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**A MODERATING ROLE OF BOARD CHARACTERISTICS
ON THE EFFECT OF ANTECEDENTS ON THE STAGE OF
ENTERPRISE RISK MANAGEMENT IMPLEMENTATION**



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**DOCTOR OF PHILOSOPHY
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MANAGEMENT IMPLEMENTATION**

By

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in Fulfilment of the Requirement for the Degree of Doctor of Philosophy**



**SCHOOL OF ACCOUNTANCY
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ABSTRACT

Enterprise Risk Management (ERM) has become an important issue of increasing attention among the business community throughout the world. However, the concept is still relatively new among Nigerian companies and little is known about why many organizations are not fully implementing it. The main objective of this study is to examine the current state of ERM practices and the stage of its implementation in the Nigerian banking sector. The study further examined the effect of the antecedents on the stage of ERM implementation, and evaluated the moderating effect of board characteristics on the relationship between antecedents and the stage of ERM implementation. The study used a survey approach to collect cross-sectional data across 361 branches and the headquarters of the 21 Nigerian commercial banks using 722 respondents. The response rate is 60 percent. Logistic Regression Model was used for data analysis. The finding revealed that there is an ERM complete in place in majority of the banks. Furthermore, the finding showed that internal audit effectiveness, human resource competency and top management commitment effect significant influence on the stage of ERM implementation while regulatory influence had partial effect. Likewise, there is a moderating effect of board characteristics on internal audit effectiveness and the stage of ERM implementation. The finding has a policy implication for the Board of Directors to improve their oversight functions and the regulatory authorities to entrench risk based supervision in all the Nigerian banks. Nevertheless, the study has limitation in terms of power of prediction with respect to measurement scale of the dependent variable and the respondents. Future research is therefore needed to evaluate the effectiveness of ERM process using a more robust scale and top management as respondents. Therefore, a clarion call is made to introduce an ERM practices across all the Nigerian companies irrespective of their status.

Keywords: Board characteristics; enterprise risk management; board directors; Nigerian banks; shareholder value.

ABSTRAK

Pengurusan Risiko Perusahaan atau *Enterprise Risk Management* (ERM) telah menjadi isu penting yang semakin mendapat perhatian dalam kalangan komuniti perniagaan di seluruh dunia. Walau bagaimanapun, konsep ini masih agak baharu dalam kalangan syarikat perusahaan di Nigeria dan tidak banyak yang diketahui tentang mengapa banyak organisasi tidak melaksanakan ERM ini sepenuhnya. Objektif utama kajian adalah untuk menyelidik keadaan semasa amalan ERM dan tahap pelaksanaannya dalam sektor perbankan di Nigeria. Kajian ini menyelidik lebih mendalam tentang kesan antesedan pada peringkat pelaksanaan ERM, dan menilai kesan pengantara ciri-ciri lembaga pengarah terhadap antesedan dan peringkat pelaksanaan ERM. Dalam kajian ini, pendekatan tinjauan digunakan untuk mengumpul data keratan rentas daripada 361 cawangan dan ibu pejabat bagi 21 buah bank perdagangan Nigeria dengan menggunakan 722 responden. Dengan kadar maklum balas sebanyak 60 peratus, Permodelan Regresi Logistik digunakan untuk menganalisis data. Dapatan kajian menunjukkan terdapat ERM lengkap dalam kebanyakan bank tersebut. Tambahan pula, keberkesanan audit dalaman, kecekapan sumber manusia dan kesan komitmen pengurusan atasan mempengaruhi peringkat pelaksanaan ERM secara signifikan, manakala pengaruh kawal selia memberikan kesan separa. Di samping itu, terdapat kesan pengantara ciri-ciri lembaga pengarah ke atas keberkesanan audit dalaman dan peringkat pelaksanaan ERM. Dapatan ini mempunyai implikasi dasar bagi Lembaga Pengarah untuk meningkatkan fungsi pengawasan dan pihak penguasa kawal selia untuk mengukuhkan kawalan penyeliaan risiko semua bank di Nigeria. Walau bagaimanapun, kajian ini agak terbatas dari segi kuasameramaldengan skala pengukuran pemboleh ubah bersandar dan responden. Oleh itu, kajian akan datang diperlukan untuk menilai keberkesanan proses ERM menggunakan skala yang lebih mantap dan menjadikan pihak pengurusan atasan sebagai responden. Oleh yang demikian, amalan ERM sememangnya amat perlu diperkenalkan kepada syarikat-syarikat perusahaan di seluruh Nigeria tanpa mengira status.

Kata kunci: Ciri-ciri lembaga pengarah; pengurusan risiko perusahaan; lembaga pengarah; bank Nigeria; nilai pemegang saham.

