some studies on the Nigeria property market that give an insight of the Nigeria property sector (Olaleye & Bello, 2014; Olaleye & Ekemode, 2014 and Amidu et al., 2008).

The Jones Lang Lasalle (JLL) reported the real estate market in the Sub-Saharan Africa to have exhibited a noticeable improvement in terms of market transparency and that the region will continually attract foreign investors' participation. Table 4.4 shows the 2004 and 2014 JLL global real estate transparency index ranking with Sub-Saharan Africa countries making more appearance.

**Table 4.4:** Global Real Estate Market Transparency Index of Selected Countries, - 2004 and 2014

Transparency Level	Market	JLL 2014 Ranking		JLL 2004 Ranking	
		Ranking	Score	Ranking	Score
High Transparent	United Kingdom	1	1.25	4	1.24
	United States	2	1.34	3	1.24
	Australia	3	1.36	1	1.19
	New Zealand	4	1.44	2	1.19
	France	5	1.52	11	1.6
	Canada	6	1.52	5	1.37
	Netherlands	7	1.57	6	1.37
Transparent	Germany	12	1.79	10	1.60
	Singapore	13	1.81	9	1.56
	Hong Kong	14	1.87	7	1.50
	South Africa	20	2.09	21	2.37
	Japan	26	2.22	26	3.08
	Malaysia	27	2.27	20	2.30
Semi Transparent	Turkey	34	2.72	46	4.5
	Mexico	41	2.89	29	3.14
	Botswana	48	3.09	-	-
	Kenya	55	3.29	-	-
Low Transparent	Zambia	63	3.49	-	-
	Bulgaria	66	3.55	-	-
	Egypt	72	3.67	48	4.67
Opaque (Non-Transparent)	Ghana	83	3.98	-	-
	<b>Nigeria</b>	<b>86</b>	<b>4.03</b>	-	-
	Angola	95	4.36	-	-

Source: Researcher's Compilation from JLL Global Transparency Index 2004 and 2014



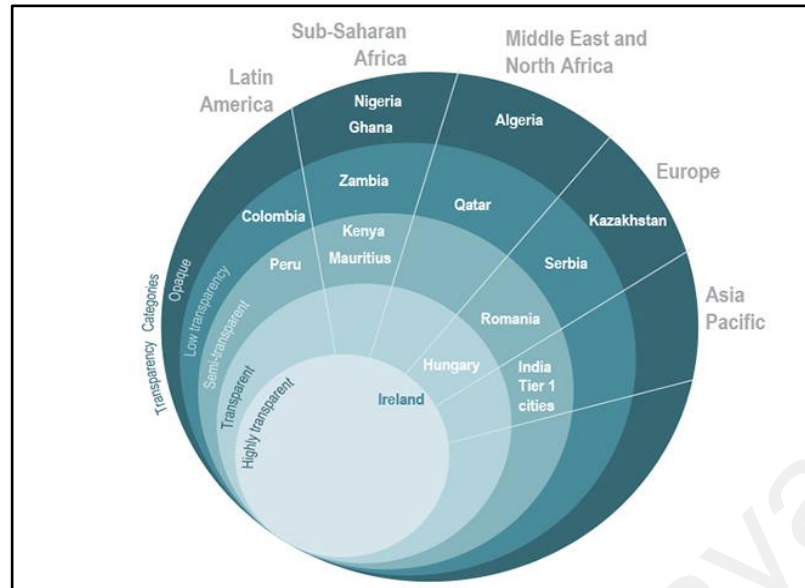
In 2004, only two Africa countries out of 50 countries that were evaluated appeared in the JLL transparency index ranking (South Africa in the transparent region and Egypt in the low transparency level. By 2014, more African countries including Nigeria made the JLL ranking, Nigeria was ranked 86 out of 102 countries assessed by JLL real estate transparency report of 2014. Though the index still places Nigeria and some other African countries in opaque level of transparency, it shows a noticeable improvement in the African market. Botswana, Mauritius and Kenya were in the semi-transparent region, while Zambia joined Egypt in the low transparent region. Ghana and Angola are in the opaque region with Nigeria. The transparency changes on regional basis is presented in Table 4.5 below with the Sub Sahara Africa having the greatest change indicating a noticeable improvement

**Table 4.5: Regional Changes in Transparency Average Score 2012 - 2014**

Region	Average Score in 2014	Average Score in 2012	Change
Americas	3.35	3.43	0.09
Europe	2.50	2.55	0.05
Asia Pacific	2.73	2.83	0.10
Middle East & North Africa	3.76	3.89	0.14
Sub-Sahara Africa	3.43	3.75	0.32
Global	3.00	3.10	0.10

Source: Researcher's Compilation from JLL Global Transparency Index 2014

Nigeria among other countries, is gaining transparency improvement especially with the Lagos land registry initiatives and the landmark 'Atlantic City' development. The JLL Global Real Estate Transparency Report, 2014 ranked Nigeria among the top 10 improvers markets (and among the top 5 improvers from Sub-Sahara Africa) as shown in Fig. 4.2. Nigeria is one of the fast growing economies and a regional hub of attraction for international commercial property investors in Africa. The various economic ranking reflect the transparency and policy inadequacy of Nigeria which is a product of the leadership of the country.



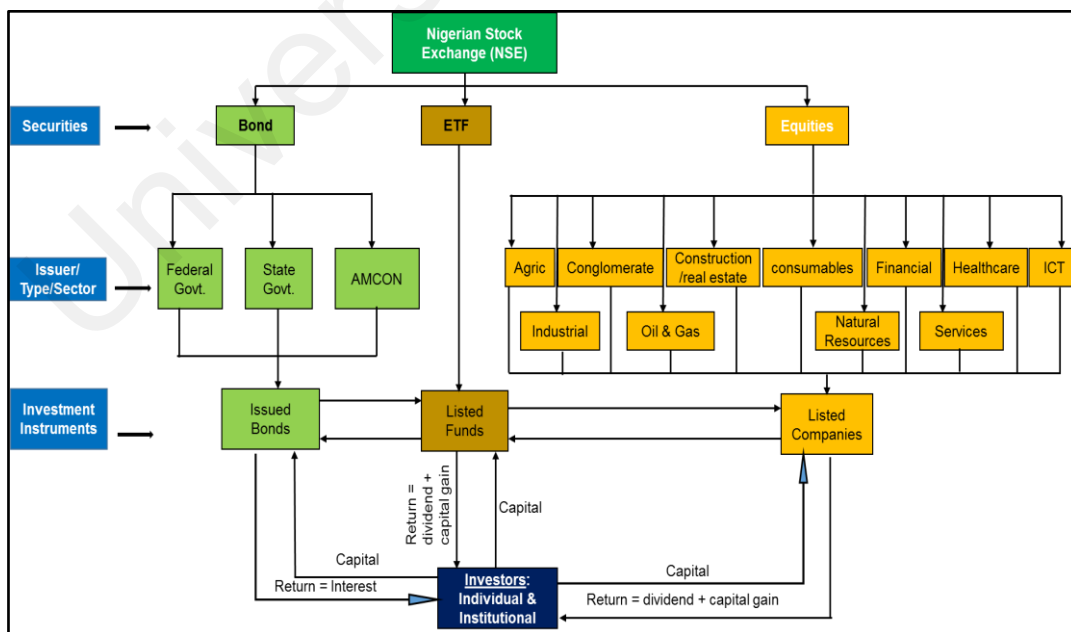
**Figure 4.2:** Top improver markets on Regional Basis (*JLL, 2014*)

Despite the seeming odds of infrastructure deficiencies, transparency problem, insecurities, size and other factors that may have effects on investment return and performance, Nigeria still presents a chance for a willing, daring and compelling investor. Nigeria is one of the fast growing economies and a regional centre for international investors and foreign direct investment destination in Africa. The Nigerian investment market does give quantum of return on investment. MTN Group, a South Africa based multinational mobile telecommunication company (MTN) prior to its investment in Nigeria (through MTN Nigeria Communications Limited) was number 3 mobile telephone operator in South Africa, the return from Nigeria market has made MTN the biggest phone operator in Africa. Similarly Shoprite, a South African retailer entered Nigeria market about ten years ago and has become successful and plans to have 44 retail outlets in addition to the existing 7 within the next four years (David, 2014).

#### **4.5 Nigeria Stock Exchange**

The Nigerian Stock Exchange (NSE) offers a range of products of securities for daily trading under three broad categories of Equity, Bond and Traded Funds. Equities sector deals with all shares and stock of the listed companies divided into 11 subsectors, The

Bond is debt instruments sector, issued by the government, both federal and state governments as well as the asset management company of Nigeria (AMCON). Exchange Traded Funds (ETF) are pools of funds that are registered with the exchange for the purpose of investment in the shares of listed companies therefore allowing the fund holders part ownership of the companies in which the funds are invested. The ETF comprises 7 listed funds with market capitalization of NGN834, 400,000 representing 0.01% of the market. The foreign portfolio in Nigeria is the Ecobank Transnational Incorporated (ETI) worth NGN284.23bn. The Nigerian stock exchange has 203 listed companies in its equities sector with market capitalization of NGN9.85trillion (US\$49.44bn) as at 31 December, 2015. The exchange has 9 indices for the market including the All Share Index (ASI), NSE30, Banking Index, Insurance Index, Oil & Gas Index, Consumer Goods Index, Lotus II Index (for sharia compliant equities), ASeM Index (alternative securities market Index), and Industrial Goods Index. The NSE All Share Index is a capital return index and not a total return index. The structure of the Nigerian stock exchange is presented in figure 4.3.



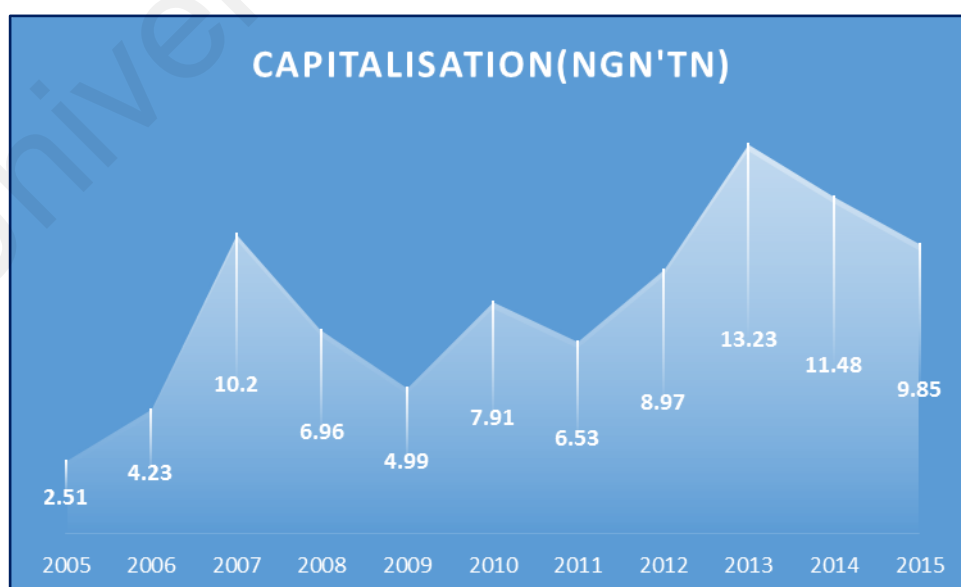
**Figure 4.3:** Structure of the Nigerian Stock Exchange (NSE)

The 11 sectors of the equities division of the Nigeria Stock Exchange are presented in the Table 4.6. The Nigerian Stock Exchange became a full member of the World Federation of Exchanges (WFE) in October 28, 2014. The NSE is a founding member of the African Stock Exchanges Association (ASEA) and joined the United Nation’s Sustainable Stock Exchanges (SSE) in October 30, 2013. The market capitalization of the Nigeria Stock Exchange for the period 2005 to 2015 is presented in Figure 4.4

**Table 4.6:** Nigeria Stock Exchange Equity Sector Capitalisation as at 17<sup>th</sup> March, 2016

Sector	Capitalisation (NGN’)	Capitalisation (US\$’)	Market Share (%)
Agriculture	844,822,832,988	4,244,274,469	9.57
Conglomerates	1,115,994,107,214	5,606,601,895	12.64
Construction	3,479,001,199,522	17,478,026,624	39.39
Consumables	213,683,311,642	1,073,515,758	2.42
Financial	2,143,173,319,638	10,767,009,895	24.27
Healthcare	43,498,776,010	218,531,906.6	0.49
Information and communication Technology – ICT	68,185,085,413	342,552,551.7	0.77
Industrial	118,969,329,145	597,685,652.6	1.35
Natural Resources	4,498,592,335	22,600,313.16	0.05
Oil and Gas	779,623,287,136	3,916,720,860	8.83
Services	20,474,678,058	102,861,984.7	0.23
<b>Total</b>	<b>8,831,924,519,101</b>	<b>44,370,381,910</b>	<b>100</b>

Source: Researcher’s Compilation from Nigerian Stock Exchange Website ([www.nse.com.ng](http://www.nse.com.ng))



**Figure 4.4:** Nigerian Stock Exchange Capitalisation for period 2005 – 2015.

#### 4.6 Nigeria REIT Sector

The REIT industry in Nigeria fall within the Construction/real estate subsector of the Nigerian Stock Exchange with 3 REIT companies (Skye Shelter Fund Plc, Union Homes REIT and UPDC REIT); one (1) property company (UACN Property Development Company – UPDC Plc) and 5 construction companies (ARBICO Plc, Costain West Africa Plc, G. Cappa Plc, ulius Berger Plc, Roads Nigeria Plc) listed in the Nigeria stock exchange. The real estate development companies have total capitalization of NGN20.5bn representing 0.25% of the market, building construction with capitalization of NGN6.04bn (0.07%) and building materials of NGN2.62tn accounting for the 32.32% of the stock market capitalization as at 31 December, 2015. The regulatory structure of the Nigerian REIT is presented in Table 4.7 below

**Table 4.7: Nigeria REIT Regulatory Structure and Characteristics**

<b>Features</b>	<b>Regulations</b>
Management	Internal Management
Property Investment	At least 75% on real estate assets for close end and 70% on real estate assets for open end.
Overseas investment	No
Property Development	Yes, only for inclusion in portfolio
Gearing	25% of fund
Distribution	At least 90%
Capital gain tax	Exempted
Stamp duty	15%
Unit Holder	Minimum of 100
Market transparency	Opaque
Withholding tax	10% in the hand of unitholders
Listing	Nigerian Stock Exchange (NSE)
Regulatory body	Securities and Exchange Commission (SEC)
Legislation	Investment and Securities Act (ISA) 2007

Source: Author's compilation from guidelines from SEC, NSE and ISA 2007

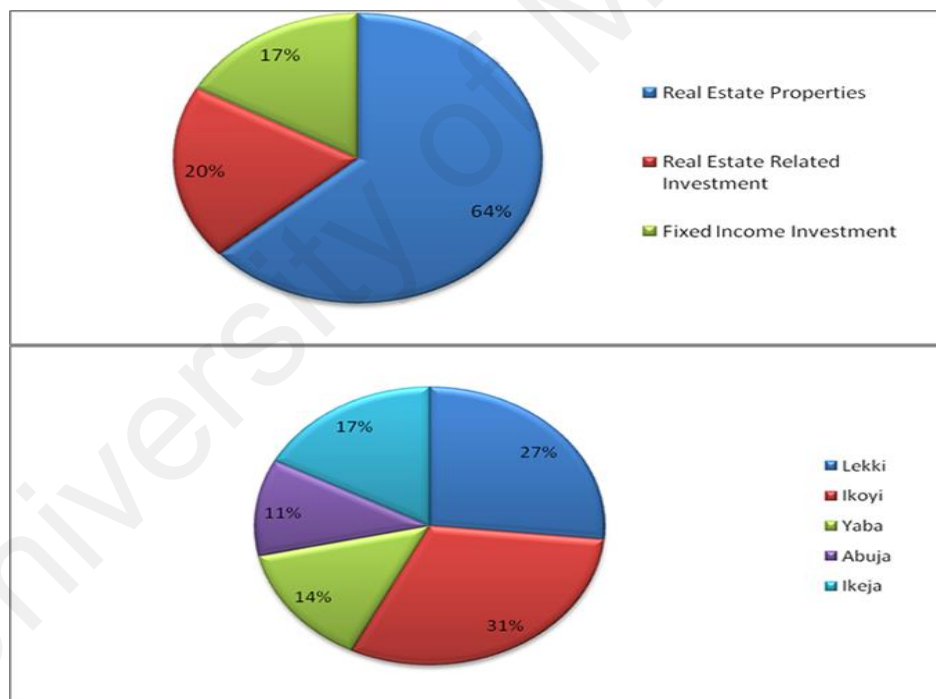
The REIT sector has a total capitalization of NGN39.99bn representing 0.41% of the stock market capitalization. There are three (3) REITs in Nigeria with predominant investment in the residential property sector. This is because one of the driving forces for REIT establishment in Nigeria is to increase the supply of housing to the teeming population. The REITs invest in high and medium class accommodation. Table 4.8 presents the profile of the Nigerian REIT.

**Table 4.8:** Nigeria REIT Profile as at 31<sup>st</sup> December, 2015

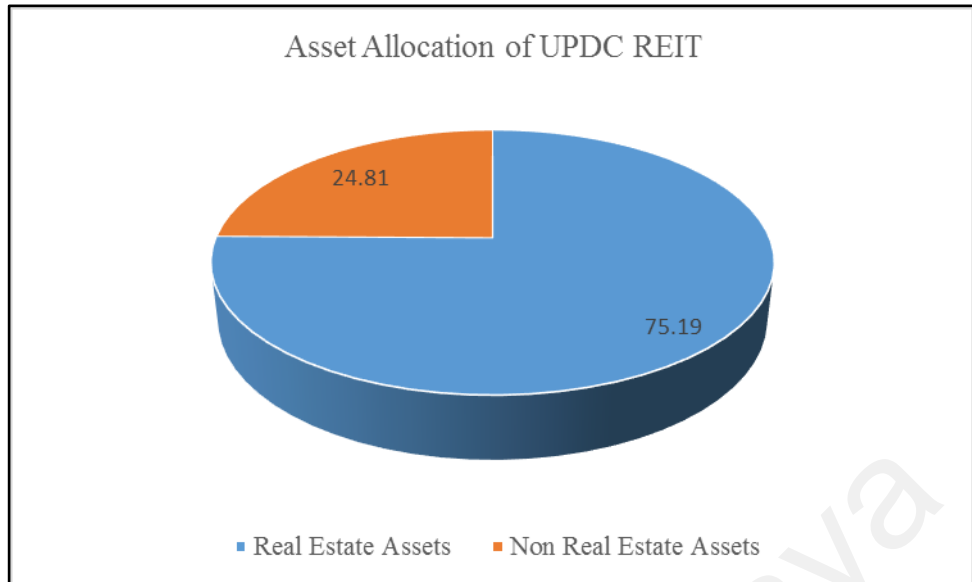
REIT	Year Listed	Units	Price (NGN)	Capitalisation (NGN'm)	Sector Share (%)	Property Types
Skye Shelter	2007	20,000,000	100	2,000	5.00	Residential and Commercial
Union Homes	2008	250,000,000	45.22	11,306	28.27	Residential and Commercial
UPDC	2013	2,658,000,000	9	26,682.7	66.73	Residential, Commercial and Hotel

Source: Authors Compilation from Nigerian Stock Exchange Weekly Report and N-REIT Annual Reports.

The asset allocation and geographical spread for the Skye Shelter REIT are presented in figure 4.5, figure 4.6 is a reflection of UPDC asset allocation and figures 4.7 and 4.8 show the properties Shelter REIT and UPDC REIT property portfolio respectively.



**Figure 4.5:** Asset allocation and geographical spread of Skye Shelter REIT



**Figure 4.6:** Asset allocation of UPDC REIT



**Figure 4.7:** Property Profile of SKYE Shelter REIT (Source: [www.skeshelterfund.com/index.php](http://www.skeshelterfund.com/index.php))



**Figure 4.8:** Property Profile of UPDC REIT (source: [www.updcplc.com/projects](http://www.updcplc.com/projects))

#### 4.7 Significance of Nigeria Property Market and Africa Real Estate Fund

In the words of Oreagba (2010) Real Estate is the largest asset class in the world (comprising more than 54% of global financial wealth) and in Nigeria, it has consistently shown significant growth over the years. The National Bureau of Statistics (NBS) report released in February 2015 shows that the real estate sector contribution to the Nigeria Gross Domestic Products (GDP) rose from 7.56% (NGN4.9tn) in 2010 to 8.01% (NGN6.677tn) in 2013. The real estate sector also serves as a very important means of asset diversification thereby making it further attractive to both retail and institutional investors. The Nigeria property market is attracting foreign funds.



There are quite a number of real estate funds that are already investing in the Nigeria property sector while others are contemplating investment in Nigeria. Eleven funds with total capitalization in the sum of US\$2.47bilon already impacted positively on Nigeria property sector. This is in addition to the Nigeria's Asset and Resource Management (ARM) real estate fund. ARM acquired Mixta Africa in 2015. Mixta Africa was founded in 2005, a foremost Europe's mover to the African real estate sector and has delivered about 10,000 housing units with over 2.5m sqm land across Africa. Africa Capital Alliance fund managers has also raised fund for Nigeria real estate sector with African Capital Alliance Property Equity I & II to the sum of US\$35m and US\$100 respectively and dedicated to Nigeria property sector. The population of Nigeria (African most populous nation) which is estimated around 170 million people present an unsatisfied demand for real estate products especially in the housing sector, thus creating avenue for increase in supply of properties. The real estate funds therefore found a profitable market to invest in. The entrance of foreign Real Estate Funds into the Nigeria market indicates the significant role the Nigeria market plays in the Africa continent. Table 4.9 presents the Africa real estate funds and the investment across Africa.

**Table 4.9:** African Real Estate Fund Capitalisation and investment destination as at 17<sup>th</sup> March, 2016

<b>Fund</b>	<b>Capitalisation (US\$'m)</b>	<b>Investment</b>
<b>Actis Africa Real Estate I</b>	154	Accra Mall – Accra, Ghana The Palms Lekki – Lagos, Nigeria Ikeja City Mall – Lagos, Nigeria The Junction – Nairobi, Kenya Nairobi Business Park – Kenya IOREC – Mauritius
<b>Actis Africa Real Estate II</b>	278	One Airport Square – Accra, Ghana Sunrise – Accra, Ghana Laurus Development Partners – Ghana Heritage Place – Lagos, Nigeria Waterfalls – Zambia Garden City – Nairobi, Kenya Mentor – Garden City – Nairobi, Kenya
<b>Actis Africa Real Estate III</b>	400	Jabi Lake Mall – Abuja, Nigeria York – Zambia.
<b>CAPIC – Africa Capital Alliance Fund</b>	165	Mansard Place – Lagos, Nigeria Onitsha Mall – Onitsha, Nigeria Alliance Place – Lagos, Nigeria
<b>Momentum Africa Real Estate Fund</b>	250	Geographical focus in Kenya, Nigeria, Mozambique, Rwanda, Zambia.
<b>Novare Africa Property Fund I</b>	81	Asset to include retail, office and industrial Grandtower Mall – Abuja, Nigeria Lekki Mall – Lagos, Nigeria Gateway Mall – Abuja, Nigeria Central Office Park – Abuja, Nigeria
<b>Novare Africa Property Fund II</b>	250	Expected to close by December 2015
<b>Phatisa Pan Africa Housing Fund</b>	41.95	Potential Projects across Eastern and Southern Africa such as Kenya, Rwanda, Mozambique, Tanzania, Uganda and Zambia.
<b>Stanlib Direct Africa Property Fund</b>	150	Target region include Sub-Sahara Africa with key focus on East and West Africa.
<b>RMB Westport Real Estate Development Fund I</b>	250	Ikeja City Mall – Lagos, Nigeria Stanbic Heights – Accra, Ghana Junction Shopping Centre – Accra, Ghana Accra Financial Centre – Accra, Ghana The Wings Towers – Lagos, Nigeria Muxima Shopping Centre – Luanda, Angola Lar Patriota – Luanda, Angola Royal Gardens Mall – Lagos, Nigeria.
<b>RMB Westport Real Estate Development Fund II</b>	450	Fund still being raised

Source: Estate Intel – [www.estateintel.com/african-real-estate-funds/#details-0-1](http://www.estateintel.com/african-real-estate-funds/#details-0-1)

#### 4.8 Summary

This chapter discussed the characteristics of the case study in detail starting with the socio demography and economic data. The performance of the Nigeria economy in the global business environment was also discussed in relation to the various economic indexes and ranking such as ease of doing business of the World Bank, corruption perception index

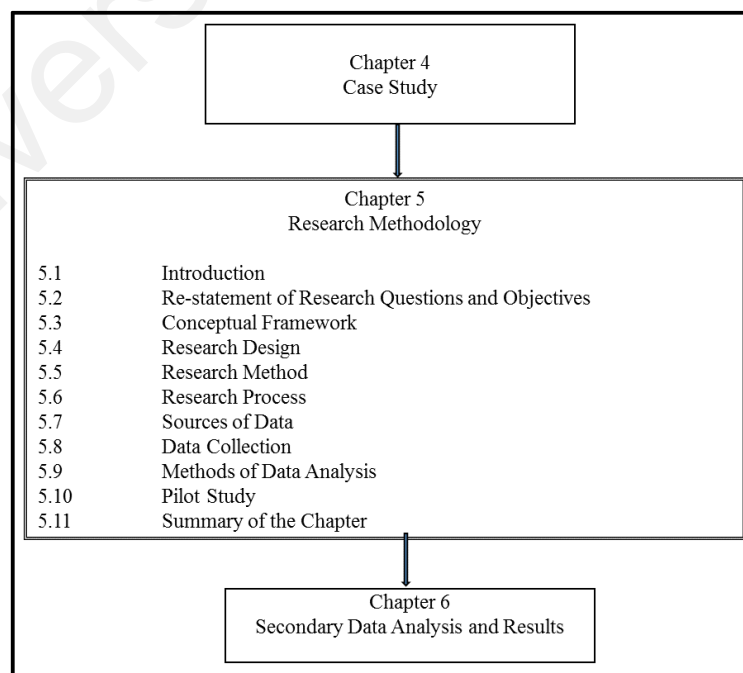
of the Transparency International, global business competitiveness of the World Economic Forum and property market transparency from the Jones Lang Lasalle. The outlook of the Nigeria REIT was also presented with respect to the stock market sectors, capitalization, regulation and property profile. This chapter also exhibited the real estate fund operation in Nigeria in recognition of the significance of the Nigeria property market in Africa. The next chapter (5) is devoted to the full discussion about research methodology and research methods adopted in this research.

University of Malaya

## CHAPTER 5: RESEARCH METHODOLOGY

### 5.1 Introduction

In relation to the literature review in chapters 2 and 3, this chapter presents the research methodology and steps adopted in this thesis with respect to the determination of research design and data sources. Research methodology is a collection of procedures or methods used to conduct an empirical study systematically from the theoretical underpinning to the collection and analysis of the data (Jill & Roger, 2009). The main focus is to discuss and clarify how the study would proceed. Thus, the methodology of this piece of study begins with the re-statement of research questions and objectives in section 5.2. It further gives clear explanation of the research design (section 5.3-5.6) inclusive of study population and data requirement; sources of data (section 5.7); data collection methods, sampling techniques, fieldwork procedures Section (5.8); methods of data analysis (section 5.9) and pilot study (section 5.10) towards fulfilling the aim of this thesis. Figure 5.1 below presents the structure and position of Chapter 5 in relation to the preceding chapters 4 and the following chapter 6.



**Figure 5.1:** Structure and Positioning of Chapter 5

## 5.2 Re-Statement of Research Question and Objectives

In order for an appropriate research plan for this study, it is necessary to re-state the research question/objectives which is presented in the table 5.1 below.

**Table 5.1:** Research question and objectives

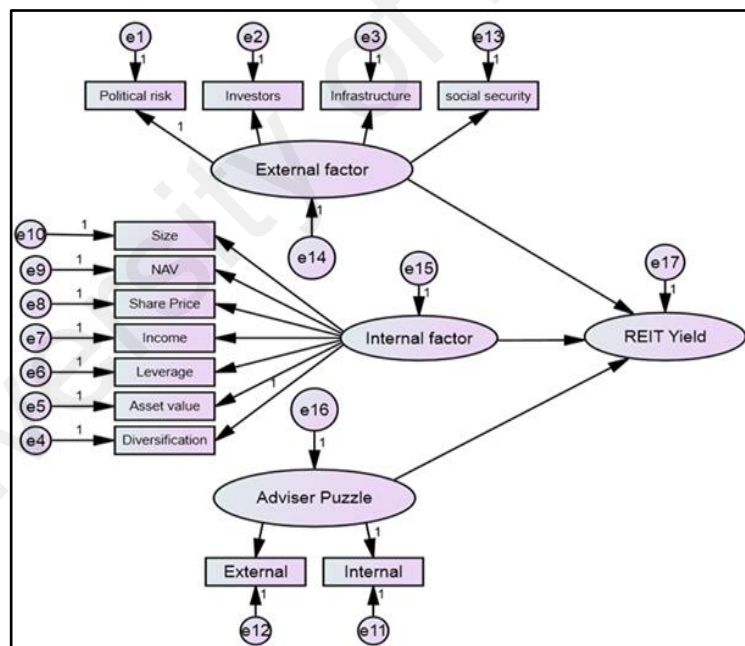
S/N	RESEARCH QUESTION	RESEARCH OBJECTIVES
1	What is investment performance level of Nigeria REIT in terms of market and dividend returns?	To assess the overall performance of REIT in Nigeria.
2	How acceptability is REIT as an investment vehicle to Nigerian investors?	To appraise the level of acceptability of investment in REIT by Nigerian Investors
3	What are the factors responsible for N-REIT performance?	To identify the main factors of great influence on N-REIT performance from the perception of REIT market stakeholders.
4	How significant is the effect of these factors on N-REIT performance?	To examine the size and effect of the predicting factors on N-REIT dividend return
		To adopt the structural equation modelling regression to establish a return prediction equation for N-REIT performance
5	Can N-REITs diversify their fund investment towards direct real estate development?	To create an asset allocation model for N-REITs that will accommodate direct real estate financing (a linear functional relationship model)

This study seeks to analyse total return which is a combination of income (dividend) and capital gain (through stock price movements) of REIT in Nigeria to assess the performance. However, available data limits the analysis to the share return and the dividend return analysis was approached through perception study of the market players using questionnaire survey.

## 5.3. Conceptual Framework

According to Sekaran (2006), theoretical framework is a conceptual model of how a researcher theorizes or makes logical sense of the relationships among the several factors that have been identified as important to the problem. In other words, the theoretical framework is supposed to help the reader understand the relationships of the variables

and factors that have been deemed relevant to the problem. Variable is any factor or parameter that can assume values (numerical or categorical). Dependent variable is a criterion or a variable that is to be predicted or explained, while the independent variable is a variable that is expected to influence the dependent variable, its value may be changed or altered independently of any other variable (Azika, 1991). In this research, REIT growth and performance is the dependent variables and the literature has identified three (3) main category of factors of influence, each of which has elements (sub variable) that can affect REIT performance. The research objectives 3 and 4 sought to identify the significant and joint effect of the independent variables (key factors) on the dependent variable. The conceptual model for this objective is a structural equation modelling of a multiple regression as presented in figure fig 5.2 below:



**Figure 5.2:** Conceptual Framework – SEM Regression.

In order to understand the relationship between the principal factors and sub-factors and to explain their contributions to REIT performance, the study adopted the multiple regression analysis (MRA) model for the assessment and significance of the influence of the factors through their beta values. The multiple regression function is expressed as

$$Y \propto \int_{x_1=n}$$

$$\text{i.e. } Y = a + b_1x_1 + b_2x_2 + \dots + b_nx_n + e$$

For a standardised model.

$$Y = b_1x_1 + b_2x_2 + \dots + b_nx_n \quad (2)$$

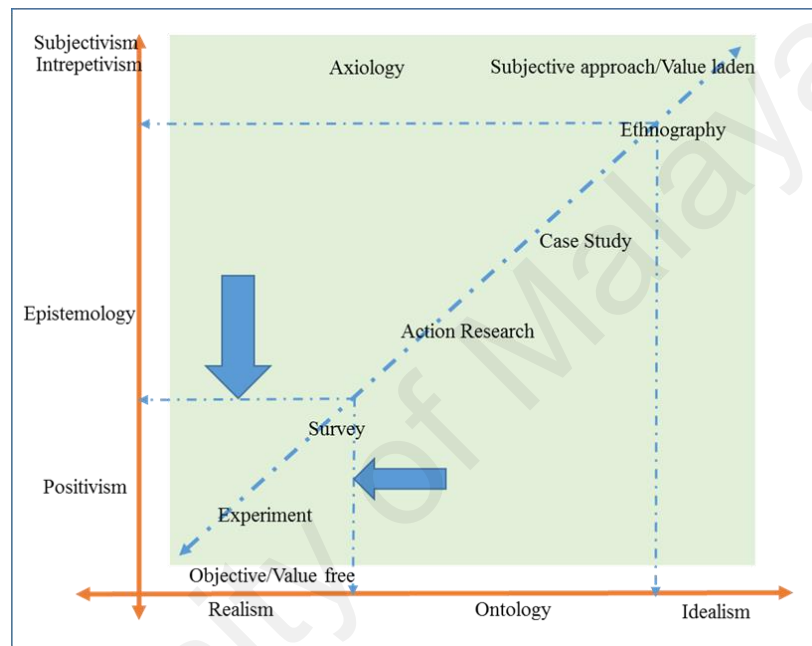
Where  $Y$  = income return,  $b$  = beta,  $x$  = factors/subfactors and  $n$  = number of factors/subfactors.

#### 5.4 Research Design

According to Kothari (2004), the research design is the conceptual structure within which the research is conducted. It constitutes the blue-print for the collection, measurement and analysis of data. As such research design includes an outline of what the researcher will do from writing the hypothesis and its operational implications to the final analysis of data. Research design is a master plan specifying the methods and procedures for collecting and analysing the needed information. Research design involves a series of rational decision-making choices. Issues relating to decisions regarding the purpose for study (exploratory, descriptive, hypothesis testing), its temporal aspects (time horizon) and the level at which the data will be analysed (unit of analysis) are integral to research design (Sekaran, 2006). Bryman and Bell (2007) stated that a research design provides a framework for the collection and analysis of data. A choice of research design reflects decisions about the priority being given to a range of dimensions of the research process.

Within the research paradigm (philosophy) of qualitative and quantitative study, there are mainly four types of basic research methods which are survey, experiment, interview and observation. Research design can be wholly quantitative or qualitative or mixed (adopting both paradigms) depending on the nature of the problem to be solved (Ospina, 2003). Quantitative research methodology is regarded as positivism view making use of numerical measurement of observations and statistical analysis of data (Sarantakos, 2005; Fellow & Liu, 2003). One of the philosophical roots of qualitative research is

phenomenology, stressing more on the subjective nature of human behavior including motives and beliefs that affect people’s social action, exploring issues, understanding and answering questions (Bryman & Bell, 2007; Sarantakos; 2005; Esteves 2004; Creswell, 2003; Shank, 2002; Taylor et al., 2000; Denzin & Lincoln, 2000). Figure 5.3 below presents the research paradigm of the study



**Figure 5.3:** Research paradigm of the study  
 Source: Baharum (2011, pg 118), adapted from Sexton, (2007)

### 5.5 Research Method

Yin (2003, 2009) and Gill and Johnson (2010) agreed that there are a number of different approaches that a research can adopt or be based upon. Olsen (2004) suggested a triangulation process of adopting the two research paradigms to authenticate research findings. Accordingly, in the words of Tashakkori and Teddlie (2009), research can adopt mixed method or mixed data modes of both qualitative and quantitative methods and data sets. Employing more than one research method by combining qualitative and quantitative approaches are expected to eradicate or minimise the disadvantages inherent



in each individual method (Nachmias & Nachmias, 2008; Sarantakos, 2005). Table 5.2 presents the characteristics of the two research paradigms in a comparable manner.

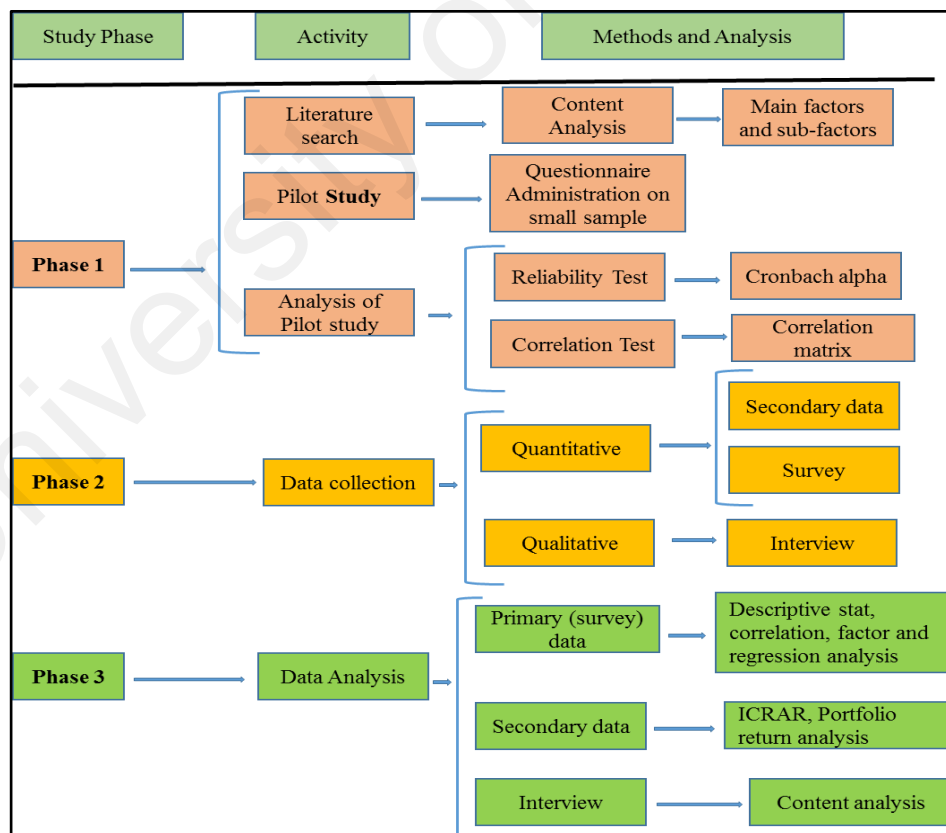
This thesis adopted a mixed mode approach of quantitative analysis of secondary data and questionnaire survey data. A semi-structured interview was conducted to validate the findings of quantitative analysis. The primary aim of adopting a mixed method for this thesis is to incorporate the views of the managers REITs under focus which will not be reflected in a questionnaire survey of stakeholders and the secondary data as analysed. REIT managers can therefore confirm literature findings as well as explaining the subject issues and challenges of the REIT industry in Nigeria.

**Table 5.2: Qualitative versus Quantitative Research**

<b>Criteria</b>	<b>Qualitative Research</b>	<b>Quantitative Research</b>
Purpose	To understand & interpret social interactions.	To test hypothesis, look at cause & effect, and make predictions
Group Studied	Smaller & not randomly selected.	Larger & randomly selected.
Variables	Study of the whole, not variables.	Specific variables studied.
Type of Data Collected	Words, images or objects.	Numbers and statistics
Form of Data Collected	Qualitative data such as open-ended responses, interviews, participant observation, field notes & reflections.	Quantitative data based on precise measurements using structured & validated data-collection instruments.
Type of Analysis	Identify patterns, features, themes.	Identify statistical relationships.
Objectivity and Subjectivity	Subjectivity expected.	Objectivity is critical.
Role of Researcher	Researchers & their biases may be known to participants in the study.	Researcher & their biases are not known to participant in the study, and participant characteristics are deliberately hidden from the researcher.
Scientific Method	Exploratory or bottom-up, the researcher generates a new hypothesis and theory.	Confirmatory or top-down: the researcher tests the hypothesis and theory with the data.
View of Human Behaviour	Dynamic, situational, social and personal.	Regular & predictable.
Research Objectives	Explore, discover & construct.	Describe, explain & predict.
Focus	Wide-angle lens, examines the breadth & depth of phenomena.	Narrow-angle lens; test a specific hypothesis.
Nature of Observation	Study behavior in a natural environment.	Study behavior under a controlled; isolated causal effects.
Nature of Reality	Multiple realities, subjective.	Single reality, objective
Final Report	Narrative report with contextual description & direct quotation from research participants.	Statistical report with correlations, comparisons of means & statistical significance of findings.

Source: (Johnson & Christensen, 2008; Lichtman, 2006)

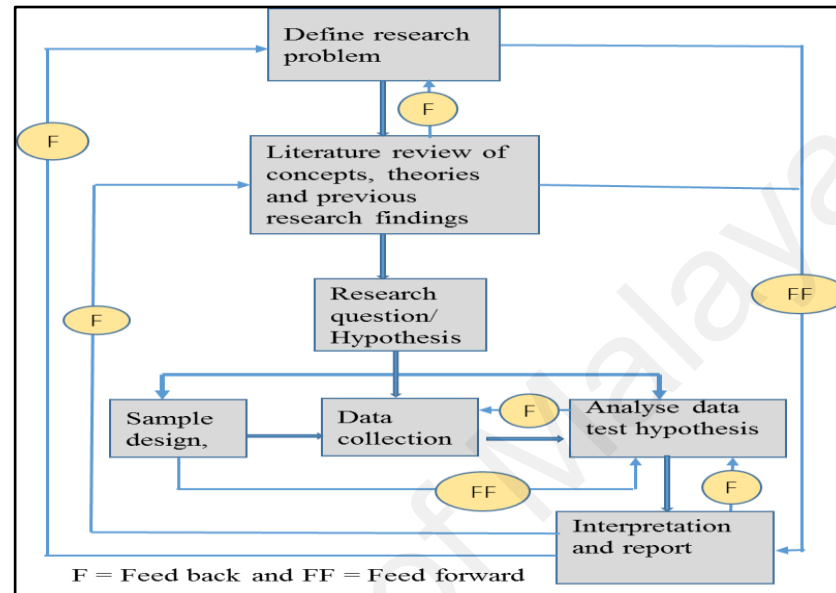
The quantitative approach was used to analyse the numerical data collected from secondary sources to determine the performance of REITs in the case study and also assess the significant contribution of economic/market factors on the performance of REITs towards establishing a causal relationship between the REIT performance and the determining variables of formal/economic factors. Quantitative analysis is also used for the fund allocation strategy of diversification to establish the possibility of deploying REIT funds to real estate financing. The questionnaire survey data are quantified following Likert scale of ranking for further statistical analysis. The data collected through interview were analysed through content analysis and further deductions made. Prior to the main research survey, a pilot study was conducted to test for the reliability and validity of the instrument. The research phases is presented in figure 5.4 below.



**Figure 5.4:** Research phases and procedure for sequential mixed method Research

## 5.6 Research Process

Research process refers to the procedural steps taken to effectively conduct a research (Kothari, 2004). It consists of series of activities and the right sequencing of the various steps. A typical research process is illustrated in the figure 5.5 below



**Figure 5.5:** Flow chart of the research process (Adapted from Kothari, 2004)

The description of the research procedure for this study is presented in Table 5.3.

**Table 5.3:** Research procedure

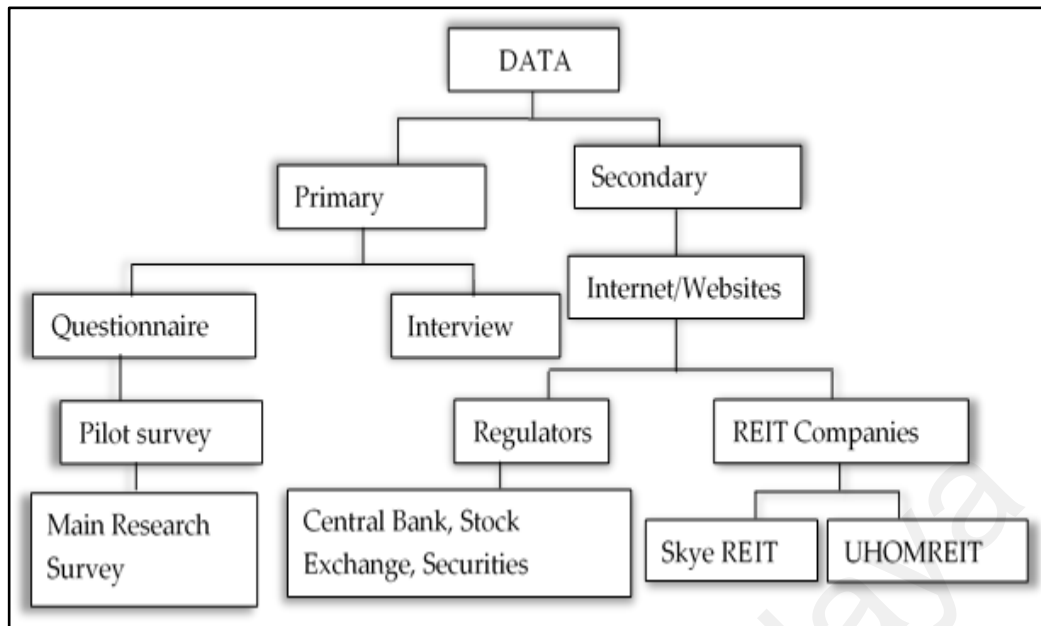
Research Question	Research Objective	Method	Type of Data	Type of Analysis	Target Outcome
What is investment performance level of Nigeria REIT in terms of market and dividend returns?	To assess the overall performance of REIT in Nigeria.	Quantitative	Secondary data – stock market trading data	ICRAR/Descriptive Statistics	REIT Share Price Return and dividend yield (rate of return)
How acceptability is REIT as an investment vehicle to Nigerian investors?	To appraise the level of acceptability of investment in REIT by Nigerian Investors	Quantitative	Secondary data – stock market trading data	ICRAR/Descriptive Statistics	REIT Share of the stock market capitalisation Investors interest
What are the factors affecting REIT performance?	To identify the relevant factors and sub-factors affecting REIT	Literature review and desk studies	Secondary information from literatures	Content analysis of literatures	Identification of factors of importance to REIT performance
What is the significant effect of the key factors?	To adopt the SEM regression predict for N-REIT dividend return	Quantitative	Primary (survey) data	Correlation and confirmatory factor (CFA) analyses	Significant effect of the factors on REIT return
What relationship exist between REIT performance and the contributing factors?	To develop a REIT performance model for Nigeria REIT	Quantitative	Primary (survey) data	Regression analysis (MRA)	N-REIT performance model
Can REIT finance property development?	To develop a REIT diversification model	Quantitative	Secondary data – return profile of assets	Portfolio return and risk analysis	Linear model for N-REIT diversification.

## **5.7 Sources of Data**

In research, both primary and secondary data are needed for a successful work. The data requirement for this research is from both primary and secondary sources.

Primary data are data collected for the first time. It is a raw (unprocessed) information collected in the course of a research activity. There are various methods for primary data collection as may be appropriate for the study. The methods proposed for primary data collection in this research are the questionnaire survey and interview. Secondary data are collected from published and unpublished work with respect to real estate investment trusts that could be available in the various public/private agencies, REITs companies as well as the stock exchange.

The main data for REITs performance analysis in this research work is the secondary data from the Nigerian Stock Exchange (NSE), the Central Bank of Nigeria (CBN) and the annual reports of the REIT companies. This is however complemented with an empirical survey to get the perception of relevant stakeholder about the operations, performance and acceptability of REIT as an investment medium for real estate in Nigeria and the possibility of deploying REITs fund to direct real estate development and financing. Questionnaire survey was adopted for this purpose. The top management staff of the REIT Companies were also interviewed (fig 5.6).



**Figure 5.6:** Sources of data

## 5.8 Data Collection

### 5.8.1 Primary Data- Questionnaire Survey

#### 5.8.1.1 Study Population

All the items under consideration in any field of study constitute a universe or population. A complete enumeration of all the items in the population is known as a census inquiry (Azika, 1991). It can be presumed that in such an inquiry when all the units are covered, no element of chance is left and highest accuracy will be obtained (Creswell, 2009). However, in the real world of research, this may not hold, even the slightest element of bias in an inquiry could get larger and larger as the number of observation increase. Such an inquiry of the whole population also requires more time, money and energy than the space for a research could permit and it may become impossible in the case of large or unknown population (Chua, 2009; Creswell, 2009; Ogunbameru & Ogunbameru, 2010). It thus becomes practically impossible to conduct an inquiry into all elements of a large population in a study. A few representatives are usually selected to be studied. The few thus selected are technically regarded as a sample. The researcher is however left to

decide on the way to select a sample that will be representative of the population without introducing bias to the study/research.

The target population for this study is twofold. One is the entire REIT companies in Nigeria. Presently the total number of REITs in Nigeria is three (3) Commercial REITs. On the second end are the identified stakeholders in real estate investment and capital markets. These stakeholders include the stockbrokers, shareholders, real estate surveyors & valuers and investment bankers. The total population of the stakeholders is not known but estimated to be more than one hundred thousand in Nigeria.

#### **5.8.1.2 Sample and Sampling**

Sample is the few selected part of a population expected to be representative of the whole element of the universe/population for a study, the result of which represents the expression of the entire population (Azika, 1991). Sample is selected through a system called sampling according to some rules and statistics (Chua, 2009; Creswell, 2009; Ogunbameru & Ogunbameru, 2010). There are two sampling methods – probability and non-probability. With probability sample, each element of the population has a known probability of being included in the sample while a non-probability sample does not allow the researcher to determine the possibility of an element being included in the sample.

Probability sampling can be achieved through simple random sampling, systematic, stratified sampling, cluster sampling or multi-stage sampling. Non-probability sampling is achieved through convenience sampling, purposive sampling, judgement sampling and quota sampling techniques. According to Kothari (2004), in non-probability sampling, items for the sample are selected deliberately by researcher and his/her choice concerning the items remains supreme. In the real world, a combination of several of the sampling

approaches could be adopted in a research study and it can then be regarded as a mixed sampling. Therefore, for this study, the non-probability technique of purposive sampling was used to determine the sample frame of the relevant stakeholders among whom the sample units were randomly selected.

### **5.8.1.3 Sample Framework**

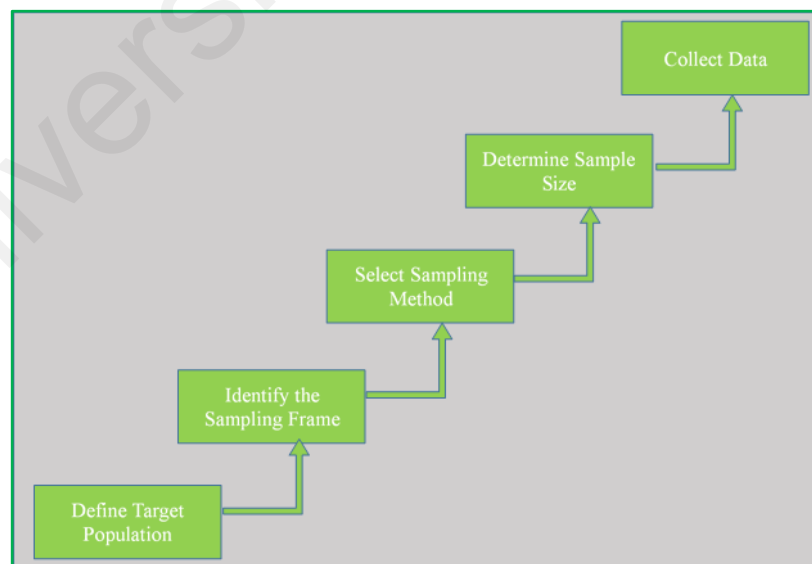
For a finite and small population, total number of elements can be both the sample frame and size. Therefore, for the quantitative survey of REITs companies, the three (3) REIT companies in Nigeria constitute the sample frame and the sample size. With respect to the questionnaire survey for this research, the sample frame for this study is the entire identified relevant stakeholders and participants in the REITs sector in Lagos, Nigeria as a subset set of study population. These participants and relevant stakeholders include investors/shareholders, investment analysts/stockbroker, real estate valuers. The total number of each category of the identified relevant stakeholders is unknown but well above a hundred thousand people with the shareholders having the highest number.

The stakeholders for the study were selected based on their participation and relevance in the REIT industry. The Stockbrokers are the players in the stock market where REIT equity is being traded. The Estate Valuers are the managers of real estate assets on which the REITs invest their funds. The shareholders/investors are the investors from whom the pool of fund for the REITs is drawn. The investors are important to this study as they determine the REIT equity trading pattern. Similarly the respondents from each category of stakeholders were selected based on some criteria that can reveal their knowledge and understanding of the research focus. The Stockbrokers and Estate Valuers are selected based on their education (not less than a bachelor's degree of its equivalent); professional qualification (registered broker or estate valuer), their market experience of not less than

10 years and their area of practice (real estate broker and investment analyst). The shareholders/investors were randomly surveyed through the registered association (Shareholders Association of Nigeria).

#### 5.8.1.4 Sample Size

A sample is a smaller representation of the whole group that is being studied (Ogunbameru & Ogunbameru, 2010). There is no hard and fast rule binding the selection of sample size. However, the basic principle guiding sample selection, is that the smaller the population, the bigger the sampling ratio (Agbola, Olatubara, Yusuf, & Alabi, 2003). Neuman (2011) opined that larger population permits smaller sampling ratio for equally good samples. The size of the sample refers to selected units of the population that should neither be excessively large, nor too small (Kothari, 2004). The size of sample depends to some extent on factors like the size of population, the nature of population and kind of study.



**Figure 5.7:** Procedure for drawing a research sample

Source: (Churchill & Iacobucci, 2004 and Wilson, 2006 in Baharum, 2013)



Consequential research requires an understanding of the statistics that drive the sample size (Smith, 2013). The sample size calculation equation developed by Krejcie and Morgan (1970) helps to sample confidentially with adequate representation of the study population. The equation is dependent on three important statistical factors namely, the confidence interval (margin of error), the confidence level, and the standard deviation. The population will then be applied to the derived equation where it is known. The margin of error is the predetermined allowable error. It reflects how assured a researcher is that the answers from the sample he has chosen reflect the views of the population of study. The commonly used margin of error is five percent (5%). This means 5% more or less of the responses reflects the views of the population. But the allowable range is 1% to 10%. The confidence level gives the assurance that the sample truly represents the population and that the result of the sample can be generalized to represent the views or position of the entire population. A 95% confidence level is the most commonly used while 90% to 99% are allowable. Confidence level is percentage assurance of getting the same result if the study is conducted on different samples of the same population. The standard deviation measures how much variance (from mean) is expected in the responses. A safe decision is 0.5 (half) which is the most forgiven number in statistics and ensures a large enough sample (Krejcie & Morgan, 1970).

To calculate the sample, there is always a corresponding value of Z-scores for different confidence level (see Z- table in Statistical table), the common confidence level and their corresponding Z-values are as presented below.

90% confidence level	—————>	Z – score	=	1.645
95% confidence level	—————>	Z – score	=	1.960
99% confidence level	—————>	Z – score	=	2.326

The sample equation =  $(Z\text{-score})^2 * Std\ Dev * (1 - Std\ Dev) / (\text{Margin of error})^2$

Using 95% confidence level, 5% margin of error and 0.5 standard deviation.

$$\begin{aligned}\text{Sample Proportion} &= (1.96)^2 * (0.5) * (1-0.5)/(0.05)^2 \\ &= 3.8416 * 0.25/0.0025 \\ &= 3.8416 * 100 \\ &= 384.16 \quad \text{approximately} \quad 385\end{aligned}$$

The above calculation is for a large and unknown population.

Where the Population is known, the population is applied to the sample proportion as follow.

Sample size =  $(S_o * P)/(S_o + (P - 1))$  where  $S_o$  is the sample proportion and P is the population.

According to the procedure put forward by Tabachnick and Fidell (2007) for simple linear and multivariate regression, a minimum sample size of 104 is required. Field (2009) and Hair et al. (2009) suggest that an addition of 5 cases for every study predictors is needed. In this study and at baseline comparison, there are 13 predictor variables identified from the literature. Thus, the minimum expected response for this study is computed as:

$$\begin{aligned}R &= 104 + 5(13) \\ &= 104 + 65 = 169\end{aligned}$$

#### **5.8.1.5 Design of Survey Instrument (Questionnaire)**

Questionnaire method was the most important approach through which the primary data for this study was collected. Questionnaire design and administration have been identified and recommended as best for a good survey (Baker, 2003; Leitz, 2009). Having listed the required information, a set of questions were listed in a questionnaire format with proper consideration of research questions and objectives of the study. The questionnaire was divided into four (4) sections (A-D) containing 30 questions in all. Section A relates to the personal details of the respondents that may be relevant to assess the competence of the respondents. The essence is to see if the respondents had adequate knowledge of

REITs and capable of giving reliable data by accurately answering the questions in the other sections of the instrument. This is expected to give credence to the study data. Section B dwells on the awareness of the respondents of Real Estate Investment Trust (REIT), the meaning, advantages, incentives and the adequacy of REIT laws. The section also assesses the acceptance of the respondent of REIT as a contributing sub-sector of the economy. Section C focuses on the REIT performance and the economic (internal) factors affecting REIT performance such as FFO, NAV, Size etc. It also addresses the adequacy and acceptance of methods employed in measuring REIT performance like Benchmarking, Forecasting, Correlation or Risk Volatility test. The section also sought for the opinion of respondents on the REIT performance analysis method, appropriate benchmark and possibility of REIT directly financing real estate projects. Section D looks at the external factors affecting REIT performance, these factors are regarded external because they relate to operating environment, the provision of which is outside the control of the REIT companies and include, socio-political probity, investors' sentiment, infrastructure, and social security and also the management style expected to enhance N-REIT performance. The questionnaire was designed to corroborate, validate or justify the quantitative analysis of the secondary data.

The questionnaire was developed in line with the identified factors and variables explanations of the previous literature as discussed in chapter 2. Although closed-ended questionnaire compels respondents to stick within the predetermined answers thereby restricting their individual views, it has the advantage of easy and better determination of similarities and divergence of the sample population (Azika, 1991). Closed-ended questions were asked in the questionnaire with fixed answer choice to avoid the respondent's subjective views in some cases and guarantee easy and prompt response. Each question was given a set of four to six answers for the respondent either to have the

choice of one out of the answers that best represents his/her opinion, or rank their level of agreement to each option in order of importance on a designed scale of measurement. A blank copy of the questionnaire is attached as Appendix A. For easy analysis of the survey data by the SPSS software, the responses to the questions were ranked under the Likert scale system with respondents expressing their level of agreement to statements/questions in the research instrument. The range is between strongly agree and strongly disagree (where strongly agree =5, agree = 4, undecided = 3, disagree = 2 and strongly disagree = 1). The ranking of the responses produced ordinal data for SPSS analysis. The question relating to the opinion of respondents of the REIT dividend yield performance which invariably is a dependent factor/variable in this research was re-coded low =1 and high = 2, carrying a dichotomous value. Before the main data collection, a pilot survey was conducted as expected of research of this nature. The main goal of the pilot survey was to ascertain the reliability and validity (integrity) of the research instrument.

#### **5.8.1.6 Questionnaire Administration**

The questionnaire forms were designed to be self-administered and distributed by the researcher with the assistance of three recruited and trained survey assistants, each attached to different stakeholder. The questionnaire was taken to the secretariat of the stakeholders (Chartered Institute of Stockbrokers (CIS), Nigerian Institution of Estate Surveyors and Valuers (NIESV) and the Independent Shareholders Association of Nigeria (ISAN) for their members to fill and return. The Survey Assistants monitors the filling of the questionnaires by visits and phone calls and collections as they are filled, even at period intervals. The questionnaires were distributed to the respondents randomly. The data collection stage spanned a period of six (6) months between July 2014 and December 2014 separate from the period of pilot survey in January, 2014.

A total of 600 questionnaires were administered and 239 were filled and returned, 12 of which were discarded for incompleteness leaving 227 for analysis, which gives a low but acceptable response rate of 37.83%

### **5.8.2 Secondary Data**

Necessary for index construction are trading data availability, representativeness of the data, consistency and length of time, market size and sector size (Freeman, 2007). Weekly returns of REIT and property sectors were accessed for the period of February, 2008 the first day of REIT transaction as recorded in the Nigerian Stock Exchange to December 2015 amounting to 410 weekly observations. The stock market computed All Share Index (ASI) were compiled for the same period as well and the Treasury Bill true yield of the Central Bank of Nigeria for 90 days tenure is adopted as the risk free rate which is 8.25% as at end of December 2015. The data were collected from the websites of the Nigerian Stock Exchange (NSE) and the Central Bank of Nigeria.

The secondary data (economic indices) required for the asset allocation such as investment return and interest rates with reference to the investment choices of property acquisition and financing in this study, were collected through the respective government departments' and companies' websites. The returns from direct real estate property in Nigeria for the period of 2008 – 2014 were extracted from the annual report of the UACN Property Development Company (UPDC), a leading and dominating listed property company in Nigeria. The lending rate (interest rates on the mortgage loan) and return on time deposit (interest) for the twenty one (21) banks in Nigeria were collected from the website of the Nigeria Central Bank. (Appendix D).

### 5.8.3 Interview

The aim of the interview is to validate the findings of the quantitative analysis of the market data and survey data. Among the interview techniques, the semi-structured variant is considered to likely yield informative data that are rich and in-depth (Levy, 2006). Earlier researchers have also used semi-structured interview for practitioners like valuers (Levy & Schuck, 2005), decision makers of UK property firms (Gallimore et al., 2000) and fund managers (Baum et al., 2000). This research adopted a semi-structured interview to collect additional data from the operators in Nigeria REIT industry. Such data includes performance, acceptability and financing in confirmatory of the quantitative data analysis.

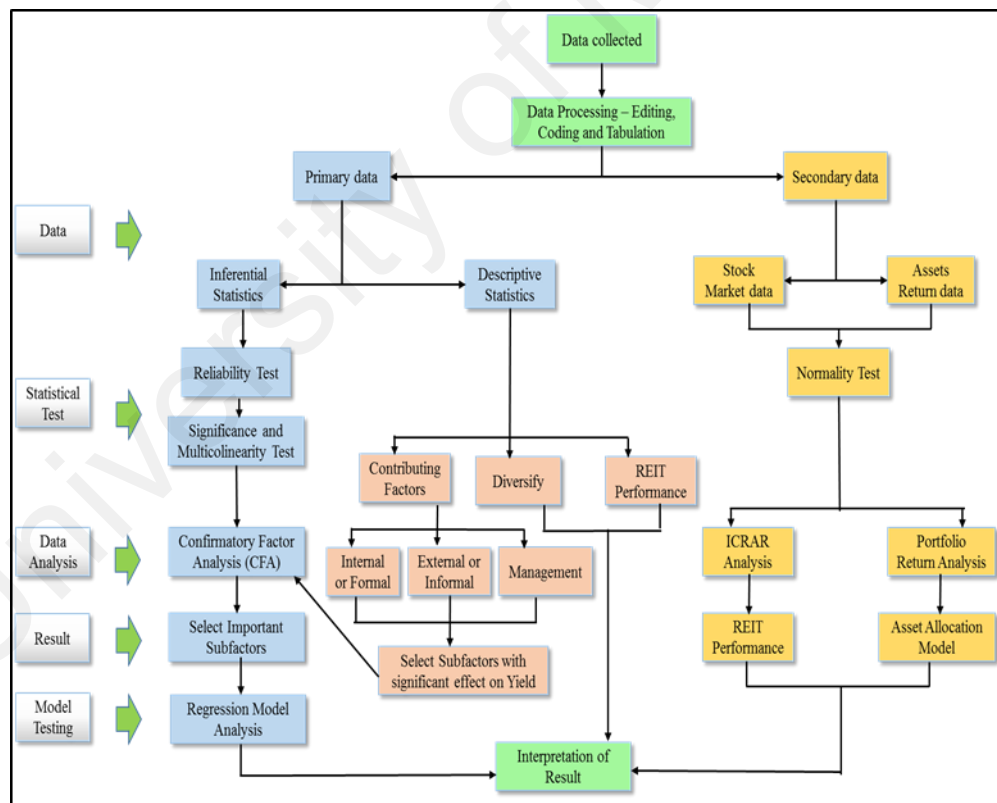
The chief executive officer (CEO) of the REIT companies were the target of the interview but the companies were represented by the designated officer for the interview. At the time of data collection for this research, three (3) REITs were listed on the Nigerian Stock Exchange (NSE). Two (2) people were interviewed with one representing the equity REIT and the other representing the Hybrid REIT. The third REIT was excluded because of the too short an experience in the market, just 15 months. The two people interviewed were senior management members of the REIT companies. The interview was conducted by the researcher with each interviewee at different times. Reflecting the Nigerian nature in data gathering, the interviewee did not accept audio/video recording of the interview sessions, answering under conditions of anonymity and insisting that these be guaranteed. The researcher had to take notes verbatim during the interview with confidentiality and non-disclosure of the identity of the interviewees similar to experiences of some earlier researchers (Baum *et al.*, 2000 and Parker, 2014). However, the use of pre-listed questions helped in the interview session. One of the interview sessions was conducted at the company's break time lasting one and a half hours. The other session was during the official working hours at an appointed time lasting about three hours with intermittent

stops to enable the official attends to his staff. Responses were fully hand recorded by the researcher.

### 5.9 Methods of Data Analysis

The process of data analysis followed data collection exercise. Prior to analysis, the data was screened, collated, sorted, edited, coded, classified and presented on tabular form. The analysis work after tabulation involved computation of percentages, measures of central tendency, dispersion, correlation co-efficient, regression and test of significance as may be relevant and appropriate by applying various well defined statistical formulae.

Figure 5.8 presents the flow chart of data processing and analysis stages



**Figure 5.8:** Flow chart of stages in data analysis process

### 5.9.1 N-REIT Performance - ICRAR

The stock market data for this study include the market's All Share Index and capitalization, percentage changes in index (return), units and unit prices of the three REIT companies and the property company UPDC for 410 observations on weekly basis.

Stock market index is based on the market capitalization of the free float stocks of the listed companies whose common stock is publicly traded on the stock exchange. New York Stock Exchange (NYSE) S&P500 is a commonly used index as benchmark to measure performance of America REITs. It is a measure of the general level of stock prices (share price x units). Generally, S&P Dow Jones indices being the most widely quoted indices adopts the value (or market) capitalization weighted approach (Blitzer & Guarino, 2012).

S&P Index value =  $\sum P_1 Q_1 / \text{Divisor}$  = (Price x Quantity)/Divisor (Recall eq. 1).

The Nigerian Stock Exchange (NSE) All Share Index (ASI) is the share price index and follows the other stock market index. Market indices only consider changes in stock prices (price return) and capital appreciation of the portfolio while income generated by the portfolio (interest and dividend) is ignored. This may be quite misleading as return from investment needs to be total. REIT return are determined by both income and capital appreciation. The average return and standard deviation of the asset(s) stock is therefore assessed and compared with the market index in order to assess performance of the subject asset.

Following the computation of the REIT index and Property Index, the weekly return is calculated and the mean return representing the average of values over the period is considered as the expected return. It was calculated as follows:



$$R = \frac{1}{T} \sum_{t=1}^T r_t \quad (3)$$

where R is the expected return,  $r_t$  is the return at time t and T is the total number of observations.

The risk adjusted return is measured by the introduction of risk component of the asset through the standard deviation of the return. Risk represents the variance between the average return and the observed return for each time and it is calculated from the sample periodic returns as follows:

$$s = \sqrt{\frac{\sum_{t=1}^T (r_t - R)^2}{T-1}} \quad (4)$$

where s is the sample standard deviation. The sample standard deviation is used in this research as population standard deviation ( $\sigma$ )

In order to arrive at risk adjusted return, the risk free return from the market, usually the government Treasury Bill (TB) return or Bond return is applied. The risk-free is deducted from the average return and divided by the standard deviation. The risk adjusted return can be assessed with the adoption of Sharpe Ratio or Treynor Ratio or Jensen's Alpha.

### 5.9.1.1 Sharpe Ratio

Sharpe Ratio, also regarded as the Reward-to-Variability ratio, was introduced by Professor William Sharpe in 1966 as a measure of return (Ogunba, 2013). It estimates/determines the risk premium earned per unit of total risk. The Sharpe ratio measures the excess return per unit of deviation in an investment asset or trading strategy. The asset return is considered with a risk free return set by another investment asset (e.g

Treasury Bill) along with the standard deviation of the investment under consideration. It is expressed as

$$S = [R_x - R] / \sigma \quad (5)$$

Where  $R_x$  is the return from the investment  $x$ ,  $R$  is the risk free rate and  $\sigma$  is the risk (standard deviation of  $R_x$ ).

Sharp ratio is therefore a measure of excess return to an investment as a reward for extra risk taken in holding a more risky asset than the market free rate. It is the mean of excess return over the standard deviation of the population. The Sharpe ratio is computed using series of observed return without need for additional information surrounding profitability. Bailey & Lopez de Prado (2012) concluded that the Sharpe ratio is overstated in case of hedge fund, the case of REITs.

#### 5.9.1.2 Treynor Ratio

Treynor ratio like Sharpe ratio is a measure of return adjusted for risk with the use of Beta in its calculation against standard deviation used by Sharpe ratio, thus:

$$T = (R_x - R_f) / \text{Beta}.$$

Where  $R_x$  is the return from the investment  $x$ ,  $R$  is the risk free rate and Beta is systematic risk of  $R_x$ .