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LIST OF ABBREVIATIONS

ACCA	Association of Chartered Certified Accountants
ACIB	Association of Chartered Institute of Bankers
ANAN	Association of National Accountants of Nigeria
APT	Areas of Risk that Present Greatest Threat to the Bank
BCS	Board Characteristics Support
BIS	Bank for International Settlement
BOD	Board of Directors
BOFI	Banks and Other Financial Institutions
BRM	Business Risk Management
CAE	Chief Audit Executive
CAS	Casualty Actuarial Society
CBN	Central Bank of Nigeria
CEO	Chief Executive Officer
CFO	Chief Finance Officer
CFR	Current Focus of Risk Management Efforts
CIMA	Chartered Institute of Management Accountants
COSO	Committee of Sponsoring Organisation of the Treadway Commission
CORM	Corporate Risk Management
CRM	Credit Risk Management
CRO	Chief Risk Officer
DEF	Development of Enterprise Risk Management Framework
Div	Dividend
ECB	European Central Bank
ERM	Enterprise Risk Management
EWRM	Enterprise Wide Risk Management
FDIC	Federal Deposit Insurance Corporation
GDP	Gross Domestic Product
GRC	Corporate Governance, Risk Management and Compliance
HRM	Holistic Risk Management
HRC	Human Resource Competency
IAE	Internal Audit Effectiveness
IASB	International Accounting Standard Board

ICAN	Institute of Chartered Accountants of Nigeria
IIA	Institute of Internal Auditing
IMF	International Monetary Fund
IRM	Institute of Risk Management
INRM	Integrated Risk Management
ISE	Istanbul Stock Exchange
ISM	Information Security Management
ISPPIA	International Standards for the Professional Practices of Internal Auditing
KPMG	Klynveld Peat Marwick Goendeler
MDB	Money Deposit Bank
MEA	Motivation for Enterprise Risk Management Adoption
MIA	Middle Africa
NDIC	Nigeria Deposit Insurance Corporation
NICON	National Insurance Corporation of Nigeria
NIM	Nigerian Institute of Management
NSE	Nigerian Stock Exchange
OLS	Ordinary Least Square
PCP	Percentage of Correct Prediction
PLC	Public Limited Company
R&D	Research and Development
RIS	Regulatory Influence Support
RMC	Risk Management Committee
ROE	Return on Equity
SAN	Senior Advocate of Nigeria
SAP	Structural Adjustment Progra
SEM	Structural Equation Modeling
SERM	Stage of Enterprise Risk Management Implementation
SOX	Sarbanes-Oxley Act
S & P	Standard and Poor
SPSS	Statistical Package for Social Science
TMC	Top Management Commitment
TRM	Traditional Risk Management
TSE	Toronto Stock Exchange

UK United Kingdom
US United States
VIF Variance Inflation Factor



CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Enterprise Risk Management (ERM) has gained an increased attention in recent years and has become a subject of interest to the stakeholders in the business world. Many companies and organisations have implemented ERM using different frameworks or through outsourcing services. The deployment of ERM in the organisations, especially the financial industry provides the required monitoring mechanism to effectively address potential risk exposures that can jeopardize the accomplishment of the objectives of the enterprise. Thus, the essence of ERM adoption is to ensure that corporate goal of raising the value of stakeholders is achieved. Enterprise Risk Management implementation further enables the entity to acquire advantage of risk and effectively convert it to an opportunity for the benefit of the enterprise.

Presently, most businesses and industries are facing various threats from risk exposures which have been on the increase, and are visible. These include compliance risk, competitiveness risk, financial risk, operational risk and strategic risk arising from technological advancement, globalization, incessant terrorist activities, diversification, information security and industrialization (Jalal-Karim, 2013). The management of risk exposures must be practical in terms of taking offensive action rather than defensive position. Therefore, managing such risk can be a real source of golden opportunity and challenge, and can be a powerful tool for supporting competitive advantage (Gatzert & Martin, 2013; Jalal-Karim, 2013). Enterprise Risk Management is therefore a roadmap to identifying and analysing the various risks faced by the enterprises from a business wide perspective.

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Appendix 1: Questionnaire



Impact of antecedents on the extent of risk management implementation in Nigerian commercial banks: A moderating effect of board characteristics

As a result of increased regulatory pressure and the desire to promote good business practices, both internally and externally, there has been a paradigm shift in the risk management practices of the Nigerian banking sector. This research is to find out how the Nigerian banks are implementing enterprise risk management (ERM) in response to these regulatory pressures. The main objective of the study is to examine the impact of antecedents of the extent of ERM implementation in the Nigerian banking sector with a view to promoting good corporate governance and enhance shareholder's value.

Research benefit: The researcher believes that the findings of this survey will be of significant use to the banks and all types of organizations in respect of the management of threats and opportunities.