The Beta is a measure of the correlated price volatility of an investment against its benchmark. This means if the benchmark moves in a direction and at a rate, what direction and what rate is the subject investment moving? Treynor ratio has no upper or lower limit and can be very high depending on the volatility of stocks (Carnahan, 2002). While it is appropriate to use the Treynor ratio to compare companies from two different industries, it may not be good for different cap sizes. It can be used in conjunction with other

methods. However, Beta values are useful when calculated against a relevant benchmark. In the investment world, stock market indexes are commonly used as benchmark, for example the S&P500 which is large cap stock in America stock exchange. However, it may not be appropriate to use S&P500 index as benchmark for a small or medium cap stock, a setback for Treynor Ratio (Staff, 2013). REITs can vary in their capitalization (small, medium or large) and while S&P500 index could be a benchmark for Beta calculation with respect to large cap REITs in developed economies, it will not be appropriate for other small and medium REITs (Nigeria REIT).

### 5.9.1.3 Jensen's Alpha

Jensen's alpha is used to determine abnormal return of security/stock/investment over and above the expected return based on the concept of "higher risk, higher return" (Gerber & Hens, 2009; Ogunba, 2013). A higher risk above the risk adjusted return is a positive alpha and good performance. Jensen's alpha is a measure of marginal return of an additional strategy that is not explained by existing factors and serve as a way of measuring performance of portfolio managers as against the investment (Pareto, 2012).

$$A_i = R_i - [R_f + (\beta_i * (R_m - R_f))]$$

where  $\beta = \text{Cov}(R_p, R_m) / \text{Cov}R_m$

Where  $A_i$  is the Jensen Alpha for investment  $i$ ,  $R_i$  is the investment return,  $R_f$  risk free return,  $R_m$  is the market return,  $\beta_i$  is the systematic risk of the  $R_i$

The risk adjusted return is measured in two ways in this study, the return risk ratio (coefficient of variation) and the Sharpe ratio. The market risk free return ( $R_{rf}$ ) is the 90 days' Treasury Bill yield of the Central Bank of Nigeria (CBN) which is 8.25% as at December, 2015. The Treasury Bill yield is averaged to weekly risk free return using the expression:

$$X^{13} = 8.25\%, \quad (6)$$

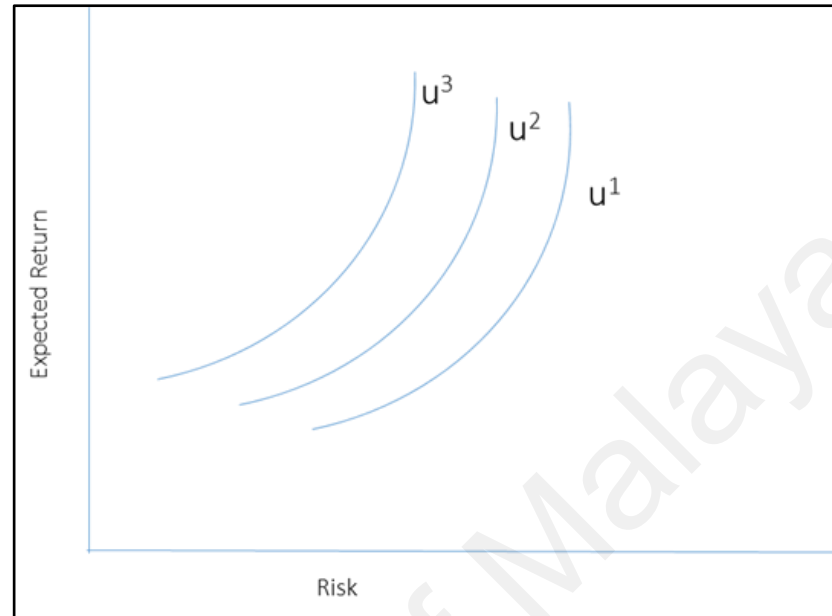
where  $X$  is the weekly risk free return.

The advantage of the Sharpe ratio is its mathematical simplicity and theoretical sensitivity but its weakness lies on the standard deviation that assumes normal distribution of returns. The adoption of the Sharpe ratio in this study follows the distribution of the returns which passes the normality test.

### **5.9.2 REIT Diversification to Real Estate Financing**

Diversification is one of the business strategies of companies including 'Trusts' to spread risk and benefit from increased income. As mentioned earlier (Chapter 2), REITs can diversify their investment across geographical locations and property types. However, in the economies of low property stock and high interest rates on construction loans, financing property development activity will not be out of the opportunities to tap on, though with cautions. As a measure of diversification, a correlation of the returns from the different investment options is performed to identify which classes of assets can be combined in an investment portfolio efficiently. A very important (first) step in portfolio management (diversification and return analysis) is the asset allocation decision. This determines what proportions of the portfolio (fund) will be invested in different classes of assets (Avramov & Zhou, 2009). The portfolio return and risk analysis was performed towards getting the efficient frontier model for REIT fund diversification to real estate financing. Studies in the field of portfolio analysis made references to the mean – variance paradigm of Markowitz efficient portfolio model (Markowitz, 1952) which analytically formalises the risk return trade-off in the selection of the optimal portfolio. The Markowitz efficient portfolio is created by searching through all possible combinations

of the investment options available, in order to find the combination that maximises expected return at any minimum level of risk (figure 5.9).

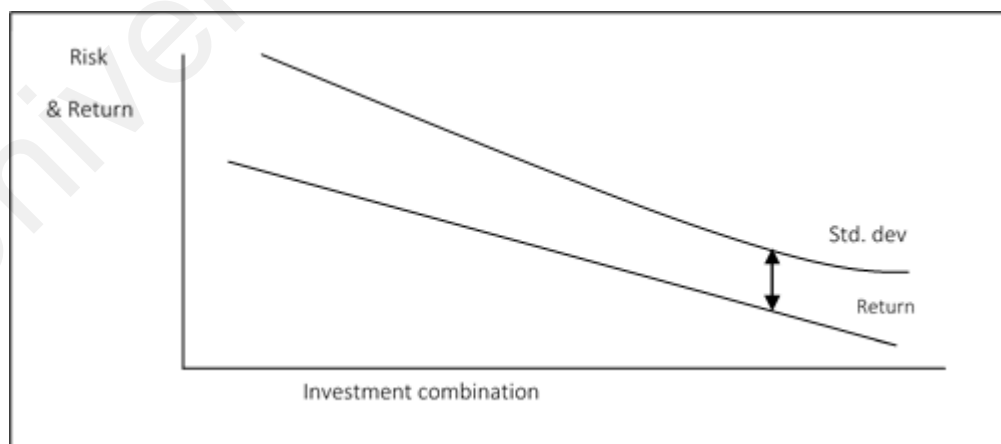


**Figure 5.9:** Return-Risk Utility Curve

### 5.9.3 Asset (Fund) Allocation Theory

Asset allocation decision determines what proportions of the portfolio (fund) will be invested in different classes of assets. Allocation can be passive when it is based on the mean-variance framework or upon simple rules of diversification or market value. When asset allocation is determined by market views, it is an active asset allocation. In passive asset allocation mean-variance view, the main goal is to seek an efficient portfolio with the dual objectives of return maximisation and risk minimisation. Asset allocation and diversification are closely linked concepts because diversification is created through the process of asset allocation (McWhinney, 2012). Avramov and Zhou (2010) asserted that portfolio selection is one of the most important problems in practical investment management. Most studies in the field of portfolio analysis made references to the mean – variance paradigm of Markowitz efficient portfolio model (1952) which analytically formalises the risk return trade-off in selection of the optimal portfolio.

Markowitz portfolios are portfolios that emerge from the principle of efficient portfolio where return maximisation and risk minimisation are the key objectives. There is a saying in the investment world that “the higher the risk, the higher the return”. Markowitz theory however postulates the Return-Risk (Mean – Variance) model which involves the calculation of average portfolio return on one stage and the analysis of portfolio risk in the second stage. The investment risk is measured by the dispersion of the returns from the mean return of each investment. The use of standard deviation is therefore employed. For each investment option, expected average return is calculated using past return of each investment option over a period of time. To the expected return from each investment alternative is applied relevant weight and the return from each investment is added together to arrive at the portfolio return. This exercise is performed with varying weights (combinations) until the return is maximized. The Markowitz efficient portfolio is thus created by searching through all possible combinations of the investment options available, in order to find the combination that maximises expected return at any given level of risk.



**Figure 5.10:** Markowitz’s Efficient Portfolio – (Avramov and Zhou (2010))

McCulloch (2003) concluded that “for future projection and prospective analysis, expected annual arithmetic mean is a more relevant statistics for modelling and analysis”

The average return method was adopted and applied to the different weight allocated to each investment option. The formula is:

$$R_p = \sum_{i=1}^N W_i R_i \quad (7)$$

In this study, two investment options A (real estate) and B (property development financing) are considered.

Thus

$$R_p = W_A R_A + W_B R_B.$$

To accommodate the corporate tax on investment option B, the formula is modified as

$$R_p = W_A R_A + W_B R_B - T_B$$

Where  $R_p$  is portfolio return,  $W_A$  is the weight or percentage of funds allocated to investment A (real estate),  $R_A$  is the return from investment A,  $W_B$  is the weight or percentage of funds allocated to investment B (financing),  $R_B$  is the return from investment B and  $T_B$  is the corporate tax on return from investment B, Thus:

$$R_p = W_A R_A + W_B R_B - (W_B R_B * \text{Tax rate}) \quad (8)$$

To calculate the risk, having known the individual investment risk nature in the form of standard deviation, the portfolio risk formula was applied as:

$$R_p = \sqrt{\sum_{i=1}^N \sum_{j=1}^N W_i W_j \rho_{ij} \sigma_i \sigma_j} \quad (9)$$

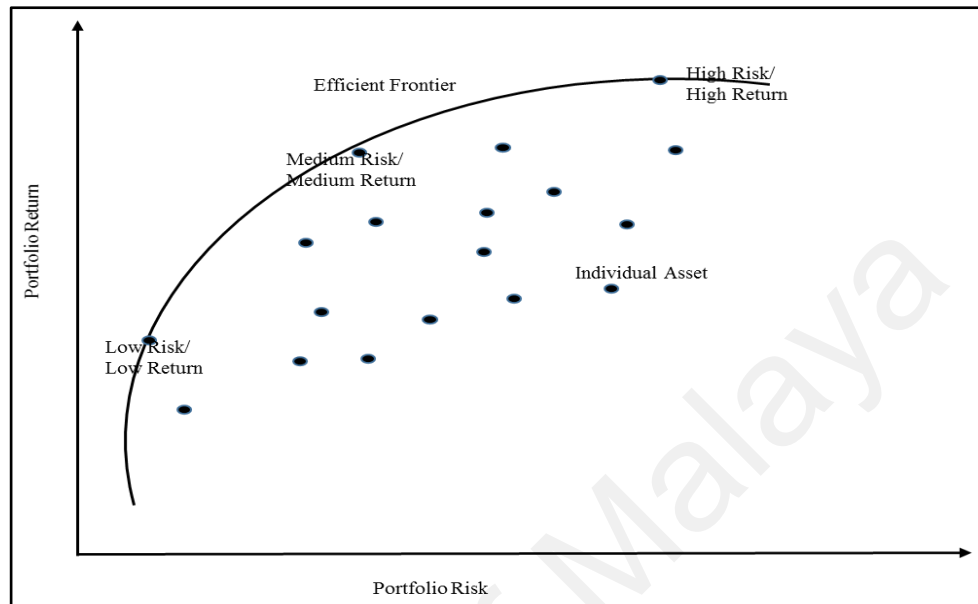
For three investments options in a portfolio

$$\sigma_p^2 = w_A^2 \sigma_A^2 + w_B^2 \sigma_B^2 + w_C^2 \sigma_C^2 + 2w_A w_B \sigma_A \sigma_B \rho_{AB} + 2w_A w_C \sigma_A \sigma_C \rho_{AC} + 2w_B w_C \sigma_B \sigma_C \rho_{BC}$$

For two investment options being considered in this study,

$$\beta_p = ((W_A^2 \beta_A^2 + W_B^2 \beta_B^2 + 2W_A W_B \beta_A \beta_B * PAB))^{0.5} \quad (10)$$

Where  $\beta_p$  is the portfolio risk,  $\beta_A$  is the standard deviation of A,  $\beta_B$  is the standard deviation of B and  $P_{AB}$  is the correlation between A and B ( $P_{AB} = \text{Cov}A\&B/\beta_A\beta_B$ )



**Figure 5.11:** Hypothetical Mean-Variance Efficient Frontier (Source: Pham, 2013)

#### 5.9.4 Analysis of Questionnaire Survey Responses

For the effect of the many important factors and or sub-factors on N-REIT performance, the study adopted a questionnaire survey approach. Each of the main factors has a different number of sub-factors (items) to measure their respective influence on the REIT performance. A correlation matrix was used to identify the significance of the influence of these sub-factors as earlier highlighted in Figure 5.4.

The studies of the effect/impact of contributing factors have clearly identified seven sub-factors under internal factor including the Net Asset Value (NAV), Size (in term of capitalization), Funds From Operation – FFO (in term of net income), Leverage (Gearing/Loan) and Asset Value (Market value of the underlying real estate assets), unit share price and extent of diversification (geographically or property type wise). Four other sub-factors were identified under external factor which includes political risk, investors'



behavior, infrastructure and social security. Management (Advisor puzzle) can be internal (in-house) or external (outsourced). Different studies while considering one factor assumed other factors to be constant, however in the real world scenario, all the identified predicting factors are exerting influences on REIT return performance at the same time (simultaneously). None of past studies has however investigated the simultaneity effect of all the factor determinants or their joint influence on the REIT performance. Yong et al. (2009) using a multi-factor approach to analyse Australian REIT (A-REIT) returns did not consider the factors simultaneously but rather in isolation. Thus the joint effect of three identified internal factors was not presented. This study in an attempt to develop a performance model for N-REIT and assess the joint effect of important factors, adopted a regression model using IBMSPSSAMOS21 for a structural equation modelling (SEM) based regression and model testing.

## **5.10 Pilot Study**

### **5.10.1 Secondary Data Analysis**

Weekly returns were assessed for the period July 2010 to June, 2014 (205 weekly observations), the stock market All Share Index (ASI) were compiled for the same period as well and the Treasury Bill true yield of the Central Bank of Nigeria for 365 days tenure is adopted as the risk free rate which is 10.2%. The result of the pilot study finds N-REIT underperforming the stock market. The result was presented at both the post graduate colloquium and the parallel sections 21<sup>st</sup> PRRES Conference held in January 2015. The feedback was that another stock in the market should be included for better comparison, thus the inclusion of the property stock (represented by UPDC) in the main research.

In the preliminary study, a linear model of asset allocation between property acquisition and direct real estate development financing for N-REIT under the current regulation and

in comparison with the M-REIT was presented at both the parallel section and the research clinic section of the 7<sup>th</sup> IBIMA IRERS 2014 and the issue of comparing M-REIT and N-REIT was discouraged on the clear point that the two REIT regimes have no equal basis of development. The research then has its focus on Nigeria REIT.

### **5.10.2 Pilot Survey**

Pilot survey is a preliminary piece of research conducted before the real comprehensive survey to test the reliability and validity of the research instrument. This is necessary to gain assurance that the research instrument will give the expected result in term of data accuracy and relevance. In essence, it is a pre-testing of the questionnaire and expected to assess the possibility of the instrument passing the main survey with no difficulty for respondents while answering the research questions. The research instrument (questionnaire) was piloted on a self-administered basis in January 2014 with thirty (30) questionnaires on selected relevant stakeholders (Shareholders, Stockbrokers and Estate Valuers), Lampard and Pole (2002) stated that a pilot survey sample must be selected from within the actual sample in order to ensure response validity. Dugeri (2011) used 30 cases, Baharun (2011) used 11 cases on two phases for a qualitative study and Adnan (2012) used 13 cases for her Delphi method study on Tenant Office Space (TOS). Therefore, 30 questionnaires distributed for pilot survey for this research is assured of being adequate for the purpose.

Reliability test in statistics can be performed in various ways among which is (i) item analysis, (ii) split-half reliability and (iii) test-retest reliability. The essence of reliability test for research instrument is to make sure that if the instrument is used for the same measurement, it is capable of giving/obtaining the same, identical or similar value. If an instrument gives identical values when used to take the measurement many times, it is

adjudged reliable. Dugeri (2012) used split half reliability test while Adnan (2012) adopted item analysis method of Cronbach alpha value test. For this research and to test for reliability of the research instrument (the questionnaire), item analysis method was also adopted to test for internal consistency of the instrument. In the item analysis, the statistic looks for the Cronbach's alpha value of the correlation of the items in the questionnaire. The Cronbach's alpha value is expected to be between 0.65 and 0.95 for an instrument to be reliable/consistent (Chua, 2009 and Pallant, 2011).

Validity test of the research instrument was done in two ways, content and construct validity. Usually for the content validity, an expert in the field of study is contacted to check and review the questions that were asked, the expression, options and the variables/items. This is to ensure that the research instrument is capable of producing data that will provide answers to research questions. With respect to construct validity, a factor analysis was performed with SPSS software. The instrument was designed to predict the effect of internal and external factors on REIT performance. Therefore, REIT performance is the dependent variable while the identified main factors are the independent variables. Factor analysis test the correlation values to check multicollinearity among the independent variables and gives the KMO value for the adequacy of samples as well as Bartlett's test of sphericity. A correlation value of 0.85 and above indicated a multicollinearity within the concerned variables/items and will need for the removal of one of the highly correlated items to achieve reliability. The KMO test gives sample adequacy for research (Chua, 2009). If the KMO value is lower than 0.6, the sample is not adequate and should be increased. The Bartlett's test of sphericity reveals the significance of the test at  $P < 0.05$ . If significant, the variables/items are related and factorisable and a non significant value show that the variables are not factorisable and unrelated.

The pilot survey shows that the research instrument is reliable and capable of yielding valid result. A critical look at the filled (returned) questionnaires require that some modification or corrections be made to the research instruments for more clarity and understanding of the respondents. There are missing values in the data due to the fact that some aspects of the questionnaires were not filled properly probably as a result of lack of proper understanding of the questions of misconceptions. In some questions where level of agreement to the statement is required for a number of factors/variables, some respondents only indicated their opinion about one or two factors. Again some questions were left unanswered. In order to correct such situation from arising in the main survey, the questionnaire was modified and further simplified with the use of simple and clear expression devoid of misinterpretation, re-arrangement of questions that sought similar or consistent responses in same sections for consistency as relevant. The modified questionnaire was re-piloted in April 2014. The result of the reliability and validity test for the second pilot survey was satisfactory.

### **5.11 Summary**

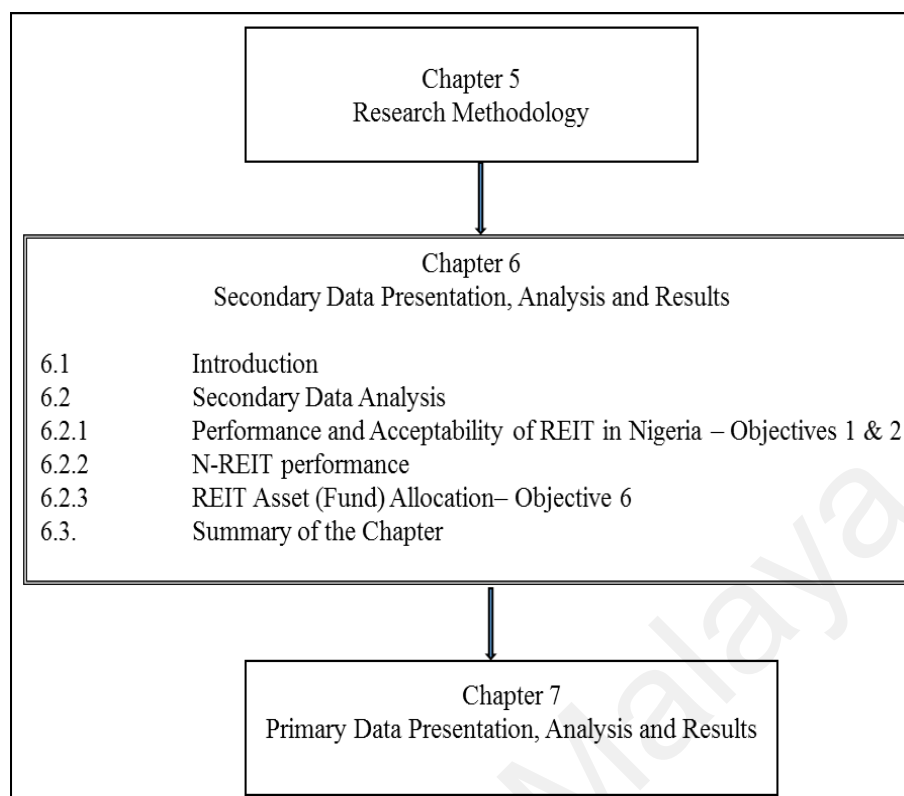
This chapter reviewed the research methodology, research design, method and process employed in this study. The chapter began with the re statement of the research questions and objectives for quick and easy reference. A discussion of the researcher's understanding of research design, paradigms and method followed the theoretical framework with an explanation of the multiple regression model adopted to establish a REIT performance model for Nigeria REIT (Objective 4). The study adopted a three phase approaches of literature search, pilot study and data collection and analysis. The research is a mixed method investigation using both quantitative and qualitative data and analyses. Secondary source data and questionnaire survey data constitute the quantitative data while an interview session provided the qualitative data for the study. The secondary

data analysis used the index computation and risk adjusted analysis method to assess REIT performance and acceptability (objectives 1 and 2), portfolio analysis of return and risk with correlation studies was used to assess the diversification of REIT asset to real estate financing (objective 6). Descriptive analysis of survey data was employed to assess REIT performance, acceptability and diversification in Nigeria from the perspective of the respondents to confirm the result of the secondary data analysis. Following the identification of factors and variables from literature search (objective 3), test of significance, correlation and confirmatory factor analysis (CFA) was used to determine the main factors/variables affecting REIT (objective 4) and the multiple regression analysis (MRA) adopted to find the joint effect of these factors on N-REIT performance and to predict N-REIT dividend return for the Nigeria market (objective 5). The interview responses were transcribed and the content analysed to validate the findings of the quantitative study with respect to all objectives. Chapter Six present the detail of data analysis and the result including the relevant statistical test of data suitability, adequacy and fitness.

## **CHAPTER 6: SECONDARY DATA PRESENTATION, ANALYSIS AND RESULT**

### **6.1 Introduction**

This chapter presents the secondary data for this research and the analysis of the data. The data was tested for reliability, sample adequacy, significance and importance to full analysis in each case and subsection. The analysis entails the use of risk adjusted return to assess the performance of Nigeria REIT and its acceptability. The Efficient Frontier model for portfolio return and risk analysis was employed to predict a proposed REIT investment diversification to real estate development financing. The chapter begins with secondary data analysis for the performance and acceptability of Nigeria REIT (section 6.2.1 and 6.2.2) covering the stock market performance of N-REIT, and REIT share of market capitalisation which shows an indication of the level of acceptability of REIT in Nigeria. Section 6.2.3 focused on objective 6 relating to the creation of asset allocation model for N-REIT proposing diversification of REIT investment to property development financing in Nigeria. A summary section 6.3 concludes the chapter as presented in figure 6.1 below in relation to the preceding chapter 5 and the next chapter 7.



**Figure 6.1:** Structure and positioning of Chapter 6

## 6.2 Secondary Data Analysis

### 6.2.1 Performance and Acceptability of REIT in Nigeria

The analysis in this section is related to objective number one (objectives 1 and 2) of the study: *to assess the performance of REIT in Nigeria and appraise the acceptability of REITs by Nigerian investors*. The analysis follows the computation of REIT property capitalisation, risk adjusted return of the trading record of the stock exchange though, the return characteristics of real estate and stocks were found not to be necessarily same (Liu & Mei, 1992 and Liow and Webb, 2009). Table 6.1 (see appendix C) shows the market data collected for the REIT's share price return performance analysis in this study.

For continuous data having above thirty (30) cases of observation or respondent, the data are assumed normally distributed (Chua, 2009). Nevertheless, the assumption of normal

distribution was tested for in respect of the weekly capitalisation data on REIT and Property Company before computation of index, using Skewness and Kurtosis statistics. Both REIT and Property Company capitalization values are normally distributed with values greater than -1.96 and less than +1.96, the normal distribution range. Skewness values are 0.73 and 0.14 while Kurtosis values are -0.79 and -0.66 for the N-REIT and Property Company respectively (Table 6.2).

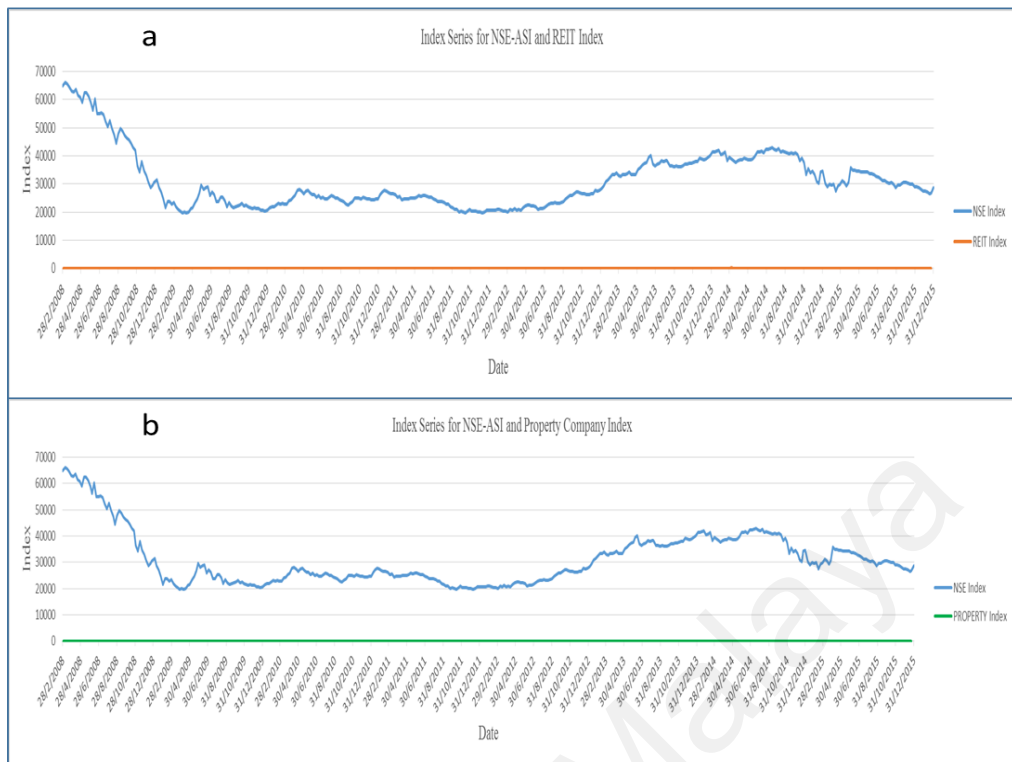
**Table 6.2:** Descriptive Statistics for Normality test for weakly capitalisation data of REITs and Property Company

	N Statistic	Mean Statistic	Std. Deviation Statistic	Skewness		Kurtosis	
				Statistic	Std. Error	Statistic	Std. Error
REIT Capitalisation	410	16632733694.13	13626371108.44	.732	.121	-.785	.240
PPTY Capitalisation	410	22732673714.34	7307440473.68	.142	.121	-.660	.240

### 6.2.2 N-REIT Performance Analysis

The indexes were plotted against the Nigerian Stock Exchange All Share Index (NSE-ASI) as shown in figure 6.2. Both REIT and property indexes reveal a near constant scenario through the entire period under study. This suggests that there is little or no trading in real estate securities (property and N-REIT) in Nigeria stock market. Both the REIT and the property indexes exhibited a no trading scenario throughout the period. Only one REIT Company (SKYEREIT) is being traded until May 2010 when the second REIT (UHOMREIT) joined the market and March, 2014 when the third REIT (UPDC REIT) joined the market. There was a rise in capitalisation but this was not followed by any unexpected impact on the index, as can be seen from figure 6.2 (a). There is only one property company (UACN Property Development Company- UPDC) listed in Nigeria Stock Exchange since 1999. Both REIT and property company showed a non-liquid, non-trading status. The market index however presented a time series data set.





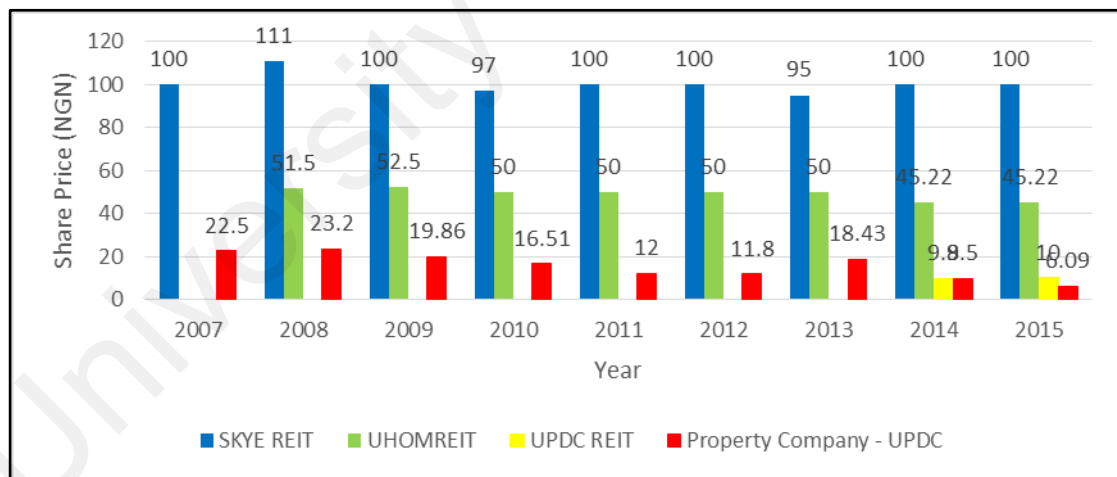
**Figure 6.2:** Index series movement for NSE-ASI, REITs and Property Company

The study estimated market share for both property and N-REIT of the Nigerian stock market in term of capitalization. The result was plotted as shown in figure 6.3. The REIT sector contributes 0.02% - 0.05% of the stock market between February 2008 to June, 2010 and this rose to 0.25% in July, 2010 as a result of the market entry of the second REIT company, only to fall to 0.11% by February, 2014. The entrance of the third REIT on March 2014 increased the REIT share of the market capitalization to 0.33%. As at December 2015, the REIT share of NSE capitalization was 0.42%. In a similar trend, the property company contributes 0.28% in February 2008, rose to 0.59% in December, 2009 and oscillated downwards to 0.09% by December 2015.



**Figure 6.3:** N-REIT and property company share of Nigerian Stock Exchange Market Capitalization

From the data collected from the stock exchange, the annual closing prices of the REITs were examined between 2007 and 2015 to show the annual price movements. Figure 6.4 presents the share price as it falls from the base year 2007 gradually until 2015 indicating depreciation in capital value (small and illiquid REIT). The property company on its part shows a more liquid stock compared to the N-REIT.



**Figure 6.4:** N-REITs Share Price (2007-2015)

Table 6.3 presents the risk-adjusted performance of N-REIT, property stock and the market (NSE) over February 2008 – December 2015. According to the results, N-REITs outperforms the market but shows an underperformance to the property company. N-REIT generates a weekly return of 0.08% as compared to that of -0.14% for the stock market and 0.43% for the property company. The risk level, as measured by standard

deviation, was higher for the property company (9.23%) than that of N-REIT (4.36%), and that of stock market (3.46%). On a risk-adjusted basis, measured by return/risk and Sharpe ratios. The risk return ratio revealed negative (-0.04) for the NSE All Share Index and positive 0.02 for N-REIT and positive 0.05 for the property company. On the Sharpe ratio basis, all sectors have negative returns. Nigeria REITs (-0.25) was ranked second to the property company (-0.08) and above the stock market (-0.38). The analysis revealed the superior performance of N-REIT over Stock market in terms of both average return and risk-adjusted performance over the study period. Meanwhile, the property company shares outperforms N-REIT as shown in Table 6.3.

**Table 6.3:** Risk adjusted return analysis of the market, REIT and property company

Sector	Weekly Risk free rate	Weekly Return (%)	Risk (%)	Risk Adjusted Return (Sharpe Ratio)	Return Risk Ratio	Rank
NSE_ASI	1.18	-0.14	3.46	-0.38	-0.04	3
N-REIT	1.18	0.08	4.36	-0.25	0.02	2
Property	1.18	0.43	9.23	- 0.08	0.05	1

The study sought correlations between N-REIT and the market and property company shares. Results of the correlation are shown in Table 6.4. N-REIT has low correlation with both the market (0.083) and the property company (0.12). The low correlation between the market and N-REIT portrays that N-REIT possesses a diversification benefit to the stocks. Similarly, the low and significant correlation of N-REIT to Property Company ( $P < 0.05$ ) also indicates diversification benefit between the two. The property company also has low but significant correlation ( $r = 0.303$ ,  $P < 0.01$ ) with the stock market equally showing diversification advantage. However, REIT could be said to have a better diversification benefit to the market than the Property Company.

**Table 6.4:** Correlation Matrix of the weekly returns (Market, REIT and Property

	MKT Return NSE-ASI	REIT Return	Property Return
MKT Return (NSE-ASI)	1		
REIT Return	.083	1	
Property Return	.303**	.120*	1

Correlation is significant at the 0.01 level (2-tailed).\*\*

Correlation is significant at the 0.05 level (2-tailed).\*

From the correlation analysis in Table 6.4, it can be concluded that both property company and REIT in Nigeria are diversifier for the stock market. Again REIT can also be a preferred real estate security to property company shares.

### 6.2.3 REIT Fund Allocation to Property Development Financing (Objective 6)

This section answers the research objective number Six, which is *to create an asset allocation model for N-REIT that will accommodate diversification to real estate financing*. Tables 6.5 presents the income return analysis from property acquisition while Table 6.6 shows the interest rate (on construction/mortgage laon) and interest on Time Deposit investment. The time deposit investment is the other investment option allowed for REIT to a maximum of 10% of REIT fund in Nigeria and the Nigeria REITs invest in deposit as well (figures 4.5 and 4.6). The analysis shows the average annual rental income return from property as revealed in the annual report of the property company (UPDC) for the period 2008 to 2014 and the CBN and NBS sector reports for 2014. The average return is represented by the mean, and also calculated are the variance and standard deviation of the distribution as a measure of risk (Table 6.5). The analysis reflects an average return of 4.23% for property acquisition per annum with 14.1% risk (standard deviation).

**Table 6.5:** Property Income Analysis for period 2008 - 2014

YEAR	Rental Income (%)
2008	2.79
2009	2.52
2010	3.33
2011	5.42
2012	3.80
2013	6.36
2014	5.37
Mean	4.23
Variance	1.99
SD	14.1%

Source: Researcher's computation from annual reports of UPDC and CBN/NBS sector report

The average annual interest rate on real estate development financing (construction loan) and time deposit were calculated from the varying interest rate charged by the 21 commercial banks in Nigeria. The data was collected from the website of the Central Bank of Nigeria (CBN) and attached as Appendix D. The average interest rate on financing is 22.5% per annum which is taken as the return from real estate financing activity while the average interest payable to investors on time deposit from the banks is 9%. The standard deviation (risk) is 32.7% and 15.2% for real estate finance and time deposit respectively as shown in Table 6.6.

**Table 6.6:** Income analysis for Real Estate Finance and Time Deposit

Banks	Income (Interest rate)	
	Finance (%)	Time Deposit (%)
Access	18.00	7.91
Diamond	21.00	7.87
Ecobank	25.50	10.77
Enterprise	27.00	9.97
FCMB	21.00	7.13
Fidelity	23.50	10.00
First	23.00	11.00
GTB	21.00	9.14
Keystone	22.50	11.48
Mainstreet	21.14	7.40
Skye	26.50	5.37
Stanbic	21.00	9.58
Standard Chartered	14.50	9.57
Sterling	21.50	8.55
Union	25.00	7.60
UBA	22.00	8.37
Wema	26.50	8.24
Zenith	20.50	9.90
Citibank	19.00	11.00
Unity	27.00	9.93
Heritage	26.00	8.50
Mean (M)	22.53	9.01
Variance	10.69	2.33
SD	32.7%	15.2%

Source: Central Bank of Nigeria and researcher's computation

Tables 6.7 presents the typical return analysis of a REIT company's fund/asset allocation to investment options under the existing regulation. The REIT law in Nigeria specifies a

minimum of 75% asset allocation to property acquisition and the remaining 25% to other investment vehicles relating to real estate with maximum 10% to financial assets or deposits. The analysis of asset allocation of REIT in this study is hypothetical to examine the impact of higher levels of other investment options in REIT portfolio but with caution not to go beyond the minimum amount prescribed to real estate by regulations globally which is 70% in some countries. In Nigeria, the asset of a REIT will be on property acquisition, real estate related investment (such as, property development company/primary mortgage banks shares) and or bank deposit. The current asset allocation is between property and fixed income investment (deposit) as reflected by the Skye REIT investment portfolio with 17% allocation to fixed income (fig.4.5) and UPDC REIT investment portfolio comprising non real estate asset of 24.81% (fig 4.6). From Table 6.5 average returns on real estate (property investment) is 4.23% with standard deviation of 14.1% and return on banks' fixed deposit rate as collected from the CBN website (Appendix D) is 9% with standard deviation of 15.2%. Adopting the portfolio return analysis from the modern portfolio theory as stated in Chapter 5 (equation 7). The portfolio return for the property deposit asset allocation was calculated. The result shows that as more fund is allocated to deposit from 0% to 30%, the portfolio return marginally rises from 4.23% to 5.66% and the portfolio risk reduces from 14.1% to 10.9%. The standard deviation of property return and that of time deposit is close and with higher return from time deposit, it is expected that the portfolio return will increase as more fund is allocated to time deposit (Table 6.7). However, the maximum permitted by the Nigeria REIT law is 10% of fund to deposit.

**Table 6.7:** Current REIT fund allocation possibilities and return analysis

Data	Asset Allocation (%)		Income Return (%)		Portfolio (%)	
	Real Estate	Time Deposit	Rental Income (RE)	Interest (TD)	Return	Risk
	100	0	4.23	9.0	4.23	14.1
RE = 4.23%	95	5	4.23	9.0	4.47	13.4
Time Deposit = 9.01%	90	10	4.23	9.0	4.71	12.8
Var (RE) = 1.99	85	15	4.23	9.0	4.95	12.2
SD (RE) = 14.1%	80	20	4.23	9.0	5.18	11.7
Var (TD) = 2.33	75	25	4.23	9.0	5.42	11.3
SD (TD) = 15.2%	70	30	4.23	9.0	5.66	10.9
Covariance = 0.12						
P(RE&TD) = 0.014						

Table 6.8 presents the proposed allocation of fund to real estate development financing as a form of diversification under the current regulation that 75% must go to the real estate acquisition. With the assumption that any income from non-real estate asset will be taxed at the company profit tax rate of 10%, the current lending rate is 23%. The study adopted the modified portfolio return equation 8 in chapter five to accommodate tax in the calculation of the return and also used the portfolio risk equation 10 in chapter five to assess the portfolio risk. The standard deviation was used as a measure of risk for the investments which are 14.1% and 32.7% for real estate and financing respectively. The result of the analysis shows that as more fund is allocated to the financing of property construction, the portfolio return increases from 4.23% to 9.17% for every 5% increase in fund to financing and the portfolio risk decreases to 13.15% at 85% real estate and 15% financing investment combination. Thereafter, the risk begins to increase as more money is invested in financing (Table 6.8). The result suggests that the efficient frontier where maximum return is obtained at minimum risk is 85% and 15% allocation to real estate and financing which gives 6.7% return at 13.1% risk level.

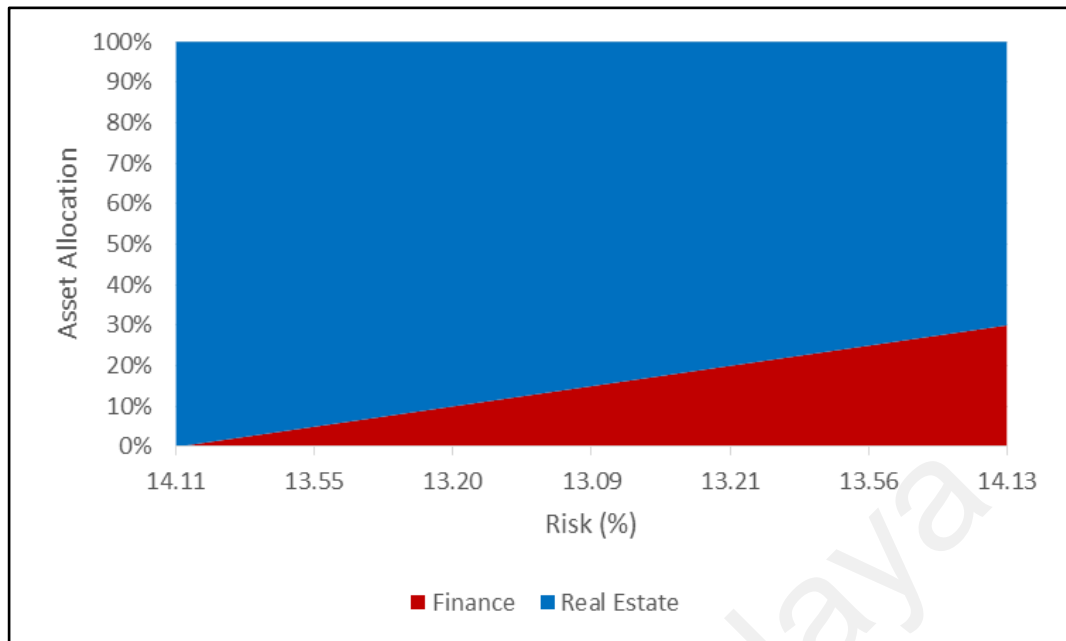
**Table 6.8:** Proposed REIT asset allocation risk return analysis

Data	Asset Allocation (%)		Income Return (%)			Portfolio (%)	
	RE	Finance	Rental Income (RE)	Imterest (F)	Tax (F)	Return	Risk
	100	0	4.23	23	10	4.23	14.11
RE = 4.23%	95	5	4.23	23	10	5.05	13.55
FINANCE = 23%	90	10	4.23	23	10	5.88	13.20
Var (RE) = 1.99	85	15	4.23	23	10	6.70	13.09
SD (RE) = 14.1%	80	20	4.23	23	10	7.52	13.21
Var (Fin) = 10.69	75	25	4.23	23	10	8.35	13.56
SD (Fin) = 32.7%	70	30	4.23	23	10	9.17	14.13
Covariance = 0.14	0.14						
P(RE&Fin) = 0.03	0.03						

A look at the current hypothetical asset allocation in Table 6.7 (in comparison to Table 6.8) shows that at 85% real estate and 15% time deposit, the portfolio return is 4.95% while the risk is 12.2%. The return is lower to 15% asset allocation to financing albeit lower risk as well. This could be suspected to be the reason behind the allocation of asset to deposit (in excess of 10% maximum specified by N-REIT law) by Nigeria REITs. The proposed asset allocation's return and risk analysis is further presented in figures 6.5 - 6.7

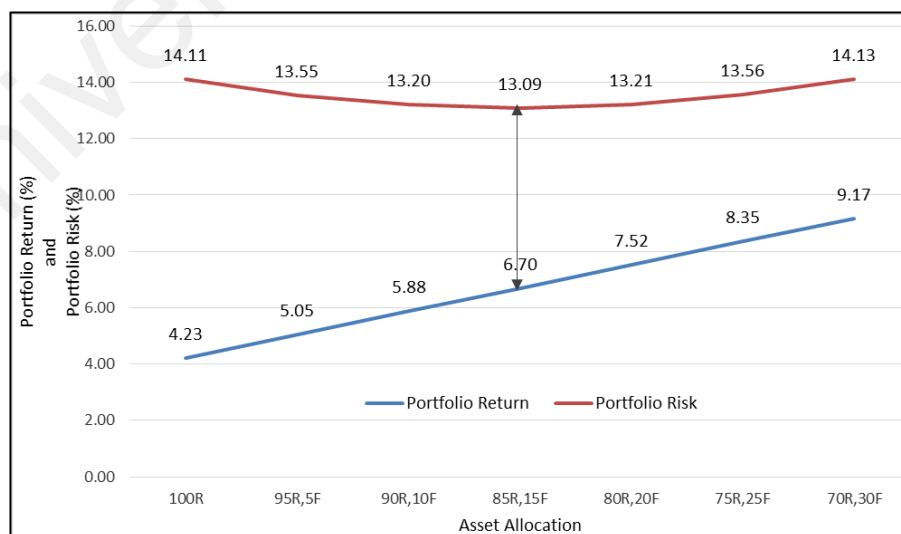
Figure 6.5 shows the proposed two assets portfolio for N-REIT, real estate and real estate finance with a minimum allocation of 70 % of fund to real estate against the expected portfolio risk levels.



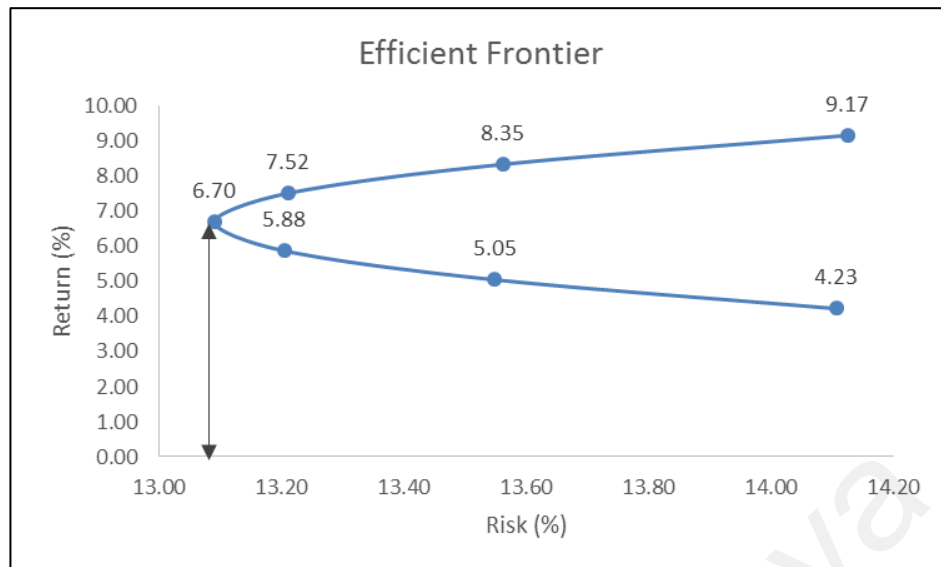


**Figure 6.5:** Proposed asset allocation between real estate acquisition and real estate financing

Figures 6.6 and 6.7 show the asset allocation Return-Risk curve and efficient frontier for the proposed asset allocation for diversification of N-REIT investment to real estate financing reflecting the optimum return at the minimum risk level. The results clearly indicated that the inclusion of real estate financing in the investment of REIT funds will enhance returns at reduced risk.



**Figure 6.6:** Return-Risk analysis for proposed asset allocation



**Figure 6.7:** Efficient Frontier curve for the proposed possible assets combination

The investment asset allocation model for Nigeria REIT diversification to direct real estate financing in line with the risk return efficient model of Markowitz theory is presented as

$$\mathbf{REIT\ Asset = 0.85RE + 0.15F} \quad (11)$$

RE = real estate acquisition and management and F = real estate development financing

### 6.3 Summary

This chapter presents the data analysis and results of the secondary data for this research. The results indicate a low REIT performance in Nigeria, the outperformance of N-REIT to the Nigerian stock exchange market with the property company outperforming both REIT and the market. There is also a low level of acceptability of REIT by Nigerian investors especially the institutional investors as revealed by the non-liquid (lack of trading) position of N-REIT shares as well as property company shares. The Nigeria REIT is a low capitalised stock and remains less attractive to the institutional investors. A REIT asset allocation model to real estate financing for REIT return optimization was also

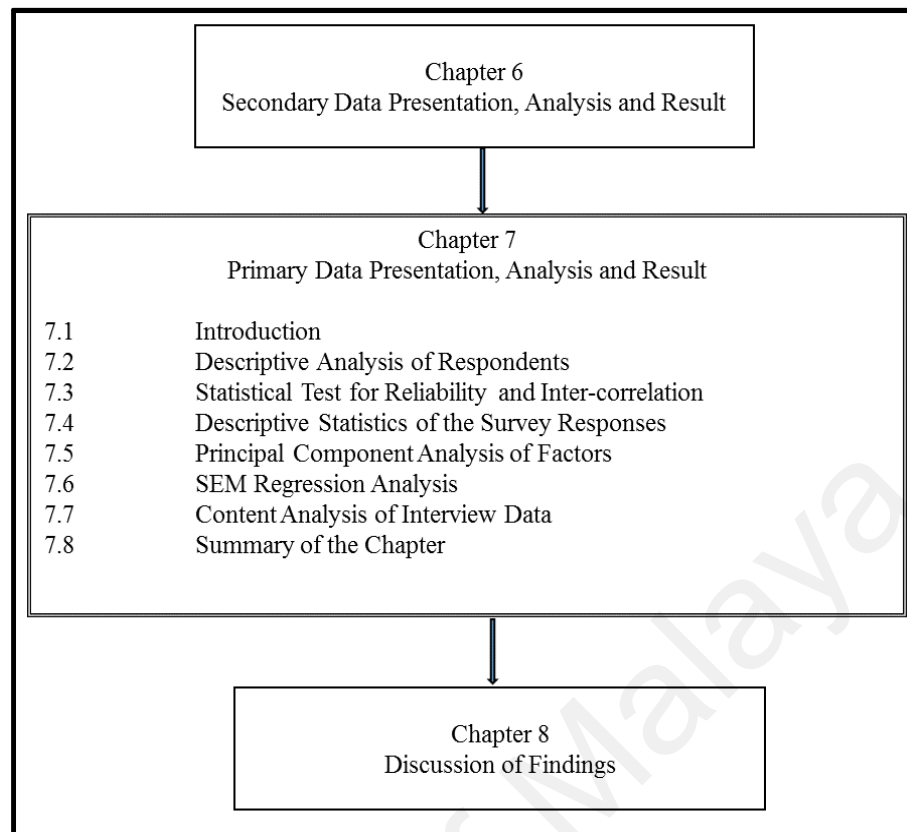
presented. Chapter Eight presents the discussion of findings in relation to earlier studies and in cross referencing to literature search and background studies.

University of Malaya

## **CHAPTER 7: PRIMARY DATA PRESENTATION, ANALYSIS AND RESULT**

### **7.1 Introduction**

This chapter presents the primary (survey and interview) data for this research and the analysis of the data. The analysis in this section is related to Objectives 2 to 4. This is focused on factors' and sub-factors' effect on REIT performance, the importance and significance as well as model development for N-REIT performance. The questionnaire survey data is non-parametric of two types - nominal (categorical) data for the demographic characteristics (personal data) of the respondents and ordinal (ranking) data for the research survey. In the process of analysis, the study tested the reliability of the survey instrument and for presence of inter-correlation (multi-collinearity) and model fit. Test of significance was adopted to determine the important factors affecting REIT return performance. Statistically, the study used 6 parameters for model testing as highlighted in Chapter 5, for the study model adopted from conceptual framework having used principal components analysis (PCA) along with correlation analysis to select the main factors (independent variables) affecting the dependent variable of the study (REIT dividend yield) and their significant effect. The descriptive analysis of the survey respondents is presented in section 7.2 followed by statistical tests in section 7.3 and the analysis of the responses in section 7.4. The principal factor analysis is covered in section 7.5 and regression modelling in section 7.6. The analysis of the interview data is presented in section 7.7. A summary section 7.8 concludes the chapter as presented in figure 7.1 below in relation to the preceding Chapter 6 and the next Chapter 8.



**Figure 7.1:** Structure and Positioning of Chapter 7

## 7.2 Descriptive Analysis of the Survey Respondents

The section presents the descriptive statistics of the questionnaire survey. The target population for the survey includes the shareholders, stockbrokers and property valuers in Nigeria. The questionnaire was distributed through the respondents' associations/institutions as stated earlier in Chapter 5 (Section 5.8.1.6). Table 7.1 presents the distribution of the questionnaire among the stakeholders and the response rate. Property valuers have the highest response rate of 59.5% (119) while the other stakeholders have less than 30% questionnaire return rate (25% and 29% for shareholders and stockbrokers respectively). The aggregate response rate to the survey is 37.83% (227). At 227, the sample is smaller than the theoretical quantum (385) to be expected for the size of population in this study (Krejcie & Morgan, 1970), but is nevertheless

statistically adequate for analysis and subsequent generalisation (Tabachniks & Fidell, 2001; Field, 2009; and Hair et al, 2009).

**Table 7.1:** Questionnaire distribution and response rate

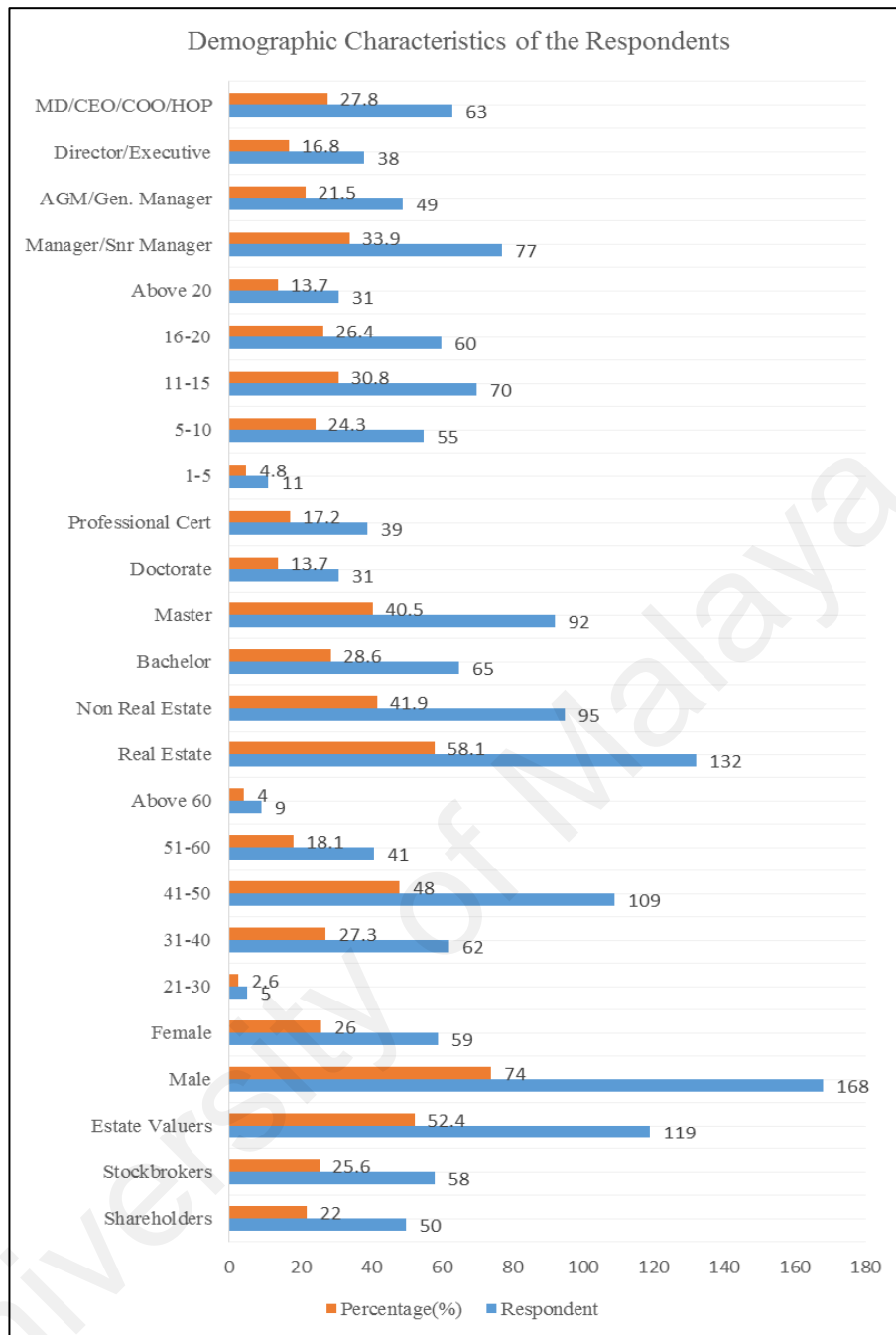
<b>Stakeholders</b>	<b>Questionnaire Distributed</b>	<b>Response Rate</b>	<b>Percentage (%)</b>
Shareholders	200	50	25.00
Stockbrokers	200	58	29.00
Property Valuers	200	119	59.50
<b>Total</b>	<b>600</b>	<b>227</b>	<b>37.83</b>

The demographic characteristics of the respondent and stakeholders involved are presented in Table 7.2. The respondents are made up of 22% (50) shareholders, 25.6% (58) stock brokers and 52.4% (property valuers). 74% (168) of the respondents are male and 26% (59) are female. 2.6% (5) are of age 21-30 years, 4% (9) are above 60 years (mostly retirees) and the remaining 93.4% (213) are between the ages of 31-60 years. 58.1% (132) of the respondents belong to the real estate industry while 41.9% (95) are of non-real estate industry (most of whom are stock brokers and investment bankers/analyst). The respondents, with their education qualification and experience, have adequate knowledge as expected to enhance their understanding of the study. The minimum qualification is the Bachelor degree (28.6%), others possess higher qualifications above first degree (Master - 40.5%, Doctorate – 13.7% and professional certification – 17.2%). On the area of experience, 4.8% (11) are young in practice with 1-5 years of working experience, 13.7% (31) has above 20 years and the majority of 81.5% (185) have between 5-20 years in practice. 33.9% (77) are manager/senior manager in term of work status/rank, 21.5% (49) are assistant general manager/general manager, 16.8% (38) are directors and executives (mainly the shareholders), and 27.8% (63) are managing directors/chief executive officers/chief operating officers/ head of practice (mostly the property valuers and stockbrokers in private practice) in their respective firms/companies/organisations. The demographic characteristics of the respondents

reveal that they are relevant stakeholders with expected knowledge in terms of education and practical experience and with enough maturity to understand the objectives of the study to give informed opinion and yield reliable data for the study (Figure 7.2).

**Table 7.2:** Demographic characteristics of the respondents

Characteristics	Options	Respondent	Percentage (%)	Cumulative Percentage (%)
Stakeholders	Shareholders	50	22	22
	Stockbrokers	58	25.6	47.6
	Property Valuers	119	52.4	100
	Total	227	100	
Gender	Male	168	74	17
	Female	59	26	100
	Total	227	100	
Age (Years)	21-30	5	2.6	2.6
	31-40	62	27.3	29.9
	41-50	109	48	77.9
	51-60	41	18.1	96
	Above 60	9	4	100
	Total	227	100	
Profession	Real Estate	132	58.1	58.1
	Non Real Estate	95	41.9	100
	Total	227	100	
Education	Bachelor	65	28.6	28.6
	Master	92	40.5	69.1
	Doctorate	31	13.7	82.8
	Professional Cert	39	17.2	100
	Total	227	100	
Experience (Years)	1-5	11	4.8	4.8
	5-10	55	24.3	29.1
	11-15	70	30.8	59.9
	16-20	60	26.4	86.3
	Above 20	31	13.7	100
	Total	227	100	
Work Status	Manager/Snr Manager	77	33.9	33.9
	AGM/Gen. Manager	49	21.5	55.4
	Director/Executive	38	16.8	72.2
	MD/CEO/COO/HOP	63	27.8	100
	Total	227	100	



**Figure 7:2:** Demographic Characteristics of the Respondents

### 7.3 Statistical Test for Instrument Reliability and Inter Correlation Between Variables

A Cronbach’s alpha test of reliability was performed on the data and the result of the Cronbach’s alpha is presented in the Table 7.3 below



**Table 7.3: Reliability Statistics for the Research Instrument**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No. of Items
.755	.749	13

From the above Table 7.3, the Cronbach's alpha value is 0.755 and lies within the acceptable reliability value of 0.65 to 0.95 (Chua, 2009). Therefore, the research instrument passes the reliability test and adjudged to be reliable with an acceptable level of consistency for this research.

The four variables of the informal factors were measured with sixteen (16) items: leadership (4), investor (2), infrastructure (6) and security (4). The scores for variables were computed using the respective items in the SPSS program. The computed scores were labelled political variable, investor variable, infrastructure variable and security variable and retaining the initial 13 sub-factors which constitute the independent variables in this study. The inter-correlation between the independent variables is less than 0.85. The variables are valid and free from multicollinearity problem (Table 7.4).

**Table 7.4: Spearman's Rho Correlation Test of Significance**

	Size	NAV	Unit Share Price	Income	Loans	Property Value	Diversify	Political Variable	Investor Variable	Infr. Variable	Security Variable	Internal Magt	External Magt	REIT Dividend Return
Size	1.000													
Net Asset Value	.453**	1.000												
Unit Share Price	.425**	.565**	1.000											
Income	.042	-.009	-.085	1.000										
Leverage/Loans	.311**	.281**	.199**	-.008	1.000									
Property Value	-.235**	-.335**	-.282**	.349**	.056	1.000								
Diversification	.133*	.234**	.373**	.025	-.037	-.149*	1.000							
Political Variable	.219**	.319**	.274**	.020	.083	-.108	.151*	1.000						
Investor Variable	-.072	-.132*	-.230**	-.018	-.092	.213**	-.310**	-.083	1.000					
Infrastructure Variable	-.304**	-.386**	-.402**	-.022	-.283**	.252**	-.191**	-.118	.460**	1.000				
Security Variable	.169*	.041	.017	-.277**	.167*	-.083	-.213**	.181**	.111	.230**	1.000			
Internal Management	.289**	.404**	.384**	-.056	.110	-.333**	.154*	.139*	.046	-.137*	-.059	1.000		
External Management	-.057	-.009	.029	.090	-.061	.031	.058	.172**	-.147*	-.048	-.024	.003	1.000	
REIT Dividend Return	-.151*	-.123	.030	-.152*	-.044	.154*	-.090	.071	.097	.182**	.088	.065	.215**	1.000

\*\* . Correlation is significant at the 0.01 level (2-tailed), \* . Correlation is significant at the 0.05 level (2-tailed).

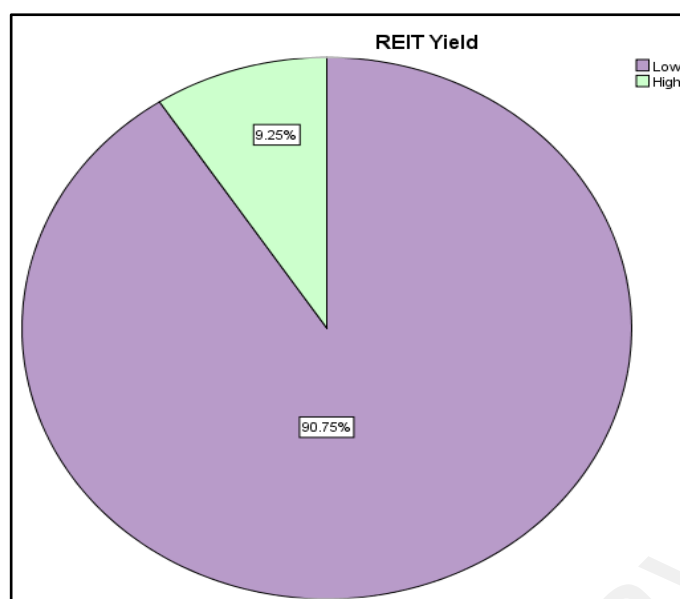
From the correlation table 7.4, out of the thirteen (13) independent variables (sub-factors), only five (5) show significant relationship with the REIT performance (REIT Yield) having p values less than 0.05. These variables include 3 variables of internal factor (Size ( $r = -0.151$ ,  $p = 0.023$ ), Income ( $r = -0.152$ ,  $p = 0.022$ ), and Asset Value ( $r = 0.154$ ,  $p = 0.02$ )), one variable of external factor (Infrastructure ( $r = 0.182$ ,  $p = 0.006$ )), and one variable of management puzzle (External management ( $r = 0.215$ ,  $p = 0.001$ )).

#### **7.4 Descriptive Statistics of Survey Response**

The perceptions of the respondents to the objectives of the study are presented below. The survey instrument is included in Appendix (A).

##### **7.4.1 Analysis of REIT Performance in Nigeria - Objective 1**

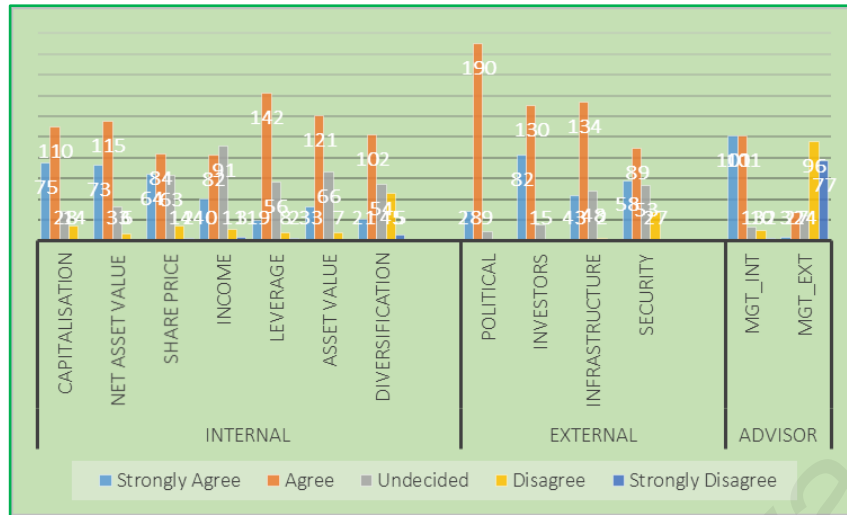
In order to establish the perception of the respondents to the first objective of the study, the study sought the respondents' opinion on the performance of REITs in Nigeria. They are required to rank their agreement to a statement of REIT good performance. 21 (9.2%) agreed that REIT performance is good, 40 (17.6%) were undecided while 166 (73.2%) disagreed with REIT good or high performance. This indicates that the performance of Nigerian REIT is low or poor, below expectation of the majority of the respondents. The responses were recoded dichotomously by making responses of strongly disagree to indifference, a low performance and agree to strongly agree indicating high dividend yield. Ninety one percent (91%) of respondents said dividend yield from N-REITs is low (figure 7.3).



**Figure 7.3:** Performance of REIT in Nigeria

#### **7.4.2 Factors and Sub-Factors Affecting REIT Performance - Objective 3**

The research established that the factors affecting REIT performance are multi-dimensional. Figure 7.4 shows the respondent's agreement with the categories of factors and the sub-variables affecting REIT performance. The respondents agreed that all the sub-variables affect REIT yield. On the internal factors, capitalization (185, 81.5%), Net Asset Value (188, 82.8%), Share Price (148, 65.2%), Income (122, 53.7%), Leverage (161, 71%), Asset Value (154, 67.8%) and Diversification (123, 54.2%). On the side of external factors, respondents also agreed to the four sub-variables of Political leadership/risk (218, 96%), Investors' Sentiment (212, 93.4%), Infrastructure (177, 78%) and Security (147, 64.8%). Management style of REIT in Nigeria is internal as affirmed by the respondent (202, 89%) while 173 (76.2%) further confirmed that N-REIT management is not external. The 24% included those who are indifferent suggesting that some of the respondents mostly from the shareholders are not aware of the workings of the REIT in respect of management personnel. This is not unexpected as some of them do not invest in the REIT companies



**Figure 7.4:** Factors affecting REIT performance in Nigeria.

The five factors were scored in order to rank them in order of preference (Table 7.5). Capitalisation (Size) was ranked first and regarded to be the most important factor that affects REIT performance. Infrastructure was ranked second most important. This suggests that adequate supporting infrastructure will have a greater influence on REIT dividend yield. Management by outsourcing or consultancy ranked third while asset value and income ranked fourth and fifth respectively.

**Table 7.5:** Main Factors affecting REIT performance in Nigeria.

Factors	Score	Rank
Capitalisation	4.08	1
Infrastructure	3.12	2
External Management	3.04	3
Asset Value	2.71	4
Income	1.61	5

### 7.4.3 Level of Agreement and Significance of the Sub-Factors to REIT Performance

#### - Objective 4:

Following the identification of the factors and sub-factors affecting REIT performance, the study sought to examine the importance and significance of the sub-factors in order to select the main factors of substantial influence. Figure 7.4 above shows the respondent affirmation to all factors with some factors having up to 90% of the respondents while some other factors have just above 50%. However with the responses alone, it will be difficult (or full of bias) to select the factors with the highest number of respondents. Therefore, the study combined the test of significance in Table 7.4 to identify key factors of more importance. This is in the tone of statistical belief that a non-significant item in a relationship contributes nothing or less to the relationship (Chua, 2009). Table 7.6 present the percentage respondents and significant values of the factors.

**Table 7.6:** Respondents Level of Agreement to factors and Significance Values

Subfactors	Respondents' (%)	Sig. Value	Important
Capitalisation	81.5	.023	Yes
Net Asset Value	82.8	.064	No
Share Price	65.2	.658	No
Income	53.7	.022	Yes
Leverage	71.0	.506	No
Asset Value	67.8	.020	Yes
Diversification	54.2	.176	No
Political risk	96.0	.287	No
Investors Sentiment	93.4	.144	No
Infrastructure	78.0	.006	Yes
Social Security	64.8	.184	No
Internal Management	89.0	.326	No
External Management	(76.0)	.001	Yes

From Table 7.6, five (5) sub-factors across the main factors have significant correlations with REIT performance and are therefore selected as the important factors affecting REIT performance.

#### 7.4.4 REIT Diversification to Real Estate Development Financing - Objective 6

With respect to objective 5 of the study, only 5 (2%) of the respondents disagreed, 35 (15%) were undecided and 187 (83%) agreed that REIT in Nigeria can diversify into direct real estate development financing (fig 7.5). This corroborates the literature finding of low property stock and lack of development funds in Nigeria.

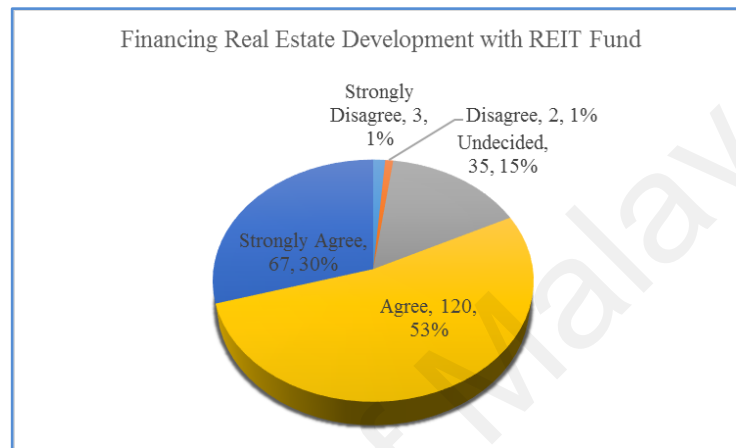


Figure 7.5: Diversification of REIT investment to real estate financing

#### 7.5 Principal Components Analysis

This section is devoted to the development of REIT performance model for Nigeria REIT. Having identified 5 important factors in the preceding section, this section started with a confirmatory factor analysis of all the sub-factors in order to justify the earlier selected important factors or otherwise. 13 items of independent variables were subjected to principal components analysis (PCA) to identify and retain the main items that have significant effect on REIT performance. Prior to PCA, the suitability of the data for factor analysis was assessed. Inspection of the correlation matrix among items in Table 7.7 shows the presence of some coefficients of 0.3 and above. The sample is 227 and more than minimum of 150 (Pallant 2011). The KMO sample adequacy test value is 0.66, greater than the recommended minimum value of 0.6 and the Bartlett's test of sphericity is statistically significant at  $p < 0.05$  (Table 7.8), lending support to the factorability of the items.

**Table 7.7:** Correlation matrix for factor analysis

	Size	Net Value	Asset Unit Price	Share Income	Loans	Property Value	Diversify	Political Variable	Investor Variable	Infr. Variable	Security Variable	Internal Magt.	External Magt.
Capitalisation	1.000												
Net Asset Value	.444	1.000											
Unit Share Price	.346	.565	1.000										
Income	.115	.028	-.092	1.000									
Loans	.296	.274	.269	.020	1.000								
Property Value	-.170	-.264	-.243	.317	-.002	1.000							
Diversification	.019	.200	.330	-.010	-.025	-.123	1.000						
Political Variable	.175	.273	.195	.094	.019	.005	.053	1.000					
Investor Variable	-.032	-.080	-.234	-.012	-.118	.251	-.261	-.008	1.000				
Infrastructure Variable	-.246	-.309	-.376	-.032	-.294	.246	-.138	-.084	.425	1.000			
Security Variable	.177	.042	.012	-.168	.151	-.050	-.261	.227	.031	.153	1.000		
Internal Management	.280	.381	.378	.027	.131	-.253	.086	.073	.071	-.040	-.012	1.000	
External Management	-.129	-.042	-.044	.082	-.040	.067	.071	.105	-.126	-.060	-.032	-.182	1.000

**Table 7.8:** KMO and Bartlett's Test of adequacy and factorability

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.662
	Approx. Chi-Square	561.686
Bartlett's Test of Sphericity	Df	78
	Sig.	.000



The 13 independent variables were subjected to principal components analysis (PCA) following the suitability of the data for factor analysis as stated above. The principal components analysis revealed the presence of five items with eigenvalues exceeding 1 explaining 22.9%, 12.67%, 10.72%, 9.79% and 8.66% of the variance respectively (Table 7.9). The five variables have a cumulative variance of 64.75%.

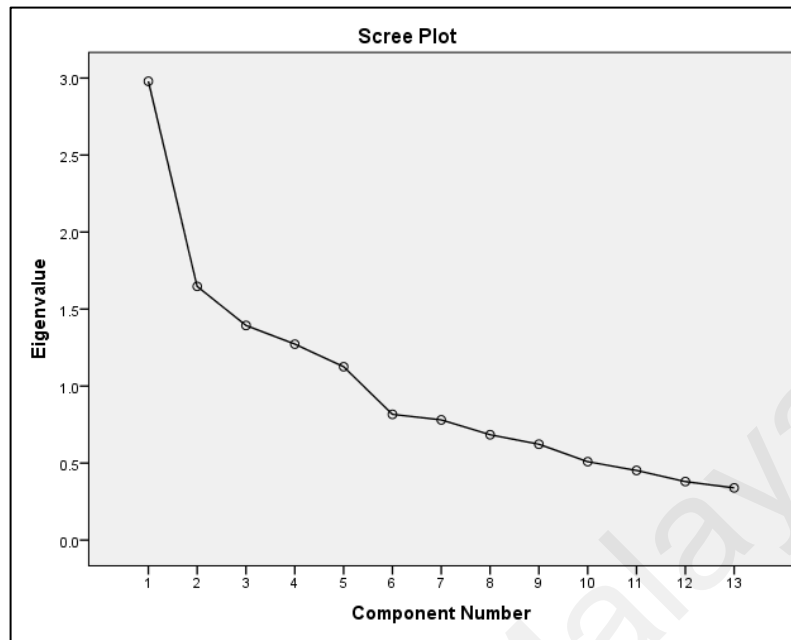
**Table 7.9:** Total Variance Explained for principal component analysis

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings <sup>a</sup>
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	2.979	22.914	22.914	2.979	22.914	22.914	2.802
2	1.647	12.670	35.585	1.647	12.670	35.585	1.505
3	1.394	10.720	46.305	1.394	10.720	46.305	1.620
4	1.272	9.787	56.092	1.272	9.787	56.092	1.588
5	1.126	8.659	64.750				
6	.816	6.278	71.028				
7	.780	6.003	77.031				
8	.684	5.261	82.292				
9	.622	4.787	87.079				
10	.509	3.916	90.995				
11	.452	3.479	94.474				
12	.380	2.921	97.395				
13	.339	2.605	100.000				

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

The Scree plot (fig 7.6) shows a partial break after the second item and another partial break at the sixth item with the seventh item loading higher than the sixth and eighth item. Further screening was done by observing other results of the factor analysis.



**Figure 7.6:** Scree plot of the principal component analysis

The pattern matrix table presents the loading factor of items on 4 component default. All the items (sub-factors) present loading factor that is higher than 0.3 with the minimum being 0.459 (political variable). The five highest loading items with significant correlation with REIT Yield were selected on the four component basis. These items are capitalisation (0.776), on component 1, external management (0.795) and Infrastructure (0.786) on component 2, income (0.828) and property value (0.758) on component 3 (Table 7.10). The structure matrix also presents similar loading factor of the items with the same items having the highest loading (Table 7.11) with all the items loaded above 0.3 and the minimum is 0.43 (political variable as well). The five items with highest loading factors also have significant correlations to REIT performance (Table 7.4). The other two items with high loading factor are Net Asset Value and Unit Share Price. However, they do not have any significant correlation to REIT performance and were not selected as principal factors. The selected factors/variables then become independent variables for the regression in the model.

**Table 7.10: Pattern Matrix<sup>a</sup>**

	Component			
	1	2	3	4
Net Asset Value	.782			
Capitalisation	.776			
Unit Share Price	.679			
Internal Management	.541	.526		
Loans	.522			
Political Variable	.459			
Investor Variable		.689		
External Management		-.795		
Infrastructure Variable		.786		
Income			.828	
Property Value			.758	
Security Variable				-.634
Diversification				.642

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 21 iterations.

**Table 7.11: Structure Matrix**

	Component			
	1	2	3	4
Net Asset Value	.788			
Unit Share Price	.720		-.314	.322
Capitalisation	.761			
Loans	.522			
Internal Management	.520	.476		
Political Variable	.430			
Investor Variable		.693	.301	
External Management		-.758		
Infrastructure Variable		.772		
Property Value			.768	
Income			.764	
Security Variable				-.586
Diversification				.662

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

## 7.6 Multiple Regression Analysis Using Structural Equation Modelling (SEM)

The theoretical frame work for this study (Figure 5.2) indicates that some variables constitute formal (internal) factors while some other variables are items of informal (external) factors and the style of management (advisor puzzle) are all contributing factors to REIT performance and growth. The framework is the adopted model for this study. Hair et al. (2010) established that confirmatory factor analysis (CFA) remains a useful tool in the

confirmation or rejection of a theory or model. CFA aimed at identifying models that are statistically acceptable to fit a data set and give meaningful interpretation of the theoretical understanding. CFA suggests model fit and also an improvement to an unfit model for the improvement of the model test. After the correlation and principal components analyses of the variables, five (5) variables emerged as principal components across the three factors (formal – Capitalization, Income and Property Value; informal – Infrastructure; management – External). A regression through structural equation modelling was conducted for the test of goodness of fit and joint effect size. Recall equation 2 in Section 5.3, thus:

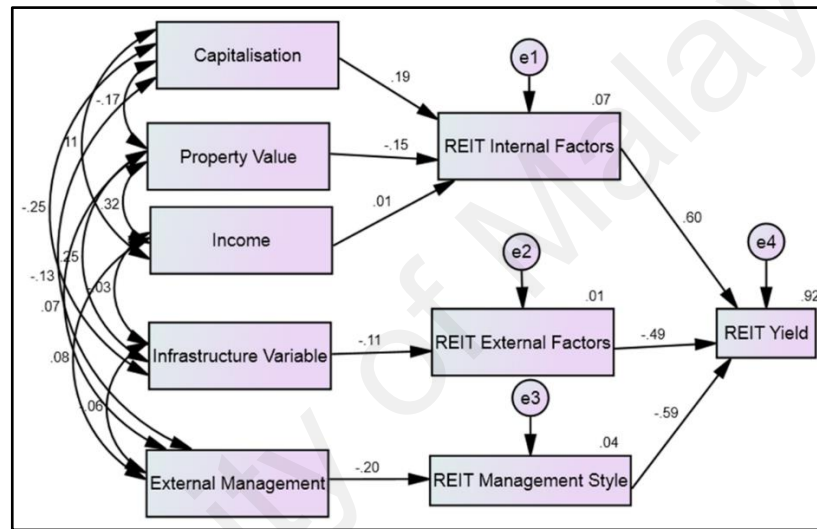
$$Y = b_1X_1 + b_2X_2 + \dots + b_nX_n$$

$$\text{Dividend Return} = \alpha_1 * \text{Int Factors} + \alpha_2 * \text{Ext Factors} + \alpha_3 * \text{Management Puzzle}$$

In order to understand the relationship between the main factors and sub-factors and to explain their contributions to and effect on REIT performance, the study employed the structural equation modelling based multiple regression analysis (MRA) model for the assessment and significance of the influence of the factors through their coefficient values. The structural equation modelling regression is adopted because of its capability of modifying models and the confirmatory test.

There are a number of goodness of fit indices that are usually employed to determine the overall fit of the model. A model that fits its data set is considered adequate to represent a population (Hair et al., 2010 and Pallant, 2011). AMOS version 20 software generates different model fit parameters and it was suggested that at least one parameter of goodness of fit must be satisfied (Hair et al, 2010). Six goodness of fit statistics tests were adopted to

assess the overall model fit in this study. The Chi Square ( $\chi^2$ ), goodness of fit index (GFI), comparative fit index (CFI), normed fit index (NFI), of values greater than 0.9; random means square error (RMSEA) values of less than 0.08 and CMIN/DF (relative chi square -  $\chi^2/df$ ) value of less than 3.0 represents a good model fit. At first CFA, the initial regression model did not satisfy all the goodness of fit parameters as presented in figure 7.7 below.

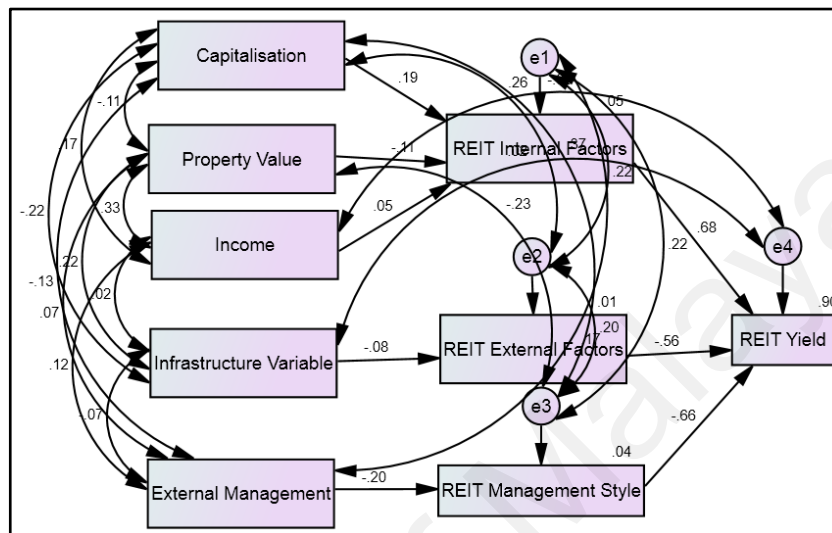


**Figure 7.7: Initial Test Model**

Chi-square = 147.585  
 Degrees of freedom = 18  
 Probability level = .000  
 GFI = 0.875    CFI = 0.457    NFI = 0.463    RMSEA = 0.178    CMIN/DF = 8.2

The Chi-square test value 147.6 (df 18,  $P < 0.05$ ) is significant indicating a poor model fit (Pallant, 2011; Hair et al., 2010; Chua, 2009). Other parameters were not equally satisfied. With the suggested modification indices by AMOS-20 software, the model was corrected for the shortcomings and five of the parameters were satisfied except the chi-square. In the modified test model, the chi square is still significant ( $\chi^2 = 21.405$ , df = 9,  $P < 0.05$ ). However, in SEM, relative chi-square which is chi square divided by the degree of freedom ( $\chi^2/df$  or CMIN/DF) is used in order to reduce the influence of sample size. The modified model gives

the acceptable values of model fit for the parameters except the chi square and since relative chi square condition is met, the model is accepted fit for the data. (fig.7.8).



**Figure 7.8:** Modified Test Model

Chi-square = 21.405

Degrees of freedom = 9

Probability level = .011

GFI = 0.98    CFI = 0.95    NFI = 0.92    RMSEA = 0.078    CMIN/DF = 2.38

The model reflects the respondents' perception of the REIT regime in Nigeria. The respondents were asked in the questionnaire to indicate their opinion on the effect of the existing level of the variables to their respective factors and to REIT performance in Nigeria. Capitalisation (size) was rated to have a positive contribution to internal factors suggesting that the level of capitalization of REIT stock is not too low for a positive REIT performance. The existing property stock in the REITs' real estate asset is considered low and having a negative effect on REIT performance. This suggests that the property stock in the Nigerian market is low and could be insufficient for REIT growth. Income as a variable of formal factors also has a positive contribution. The formal factor contributes positively to REIT performance with an aggregate 1% increase of formal factors resulting in 0.68% increase in

REIT yield. The present level of infrastructure in Nigeria reflects a negative contribution of informal factors to REIT performance. This suggests that infrastructure provision of accessibility, power, transportation and other location attributes are inadequate to support REIT growth and are having a negative impact on REIT performance of 56% to REIT yield. This translates that an improvement on infrastructure by 1% will give 0.56% improvement to REIT performance. External management style was also regarded as non-existent in Nigeria REIT sector as all the 3 REITs are internally managed. This suggests that internal management adopted in Nigeria REIT industry is contributing to low performance and that a trial of external management will improve REIT yield. Table 7.12 presents the standardised regression weights of the model. The R<sup>2</sup> value on the REIT Yield in the model indicates that the five variables retained in this study contribute 90% of REIT performance.

**Table 7.12:** Standardized Regression Weights of the model

			<b>Estimate</b>
Internal Factor	<---	Capitalisation	.190
Internal Factor	<---	Property Asset Value	-.109
Internal Factor	<---	Fund From Operation	.047
External Factor	<---	Infrastructure	-.077
Management	<---	External	-.197
REIT Yield	<---	External Factor	-.556
REIT Yield	<---	Management	-.664
REIT Yield	<---	Internal Factor	.676

From the regression weights above, the following equations are derived.

- (i) Internal factors = 0.19(size) + 0.05(FFO) – 0.11(Asset value) 5.1
- (ii) External factors = -0.08(Infr) 5.2
- (iii) Management factors = -0.2(Ext) 5.3
- (iv) REIT Yield = 0.68(Internal factor) – 0.56(External factor) – 0.66(Management)

Replacing internal factor, external factor and management in REIT yield equation

$$\text{REIT Income Return} = 0.68(0.19\text{size} + 0.05\text{FFO} - 0.11\text{asset value}) - 0.56(-0.08\text{Infr}) - 0.66(-0.2\text{Ext})$$

Thus,

$$\text{REIT Income Return} = 0.13\text{size} + 0.03\text{FFO} - 0.07\text{Asset Value} + 0.04\text{Infr} + 0.13\text{Ext} \quad (13)$$

Where:

REIT Income Returns = REIT performance, Size = capitalization, FFO = Income, Asset Value = Value of real estate assets of REITs, Infr = infrastructure, Ext = External management style. The above equation 13 answers objective 6 of this study.

### **7.7 Content Analysis of Interview Data**

The third form of data gathered for this study is qualitative in nature having been obtained through semi-structured interviews with the senior management staff of the two REIT companies in this study. The interviewees have not less than five (5) years of experience in their respective REIT companies. The interview was conducted as stated in chapter 5 (section 5.8.3). The table 7.13 below presents the transcription of the interview information and data.



**Table 7.13: Summary of the interview responses**

Focus Issue	Interview Questions	Responses	
		Interviewee 1 (Skye REIT)	Interviewee 2 (UHOMEREIT)
Awareness	What is your designation in the company?	I am a Senior Manager in the corporate governance department.	I am an assistant general manager (AGM), Investments.
	How long have you been working in the company?	I joined the company 5 years ago.	I moved from the mother company (Union Bank) when the REIT company was established.
	What is the level of awareness of REIT in Nigeria?	The awareness is low, you can observe that in the daily trading on the floor of NSE.	Relatively, people are becoming aware of REIT, but in the past, the awareness was low.
	How many REITs is in Nigeria?	There were 2 REITs until 2013 when UPDC REIT joined the train.	We have 3 REITs now listed in Nigeria.
	On awareness, are you saying Nigerian investors are not aware of REITs?	Individual investors like you and I are buying shares/units of the REIT company just like other shares without full knowledge of the REIT operation. It is a way of saving money instead of bank deposit. The level of patronage of institutional investors like pension fund and insurance company is minimal.	Members of shareholders associations subscribed to REIT shares, but the institutions are not too external. The sponsors have a greater stake in our company. I think the awareness cut across both individual and institutional investors.
Performance of REIT	How do you assess performance of REIT in Nigeria?	REIT performance is low, trading on the exchange floor on REITs is nearly stagnant, it does reflect an illiquidity of REIT stock.	I will say performance is average compare to other stock prices, even property company shares. The market return is depending more on other stock than property.
	You have mentioned the stock market, what about dividend to shareholders?	We have kept faith with our shareholders, we distributed dividend since 2008 till 2013. There was a year the dividend is up to 6% return and the minimum so far is 3.7%.	We came up in 2008 in the midst of a global financial crisis, the shares floated were not fully subscribed. It was the market turbulence of the time, but we distributed dividend in 2013 of about 5%.
	What are the indicators of REIT performance as a stock investment?	In the stock market, we look at the NAV, FFO, unit price but individual investors are more concerned with dividend they get.	Unit price movement and NAV determines stock investment performance. Companies can borrow money to pay dividends in other to keep their investors.
	What in your opinion are factors affecting REIT performance in Nigeria?	They are many, government policies, political leadership, corruption, global economic stability,	Acceptability, good spendable income in the hands of investors, property stock, infrastructure
	How can you categorise the factors?	Internal and external, internal peculiar to stock investment like size, income, price, loan, NAV, property assets. public amenities and security.	Economic and environmental, added to economic factors are the business environment like level playground, conducive environment for investors
	How is performance measured or analysed?	Price movement, volatility studies against benchmarks.	Unit price movement, index benchmarking
	What do you think is an appropriate benchmark for REIT performance?	Equity indices, REIT index.	REIT index or stock market index.

	Will expected return forecast be a better benchmark for REITs?	I am not sure, there may be no competitiveness.	Yes if the market and the REIT sector are fully active, that I have not seen in Nigeria market.
Construction finance	Can REIT finance real estate development?	Yes, development fund is difficult and costly to access in the banks.	Certainly yes, to bring more property into the market.
	In the face of REIT regulation globally, real estate development financing is not allowed for REITs.	Yes, the law is not adequate or favourable as there are very few properties to acquire and manage with shareholders fund and that affect dividend distribution.	The law is not too clear on that, but it should be allowed. Since the country does not have efficient mortgage market and the construction loan is in double digits interest rate.
Advisor and Challenges	What management style is adopted for REIT in Nigeria (internal or external)?	The management is internal.	The management is internal, it reduces cost.
	What are the challenges being faced by REIT in Nigeria?	A lot, as we have been saying before, spendable income of people, knowledge of REIT, political leadership, amenities, finance to develop property and so on.	Acceptability is low and finance is a challenge to increasing real estate stock in Nigeria. External factors of corruption, lack of power and road networks among others.

The interview yielded a good number of responses in respect of the research objectives of performance and acceptance of REIT in Nigeria, to factors contributing or affecting REIT performance, and possibility of financing real estate development with REIT fund. The interviewees have vast knowledge and experience in fund management and stock investment and are both on the management team of their respective REIT companies with not less than 5 years' experience in addition to their working experience prior to their current appointment. The interview data suggest as follows.

There is low awareness of REIT in Nigeria, Interviewee 1 said the awareness is low judging from the daily trading at the floor of the Nigeria Stock Exchange. Interviewee 2 added that investors are becoming more aware of REIT in Nigeria. Both of them confirm that there are 3 REITs in Nigeria. The level of institutional investors' participation in Nigeria REIT is adjudged low. Interviewee 1 stated that the REIT performance in term of stock return is lower than the market return but the dividend return of between 3.7% and 6% over 2008 to 2014 is encouraging as it surpasses the return on bank savings account interest. Interviewee 2

believed that the N-REIT performance is on the average in comparison with the other stocks in the market and that 5% dividend in 2013 was equally considered good. The interviewees said that performance of REIT can be reflected by the net asset value (NAV), income from the property assets, unit price and dividend distribution. Interviewee 2 added that companies do take loans to pay dividend (even if there is no or little net profit for distribution) in order to keep their investors, therefore suggesting that dividend distribution may not reflect the true status of companies in term of performance.

The interviewees also itemized the factors considered to be affecting REIT operations and performance across the 3 main categories identified through the literatures to include capitalization, net asset value, share prices, income, leverage, property asset value (internal); political leadership, government policies, corruption, spendable income, property stock infrastructure, conducive environment, and institutional investor (external). Government policies, political leadership and corruption were considered in the questionnaire survey as political risk. In similar vein, institutional investor and spendable income are considered together as investors' behavior in the study survey. The interviewees added global economic stability and made reference to the global financial crisis of 2007/2008. Management of REIT in Nigeria is internal (in house) and it is also mentioned as a factor expected to contribute positively to REIT performance due to its cost saving effect.

The interviewees stated that there are low property stock and absence of development fund with high interest rate on loan. They both agreed that the Nigerian REIT law and regulation are not too clear on allowing REIT to directly finance property construction activities and said that the REIT companies will be ready to finance property developments as investment

option if allowed. The challenges to REIT performance are inadequate knowledge of REIT by the populace/investors, institutional investors' low participation, political risk factors, lack of basic social and infrastructure goods, low property stock and corruption in addition to funding problems, the interviewees said.

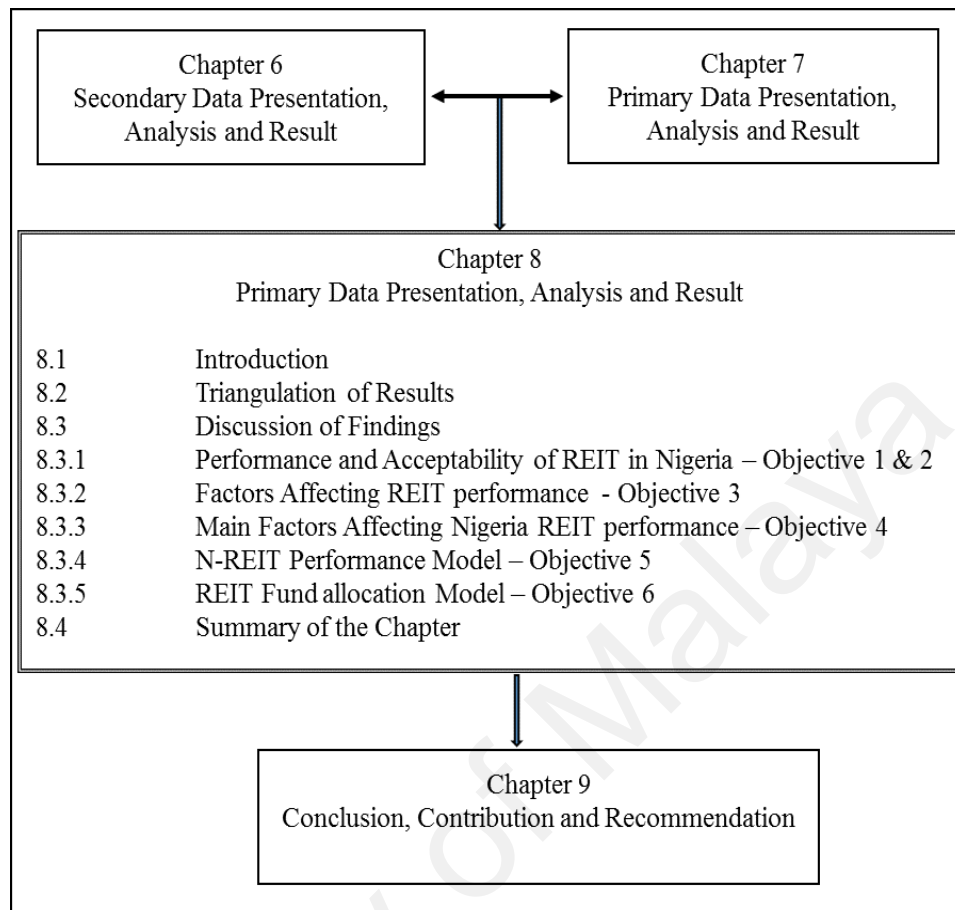
## **7.8 Summary**

This chapter presents the data analysis and results of the research. The results indicate a low REIT performance in Nigeria although this outperformed the stock exchange market, and there is also a low level of acceptability of REIT by Nigerian investors especially the institutional investors. The Nigeria REIT is regarded as a low capitalised stock therefore not attractive to the institutional investors. The study further identified, in confirmation of the findings of the past studies, 13 sub-factors affecting REIT performance under the three broad categories of internal/formal, external/informal and management (adviser puzzle). The principal components analysis (PCA) together with test of significance selected five variables as the most important factor, these five variables/factors are capitalisation, net operating income, asset value, infrastructure and external advisor with a joint contribution of 90% ( $R^2 = 0.90$ ) to REIT performance as presented by the SEM regression model. The results lead to the development of a model for Nigeria REIT performance as validated by the SEM regression analysis. Chapter Eight presents the discussion of findings in relation to earlier studies and in cross referencing to literature search and background studies.

## CHAPTER 8: DISCUSSION OF FINDINGS

### 8.1 Introduction

In response to the results of the analyses in chapters 6 and 7, this chapter discusses the findings of this research in an attempt to reconcile the current research findings on REIT performance, acceptability, contributing factors and diversification in Nigeria with the theoretical framework, past research findings and the global perception of REITs as a real estate investment vehicle. The discussion of the findings is preceded by a triangulation of the results of analyses from the mixed methods adopted for the study including econometric analysis of secondary data, statistical analysis of the survey data and content analysis of the interview data. The empirical findings reveal a low size stock and low performance REIT market in Nigeria. The thirteen (13) factors identified in the literatures that are contributing to REIT performance were reaffirmed by the survey and five (5) important factors selected through the principal factor analysis (PFA) and test of significance. The paucity of funds and high interest rates on construction loans in Nigeria requires an aggressive real estate development financing approach to which REITs can profitably engage. Section 8.2 presents the convergence of results of analyses of the different types of data and section 8.3 is devoted to the interpretation of the results in respect of each of the objectives of the study. The structure of this chapter in relation to the preceding chapters (Chapter 6 and 7) and the concluding chapter (Chapter 9) is presented in figure 8.1.



**Figure 8.1:** Structure and Positioning of Chapter 8

## 8.2 Triangulation of Results of the Analyses

The results of the data analysis for this research, towards answering the research questions and meet research objectives from the various data sources, are presented in Table 8.1. This is to help in making deductions that represent the opinions and suggestions from all the data sources. The table shows some instances where an objective is answered by the three data types and in some few cases one or two data sources provided answers to some objectives, for instance in the performance model development which was developed from the analysis of the survey data only. However, the response and findings are substantial enough to make an acceptable inference that represents the study population.

**Table 8.1: Convergence of Results of Analysis of the Three Data Types.**

Research objectives	Results of Data Analysis			Decision/Inference /Remark
	Secondary data	Survey data	Interview data	
REIT performance and acceptability in Nigeria	Nigeria REIT outperforms the market all share index (ASI), however the low share price return (0.08%) indicates a low performance. Savings account gives 3.7% per annum (1.03% weekly) while time deposit return is 9% (1.04% weekly)  Near constant capitalization and fall in unit price indicates lack of trading on REIT stock, thus a low level of acceptability	Respondents disagreed with high performance, thus low level of REIT performance in Nigeria	There is loss in capitalization.  Little Improvement in dividend distribution.  Low participation of institutional investors	Low return and poor performance.  Low level of acceptability by institutional investors as revealed by their non-participation
Factors affecting REIT Performance	3 categories of factor: Internal, external and management puzzle. Internal are NAV, size, income, leverage, real estate asset value, and diversification. External are political risk, investors' behaviour, infrastructure, security, public amenities, operating environment. Management can be in house (internal) or outsourced (external)			The 3 categories of factors confirmed.
Main important factors	Size, Price, Income, Leverage, diversification, Investors' sentiment	Size, income, asset value, infrastructure and external management style	Size, income, political risk, transparency, property stock, operating environment	Size, Income, Property value, infrastructure and external management.
N-REIT dividend return prediction model and size of the effect of the important factors		$R^2 = 0.9$ indicates 90% effect size jointly of the five important factors. Data fit the model		90% significant effect (P value 0.011)  Model accepted
REIT property financing diversification model	85% of REIT fund to property acquisition and 15% to property financing	REIT can finance property development	REIT can finance property development to increase property stock in the market	REIT Asset Allocation Model = $0.85RE+0.15F$

### 8.3 Discussion of Findings

This thesis appraised the performance and acceptability of REIT in Nigeria adopting mixed method approach where both primary and secondary data were collected and interviews conducted for empirical analysis, for complementary and validation purposes. Six research objectives were set for a deep and thorough investigation of the research questions and the

main aim of the study as presented in chapter one section 1.5 as well as Table 5.1 in chapter five. Following a comprehensive literature search, data collection and analysis, this section discusses the result of the analysis and findings in a sequential manner following the objectives.

### **8.3.1 Performance and Acceptability of REIT in Nigeria (Objectives 1 and 2)**

The research assessed the performance and acceptability of REIT in Nigeria as a focal point of this study using the Index Computation and Risk adjusted return approach as commonly adopted in stock investment performance analysis. The result is crosschecked with a descriptive statistics of the survey response and further validated with the interview of the REIT management officials in Nigeria. The consensus of the findings from the various methods shows that REIT performance in Nigeria is low. N-REIT outperforms its benchmark which is the Nigerian stock exchange – All Share Index with an average weekly return of 0.08% against the market index of -0.14% and risk adjusted return -0.25 and -0.038 respectively (Table 6.3). However, N-REIT underperforms the property stock of a weekly average return of 0.43% (and risk adjusted return is -0.08). The correlation among the market index, N-REIT and property is low and with REIT and stock market having a very low correlation (0.083) signalling a diversification attribute of N-REIT for the stock market. Weak and significant correlation of N-REIT and Property Company portrays marginal diversification benefit (Table 6.4). This finding is in agreement with the global consensus of outperformance of REIT in other markets most especially equity REITs. Ong et al. (2011) in their study of Malaysia REIT acknowledged the superior performance of M-REITs. One of the established benefits of REITs is high and reliable income (section 2.6.1 in chapter two) and this had been reported to be the main attraction of REITs in early studies.



Havsy (2012) reported 7-8% average long-term yield from REIT in 2012, an outperformance over the Standard and Poor (S&P) 500 index. FMI (2010) ranged dividend from Asian REITs to be between 4.1% and 9.3% and it is more than the interest rate on savings and time deposits. Alias and Soi Tho (2011) also reported the outperformance of M-REIT with a yield of between 4.79% and 13.46% in 2007 to 2008 for three Malaysian REITs namely Starhill REIT, Axis REIT and UOA REIT. Some other studies of REIT performance in Singapore, Japan, France and United Kingdom and USA also concluded that REIT have superior return compared to their respective benchmarks in earlier studies (Newell et al., 2013, 2015; Newell and Peng, 2012; Okunev & Wilson, 2008; Alias & So Tho, 2011 and Alcock, Glascock & Steiner, 2013). This finding of low performance in this research could not be regarded as new or out of expectation as few other studies have argued the superior performance of REIT return and others reported dual findings of both outperformance and underperformance. Alcock, Glascock and Steiner (2013) found in their study that only Hotel REITs underperform the benchmark – S&P 500 index. Osmadi (2007) in a study of the Malaysian property trust funds (PTFs) for the period 1991-2005 prior to the PTFs' migration to modern REIT regime concluded that the PTFs underperformed the stock market index, KLCI. In their study, Ooi and Liow (2003) did not find any evidence of higher return from real estate stocks to other stocks in Asian markets. Ong et al. (2012) also reported dual findings of both negative and positive outperformance of Malaysia REIT depending on the basis of measurement tool that is adopted. Where Treynor and Sharpe Indexes, reveal underperformances during and post global financial crisis (GFC), Jensen Alpha presented superior performance of M-REIT to the market (KLCI). Taiwan REIT was found to have underperformed the construction sector shares on risk adjusted return (Sharpe ratio) basis.

Chan et al. (2003) linked REIT performance to the stock prices and the underlying property assets and cautioned that the price movements in the stock market occur every minute while income from properties infrequently change. They attributed the fluctuation in REIT return performance to the cyclical nature and trend of the property market which do exhibit boom, bull, recession and recovery. REIT in Nigeria was introduced in the midst of the global financial crisis (GFC) of 2007-2008 and initially suffered the effect of the GFC on the stock market with the initial public offer of Union Homes REIT not fully subscribed to. This has affected the performance of UHOMREIT in the last six years as its share price plummeted. REIT performance has also been attributed to type of REIT, equity or mortgage or hybrid. Nigeria REIT has two equity REITs and one hybrid REIT, the history of dividend distribution agreed with this assertion as the Equity REIT did better than the Hybrid REIT (Table 7.13).

Diversification in term of property types is widely accepted to be impacting on performance with most REITs having a sizeable number of income generating commercial (office and retail) properties in their portfolio. Nigeria REITs' portfolio is dominated by residential properties of high income-class with few commercial properties in an attempt to reduce the housing shortage in Nigeria (figure 4.7 and 4.8). This probably has contributed to the underperformance of Nigeria REIT compared to the Property Company. Despite the mixed findings of different studies on REIT performance across the globe, the consensus is that REIT have superior performance and do outperform their markets. The share price return of Nigeria REIT corroborates the assertion. The underperformance of Nigeria REIT against the property securities however negates the superior performance of REIT over property (Newell et al., 2013).

In answering objective two (2) which assesses the acceptability of REITs in Nigeria, the computed index of REIT, property and market were plotted on a chart to identify the pattern of growth or depreciation. Figure 6.2 shows that REIT and property sector in Nigeria exhibit a near constant value suggesting no trading on stock. The unit prices of the REIT shares experienced a fall from their initial public offer (IPO) price, sometimes retain the IPO price and no appreciable increase in price over the period of this study, 2008-2015. There is no growth but a gradual fall in capitalization. The study further found that N-REIT contributes a negligible impact to the entire market capitalization with a market share of 0.02% to 0.4% for the period covered by this research (Figures 6.2a and 6.3). The earlier studies of REIT performance linked REIT return to the investors' perception and acceptability relative to the capitalization and net asset value. Chan et al. (2003) placed more emphasis on the institutional investors while Ong et.al. (2011) concluded that poor perception by Malaysian institutional investors negatively affected M-REIT growth. In a study of the 5/50 rule on REITs, Downs (1998) found similar results that the effect of the rule limited the extent of institutional investors in REITs which in turn retard the growth and performance. This led to the relaxation of the 5/50 rule in 1993 and resultant effect was a noticeable increase in the participation of institutional investors in REITs (Lee & Lee, 2003). Where an investment instrument is fully accepted by the investors, the willingness to invest is increased and it usually leads to high performance and growth.

Institutional investors are critical when it comes to investors' behaviour or sentiment. Literature has found stock dominated by a higher number of institutional investors outperforming the ones dominated by individuals. This finding was supported by other studies (Chan et al., 2003 and Chan et al., 2001). The conclusion was that institutional

investors have a great number of analysts that studied the market and impact positively on investment performance. Studies also revealed that capitalization of stocks is an attraction to institutional investors. A small cap stock of Malaysia REIT was not attractive enough to the funds of institutional investor (Ong et al., 2011). REIT acceptability to institutional investors has also been examined in terms of the net asset value (NAV). The literature established that REITs trading at a premium or discount NAV is a result of institutional investors' perception and participation (Clayton & Mackinnon, 2001; and Ong et al., 2011). It can therefore be agreed that acceptability of REIT to institutional investors affects REITs fortunes in terms of performance. The findings of this study supported the earlier studies. N-REIT portends a low level of acceptability to the institutional investors as reflected in the low capitalization, liquidity and performance (Figures 6.2 and 6.3). The result of the interview in this study also confirmed the low level of awareness and acceptability of REITs to Nigerian investors (Tables 7.13 and 8.1). However, a finding of lack of trading result of the analysis of Nigeria REIT does not translate to total illiquidity of the REIT stocks but an expression of investors' sentiment towards the REIT market. A case of low acceptability of Nigeria REIT stock, especially by institutional investors is established in agreement with earlier researches.

### **8.3.2 Factors Affecting REIT Performance (Objective 3)**

Literature search reveals three categories of factors affecting investment performance. Baum (2008) and Baum and Murray (2010) identified two categories of formal and informal factors while Chan et al. (2003) added advisor puzzle as discussed in chapter two (2). In this research, formal and informal factors are classified as internal and external factors. And advisor puzzle is regarded as management style. This research conducted through questionnaire survey and semi structured interviews, confirmed these factors.

### **8.3.2.1 Internal Factors**

In respect of internal factors, there have been substantive studies of the sub-factors (variables) identified to be of influence to REIT return and performance. With respect to capitalization, findings reveal that highly capitalised REIT possess economies of scale advantages in terms of unit cost reduction, higher profit, easy identification of investment opportunities and capacity to bid for properties with high potential of good return (Ambrose and Linneman, 2001). A positive relationship of size to yield was also reported by Alias and Soi Tho (2011) and supported by Brounen and Sjoerd (2012). However, other studies found and reported contrary situations. The economies of scale benefits were found to be temporary as the cost of operation can increase when REIT grows in size beyond what could be its optimum size (Ambrose et al, 2000; Hardin III & Hill, 2008 and Shan et al, 2009). Irrespective of the direction of relationship between REIT size and return as may have been widely reported, this study agreed with previous studies that size is a factor worth consideration in REIT performance analysis.

Net asset value is another factor identified in literature and reiterated in this research as attested to by the survey respondents and the interviewees. A REIT that trades at NAV premium is regarded as a growth stock and yields good return than REITs that traded at NAV discount. A look at annual financial report of Skye Shelter REIT and its share prices between 2008 and 2013 (fig 2.5) revealed that N-REIT is a value stock as it trades at a discount with share price less than its NAV throughout the period. Although NAV is a factor studied in relation to REIT performance, it is more of a valuation method and an indicator of performance and growth prospects for REITs than being a determining variable. This is because the process of determining the NAV (Asset – Liabilities) contains components of

other factors/variables like property asset value and leverage/gearing and this could result in double counting of the effect of such variables in a multivariate analysis. Therefore, this research tends to consider NAV as an indicator of REIT performance and not a factor contributing to REIT return on its own.

Fund from operation (FFO) or net operating income (as commonly referred to in REIT annual reports) is another variable under internal factors. Income distribution (dividend) by REITs to stakeholders depends heavily on income (rent) derived from real estate asset. Therefore income is a variable that determines performance. The research survey and interview responses corroborated the literature on this position (fig. 7.4 and Table 7.13). Previous studies have examined FFO and dividend distribution. Hwa and Abdul Rahman (2007) concluded that income from property assets affects stability of dividend distribution by Malaysia REITs/LPTs. Other studies that have agreed with the finding include Alias and Soi Tho (2011); Hardin III and Hill (2008) and Feng et al. (2011). Alias and Soi Tho (2011) suggested that volatility of dividend payout is a result of instability of FFO as income from properties are further affected by other factors, both demographic and infrastructure. This research agreed with Alias and Soi Tho (2011) and the earlier findings of a positive relationship between FFO and REIT performance.

As a result of the requirement that REIT must distribute 90% of its income as dividend to unit holders, REIT would always be left with little or no fund for growth and to tap on opportunity that may present itself in the market. It is on this strength that earlier studies identified leverage/gearing as a factor that could affect performance. The argument was that REITs will use loans as a way of raising capital for investment purpose though subject to

restrictions placed by each market's laws and regulation (Table 2.5). This study found an insignificant negative relationship between leverage and REIT yield contrary to the acknowledged positive effect found by Giacomini et al. (2015). Though earlier researchers have presented mixed findings of leverage contribution to REIT performance, Chan et al. (2003) found that leverage increases profitability and performance in the boom era but in a declining market, high level of leverage will increase the interest rate payment resulting in reduction of net income for distribution. Interest rate was also found to drive the movement of property security prices thereby affecting performance of the stock in the market (Cheong et al., 2009). The effect of leverage is also attributed to the size and management style of a REIT firm. Small size REIT has a lower debt equity ratio and pay high dividend than larger REIT.

Externally managed REITs were found to use more debt capital resulting in high interest rate payment and less dividend (Ambrose & Linneman, 2001). Allen et al. (2000) and Delcours and Dickens (2004) in their separate studies concluded that loan terms affect returns. Short term loans have a negative effect on REITs while long term loans affect return positively. This position was opposed by Ratcliffe and Dimowski (2007) with a finding of negative significant effect of long term loan on return and a positive but insignificant effect of short term loan on return. The mixed findings on the effect of leverage on REIT performance could be a result of other considerations in different markets. Nevertheless, this research is in agreement with the finding of negative effect of leverage in a declining market or crisis period (Chan et al., 2003; Giacomini et al., 2015) as Nigeria market portrays a declining market and it is just recovering from the effect of the GFC, leverage indeed is a factor affecting REIT return and performance both in term of dividend and stock price volatility.

This research also finds diversification to be a factor in REIT performance in agreement with past researches. Studies have been conducted extensively on the diversification benefit of real estate securities including REIT and were found to be diversification tools for the stock market and also in a mixed asset portfolio (Amidu et al., 2008; Olalaye & Ekemode, 2014; Ling & Naranjo, 2002; Bond et al., 2003; Liow & Webb, 2009; Newell et al., 2005, Newell et al., 2014, 2015 and Pham, 2013). The current study needs to be differentiated from earlier ones as it attempts to appraise REIT investment diversification and not as a diversifier for other investment options in a mixed asset portfolio consideration. This research looks at REIT diversifying its investment choices within the provision of the existing law and regulations. REIT can diversify investment within the property types and across geographical spread including foreign countries. Chan et al. (2003) supported lack of significant diversification benefit to REIT, both in terms of property types or locational spread. Benefield et al. (2009) reported higher return of property diversified REIT over specialized REIT but only in unfavourable conditions. Stevenson (2002), Worzala and Sirmans (2003), Liow et al. (2005) and Pham (2013) reported and concluded that international geographical diversification would result in beneficial advantages between Asian and European REIT markets. Nigeria REITs portfolio is more of residential properties but across the major property hotspots of Lagos and Abuja (fig. 4.7 and 4.8). This research again is a bit different as it looks into diversification of REIT to direct real estate development financing to grow property stock in Nigeria. There is lack of literature in this special diversification focus. However, the study agreed with the consensus that diversification could help increase investment performance as the risks are spread across investment options and markets.



Other variables of internal factors include property asset value and unit share price. Property asset value relates to the market value of all real property assets in the portfolio of a REIT. This has been discussed as a principal component in relation to determination of NAV. The unit share price is also reflected in the capitalization (being a product of unit price and quantity of subsisting shares). In this research unit price is reflected in size while asset value is considered in lieu of NAV.

### **8.3.2.2 External Factors**

The external (informal) factors identified by Baum (2008) and Daud et al (2012) are examined in this research and found to be relevant. Some of these variables of external factor were found to be subdivided into sub elements. Political risk variables were reported to include elements like political leadership of a country, the policies in creating an enabling environment for investment growth including tax, land rights and transparency. Investor's sentiment in this research is treated in term of acceptability and willingness of Nigerian investors of REIT. Investors sentiment has been related to NAV as discussed in section 8.3.2.1 above. Infrastructure is also a variable of many branches including location attributes, accessibility, electricity, transportation, neighbourhood, water and sanitation. Many of these infrastructure elements affect property income which in turn affects dividends as it also determines REIT Performance (Alias & Soi Tho, 2011; Daud et al., 2012 and Hwa & Abdul Raham, 2007). Social security as a factor became important in consideration of the existing security challenges in certain part of the world and in the case study, Nigeria. This was subdivided into political violence, ethnic violence, financial scam and terrorist attack. No investment in violence prone region on real estate acquisition (immovable assets) especially in areas exposed to frequent bombing and demolitions of properties and loss of lives will be

expected to break even. The situation being experienced in the Northern and North-Eastern Nigeria in the past six years with the advent of 'BOKO HARAM' terrorist group in addition to occasional ethnic violence and destructions across the country has turned some property transaction hubs to 'no go area' for property investment. All the elements of each of the variables of external factors were computed as an aggregate to their respective variables. Further analyses were performed on all these variables to identify main factors of influence. This study agreed that the external factors are indeed affecting Nigeria REIT sector growth and performance.

### **8.3.2.3 Management Style**

The argument in the past research identifies internal (in-house) management style and external (outsourcing of REIT investment management to a consultant) as the two available options for advisor puzzle. Chan et al. (2003) stated that before 1986, REIT was strictly managed by external manager but for the amendment of the US Tax code in 1986 that allows management of REIT by internal manager. Despite this change in the law, there are still many REITs who have stuck to the external management rule and therefore both internal and external advisor co-exist. Researchers have conducted studies on REIT management style and performance. Cannon and Vogt (1995) reported that externally managed REIT underperform their market. Nigeria REITs are internally managed but underperforms its market. This is contrary to outperformance record found by earlier studies. Malaysia REIT is externally managed and outperform the FBMKLCI. The finding of this research suggests that externally managed REIT could outperform the market and yield more return than an internally managed REIT as presented by Malaysia REIT and can be replicated in other developing economies like Nigeria.

### **8.3.3 Main Factors Affecting Nigeria REIT Performance (Objective 4)**

The identified sub-factors/variables of the three categories are thirteen, seven under internal factors, four under external factors and two management styles. In the process of identifying the main factors through PFA, reliability test was performed on the data adopting Cronbach's alpha. The Cronbach's alpha value of 0.75 (Table 7.3) lies within the acceptable reliability level of 0.6 and above (Pallant, 2011; Chua, 2009). The decision rule was set that a significantly correlated variable with loading factor below the reliability level of 0.75 will be dropped and variables with loading factor above 0.75 but insignificantly correlated will also be dropped. Therefore only variables that fulfill the two conditions of a significant correlation and loading factor above 0.75 are selected as the main factors affecting REIT yield and performance in Nigeria. The PCA revealed five variables with the eigenvalues above 1 accounting for 64.75% of total variance (Table 7.9). Both pattern matrix (Table 7.10) and structure matrix (Table 7.11) show six variables with loading factor above 0.75 which include the five factors that have significant correlation with REIT yield and the net asset value. The net asset value was dropped as an important factor because of its insignificant correlation with REIT yield. Therefore both the correlation and principal component analysis confirmed five main factors affecting REIT performance in Nigeria to include capitalisation, income, property asset value, infrastructure and external management advisor.

The findings of this research did not record any significant effect of NAV, leverage, share price, and diversification on N-REIT performance. This confirms the position that the effect of share price is contained in the capitalization, NAV is an indicator of performance and not a predicting factor as asset value is an important component and leverage as a company liability deductible from the asset value in the computation of NAV (section 6.3.2.1). NAV, leverage and diversification have negative correlation with REIT yield. The negative

correlation of NAV suggests a contrary result to the growth and higher return of REIT stock trading at NAV premium (Ong et al., 2011; and Clayton et al., 2007). The result is consistent with and further confirmed earlier submissions that higher leverage/gearing will lead to reduction in income because of the interest rate payment and reduce dividend return. The insignificant and negative effect of diversification found in this research agreed with the notion that diversification has no significant benefit to REITs. Nigeria REIT is not allowed by its regulation to invest outside Nigeria and could not benefit from international geographical diversification.

For the external factors, political variable, investors' sentiment and social security have positive correlation as expected. However, the correlations are low and insignificant. The political variable consists of all items of governance including policies, enabling environment and transparency. Despite unimpressive economic ranking of Nigeria on various economic indices like ease of doing business and transparency, the Nigerian investment market suffers no negative impact. The investors' sentiment is also not a factor of importance to Nigeria REIT performance. This is understood to be attributed to none or little participation of institutional investors in Nigeria REIT industry. Studies have found that institutional investors' participation and behavior affect stock prices of REIT and investment performance (Lee & Lee, 2003, Ong et al., 2011). Nigeria REIT exhibits low stock characteristics and this study's finding of insignificant effect on N-REIT performance is consistent with low participation effect. Social security shows contrary to perception, a non-significant effect. Though REIT is an investment fund whose asset is placed on real estate, therefore, a conflict prone location will not be attractive for such capital investment. Surprisingly and against the concession that internally managed REIT outperforms the externally managed REIT (Cannon

& Vogt, 1995), there is no significant effect of internal management style on Nigeria REIT performance. External management style has a significant effect in Nigeria and is believed to be a better option.

The following section 8.3.4 discusses the effect size and direction of the selected main factors on REIT performance as expressed by a structural equation modelling multiple regression.

#### **8.3.4 Developing a REIT Performance Model (Objective 5)**

In an effort to build a REIT performance model for Nigeria REIT sector and to answer objective 4, a regression model analysis using the five identified main factors as independent variables and REIT yield as the dependent variable was performed. The regression, having satisfied the requirement of relevant parameters/assumptions ( $\chi^2$ , GFI, CFI, NFI, RMSEA) of a structural equation modelling (SEM), gives a  $R^2$  value of 0.9 indicating that the five factors jointly contribute 90% to Nigeria REIT performance (fig. 7.8). Therefore, a performance model for Nigeria REIT was developed as shown in equation 13 (section 7.6) and reproduced below:

$$\text{REIT Dividend return} = 0.13\text{size} + 0.03\text{FFO} - 0.07\text{Property Value} + 0.04\text{Infrastructure} + 0.13\text{Ext. Mgt.}$$

The findings from the correlation studies, PFA and regression analysis (MRA) show that all the three approaches in this research selected the five variables in the REIT Yield model above as main important factors of significant effect. The selection of capitalization (size) as an important variable was consistent with earlier studies on the effect of size on REIT performance (as discussed in chapter 2 and section 8.3.2.1). From the size and effect perspective for decision taking, capitalization with beta value of 0.13 individually contributes

13% of REIT yield. The direction of influence of capitalization to yield is positive, therefore it can be concluded that an increase in capitalization leads to increase in REIT return. This finding agreed with the findings of Alias and Soi Tho (2011) and Brounen and Sjoerd (2012) which revealed that the bigger the size, the higher the return. The result however contradicts the findings of Hardin III and Hill (2008) that small size REIT outperforms larger REIT which may not be applicable in Nigeria.

Net operating income, also known as funds from operation (FFO) is another variable of significant effect that influences REIT return in Nigeria and was selected as one of the main variables of influence by the PFA. Income has positive beta values indicating that higher income level translates to a higher yield for the Nigeria REIT. The findings of this research support Feng et al (2011), Hardin III and Hill (2008) while the existence of other factors that influence income level is not in doubt as highlighted by Daud et al. (2012) and Alias and So Tho (2011).

Property asset value exhibited a negative beta value in respect of its effect on the REIT yield. The effect of asset value has always been reflected in net asset value because property asset value is a major determinant in the estimation of NAV. After deducting all liabilities (including loan) from the assets' value, the balance is divided by the total outstanding units of shares to arrive at NAV and compared to the stock trading price to arrive at a judgement on the performance of the stock. Nigeria REIT exhibited a NAV discount trading stock (fig 2.5). The negative effect of property asset value on REIT yield and low performance records suggest a non-growth Nigeria REIT stock which confirms the position of Clayton et al.

(2007) and Ong et al. (2011) that stock that trades at prices higher than its NAV is a growth stock and yield better return.

The sub-factor that was selected by the PFA under the external factor is infrastructure with a positive beta value. This study reflects also the earlier study of Adair et al (2014) on infrastructure development financing and its effect on property values (capital and rental). Infrastructure comprises all factors that affect usability of building and rent. The finding corroborates previous study of Hwa and Abdul Rahman (2007) and Daud et al. (2012) on the effect of locational attributes on REIT income volatility. The better the infrastructure provision in Nigeria, the higher will be the income from real estate asset and the higher the return from REITs. This finding shows that the level of supporting facilities and services for the real estate market in Nigeria is low. These facilities and services include electricity, road network, efficient transportation and communication systems. These services are at a lower ebb in Nigeria and that is having its effect on the real estate industry including the REIT sector.

The acclaimed outperformance of internal management style of REIT was not found in Nigeria REIT sector. This research found no significant contribution of internal management to N-REIT performance. The result of the analysis of survey data shows external management having positive significant correlation with REIT yield suggesting that external REIT management advisor will increase performance. This is consistent with the submission of Ambrose and Linneman (2001) of the aggression of external managers to pursue growth strategies for their REIT firm. This finding is also supported by the empirical situation of Malaysia REIT that adopted external management of REIT, outperforming its market with

higher yield (Ong et al., 2011; Newell & Osmadi, 2009 and Pham 2013). Nigeria REIT is internally managed and has a low dividend, therefore, it can be concluded that externally managed REIT can outperform their internally managed counterparts.

In general, it can be reported that four out of the five main important factors affecting REIT performance have direct relationships (capitalization, income, infrastructure and external management/advisor). Property asset value is the only factor that is inversely related. The five factors jointly contribute 90% to N-REIT Yield. This implies that other factors that are insignificantly correlated to REIT contributes about 10% of the REIT yield. These five factors are the main important factors contributing to performance in Nigeria REIT context.

### **8.3.5 REIT Fund Allocation to Property Development Financing (Objective 6)**

In order to answer research objective (RO) 6 on the possibility of REIT financing property development, which was developed from the findings of low property stock for REIT acquisition coupled with the seemingly attractive high interest rate on construction loan in the absence of long term loan, a portfolio asset allocation analysis was done in two steps. First, the portfolio return analysis of the existing investment structure of property asset and financial deposit adopting the return on real estate and interest on deposit as yield from the assets. The finding shows that the current asset allocation between real estate and deposit favours 100% asset allocation to real estate as a maximum return of 4.23% (14.1% risk) will accrue to the portfolio at 0% asset allocation to time deposit (Table 6.7). The portfolio return increases gradually to 5.66% at 30% fund allocation to time deposit while the risk reduces from 14.1% to 10.09%. Secondly, the portfolio return and risk analyses was conducted for the proposed asset allocation between real estate (RE) and property development financing



(F). The analysis shows increase and better return as more funds are allocated to financing with gradual fall in risk until it gets to the optimum asset combination after which the risk begins to increase (Table 7.7). The finding suggests that at 85% asset allocations to real estate and 15% asset allocation to property development financing, REIT in Nigeria will achieve a return of 6.7% at the minimum risk of 13.1%. Therefore a linear REIT diversification model was developed (equation 11). Interestingly, none of the available literature have studied REITs diversifying into property development financing but on its capacity of a diversifier for other asset class, or the market in a mixed asset portfolio because of the superior performance recorded globally (Pham 2013, Newell et al., 2014, 2015; Liow & Webb, 2009; Benefield et al, 2009). The diversification analysis adopted the mean – variance (return – risk), the efficient frontier model as used in various studies and found improved performance of N-REIT in diversification to financing. Thus, real estate development financing could be an investment option for REIT investment and the regulations can be amended to accommodate such.

#### **8.4 Summary**

This chapter presented the findings and discussion of the findings. The last 15 years has witnessed rapid adoption of REIT regimes and growth of REIT markets globally. However, REIT in Africa has not attracted global attention with limited literature on African real estate securities and REITs compared to other continents (America, Europe and Asia-Pacific). Past literature on REIT performance has also done little on the joint effect of main factors affecting REIT return amidst mixed findings of size and direction of the effect on individual factors (either correlations or volatility study). Many studies also examined diversification benefit of REITs as a diversifier. While REIT is expected to ease financial challenges in the

real estate sector, few studies addressed REIT directly financing real estate development activities. This research investigated the performance and acceptability of REIT in the Nigerian market context, identified the main factor affecting REIT return and proposed a REIT asset allocation model incorporating real estate financing.

Based on the findings of this research, Nigeria REIT outperformed the stock market both on average return (0.08%) and risk-adjusted return (-0.25%) to -0.14% and -0.38%. Despite market superior share price performance of REIT to the market, the return is low (0.08%) compared to savings (3.7%) and time deposit of 9%. The survey also confirms a low dividend based return. This is inconsistent with superior performance of REIT in other markets. In term of capitalization, Nigeria REIT is a low cap stock with little or no institutional investors' participation. Five main factors were identified to be largely responsible for such REIT performance in Nigeria, significantly contributing 90% of REIT yield as shown by the REIT performance model developed for N-REIT. These factors are also featured in the past literature, and confirmed by confirmatory PCA. Direct real estate development financing was found to be a beneficial investment option to REITs in Nigeria as it yields optimum return at 85% real estate and 15% financing investment combination (incorporating 10% corporate income tax), with a yield of 6.7% at 13.1% risk level. The low stock of property asset in Nigeria and lack of supporting infrastructure facilities and services are challenges facing REIT industry in Nigeria. However, Nigeria REIT market is emerging and can grow to a competitive level in the near future. The next chapter presents concluding remarks of the research findings, implication and recommendation for further studies.

## **CHAPTER 9: CONCLUSIONS, CONTRIBUTIONS AND RECOMMENDATIONS**

### **9.1 Introduction**

Investigation of the performance of REIT either as an investment option or in a mixed asset portfolio is yet to gather momentum in Nigeria and Africa as a whole. The main aim of this research was to investigate the level of REIT performance in Nigeria with six objectives to answer the research questions. The previous chapters have presented the literature review (chapters 2 and 3), the case study (chapter 4), research design and methods (chapter 5), analysis and result (chapter 6 and 7) and discussion of findings (chapter 8). This chapter is devoted to the general conclusions and implications of the study. It synthesises the major findings presented in the body of the thesis to provide answers to research questions. It also highlights the study limitations and suggests future research directions that have emerged.

### **9.2 Conclusions of Main Research**

The main driving force for this research is the empirical study of the performance of REITs in Nigeria market since its adoption in 2007. The study investigated the average return, risk adjusted return and dividend distribution; level of REIT acceptance; REIT involvement in real estate financing and created a model for the prediction of dividend return performance of REITs in Nigeria in full consideration of the many important factors affecting N-REIT. To answer the research questions and objectives, the research design and methodology incorporated a systematic literature search, data identification, collection, analysis and interpretation. The findings provided a good insight into Nigeria REIT market. Drawing from the Asian REIT experience, there are some strategies that can be adopted to improve Nigeria REIT industry. The issue of market transparency as well as tax transparency must be positively addressed to give investors more confidence in the Nigeria real estate sector in

general and the REIT industry in particular. Corporate governance should also be strengthened to discourage and eliminate corrupt practices. The real estate portfolio of the REIT companies should be enhanced with high quality income producing properties – retail offices and hotels. The over domination of REIT portfolio with residential properties will not yield attractive income to investors. The participation of Africa real estate funds in the Nigeria market will no doubt increase the stock of high income generating properties in the market. The presence of knowledgeable real estate practitioners in the property market will enhance the maturity of the market and in turn improve the N-REIT sector. Therefore, the training of the professionals in the real estate industry in Nigeria cannot be overlooked. Land and property rights registration in Nigeria is characterized by a lot of bottlenecks from the governments and public service operators, the use of ICT is highly desired in title/right registration process. A complete computerization of the entire process will give more efficient property transaction records and registration. The major highlights of the result of this empirical analysis are:

- (i) A low REIT performance in Nigeria both in term of index return despite the share price outperformance of the stock market, and also in term of dividend income.
- (ii) Low level of acceptance as evidenced by the REIT share of market capitalisation and illiquidity status of the REIT stock; the survey responses and low participation of institutional investors in Nigeria REIT sector.
- (iii) 5 main important factors contribute 90% of N-REIT dividend yield significantly.
- (iv) REIT investing in direct real estate development financing will increase REIT return in Nigeria.

### **9.2.1 Performance and Acceptability of REIT in Nigeria**

Empirical analyses and results indicated low REIT performance in Nigeria, underperforming the property company but outperforming the stock market. The lower volatility of N-REIT in this study is however consistent with lower REIT volatility in other markets especially Asian markets. This finding in effect reveals that the existence of basic fundamentals alone will not necessarily translate to the same result across markets. In this case, for instance, the basic existence of formal factor variables (size, NAV, income, leverage, property asset value, share price and diversification) does not guarantee a superior return. It is further inferred that REIT performance varies across markets with time horizon. Acceptability of REIT in Nigeria is low among the Nigerian investors both individual and institutional, this is reflected by low participation of institutional investors in the Nigeria REIT sector evidenced in the stock illiquidity. Earlier studies suggested that low size stock does not attract institutional investors, perhaps the reason for the institutional investors' low participation in the N-REIT sector. The global financial crisis (GFC) that ushered in the REIT regime in Nigeria also affects investors' acceptance of REIT in Nigeria. Nevertheless, the Nigerian economy presents a ready demand for real estate products which can be a pivotal support for a flourishing REIT sector.

The low return performance of REIT in Nigeria can be related to a number of factors. Nigeria REIT is low capitalized stock and trading at a discount, earlier studies have confirmed positive relationship between REIT size and return. There is a need therefore for the Nigeria REIT market players to shore up their stock size and strengthen their capital base. Unavoidably is the effect of global financial crisis (GFC) in Nigeria. The second and largest REIT in Nigeria, UHOMREIT was launched in the stock market in the midst of the GFC

period in 2008 and this sharply affected response rate to its IPO subscription with half of the proposed NGN50billion capital raised, which has also resulted in low capitalization. The plunge in price over the crisis period does not help matters but worsen the loss in capitalization to which the Nigerian REIT sector is yet to recover. Globally, REIT does perform low in a crisis period as established by studies across REIT markets. It took about five years before another REIT (UPDC REIT) IPO can be launched in Nigeria stock market in 2013. All these contribute to low performance result in Nigeria REIT market. The market players, including the REIT companies, the stock market and the government will have to jointly work together to raise the capital base of the REIT companies. The Nigerian economy is big enough to accommodate more REIT companies. Therefore the business and investment world would have to study the market and establish more REITs for good business competition.

The property portfolio of the REIT companies is concentrated on residential properties paying more attention to housing provision for the medium and high income group. REITs in other markets have more high income generating properties of commercial nature (offices, retail and hotel) in their portfolio accounting for higher revenue and better performance. In most economies, housing is provided as social goods and the government is actively involved in different ways including subsidy, direct provision, housing loan at concessionary rate and public private partnership (PPP) model. As a result, investment in residential property only may not yield a good return to REITs. In addition commercial property developments are strictly on a business model and it has been acclaimed to yield higher income in terms of rent. Intertwined with residential property portfolio of Nigeria REITs is the model of 'Build and Sell' (BS) as against 'Acquire, Operate and Sell' (AOS) model of REIT. The Nigerian

REIT laws specify minimum holding period of property before disposal for capital gain. REIT companies in Nigeria operate similar to a property companies that develop property and sell to the public. Government will have to implement and enforce the holding period clause of REIT operation guidelines before properties can be disposed for capital gain.

Market maturity and transparency (Akinbogun et al, 2014) are likewise, factors responsible for REIT low performance in Nigeria. Different economic rating and ranking reports have not been favourable to Nigeria Market. The real estate market transparency index still retains Nigeria in the opaque region despite being one of the transparency improver markets in 2014. However, the improvement record achieved by Nigerian real estate market is creating attraction to international commercial real estate investors. The 'Atlantic City' development in Lagos testifies to this assertion. A greater improvement in all items of assessment like ease of doing business, taxation, business registration, development plan approval, land title registration, economic index and transparency rating will launch Nigeria into global competitive real estate market. The government of Nigeria can take a lead through implementation of good laws with fairness, equity and justice.

Institutional investors' participation in any market is a factor in performance of the investment option. The apathy of institutional investors in Nigeria REIT market is worrisome. Although this can be partly attributed to the transparency status of the Nigerian real estate market, the level of improvement achieved by Nigeria is expected to signal a good opportunity to investors. Generally, studies have confirmed that REIT companies dominated with institutional investors outperforming individual investors dominated REITs. The Nigeria REIT sector deserves more participation of institutional and international investors

to foster growth and stabilize the REIT industry. The accumulated pension fund and insurance life policy fund should be channeled to the long term investment in real estate rather than the short term trade sector they presently engaged in (particularly the petroleum products importation). Both the market and the government should formulate a policy guideline or framework that will encourage increased participation of institutional investors in Nigeria and international investors into Nigerian real estate market through REIT.

### **9.2.2 Main Factors Affecting REIT Performance**

The performance model developed from this study reflects direct relationship between the main factors except property asset value. This has implication in the REIT industry. Despite mixed findings about the effect of capitalization and income on performance, this research affirmed the positive relationship between REIT performance with capitalization and income. The Nigeria REIT market therefore is not different from other global REIT markets. The REIT operators, the stock market and the market regulators can address the capitalization problem by encouraging investors and issuance of more units. Investment in more income generating properties (office and retail) will increase revenue to REIT companies. The current waves of retail (shopping mall) development should be encouraged and made substantial. The inverse relationship of property asset value to REIT return was unexpected as N-REIT stock trades at a price less than its net asset value (NAV). The implication is that, with increase in property asset value either as a result of more property acquisition or value appreciation, the performance (in term of dividend return) reduces. Value appreciation is a capital gain that can increase income distribution but Nigeria REIT market proves otherwise. This is a negative signal to investors as it sends caution to property acquisition effect. This relationship can be interpreted in two ways. Firstly, the existing stock of property in the



portfolio of REITs in Nigeria being dominated by a non-high income generating property type (residential). Secondly is the question of financial probity of REIT companies. There could be overvaluation of property asset where there is lack of transparency (as accredited to Nigerian real estate market). REIT regulators are therefore expected to guard against overvaluation of assets by REIT companies with strict punishment to consultant property valuers. REITs should also diversify their investment in property types from residential to commercial and tourism.

As can be observed elsewhere and in other markets, infrastructure is directly related to REIT performance. Infrastructure includes the locational attributes of accessibility, transportation network and neighbourhood; power (electricity) supply; water and sanitation; information and communication technology (ICT) and support services. There is not any gain saying that Nigeria infrastructure is on the lower ebb. Erratic supply of electricity characterized the power sector, transportation nodes is not well integrated. Bad roads, absence of efficient mass transportation system, lack of water supply and inadequate recreational facilities are contributing to property performance in Nigeria. The implication is that, it becomes an additional cost on property developers, REITs and potential tenants to provide some of these infrastructure and support services for efficient property performance thereby eroding revenue to REIT companies in term of reduced rent and increased operational cost. This will encourage REITs to divest into 'unauthorised' investment options that have less operational cost. The provision of infrastructural facilities has an overwhelming cost effect on government. However, there is a pragmatic shift from provision of public goods fully funded by the government to the public private partnership (PPP) arrangement in many sector of the economy in many countries, Nigeria inclusive. PPP is a successful alternative in public

infrastructure provision globally and the Nigerian government should consolidate its PPP policy and extend it to cover all aspects of infrastructure provisions. The ongoing privatization of the Nigerian power sector is expected to yield positive results and enhances supply of electricity tremendously nationwide. All other aspects of public infrastructure should be enhanced to create economic benefits for the Nigeria citizenry and grow the REIT market. Good infrastructure development will also attract international investors and encourage tourism into the country with noticeable impact in property sector.

The Nigeria REIT market recorded no significant impact of internal REIT managers contrary to the concession that internally managed REITs outperform externally managed ones. The survey shows a significant impact of external advisor instead. This in effect revealed that internal management could be having no contribution to REIT performance in Nigeria. This result is not an exception. Malaysia REITs are externally managed and have reported superior performance in both stock market and income distribution. REIT companies in Nigeria should therefore adopt external advisor system. Some literature supported the fact that external managers seek REIT growth and expansion at least to justify their expertise, though their remuneration constitutes a cash outflow. Internal management can be shrouded in transparency problem in the Nigerian context, thus, enforcement of transparency rules by the market regulators is inevitable.

### **9.2.3 REIT Investment Diversification to Real Estate Development Financing**

The Nigerian property market is characterized by a shortage of development fund, low property stock and high interest rate on construction loans. These have resulted in an acute shortage of properties in the market for REIT acquisition coupled with an inefficient financial

system which created a wide gap between property demand and supply. The fifth and last objective of this research is “to create a linear asset allocation model for N-REIT that will accommodate real estate financing”. This was achieved through the application of modern portfolio theory. The study also found that direct real estate financing as an investment diversification option for Nigeria REIT will enhance performance. N-REITs operate in the midst of lack of property stock and lack of funding for real estate development finance. In the face of the present REIT regulation and law, REITs are expected to invest 75% of their asset (fund) on real estate related investment (property acquisition and mortgage). However, this research predicts an asset allocation model of 85% real estate acquisitions and 15% financing towards real estate development activities. This will have a dual effect of growing the property asset portfolio of REITs and increase revenue because interest rates on development loan are far higher than the return from property investment. The implication is that the restriction on REIT from directly financing creation of real estate assets reduces the income to REIT, and also the paucity of investment property to acquire becomes a menace to REIT performance. REITs in Nigeria have no other option than to engage in direct construction to create a portfolio of property assets. This accounts for the residential property dominated portfolio of Nigerian REITs. Although the REIT law prescribes mortgage related investments as option to REITs, the secondary mortgage market in Nigeria is not developed. The secondary mortgage institution in Nigeria, Nigeria Mortgage Refinance Company (NMRC) was established in 2013 and it is still in an infancy stage. The challenge of low property stock can make REIT channel their fund to other investment vehicles. The government can relax the law/rule prohibiting financing construction activities perhaps with additional guidelines in order to grow a vibrant real estate and REIT sector. Real estate asset creation is the backbone for REIT operation and success. Conclusively, the property need of

the rapidly increasing population of Nigeria which was estimated to be 16 million units in the housing sector alone by the United Nations can grow the real estate sector and transform the country's economic development. The Nigerian real estate sector should be made attractive to institutional and international property investors to realise the full potential of the Nigerian property market. This calls for a wider and transparent economic and institutional framework to make Nigerian property market a more viable and sustainable one.

### **9.3 Contributions to Knowledge**

This study has provided an empirical analysis of Nigerian REIT performance as well as identified important factors affecting N-REIT return and their significant contributions. This research also proposed investment diversification of Nigeria REIT. The study is considered relevant and is believed to have filled a gap in existing knowledge, having both theoretical and practical contributions which are further elaborated in the following sections.

#### **9.3.1 Theoretical Contributions**

In the absence of any available prior study on Nigeria REIT, this work will probably be the first that empirically investigated performance of REIT in Nigeria and probably in the Sub-Saharan Africa with the exception of South Africa PUT and PLS. Most African markets have not attracted the attention of the global survey of their property markets in the same way the economic ranking has beamed light in Africa (especially on transparency). Therefore, this research fills the gap created by non-coverage of Nigeria REIT by global REIT surveys and reports by bringing the Nigerian REIT sector to global awareness. This research has also extended the existing literature on Africa REIT market. The research further contributed to knowledge through the development of REIT performance model following the identification

of the main factors of influence. Previous studies have empirically examined the influence of each factor on REIT performance without assessing the joint or simultaneous effect and more focus has been on formal (internal) factors to the exclusion of informal (external) factors. Another contribution to knowledge is the proposed diversification of REIT investment to property financing as against the previous studies of REITs as diversifier for other investment options. These new areas will create more openings for further research.

### **9.3.2 Practical Contributions**

In addition to the contributions to existing literature, this research provides an insight into the characteristics of Nigerian REIT market which would be of interest and practical usefulness to market players. The computation of indices for N-REIT and property companies in Nigeria in this study was to provide comparison with the market index. There has been no such indices in Nigeria market publicly prior to this study. The indices will provide a useful tool for further analysis of Nigerian property market especially for real estate securities. Secondly, most of the previous studies on market securities have only included property securities of the only listed property company in Nigeria (UPDC), therefore investors can be guided that investing in REIT is equally good and rewarding as does the property companies in decision making with regard to real estate securities because of the clear evidence of the low correlation of REIT to property company indicating a diversification benefit. The study has also exposed the level of awareness of the Nigerian investors as well as low participation of institutional investors. It is believed that this finding of the research will enlighten the investing populace and encourage their participation in Nigerian REIT. Thirdly, the REIT yield model developed can be of great help to investment

analysts when contemplating investment in real estate sector because the model indicated the key factors that affect REIT and their direction of influence.

Last but not the least is the proposed investment diversification to real estate financing which portrays an enhancement to REIT portfolio return. This shows that REITs can look beyond geographical or property type diversification. This finding will also be useful to the policy makers in a bid to relax restricting rules and regulations on REIT investment options. Some studies of this nature were believed to have led to the relaxation of 5/50 rule through the Revenue Reconciliation Act of 1993 and the amendment of the Tax Code in 1986 to allow for internal REIT managers and the beneficial effect has been discussed in literatures.

#### **9.4 Limitations of the Study**

Following a rigorous literature review, a great effort was made towards achieving the aim and objectives of this research. However, there are factors beyond the researcher's control that could constitute limitations to the study. In recognition of the contributions this research has made to the body of knowledge, it also becomes inescapable to identify and acknowledge key limitations to the findings.

While it is certain that some recent studies would have been inadvertently left out and not considered in this study, such is acknowledged and considered the first limitation of the research.

The second limitation relates to sample size both in term of number of REITs considered in this study and the survey sample. There are only three (3) REITs in Nigeria established

between 2007 and 2013. The smallness of the REITs sample could be a limiting factor to the findings. The survey sample frame was purposively selected to include the identified relevant stakeholder to whom the questionnaire were distributed randomly, the subjectivity of each respondents could be a limiting factor to the generalization of the findings.

The next challenge to this study is the short time series of the Nigerian REIT market (2008-2015) due to short period of existence of REIT market in Nigeria, compared with Europe, America and Asian markets. The lack of data on dividend distribution by UHOMREIT restricts this study to stock market share price return performance alone. The result of the analysis did not report or be comparable to long term performance of REIT nor total return analysis. The lack of performance bench mark for a total return in the Nigeria market is also a limiting factor intertwined with market data. The property portfolio of the REITs in Nigeria is dominated by residential properties against the commercial properties in other markets.

The adoption of Sharpe ratio which relied on standard deviation as a measure of risk has been widely criticized. However, literature supported its use for a normally distributed data upon which the standard deviation assumption rests. The data used in this research are scale (interval) data assumed normally distributed justifying the Sharpe ratio risk measure. Meanwhile, the criticism of the Sharpe ratio is not overlooked but acknowledged and could be a point for limiting factor in the investment model developed in this research.

Finally, this research as a potential pioneer study of Nigeria REIT did not consider a mixed asset portfolio effect or benefit. The research did not see N-REIT as a diversifier but searches a diversifying investment option for REIT in real estate financing. The result of this study is

delimited by the scope which is the emerging Nigeria REIT market. While some of the limiting factors could portend potential to affect generalisability of the results, they have no significant detrimental effect on the findings and the result represent the Nigerian REIT market.

### **9.5 Recommendations for Future Research**

This research has exposed the Nigeria REIT market to further studies and investigations. The suggestion for future research is aimed at finding solutions to the shortcomings of this study as stated in the limitation as well as highlighting other areas that deserve further studies. Therefore, the following potential future areas of further studies are recommended.

1. The result and findings of this research (being considered as a pioneer study on Nigeria REIT) are open and can be subjected to confirmatory study or otherwise. The study has acknowledged its sample shortcomings. In the near future, it is expected that more REITs will evolve in Nigeria and a long term data series will become available for further analysis of Nigeria REIT.
2. A comparative study of African REIT markets (Nigeria, Ghana and South Africa) will be a replica of study of Asian REIT market for continental comparison. The study of REIT in a mixed asset portfolio that will include other stocks in addition to Property Company will be a worthy study in the near future.
3. This research further recommends studies of the key factors affecting REIT performance in order to verify the model for REIT performance in other markets. A



simultaneity effect of factors affecting return is worth further investigation and in comparison among markets.

4. A study of the Nigeria REIT structure, regulation, corporate governance and market players is suggested as a future research area to compliment the findings of this research.
5. Finally, the idea of REIT diversifying to direct real estate financing is noble. Similar studies are encouraged in other to canvas for change of rule to support growth of REIT industry in emerging markets.

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## LIST OF PUBLICATIONS AND CONFERENCE PAPERS PRESENTED

### List of Publication:

Olanrele O.O., Said R. & Daud M. N (2015). Setting a Benchmark for REIT Performance in Malaysia. *International Journal of Property Sciences*. Vol 5 (1), 31-43.

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### List of Conferences Proceedings

Olanrele O.O., Said R. & Daud M. N (2015). REIT Financing Real Estate Development Project: A Rewarding Investment Option. A paper presented at the 9<sup>th</sup> Asean Postgraduate Seminar (APGS) held at Faculty of Built Environment, University of Malaya, Kuala Lumpur, Malaysia, 8<sup>th</sup> December.

Olanrele O.O., Said R. & Daud M. N (2015). An Evaluation of the Performance and Acceptability of REIT in Nigeria. A paper Presented at the 15<sup>th</sup> African Real Estate Society (AfRES) Annual Conference held at Kumasi, Ghana, 31<sup>st</sup> August -3rd September.

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Olanrele O.O., Said R. & Daud M. N (2014). Real Estate Investment Trusts (REITs) Industry in Nigeria: The Influence of External Factors on Return. A paper Presented at the 14<sup>th</sup> African Real Estate Society (AfRES) Annual Conference held at Cape Town, South Africa, 2-5 September.

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Olanrele O.O., Said R & Daud M.N (2013). Setting a Benchmark for REIT Performance in Malaysia: An Application of Hedonic Price Model. A paper presented at the 7<sup>th</sup> Asean Postgraduate Seminar (APGS) held at Faculty of Built Environment, University of Malaya, Kuala Lumpur, Malaysia, 5<sup>th</sup> December.

#### **Poster Presentation**

Olanrele O.O., Said R & Daud M.N (2014). A Comparative Study of the Performance and Acceptability of REITs in Nigeria and Malaysia. A paper presented at the 7<sup>th</sup> IBIMA International Real Estate Research Symposium (Poster Presentation) held at Kuala Lumpur, Malaysia. 28 April.

Said R, Daud M.N & Olanrele O.O (2013). A study of REIT Performance and its Acceptability as Alternative Source of Funds to Direct Real Estate Finance in Nigeria: Malaysia REIT (M-REIT) as Benchmark. A Paper presented at the 3<sup>rd</sup> International Building Control Conference (Poster Presentation) held at Kuala Lumpur, Malaysia, 21<sup>st</sup> November.

#### **Awards:**

Best Paper Award (2015) for the African Real Estate Research for Investment in Real Estate (Dr Oni Memorial Award for Valuation), IREBS/AfRES, 15<sup>th</sup> AfRES Conference, Kumasi, Ghana.

Best Paper Award (2014) for the African Real Estate Research in Investment and Finance category, IREBS/AfRES, 14<sup>th</sup> AfRES Conference, Cape Town, South Africa.

## APPENDIX

### Appendix A – Research Instrument

**UNIVERSITY OF MALAYA (UNIVERSITI MALAYA),  
KUALA LUMPUR, 50603, MALAYSIA**



**FACULTY OF BUILT ENVIRONMENT (FAKULTI ALAM BINA)  
DEPARTMENT OF ESTATE MANAGEMENT**

### RESEARCH QUESTIONNAIRE

Dear Sir/Madam,

This is a Ph.D research work to appraise the performance, acceptability, growth and problems of Real Estate Investment Trust (REIT) in Nigeria. Your input is highly solicited for the success of this research. Kindly provide answers to the questions listed below by ticking the options which best represent your view/response. Any information you give will be treated with strict confidence and used purely for academic purposes. Thank you

**Olusegun Olanrele B.Sc, M.Sc, ANIVS, RSV**

**1. Name (Optional)**

.....

**2. Office Address:**

.....

.....

Tel:.....

E-mail:.....

**SECTION A: RESPONDENTS PROFILE**

Please tick  or mark 'X' as necessary.

**3. You have been identified as a stakeholder for this study. Please indicate your category**

- Shareholder/Investor
- Stockbroker/Investment Analyst
- Banker/Financier
- Real Estate Broker/Analyst
- Business/Commercial Lawyer
- Others (please specify) .....

**4. Gender.**

- Male
- Female

**5. Education Background**

- Related in Real Estate Study
- Non Real Estate study
- Specify.....

**6. Please indicate your age bracket as stated below**

<input type="checkbox"/>	21 – 30 years
<input type="checkbox"/>	31 – 40 years
<input type="checkbox"/>	41 – 50 years
<input type="checkbox"/>	51 – 60 years
<input type="checkbox"/>	Above 60 years

**7. Educational Qualification (Please choose the highest qualification you have attained)**

<input type="checkbox"/>	Higher Diploma/ Bachelor Degree
<input type="checkbox"/>	Professional Master Degree
<input type="checkbox"/>	Academic Master/Doctorate
<input type="checkbox"/>	Professional Qualification Certificate
<input type="checkbox"/>	Specify.....

**8. Status/rank/designation**

<input type="checkbox"/>	Manager/Senior Manager
<input type="checkbox"/>	Assist Gen Mgr/General Manager
<input type="checkbox"/>	Director/Executive Director
<input type="checkbox"/>	Managing Director/CEO/COO
<input type="checkbox"/>	Partner/Head of Practice
<input type="checkbox"/>	Others, Please specify .....

**9. working experience**

<input type="checkbox"/>	1 – 5 years
<input type="checkbox"/>	6 – 10 years
<input type="checkbox"/>	11 – 15 years
<input type="checkbox"/>	16 – 20 years
<input type="checkbox"/>	Above 20 years



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*Proceed to page 2*

**SECTION B : AWARENESS, PERCEPTION & ACCEPTABILITY OF REIT**



Please indicate your answer using the following 5-point scale:

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

	1	2	3	4	5
1) I am aware of REITs					

	1	2	3	4	5
2) The provisions in the Nigeria REIT law, policy and Regulations is adequate					

3) REIT can be define as	1	2	3	4	5
(a) Mutual Fund					
(b) Trust Fund					
(c) A real estate devt. company					
(d) Investment Vehicle for Real Estate					
(e) A property finance company					

4) REITs is a subsector in the investment/stock market of the economic .	1	2	3	4	5

5) REITs in Nigeria are have good performances in term of dividend distribution	1	2	3	4	5

6) Below are listed, the advantages of REIT	1	2	3	4	5
a) Corporate Tax exemption					
b) Large Income (dividend) Distribution					
c) Liquidity					
d) Re-Investment potential					
e) Investment Growth					

7) The following item are the measures of REITs performance	1	2	3	4	5
a) Net asset value (per unit)					
b) Market capitalization					
c) Unit share price changes					
d) Net Operating income (FFO)					
e) Dividend distribution					

8) REIT performance in term of dividend return is determined by the following main factors	1	2	3	4	5
a) Internal/formal economic factors					
b) Operating environment (external) factors					
c) Management Style					
d) Others (specify)..... .....					

**9. How many REITs are in Nigeria**

1
2
3
4
5 and above Specify
I do not Know



Proceed to page 3

**SECTION C: REIT'S PERFORMANCE AND FORMAL/INTERNAL/ECONOMIC FACTORS**

Please indicate your answer using the following 5-point scale:



1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

1. The following variables/elements of formal/internal/economic factor affect the performance of REIT return to investors					
	1	2	3	4	5
a) Market Capitalization					
b) Net Asset Value					
c) Unit share price					
d) Income					
e) Leverage/Gearing					
f) Real Estate Asset Value					
g) Diversification					

2. The following analysis could be adopted to measure REITs' performance					
	1	2	3	4	5
a) Index Benchmarking					
b) Correlation Analysis					
c) Risk Volatility Analysis					
d) Forecasting of Return					
e) Net Asset Value					
f) Share Price Movement					

4. The following elements serve as a measure of REITs' performance					
	1	2	3	4	5
a) Net annual value (of asset)					
b) Market capitalization					
c) Unit share price					
d) Dividend					
e) Net Operating income					

3. The following Benchmark is suitable to indicate REITs performance					
	1	2	3	4	5
a) Equity Indices like S&P500 Index, ASX200 etc					
b) Ratios like Sharpe, Treynor or Jensen's Alpha etc					
c) Stock Market Indices like FTSE,FBMKLCI, ASI, Nasdaq etc					
d) REIT index like NAREIT					

6. REITs can diversify towards direct real estate financing					
	1	2	3	4	5

5. Expected return forecast is a better benchmark for REIT performance analysis					
	1	2	3	4	5

Proceed to page 4



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**SECTION D: REIT'S PERFORMANCE AND EXTERNAL FACTORS**



Please indicate your answer using the following 5-point scale:

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

**1. The following external (environmental) factors have effect on REIT's performance**

	1	2	3	4	5
a) Political Leadership					
b) Perception/Acceptability					
c) Infrastructure					
d) Security					

**2) The following elements of political leadership affects REIT performance**

	1	2	3	4	5
a) Leadership Vision					
b) Policy/Guidelines					
c) Financial Probity					
d) Transparency					

**3) The following elements of Investors' Perception affects REIT performance**

	1	2	3	4	5
a) Acceptability of the Instrument					
b) Willingness to Invest					

**4) The following elements of Social Security affects REIT performance**

	1	2	3	4	5
a) Civil Protest					
b) Communal Clashes					
c) Ethic Political Crises					
d) Election Violence					
e) Terrorist Insurgency					

**5) The following elements of Infrastructure affects REIT performance**

	1	2	3	4	5
a) Electricity					
b) Transportation					
c) Communication (Telephony and Internet)					
d) Road Network and/or Accessibility					
e) Location/Neighbourhood					
f) Water Supply and Sanitation					

**6) The management style for good REIT performance is**

	1	2	3	4	5
a) Internal (In-House)					
b) External (Outsource)					

Proceed to page 5



**SECTION D: REIT'S PERFORMANCE AND EXTERNAL FACTORS - Contd**



<b>7) Indicate your level of agreement to the effect of the external factors and their elements on REIT return from Highly positive to highly negative on a 5 point Likert scale</b>					
	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
<b>(I) Political Leadership</b>					
a) Leadership Vision					
b) Policy/Guidelines					
c) Financial Probity					
d) Transparency					
<b>(II) Investors' Perception</b>					
a) Acceptability of the Instrument					
b) Willingness to Invest					
<b>(III) Infrastructure</b>					
a)Electricity					
b) Transportation					
c) Communication (Telephony and Internet)					
d) Road Network and/or Accessibility					
e) Location/Neighbourhood					
f) Water Supply and Sanitation					
<b>(IV) Social Security</b>					
a) Civil Protest					
b)Communal Clashes					
Ethic Political Crises					
d) Election Violence					
e) Terrorist Insurgency					

*Thank you for participating in this research*



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## Appendix B – Question Guide for Interview

UNIVERSITY OF MALAYA (UNIVERSITI MALAYA),  
KUALA LUMPUR, 50603, MALAYSIA  
FACULTY OF BUILT ENVIRONMENT (FAKULTI ALAM BINA)  
DEPARTMENT OF ESTATE MANAGEMENT



### INTERVIEW QUESTIONS' GUIDE FOR A PHD RESEARCH

1. Name: \_\_\_\_\_
2. Office Address: \_\_\_\_\_
3. \_\_\_\_\_
4. Position/Rank/Designation: \_\_\_\_\_
5. Level of Awareness of REIT: \_\_\_\_\_
6. How many REITs companies are in Nigeria: \_\_\_\_\_
7. How adequate are REIT law, regulation and policy in the country: \_\_\_\_\_
8. Please Categorise REIT in Investment Market (Trust/Mutual Fund, Property Devt Coy, Finance Firm etc)
9. What are the advantages of REIT?
10. Please rate REIT performance in Nigeria (low, average, above average, high)
11. What is the indicator(s) of REIT performance (unit price, size, NAV, Dividend, FFO)?
12. What are the factors/elements affecting REIT performance in Nigeria?
13. Please Categorise the factors (formal/informal, internal/external, economic/environment)
14. The sub-factors/sub-elements in each category include:
15. Investment (REIT inclusive) performance analysis can be done through (unit price movement, NAV, volatility analysis, correlation analysis, index benchmarking, forecast benchmark)
16. What will be the appropriate benchmark/index to measure REIT performance (equity indices – S&P500; ratio – Sharpe ratio; Stock market index – ASI; REIT index – NAREIT index)?
17. Will expected return forecast serve a better benchmark for REIT performance?
18. Can REIT engage in direct real estate financing and or development?
19. How does the following affect REIT performance (political leadership, investors behaviour, infrastructure and security)?
20. What management style is adopted for REIT in Nigeria (internal/external)?
21. What are the challenges facing REIT regime in Nigeria?



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Appendix C – Raw market data from the Nigerian Stock Exchange daily trading record

**Table 6.1:** Stock Exchange Data of the Market, REIT and Property (New REIT entrance shaded)

Date	Nigeria Stock Market (NSE)			Nigeria REIT Sector			Property Company		
	Capitalisation (NGN)	Index	Return (%)	Capitalisation (NGN)	Index	Return (%)	Capitalisation (NGN)	Index	Return (%)
31/12/2015	9850605500525.41	28642.25	6.59	39988589497	100.00	0.00	8373749976	101.00	1.00
23/12/2015	9238934158001.91	26871.24	1.26	39988589497	100.00	0.00	8291249976	100.00	0.00
18/12/2015	9124138166021.12	26537.36	-2.69	39988589497	100.00	0.00	8291249976	100.00	-0.50
11/12/2015	9375938297438.49	27269.71	-1.31	39988589497	100.00	0.00	8291249976	100.50	4.86
4/12/2015	9500175437403.40	27631.05	0.05	39988589497	100.00	0.00	8249999976	95.85	0.75
27/11/2015	9495499182697.01	27617.45	-1.83	39988589497	100.00	0.00	8607499975	95.14	5.26
20/11/2015	9670397103973.31	28131.28	-2.46	39988589497	100.00	0.00	9047499974	90.38	-17.93
13/11/2015	9914597781332.63	28841.67	-1.14	39988589497	100.00	0.00	10009999971	110.14	17.13
6/11/2015	10029303863913.00	29175.35	-0.05	39988589497	100.00	0.00	9088749974	94.03	14.62
30/10/2015	10032182458782.80	29190.54	-2.74	39988589497	100.00	0.00	9666249972	82.03	-21.80
23/10/2015	10314463851890.20	30011.89	0.60	39988589497	100.00	0.00	11783749966	104.90	4.90
16/10/2015	10253399363264.30	29834.21	-1.10	39988589497	100.00	0.00	11233749967	100.00	0.00
9/10/2015	10367161255011.50	30165.22	-1.38	39988589497	100.00	0.00	11233749967	100.00	-4.65
2/10/2015	10512600758544.70	30588.41	0.15	39988589497	100.00	0.00	11233749967	104.88	-0.10
23/9/2015	10497052387221.30	30543.17	0.69	39988589497	100.00	0.00	10711249969	104.99	5.55
18/9/2015	10424714024253.90	30332.68	2.17	39988589497	100.00	0.00	10202499970	99.46	4.66
11/9/2015	10203521026304.70	29689.08	0.60	39988589497	100.00	0.00	10257499970	95.03	-9.21
4/9/2015	10148454327282.80	29511.08	2.42	39988589497	100.00	0.00	10793749969	104.67	10.11
28/8/2015	9908950846856.04	28814.62	-3.56	39988589497	100.00	0.00	10312499970	95.06	3.61
21/8/2015	10240924500410.60	29878.33	-2.69	39988589497	100.00	0.00	10848749968	91.74	-3.78
14/8/2015	10524483117554.60	30705.62	1.51	39988589497	100.00	0.00	11824999966	95.34	0.95
7/8/2015	10367570845396.60	30247.83	-0.62	39988589497	100.00	0.00	12402499964	94.45	-3.08
31/7/2015	10432129439939.10	30436.18	-2.87	39988589497	100.00	0.00	13131249962	97.45	1.43

24/7/2015	10725897787473.80	31334.79	0.92	39988589497	100.00	0.00	13474999961	96.08	-2.04
16/7/2015	10627723662529.60	31047.99	-2.15	39988589497	100.00	0.00	14024999959	98.08	-3.81
10/7/2015	10835798746172.20	31729.26	-2.49	39988589497	100.00	-1.33	14299999958	101.96	4.96
3/7/2015	11107482854389.50	32538.34	-0.96	39988589497	101.35	1.35	14024999959	97.14	-2.86
26/6/2015	11215064162209.60	32853.49	-1.22	39454935597	100.00	0.00	14437499958	100.00	-4.76
19/6/2015	11353116802289.00	33257.9	-1.08	39454935597	100.00	-0.68	14437499958	105.00	5.00
12/6/2015	11476706956619.40	33621.75	-0.13	39454935597	100.68	0.68	13749999960	100.00	1.00
5/6/2015	11491440212301.70	33664.91	-1.88	39188108647	100.00	0.00	13749999960	99.01	-1.97
28/5/2015	11658810917164.50	34310.37	0.11	39188108647	100.00	0.00	13887499960	101.00	3.53
22/5/2015	11644301964599.80	34272.09	-0.49	39188108647	100.00	0.00	13749999960	97.56	-2.44
15/5/2015	11696846667606.00	34439.4	0.15	39188108647	100.00	0.00	14093749959	100.00	9.37
8/5/2015	11678311923604.90	34388.12	-0.92	39188108647	100.00	0.00	14093749959	91.44	-3.75
30/4/2015	11786948669477.60	34708.11	0.64	39188108647	100.00	0.68	15413749955	95.00	-8.22
24/4/2015	11751207174250.80	34485.72	-1.48	39188108647	99.32	-0.68	16224999953	103.51	-0.40
17/4/2015	11928173238680.40	35005.05	0.21	39454935597	100.00	0.00	15674999954	103.92	0.41
10/4/2015	11902604206748.00	34930.02	-2.23	39454935597	100.00	0.00	15083749956	103.49	-5.98
2/4/2015	12135064370739.80	35728.12	16.90	39454935597	100.00	-2.03	14574999958	110.07	4.59
27/3/2015	10318504097699.30	30562.93	4.19	39454935597	102.07	2.07	13241249961	105.25	7.55
20/3/2015	9788755989868.16	29334.23	-4.51	38654454747	100.00	0.00	12581249963	97.86	-2.14
13/3/2015	10250970232980.70	30719.36	-1.06	38654454747	100.00	0.00	12856249963	100.00	3.64
6/3/2015	10360053489142.90	31049.37	3.14	38654454747	100.00	0.00	12856249963	96.49	-1.92
27/2/2015	10044551396099.80	30103.81	2.45	38654454747	100.00	-3.45	13323749961	98.38	19.25
20/2/2015	9804355643518.18	29383.93	6.52	38654454747	103.57	5.22	13543749961	82.50	-17.50
13/2/2015	9204202190258.87	27585.26	-8.00	37320319997	98.44	-3.10	16417499952	100.00	-23.53
6/2/2015	10004936459916.40	29985.08	1.43	37912866878	101.59	3.20	16417499952	130.78	22.90
30/1/2015	9846629029447.69	29562.07	-0.84	37320319997	98.44	-3.10	12553749963	106.41	5.54
23/1/2015	9929893805212.45	29812.05	2.68	37912866878	101.59	1.59	11797499966	100.82	6.75
16/1/2015	9671034519252.69	29034.89	-3.68	37320319997	100.00	5.72	11701249966	94.45	-0.41
9/1/2015	9979759223723.20	30144.7	-13.02	37320319997	94.59	-3.99	12388749964	94.84	-3.16

31/12/2014	11477661174486.50	34657.15	0.66	39454935597	98.52	-2.94	13062499962	97.94	-4.79
24/12/2014	11402042992052.70	34428.82	13.60	40047482478	101.50	3.03	13337499961	102.86	11.26
19/12/2014	10005614281026.60	30306.51	-1.49	39454935597	98.52	-8.19	12966249962	92.45	-3.92
12/12/2014	10156447994566.00	30763.38	-7.42	40047482478	107.31	7.31	14024999959	96.23	-4.68
5/12/2014	10970233335645.30	33228.29	-3.81	37320319997	100.00	1.59	14574999958	100.95	1.14
28/11/2014	11404295415335.90	34543.05	1.82	37320319997	98.44	0.36	14437499958	99.81	3.70
21/11/2014	11241121978737.10	33926.18	-4.11	37912866878	98.08	-1.92	14464999958	96.25	5.76
14/11/2014	11718465387203.70	35381.02	6.49	38654454747	100.00	-1.92	15028749956	91.01	6.09
7/11/2014	11004625110983.90	33225.75	-11.52	38654454747	101.96	1.96	16513749952	85.79	-14.21
31/10/2014	12436971298260.60	37550.24	-3.93	37912866878	100.00	1.59	19249999944	100.00	3.57
24/10/2014	12906455082032.30	39087.1	2.33	37912866878	98.44	-1.82	19249999944	96.55	-3.45
17/10/2014	12612788470272.40	38197.73	-5.55	38515414550	100.26	-1.05	19937499942	100.00	9.31
10/10/2014	13354629624551.70	40444.39	-1.60	38415414550	101.33	2.67	19937499942	91.48	-16.31
3/10/2014	13572347588448.70	41103.94	0.79	37912866878	98.69	-1.31	21793749937	109.31	9.69
26/9/2014	13465446095347.80	40780	-0.66	38415414550	100.00	-1.31	19937499942	99.66	3.97
19/9/2014	13554361021021.20	41049.27	0.93	38415414550	101.33	1.33	20006249942	95.85	-3.14
12/9/2014	13430096400300.80	40672.94	-1.18	37912866878	100.00	0.00	20872499939	98.96	0.63
5/9/2014	13591128501120.00	41160.62	-0.89	37912866878	100.00	0.00	21092499939	98.33	2.12
29/8/2014	13713864815116.10	41532.31	-0.08	37912866878	100.00	0.00	21449999938	96.30	-1.92
22/8/2014	13724390450025.10	41564.19	0.44	37912866878	100.00	-0.26	22274999935	98.18	1.16
15/8/2014	13663590816889.80	41380.05	-2.86	37912866878	100.26	0.26	22687499934	97.06	-2.60
8/8/2014	14065906036560.90	42598.46	1.58	37812866878	100.00	0.00	23374999932	99.65	1.98
1/8/2014	13846636619640.70	41934.4	-0.83	37812866878	100.00	0.26	23457499932	97.71	-2.29
25/7/2014	13962674489539.10	42285.82	-1.41	37812866878	99.74	-0.26	24007499930	100.00	-0.11
18/7/2014	14162773810849.00	42891.82	0.31	37912866878	100.00	-0.26	24007499930	100.11	1.32
11/7/2014	14118591581475.50	42758.02	1.35	37912866878	100.26	7.34	23979999930	98.81	-1.47
4/7/2014	13930245662026.20	42187.62	0.00	37812866878	93.41	-6.59	24268749929	100.28	0.57
27/6/2014	13930245662026.20	42187.62	2.56	40481136378	100.00	0.00	24199999930	99.72	1.69
20/6/2014	13581960157856.00	41132.86	-1.22	40481136378	100.00	0.00	24268749929	98.06	-2.71

13/6/2014	13750262096065.20	41642.55	0.27	40481136378	100.00	0.00	24749999928	100.78	1.18
6/6/2014	13712794218840.60	41529.11	0.13	40481136378	100.00	0.00	24557499929	99.61	-1.11
30/5/2014	13694732531903.50	41474.4	4.12	40481136378	100.00	0.25	24653749928	100.73	1.81
23/5/2014	13152361583359.20	39831.83	2.08	40481136378	99.75	-0.25	24474999929	98.94	26.50
16/5/2014	12851911678422.30	39018.34	1.20	40581136378	100.00	0.00	24736249928	78.22	-16.61
9/5/2014	12699035695347.20	38554.19	-0.06	40581136378	100.00	0.00	31624999908	93.80	-4.94
2/5/2014	12700166864422.10	38578.78	-1.11	40581136378	100.00	0.00	33714999902	98.67	-0.73
25/4/2014	12530763958091.90	39010.99	-0.80	40581136378	100.00	0.00	34168749901	99.40	-0.60
17/4/2014	12932456793098.90	39325.98	1.81	40581136378	100.00	0.00	34374999900	100.00	0.64
11/4/2014	12407137503301.50	38626.11	-0.22	40581136378	100.00	1.48	34374999900	99.36	-17.46
4/4/2014	12434970788757.40	38712.76	0.99	40581136378	98.54	-1.46	34594999899	120.38	10.88
28/3/2014	12312596859787.40	38331.78	1.43	41183684050	100.00	0.00	28737499916	108.57	13.37
21/3/2014	12138606781506.70	37790.12	-1.00	41183684050	100.00	0.00	26468749923	95.77	0.35
14/3/2014	12261054610723.30	38171.32	-2.01	41183684050	101.20	-4.14	27637499920	95.44	-9.36
7/3/2014	12511968584220.60	38952.47	-1.53	41183684050	105.35	5.35	28957499916	105.30	5.30
28/2/2014	12706756641282.90	39558.89	3.30	14500989050	100.00	0.00	27499999920	100.00	-1.25
21/2/2014	12301020359521.70	38295.74	-7.65	14500989050	100.00	0.00	27499999920	101.27	2.50
14/2/2014	13288742000174.60	41469.94	1.71	14500989050	100.00	0.00	27156249921	98.80	-1.20
7/2/2014	13070184995601.30	40773.5	0.50	14500989050	100.00	0.00	27486249920	100.00	5.05
31/1/2014	13005471532105.00	40571.62	-3.21	14500989050	100.00	0.00	27486249920	95.19	-6.89
24/1/2014	13432177660476.40	41917.55	0.40	14500989050	100.00	0.00	28874999916	102.24	4.03
17/1/2014	13364731342649.80	41751.55	0.65	14500989050	100.00	0.00	28242499918	98.28	-7.37
10/1/2014	13274707530034.20	41480.62	0.07	14500989050	100.00	0.00	28737499916	106.09	-0.75
3/1/2014	13265059771454.50	41450.48	3.03	14500989050	100.00	0.00	27087499921	106.89	2.37
27/12/2013	12875019134881.10	40231.68	1.69	14500989050	100.00	0.00	25341249926	104.42	3.53
20/12/2013	12660944331885.70	39562.75	1.88	14500989050	100.00	0.00	24268749929	100.86	3.74
13/12/2013	12426959648935.20	38831.59	0.24	14500989050	100.00	0.00	24062499930	97.22	-2.78
6/12/2013	12390441830362.60	38738.15	-0.47	14500989050	100.00	0.00	24749999928	100.00	0.00
29/11/2013	12448878927182.00	38920.85	-0.83	14500989050	100.00	0.00	24749999928	100.00	2.11

22/11/2013	12552895322374.00	39246.05	3.60	14500989050	100.00	0.00	24749999928	97.93	0.70
15/11/2013	12117093339684.30	37883.53	0.03	14500989050	100.00	0.00	25272499926	97.25	-6.92
8/11/2013	12100140166086.10	37870.87	0.28	14500989050	100.00	0.00	25987499924	104.48	9.50
1/11/2013	12066575644324.90	37765.82	0.81	14500989050	100.00	0.00	24873749928	95.41	-16.01
25/10/2013	11969483795497.40	37461.94	0.32	14500989050	100.00	0.00	26069999924	113.60	8.97
18/10/2013	11897259511790.90	37342.73	0.95	14500989050	100.00	0.00	22948749933	104.25	2.88
11/10/2013	11782362568771.90	36991.62	0.18	14500989050	100.00	0.00	22013749936	101.33	4.86
4/10/2013	11761403942625.20	36925.82	1.34	14500989050	100.00	0.00	21724999937	96.64	-10.16
27/9/2013	11605701942308.30	36436.98	0.69	14500989050	100.00	0.00	22481249935	107.57	6.58
20/9/2013	11526629390489.30	36188.72	0.25	14500989050	100.00	0.00	20899999939	100.93	8.44
13/9/2013	11493628889807.20	36098.07	-0.84	14500989050	100.00	0.00	20707499940	93.08	-6.92
6/9/2013	11591023131701.70	36403.95	0.43	14500989050	100.00	0.00	22247499935	100.00	3.21
30/8/2013	11496607675640.60	36248.53	-0.90	14500989050	100.00	0.00	22247499935	96.89	4.43
23/8/2013	11583734535261.80	36577.28	0.29	14500989050	100.00	0.00	22962499933	92.78	-15.21
16/8/2013	11658647443918.20	36472.43	-4.59	14500989050	100.00	0.00	24749999928	109.42	10.75
7/8/2013	12106387756952.30	38227.63	-0.51	14500989050	100.00	0.00	22618749934	98.80	-5.65
2/8/2013	12168683476062.50	38424.34	1.42	14500989050	100.00	0.00	22893749933	104.72	5.31
26/7/2013	11998062045898.90	37885.58	-1.17	14500989050	100.00	0.00	21862499936	99.44	-6.72
19/7/2013	12140245661154.70	38334.54	2.55	14500989050	100.00	0.00	21986249936	106.60	5.89
12/7/2013	11838738699334.60	37382.49	1.24	14500989050	100.00	0.00	20624999940	100.67	-1.96
5/7/2013	11694263593306.30	36926.29	1.27	14500989050	100.00	0.00	20487499940	102.69	7.15
28/6/2013	11714634777152.70	36464.39	-1.81	14500989050	100.00	0.00	19951249942	95.84	-7.58
21/6/2013	11930313653724.80	37135.74	-7.19	14500989050	100.00	0.00	20817499939	103.70	8.10
14/6/2013	12854560317196.80	40012.66	1.13	14500989050	100.00	0.00	20074999942	95.93	-5.46
7/6/2013	12640618728528.80	39564.79	4.68	14500989050	100.00	0.00	20927499939	101.47	7.01
31/5/2013	12075225694462.80	37794.75	1.19	14500989050	100.00	0.00	20624999940	94.82	1.89
24/5/2013	11939337743821.30	37350.53	1.20	14500989050	100.00	0.00	21752499937	93.06	-12.96
17/5/2013	11797819103433.00	36907.81	3.15	14500989050	100.00	0.00	23374999932	106.92	2.21
10/5/2013	11440325729650.10	35782.09	1.92	14500989050	100.00	0.00	21862499936	104.61	3.23

3/5/2013	11225230428678.70	35109.33	5.52	14500989050	100.00	0.00	20899999939	101.33	2.82
25/4/2013	10637581953960.00	33271.33	-0.24	14500989050	100.00	0.00	20624999940	98.55	-1.45
17/4/2013	10661715701319.50	33352.96	-0.48	14500989050	100.00	0.00	20927499939	100.00	5.12
12/4/2013	10713237306220.50	33514.14	-2.30	14500989050	100.00	0.00	20927499939	95.13	-12.01
5/4/2013	10978164022661.20	34301.37	2.28	14500989050	100.00	0.00	21999999936	108.11	4.02
28/3/2013	10733286294647.20	33536.25	0.09	14500989050	100.00	0.00	20349999941	103.93	8.75
22/3/2013	10721959476589.40	33506.88	0.45	14500989050	100.00	0.00	19579999943	95.57	-4.43
13/3/2013	10674050314899.10	33357.16	1.55	14500989050	100.00	0.00	20487499940	100.00	0.00
8/3/2013	10511479381009.10	32849.11	-1.01	14500989050	100.00	0.00	20487499940	100.00	7.38
1/3/2013	10618383173097.00	33183.19	-2.10	14500989050	100.00	0.00	20487499940	93.13	-4.84
22/2/2013	10846180571098.00	33895.07	1.91	14500989050	100.00	0.00	21999999936	97.86	-2.14
15/2/2013	10642643644051.80	33258.45	-0.17	14500989050	100.00	0.00	22481249935	100.00	-2.45
8/2/2013	10658533894812.90	33313.48	2.78	14500989050	100.00	0.00	22481249935	102.51	1.93
1/2/2013	10370061845032.20	32411.86	2.62	14500989050	100.00	0.00	21931249936	100.57	1.46
25/1/2013	10102627982762.00	31583.48	2.12	14500989050	100.00	0.00	21807499937	99.13	-23.12
18/1/2013	9892693775236.34	30927.18	5.91	14500989050	100.00	0.00	21999999936	128.93	22.59
11/1/2013	9339459026519.81	29202	2.33	14500989050	100.00	0.00	17063749950	105.17	5.17
4/1/2013	9261463892651.34	28538.06	2.41	14500989050	100.00	0.00	16224999953	100.00	-6.78
28/12/2012	8906594721580.02	27866.51	1.69	14500989050	100.00	0.00	16224999953	107.27	7.18
21/12/2012	8755229703085.08	27402.06	-1.02	14500989050	100.00	0.00	15124999956	100.09	-3.46
14/12/2012	8846179433118.95	27685.54	3.80	14500989050	100.00	0.00	15111249956	103.68	3.58
7/12/2012	8522241184555.37	26671.72	0.67	14500989050	100.00	0.00	14574999958	100.09	0.09
30/11/2012	8465594937281.11	26494.44	0.65	14500989050	100.00	0.00	14561249958	100.00	13.13
23/11/2012	8380569447045.46	26322.17	-0.30	14500989050	100.00	0.00	14561249958	88.40	-15.88
16/11/2012	8413189709023.95	26400.94	-1.19	14500989050	100.00	0.00	16472499952	105.09	15.23
9/11/2012	8514322758618.52	26718.3	0.60	14500989050	100.00	0.00	15674999954	91.20	-16.75
2/11/2012	8463735147203.49	26559.55	-1.18	14500989050	100.00	0.00	17187499950	109.55	10.42
24/10/2012	8564600458639.51	26876.07	-1.54	14500989050	100.00	0.00	15688749954	99.22	-5.10
19/10/2012	8697821077663.69	27296.35	0.03	14500989050	100.00	0.00	15812499954	104.55	3.79

12/10/2012	8695110879762.61	27287.84	3.20	14500989050	100.00	0.00	15124999956	100.73	0.73
5/10/2012	8419524730248.33	26442.67	1.66	14500989050	100.00	0.00	15014999956	100.00	10.99
28/9/2012	8282280373770.58	26011.63	0.53	14500989050	100.00	0.00	15014999956	90.10	-21.94
21/9/2012	8238364251295.22	25873.71	2.12	14500989050	100.00	0.00	16664999952	115.43	9.93
14/9/2012	8065796348783.10	25337.18	2.01	14500989050	100.00	0.00	14437499958	105.00	5.00
7/9/2012	7907110876606.15	24838.7	4.58	14500989050	100.00	0.00	13749999960	100.00	-3.00
31/8/2012	7560055535389.98	23750.82	1.50	14500989050	100.00	0.00	13749999960	103.09	3.09
24/8/2012	7448253878013.97	23399.58	1.12	14500989050	100.00	0.00	13337499961	100.00	1.55
17/8/2012	7365972502121.84	23141.08	-0.42	14500989050	100.00	0.00	13337499961	98.48	-1.52
10/8/2012	7396598926828.71	23239.03	-1.21	14500989050	100.00	0.00	13543749961	100.00	0.00
3/8/2012	7487032643341.50	23523.16	0.99	14500989050	100.00	0.00	13543749961	100.00	-0.30
27/7/2012	7413714368395.11	23292.8	0.86	14500989050	100.00	0.00	13543749961	100.31	0.61
20/7/2012	7349433560874.33	23095.31	1.56	14500989050	100.00	0.00	13502499961	99.70	-10.73
13/7/2012	7259702079039.73	22741.05	2.85	14500989050	100.00	0.00	13543749961	111.68	11.68
6/7/2012	7058538046034.57	22110.91	2.37	14500989050	100.00	0.00	12127499965	100.00	8.50
29/6/2012	6895294442792.46	21599.57	0.96	14500989050	100.00	0.00	12127499965	92.16	-3.02
22/6/2012	6829917424739.31	21394.77	0.99	14500989050	100.00	0.00	13158749962	95.03	-0.15
15/6/2012	6762818146509.27	21184.58	1.35	14500989050	100.00	0.00	13846249960	95.18	0.13
8/6/2012	6666194658431.58	20902.95	-4.83	14500989050	100.00	0.00	14547499958	95.06	-1.78
1/6/2012	7004533938571.20	21963.87	-1.21	14500989050	100.00	0.00	15303749955	96.78	-3.22
25/5/2012	7090158913759.78	22232.36	-0.66	14500989050	100.00	0.00	15812499954	100.00	-4.26
18/5/2012	7137597021094.14	22381.11	-1.07	14500989050	100.00	0.00	15812499954	104.45	4.45
11/5/2012	7214560323553.62	22622.44	-0.19	14500989050	100.00	0.00	15138749956	100.00	-6.63
4/5/2012	7228449054391.91	22665.99	2.52	14500989050	100.00	0.00	15138749956	107.10	3.25
27/4/2012	7050957774814.35	22109.44	1.62	14500989050	100.00	0.00	14134999959	103.73	10.54
20/4/2012	6938402112939.03	21756.5	4.89	14500989050	100.00	0.00	13626249960	93.84	-11.04
13/4/2012	6615440936684.43	20743.16	-0.95	14500989050	100.00	0.00	14519999958	105.49	5.39
5/4/2012	6641641865043.90	20941.92	1.40	14500989050	100.00	0.00	13763749960	100.10	9.61
30/3/2012	6549842134195.90	20652.47	-2.54	14500989050	100.00	0.00	13749999960	91.32	-9.09

23/3/2012	6720702478726.19	21191.22	1.76	14500989050	100.00	0.00	15056249956	100.46	-3.69
16/3/2012	6571934342119.69	20824.25	-0.60	14500989050	100.00	0.00	14987499956	104.31	3.71
9/3/2012	6611624573055.92	20950.02	3.75	14500989050	100.00	0.00	14368749958	100.58	5.80
2/3/2012	6364034581557.88	20193.4	-1.48	14500989050	100.00	0.00	14286249958	95.06	3.50
24/2/2012	6459372832755.20	20495.92	0.42	14500989050	100.00	0.00	15028749956	91.85	-7.61
17/2/2012	6432663628885.08	20411.17	-1.03	14500989050	100.00	0.00	16362499952	99.42	4.65
10/2/2012	6499621795168.44	20623.63	-1.22	14500989050	100.00	0.00	16458749952	95.00	-5.00
3/2/2012	6579675551427.83	20877.64	-0.07	14500989050	100.00	0.00	17324999950	100.00	0.00
27/1/2012	6584408900906.61	20892.66	0.35	14500989050	100.00	0.00	17324999950	100.00	-4.76
20/1/2012	6560848127176.92	20820.32	-0.10	14500989050	100.00	0.00	17324999950	105.00	5.00
13/1/2012	6567354645934.69	20840.97	0.56	14500989050	100.00	0.00	16499999952	100.00	0.00
6/1/2012	6530905784265.14	20725.3	-0.03	14500989050	100.00	0.00	16499999952	100.00	1.33
30/12/2011	6532583589337.88	20730.63	-0.16	14500989050	100.00	0.00	16499999952	98.68	-1.32
23/12/2011	6542866170050.97	20763.26	3.68	14500989050	100.00	0.00	16719999951	100.00	0.00
16/12/2011	6331204308182.52	20025.94	1.22	14500989050	100.00	0.00	16719999951	100.00	1.15
9/12/2011	6255042927799.71	19785.03	-0.89	14500989050	100.00	0.00	16719999951	98.86	3.68
2/12/2011	6282343849777.28	19963.37	-0.79	14500989050	100.00	0.00	16912499951	95.35	-4.65
25/11/2011	6332309170633.12	20122.14	-0.93	14500989050	100.00	0.00	17737499948	100.00	0.00
18/11/2011	6391901444611.99	20311.51	-0.51	14500989050	100.00	0.00	17737499948	100.00	-4.26
11/11/2011	6479286618485.86	20416.1	-0.57	14500989050	100.00	-0.41	17737499948	104.45	-1.97
4/11/2011	6516201901344.40	20532.41	-1.77	14500989050	100.42	0.83	16981249951	106.56	13.54
28/10/2011	6616744586469.04	20903.16	3.19	14440989050	99.59	-0.41	15936249954	93.85	-1.21
21/10/2011	6412333117349.79	20257.47	1.95	14500989050	100.00	0.00	16981249951	95.00	-1.71
14/10/2011	6297882277670.03	19869.85	-1.76	14500989050	100.00	0.00	17874999948	96.65	-12.33
7/10/2011	6449551646764.01	20225.02	-0.73	14500989050	100.00	0.00	18493749946	110.25	26.60
30/9/2011	6496736636180.35	20373	0.84	14500989050	100.00	0.00	16774999951	87.08	-2.60
23/9/2011	6442367633027.89	20202.5	-4.28	14500989050	100.00	0.00	19263749944	89.41	0.13
16/9/2011	6730696619469.78	21106.67	0.01	14500989050	100.00	0.00	21546249937	89.29	0.18
9/9/2011	6725493583396.78	21104.1	-2.29	14500989050	100.00	0.00	24131249930	89.13	-10.87



2/9/2011	6908975202559.11	21598.98	-1.72	14500989050	100.00	0.00	27073749921	100.00	0.30
26/8/2011	7029852748933.63	21976.87	-3.29	14500989050	100.00	0.00	27073749921	99.70	-8.13
19/8/2011	7268845913424.73	22724.02	-0.23	14500989050	100.00	-0.41	27156249921	108.52	13.29
12/8/2011	7285330867489.41	22775.55	-2.66	14500989050	100.42	0.42	25024999927	95.79	-7.19
5/8/2011	7484258839149.96	23397.44	-1.80	14440989050	100.00	0.00	26124999924	103.20	7.91
29/7/2011	7621659181443.05	23826.99	-0.41	14440989050	100.00	0.00	25313749926	95.64	0.11
22/7/2011	7649932540589.57	23925.72	0.39	14440989050	100.00	0.00	26468749923	95.53	-5.18
15/7/2011	7620010418668.32	23832.14	-1.97	14440989050	100.00	0.00	27706249919	100.75	0.75
8/7/2011	7772810942747.64	24310.03	-1.57	14440989050	100.00	0.00	27499999920	100.00	-5.00
1/7/2011	7896478059753.55	24696.81	-2.27	14440989050	100.00	0.00	27499999920	105.26	4.71
24/6/2011	8080254439275.02	25271.69	-0.15	14440989050	100.00	0.00	26124999924	100.53	-4.26
17/6/2011	8092264256352.42	25309.17	-1.51	14440989050	100.00	0.00	25987499924	105.00	5.93
10/6/2011	8216096148053.16	25696.46	-1.03	14440989050	100.00	0.00	24749999928	99.12	-4.48
3/6/2011	8301476963589.01	25963.5	0.52	14440989050	100.00	0.00	24969999927	103.77	1.46
27/5/2011	8258715040368.31	25829.75	0.15	14440989050	100.00	0.00	24062499930	102.28	1.32
20/5/2011	8240640418592.65	25790.64	-0.09	14440989050	100.00	0.00	23526249932	100.94	-4.65
13/5/2011	8248012337155.97	25813.71	2.03	14440989050	100.00	0.00	23306249932	105.87	5.81
6/5/2011	8084017759812.99	25300.46	1.03	14440989050	100.00	0.00	22013749936	100.06	-0.56
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8/4/2011	7902410660237.11	24733.38	-0.08	14440989050	100.00	0.00	21999999936	98.16	-1.84
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25/3/2011	7943946458552.53	24863.38	1.99	14440989050	100.00	0.00	22412499935	98.79	-1.21
18/3/2011	7789094226203.30	24378.72	-4.72	14440989050	100.00	0.00	22687499934	100.00	0.00
11/3/2011	8174582254494.00	25585.24	0.90	14440989050	100.00	0.00	22687499934	100.00	4.24
4/3/2011	8104960482609.03	25357.84	-3.14	14440989050	100.00	0.00	22687499934	95.93	-4.07
25/2/2011	8368120500412.40	26181.18	-1.72	14440989050	100.00	0.00	23649999931	100.00	0.00
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28/1/2011	8743808129884.96	27356.59	-1.18	14440989050	100.00	0.00	23649999931	101.78	8.40
21/1/2011	8848584094665.76	27684.4	1.53	14440989050	100.00	0.00	23237499932	93.89	-6.11
14/1/2011	8711396654909.67	27267.17	4.19	14440989050	100.00	0.00	24749999928	100.00	-8.28
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31/12/2010	7913752224641.62	24770.52	0.33	14440989050	100.00	0.00	22701249934	103.06	5.50
24/12/2010	7887615120409.13	24689.16	1.00	14440989050	100.00	0.00	22027499936	97.68	-1.96
17/12/2010	7809381620967.97	24444.28	0.00	14440989050	100.00	0.00	22549999934	99.64	1.69
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3/12/2010	7925274893928.97	24807.04	0.79	14440989050	100.00	0.00	23099999933	95.95	-4.05
26/11/2010	7859409007171.05	24611.56	-1.40	14440989050	100.00	0.00	24076249930	100.00	0.00
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12/11/2010	8100735290880.32	25367.83	2.29	14440989050	100.00	0.00	24076249930	97.28	-2.72
5/11/2010	7919559832719.33	24800.47	-0.97	14440989050	100.00	0.00	24749999928	100.00	2.78
29/10/2010	7982472979578.71	25042.16	0.25	14440989050	100.00	0.00	24749999928	97.30	-5.38
22/10/2010	6120090401119.69	24978.7	-0.39	14440989050	100.00	0.00	25437499926	102.83	-1.40
15/10/2010	6145004831291.57	25077.73	5.49	14440989050	100.00	0.00	24736249928	104.29	9.13
8/10/2010	5825149270151.39	23772.4	3.13	14440989050	100.00	0.00	23718749931	95.57	0.60
30/9/2010	5648277475308.34	23050.59	1.59	14440989050	100.00	0.00	24818749928	95.00	-7.10
24/9/2010	5559696168600.66	22689.09	-1.33	14440989050	100.00	0.42	26124999924	102.26	7.60
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8/9/2010	5832714499039.14	23802.79	-1.81	14500989050	100.00	0.00	26881249922	100.00	-4.35
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27/8/2010	5936671818206.92	24274.51	-3.32	14500989050	100.00	0.00	25712499925	96.49	-5.35
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13/8/2010	6110381705491.72	24984.8	-2.93	14500989050	100.00	4.31	26138749924	92.96	-7.04
6/8/2010	6294779668886.13	25738.79	-0.41	14500989050	95.87	-4.13	28118749918	100.00	2.69
30/7/2010	6320555104742.53	25844.18	2.27	15126038503	100.00	0.00	28118749918	97.38	-2.76

23/7/2010	6127997450988.78	25269.36	1.70	15126038503	100.00	0.00	28874999916	100.14	0.19
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25/6/2010	6118500661156.64	25154.26	-2.74	2000000000	100.00	0.00	28737499916	100.00	0.48
18/6/2010	6290633203094.48	25861.93	1.73	2000000000	100.00	0.00	28737499916	99.52	3.55
11/6/2010	6183818461966.92	25422.79	-2.79	2000000000	100.00	0.00	28874999916	96.11	-4.11
4/6/2010	6361548187516.39	26153.47	-0.11	2000000000	100.00	0.00	30043749913	100.23	-5.75
28/5/2010	6368783085452.31	26183.21	-2.25	2000000000	100.00	0.00	29974999913	106.34	49.50
21/5/2010	6515135828785.70	26784.9	-3.49	2000000000	100.00	0.00	28187499918	71.13	-37.80
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7/5/2010	6652387001757.11	27503.36	3.97	2000000000	100.00	0.00	34649999899	106.19	4.58
30/4/2010	6398379830657.16	26453.2	-3.46	2000000000	100.00	0.00	32628749905	101.54	14.05
23/4/2010	6627438084071.53	27400.21	-2.10	2000000000	100.00	0.00	32133749907	89.03	-11.82
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26/3/2010	6124980573941.45	25322.87	3.28	2000000000	100.00	0.00	31624999908	120.86	27.02
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12/3/2010	5813870476319.21	24141.72	5.31	2000000000	100.00	0.00	27499999920	97.56	-0.06
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22/1/2010	5305585671179.59	22030.18	-0.14	2000000000	100.00	0.00	28187499918	100.00	0.00
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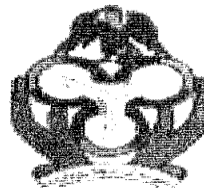
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20/3/2009	4586538020049.49	20370.06	-3.02	2109200000	100.00	-5.00	20624999940	92.02	12.91
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19/12/2008	6537375845551.27	29551.84	3.05	2220200000	100.00	0.00	29287499915	104.93	16.19
12/12/2008	6343942305142.31	28677.44	-6.45	2220200000	100.00	0.00	27912499919	90.30	2.27
5/12/2008	6781114024707.99	30653.65	-7.18	2220200000	100.00	0.00	30909999910	88.30	-7.06
28/11/2008	7305863001698.48	33025.75	-4.72	2220200000	100.00	0.00	35007499898	95.00	-13.15

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7/11/2008	7535992625774.89	34351.81	-5.43	2220200000	100.00	0.00	31624999908	89.36	-10.64
31/10/2008	7969051638349.47	36325.86	-13.27	2220200000	100.00	0.00	35392499897	100.00	0.00
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26/9/2008	9836914013504.09	46216.13	-2.33	2220200000	100.00	0.00	35749999896	100.00	3.50
19/9/2008	10019072017029.80	47317.94	-2.91	2220200000	100.00	0.00	35749999896	96.62	-1.44
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25/7/2008	10102089247852.40	50422.78	-3.57	2337000000	100.00	0.00	31638749908	92.04	-4.28
18/7/2008	10470093742210.40	52286.88	-4.35	2337000000	100.00	0.00	34374999900	96.15	-7.54
11/7/2008	10851786467183.60	54662.06	-1.43	2337000000	100.00	-5.00	35749999896	104.00	-1.74
4/7/2008	10876851379371.90	55456.58	1.00	2337000000	105.26	5.26	34374999900	105.84	2.17
27/6/2008	10482381849556.60	54905.3	0.00	2220200000	100.00	5.26	32477499906	103.60	19.05
20/6/2008	10706180176172.90	54908	-8.78	2220200000	95.00	-5.00	31349999909	87.02	-12.98
13/6/2008	11721200478387.90	60191.83	7.04	2337000000	100.00	0.00	36024999895	100.00	3.05
6/6/2008	10950493853029.90	56234.02	-4.57	2337000000	100.00	5.26	36024999895	97.04	-5.73
30/5/2008	11614463952550.20	58929.02	-3.81	2337000000	95.00	-5.00	37124999892	102.94	5.76
23/5/2008	12065874656576.60	61263.14	-1.85	2460000000	100.00	0.00	36066249895	97.33	-8.96
16/5/2008	12102682981975.40	62415.06	-0.16	2460000000	100.00	0.00	37056249892	106.90	-2.89
9/5/2008	12122656826605.00	62518.07	5.74	2460000000	100.00	-2.44	34663749899	110.09	5.76

2/5/2008	11430155080973.20	59124.87	-3.03	2460000000	102.50	5.06	31487499908	104.09	14.45
25/4/2008	11756459123650.00	60970.66	-0.73	2400000000	97.56	-6.40	30249999912	90.95	5.27
18/4/2008	11843322040287.30	61421.14	-3.63	2460000000	104.24	6.00	33261249903	86.39	-12.93
11/4/2008	12289704675899.40	63736.14	1.82	2360000000	98.33	-2.49	38499999888	99.22	-14.25
4/4/2008	12044806981421.80	62595.15	-0.87	2400000000	100.84	16.94	38802499887	115.70	30.69
28/3/2008	12151003669723.90	63147.04	-2.30	2380000000	86.23	-10.02	33536249902	88.53	-6.81
20/3/2008	12324642204233.90	64635.22	-1.36	2760000000	95.83	-3.50	37881249890	95.00	-6.97
14/3/2008	12495067425429.90	65529	-0.89	2880000000	99.31	-16.94	39874999884	102.11	-10.83
7/3/2008	12592284789270.70	66120.19	1.61	2900000000	119.57	13.88	39049999886	114.52	15.39
29/2/2008	13882335836147.80	65075.02	0.39	2425400000	105.00		34099999901	99.24	
28/2/2008	12339588518109.70	64819.49		2310000000			34361249900		

Appendix D – List of Banks in Nigeria and Lending rates from Central Bank of Nigeria



In furtherance of the transparency and full disclosure stance of the Central bank of Nigeria, the Monetary Policy Committee has decided that henceforth the lending rates obtainable in all Deposit Money Banks (DMBs) be made public to guide business decisions. Consequently, find below the applicable rates for each of the DMBs as at January 30, 2015. The rates will be published every Wednesday in some selected national Newspapers. The rates will also be available on the website of the Central Bank of Nigeria



S/N	NAME OF BANK	Deposit			Lending Rate									
		Demand Deposit	Savings Deposit	Time Deposit	General Comm.		Mortgage		Transp. & Comm.		Fin. & Ins.		Govt.	
		Ave.Int Rate	Ave.Int Rate	Ave.Int Rate	Prime	Max.	Prime	Max.	Prime	Max.	Prime	Max.	Prime	Max.
1	Access Bank	0.08	3.34	11.56	11.00	25.00	14.00	25.00	15.00	25.00	15.00	25.00	13.50	19.00
2	Citi Bank Nigeria	2.72	3.90	6.23	17.00	21.00	-	-	17.00	21.00	17.00	21.00	-	-
3	Diamond Bank	1.11	3.90	10.95	17.00	26.00	17.00	25.00	17.00	25.00	17.00	25.00	17.00	23.00
4	Ecobank Nigeria	0.01	3.90	9.97	16.50	35.00	13.00	32.00	19.00	32.00	19.00	32.00	18.00	32.00
5	Enterprise Bank Ltd	0.20	3.60	7.13	25.00	29.00	25.00	29.00	25.00	29.00	25.00	29.00	25.00	29.00
6	FCMB	0.94	3.60	11.50	17.50	30.00	17.50	19.95	17.50	25.00	17.50	25.50	17.50	25.50
7	Fidelity Bank	2.00	3.90	10.50	19.00	28.00	19.00	28.00	19.00	28.00	19.00	28.00	19.00	28.00
8	First Bank of Nigeria	-	3.60	11.35	20.00	26.00	20.00	26.00	20.00	26.00	20.00	26.00	19.00	26.00
9	Heritage Bank	-	3.99	11.48	24.00	28.00	24.00	28.00	24.00	28.00	24.00	28.00	24.00	28.00
10	Guaranty Trust Bank	0.50	3.90	8.58	13.00	27.00	15.00	27.00	12.00	27.00	18.00	24.00	16.00	21.00
11	Keystone Bank Ltd	0.91	3.13	7.88	21.00	28.00	19.00	26.00	19.00	26.00	21.00	28.00	21.00	28.00
12	MainStreet Bank Ltd	0.10	3.90	10.90	16.28	27.00	16.28	27.00	16.28	27.00	16.28	27.00	16.28	27.00
13	Skye Bank	-	3.60	10.26	25.00	28.00	25.00	28.00	25.00	28.00	25.00	28.00	25.00	28.00
14	Stanbic IBTC Bank	0.76	3.95	9.04	13.75	28.00	16.00	26.00	16.00	27.00	13.75	27.00	14.00	24.00
15	Standard Chartered Bank	-	3.90	10.50	13.00	16.00	17.00	20.00	13.00	16.00	13.00	15.00	14.50	16.00
16	Sterling Bank	1.25	3.60	8.37	16.00	27.00	16.00	25.00	15.00	27.00	16.00	26.00	14.75	22.00
17	Union Bank	0.50	3.90	9.33	24.00	26.00	24.00	26.00	24.00	26.00	24.00	26.00	24.00	26.00
18	United Bank for Africa	0.02	3.60	9.39	20.00	24.00	24.00	26.00	20.00	24.00	16.50	24.00	20.00	24.00
19	Unity Bank	0.5-1.00	3.60	3.5-11.00	24.00	30.00	24.00	30.00	24.00	30.00	24.00	30.00	24.00	30.00
20	Wema Bank	1.32	3.90	10.28	27.00	27.00	27.00	26.00	27.00	24.00	27.00	24.00	27.00	25.00
21	Zenith Bank	0.50	3.60	9.00	17.00	27.00	17.00	23.00	17.00	25.00	18.00	24.00	17.00	19.00

Average Deposit and Lending Rates as at 30-01-2015

S/N	NAME OF BANK	Deposit			Lending Rate									
		Demand Deposit	Savings Deposit	Time Deposit	Agriculture		Mining & Quarrying		Oil & Gas		Manufacturing		Real Estate & Const	
		Ave.Int Rate	Ave.Int Rate	Ave.Int Rate	Prime	Max.	Prime	Max.	Prime	Max.	Prime	Max.	Prime	Max.
1	Access Bank	0.08	3.34	11.56	7.00	25.00	-	-	13.00	25.00	7.00	25.00	11.00	25.00
2	Citi Bank Nigeria	2.72	3.90	6.23	17.00	21.00	17.00	21.00	17.00	21.00	17.00	21.00	17.00	21.00
3	Diamond Bank	1.11	3.90	10.95	14.00	22.00	17.00	25.00	17.00	25.00	17.00	25.00	17.00	25.00
4	Ecobank Nigeria	0.01	3.90	9.97	21.00	32.00	30.00	32.00	19.50	32.50	16.00	32.00	19.00	32.00
5	Enterprise Bank Ltd	0.20	3.60	7.13	25.00	29.00	25.00	29.00	25.00	29.00	25.00	29.00	25.00	29.00
6	FCMB	0.94	3.60	11.50	17.50	27.00	17.50	10.55	17.50	26.00	17.50	25.00	17.50	25.00
7	Fidelity Bank	2.00	3.90	10.50	6.00	28.00	19.00	28.00	19.00	28.00	19.00	28.00	19.00	28.00
8	First Bank of Nigeria	-	3.60	11.35	9.00	24.00	20.00	26.00	20.00	26.00	20.00	26.00	20.00	26.00
9	Heritage Bank	-	3.99	11.48	24.00	28.00	24.00	28.00	24.00	28.00	24.00	28.00	24.00	28.00
10	Guaranty Trust Bank	0.50	3.90	8.58	17.00	27.00	24.00	24.00	13.50	27.00	14.70	27.00	15.00	27.00
11	Keystone Bank Ltd	0.91	3.13	7.88	n/a	n/a	19.00	26.00	19.00	26.00	19.00	26.00	19.00	26.00
12	MainStreet Bank Ltd	0.10	3.90	10.90	16.28	27.00	16.28	27.00	16.28	27.00	16.28	27.00	16.28	27.00
13	Skye Bank	-	3.60	10.26	14.00	14.00	25.00	28.00	25.00	28.00	25.00	28.00	25.00	28.00
14	Stanbic IBTC Bank	0.76	3.95	9.04	5.50	28.00	16.00	27.00	16.00	27.00	12.50	27.00	16.00	26.00
15	Standard Chartered Bank	-	3.90	10.50	13.00	16.00	13.00	16.00	15.00	19.00	16.00	20.00	13.00	16.00
16	Sterling Bank	1.25	3.60	8.37	7.00	26.00	16.00	28.00	16.50	27.00	16.00	27.00	15.00	28.00
17	Union Bank	0.50	3.90	9.33	24.00	24.00	24.00	26.00	24.00	26.00	24.00	26.00	24.00	26.00
18	United Bank for Africa	0.02	3.60	9.39	7.00	24.00	20.00	24.00	16.50	24.00	16.50	24.00	20.00	24.00
19	Unity Bank	0.5-1.00	3.60	3.5-11.00	24.00	30.00	24.00	30.00	24.00	30.00	24.00	30.00	24.00	30.00
20	Wema Bank	1.32	3.90	10.28	27.00	26.00	27.00	25.00	27.00	24.00	27.00	24.00	27.00	26.00
21	Zenith Bank	0.50	3.60	9.00	17.00	18.00	17.00	23.00	17.00	24.00	17.00	24.50	17.00	24.00

These are the interest rates banks charge the public on loans and advances. It reflects the cost of borrowings and also includes all charges and commissions levied by banks.

(Signed)

Management

Appendix E – Structural Equation Modelling Model Fit Parameters

**Model Fit Summary**

**CMIN**

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	36	21.405	9	.011	2.378
Saturated model	45	.000	0		
Independence model	9	274.586	36	.000	7.627

**RMR, GFI**

Model	RMR	GFI	AGFI	PGFI
Default model	.030	.980	.899	.196
Saturated model	.000	1.000		
Independence model	.093	.771	.713	.616

**Baseline Comparisons**

Model	NFI	RFI	IFI	TLI	CFI
	Delta1	rho1	Delta2	rho2	
Default model	.922	.688	.953	.792	.948
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

**RMSEA**

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.078	.035	.121	.123
Independence model	.171	.153	.190	.000