Confidentiality: All information provided by your bank will be treated with utmost confidence and will only be used for achieving the objectives of the study.

Instruction for completion: Kindly complete the questionnaire attached herewith. It is hope that your response will reflect the actual practice in your bank. It will be appreciated if you could return them immediately after completion.

Thank you in anticipation of your cooperation and understanding. In case of any inquiry, please contact the researcher through the address:

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Part A: Current status of enterprise risk management implementation (ERM) Nigerian commercial banks

The following statements relate to the current practices of enterprise risk management (ERM) in the Nigerian commercial banks. From your experience in the bank, to what extent do you agree or disagree with the statements? Please indicate the extent of your agreement with each statement by circling 1- 5, based on the following scale:

“1” = strongly disagree (SD)
 “2” = Disagree (D)
 “3” = Indifferent (IND)
 “4” = Agree (A)
 “5” = strongly agree (SA)

Section 1: What are the current focuses of risk management efforts that support ERM implementation in your bank? (Please circle all that apply)

		SD	D	IND	A	SA
1	Integration of risk management into day to day operations	1	2	3	4	5
2	Risk management considerations are explicitly factored into decision making	1	2	3	4	5
3	Existence of the rank of chief risk officer (CRO)	1	2	3	4	5
4	ERM integrate risk management with corporate strategic planning	1	2	3	4	5
5	Aligns ERM initiatives to bank objectives and strategies	1	2	3	4	5
6	Putting a system in place to promote risk optimization and opportunities	1	2	3	4	5
7	Integration of ERM across all functions and bank business units	1	2	3	4	5

How did you develop the framework that support ERM implementation in your bank? (Please circle all that apply).

		SD	D	IND	A	SA
8	Continuous improvement on the existing risk management framework	1	2	3	4	5
9	Adoption from Basel 11 Capital Accord	1	2	3	4	5
10	Adopt from the CAN/CSA-Q850-97, RM Guideline for decision makers	1	2	3	4	5
11	Adopt from the COSO, 2004 Enterprise Risk Management Integrated Framework, USA.	1	2	3	4	5
12	Adoption from Nigerian code of corporate governance by SEC and CBN, 2006.	1	2	3	4	5

What are the Motivations for the implementation of ERM in your bank? (Please circle all that apply)

		SD	D	IND	A	SA
13	Compliance with regulatory demands	1	2	3	4	5
14	Mandate from the Board of Directors	1	2	3	4	5
15	Desire to Protect and improve shareholder value	1	2	3	4	5
16	External/Internal auditors' influence	1	2	3	4	5
17	Emerging corporate governance requirements	1	2	3	4	5
18	Emerging best business practices	1	2	3	4	5

What are the areas of risk which present the greatest potential threats and become a priority to your bank? (Please circle all that apply).

		SD	D	IND	A	SA
19	Compliance risk	1	2	3	4	5
20	Credit risk	1	2	3	4	5
21	Information security risk	1	2	3	4	5
22	Market risk	1	2	3	4	5
23	Operational risk	1	2	3	4	5
24	Reputational risk	1	2	3	4	5
25	Liquidity risk	1	2	3	4	5

Section 2: Stage of ERM implementation in the bank

The following question relate to the current stage of ERM implementation in the Nigerian commercial banks. From your experience in the bank, Please answer the question by ticking [/] only one item in the appropriate box.

26. What is the current stage of risk management implementation in your bank?

The bank has complete ERM in place

The bank has partial ERM in place

Section 3: Antecedents of risk management implementation in the Nigerian banking sector

The following statements relate to the antecedents of ERM implementation in the Nigerian commercial banks. From your experience in the bank, to what extent do you agree or disagree with the statements? Please indicate the extent of your agreement with each statement by circling 1- 5, based on the following scale:

Internal audit effectiveness that support ERM implementation in the bank (Please circle all that apply)		SD	D	IND	A	SA
27	Internal audit Scope of work covers bank capital and liquidity management that support ERM implementation in the bank	1	2	3	4	5
28	Internal audit independence and objectivity support ERM implementation in the bank	1	2	3	4	5
29	Internal audit educational background is relevant to banking operations which support ERM implementation in the bank	1	2	3	4	5
30	Internal audit have sufficient knowledge of banking operations to support ERM implementation in the bank	1	2	3	4	5
31	Internal auditor knowledge of internal auditing standards support ERM implementation in the bank	1	2	3	4	5
32	Availability of audit manual in the bank support ERM implementation	1	2	3	4	5
33	Top management implement internal audit recommendation to support ERM implementation in the bank	1	2	3	4	5

**Human resource competency that support ERM
implementation in the bank (Please circle all that apply)**

		SD	D	IND	A	SA
34	The bank focuses on education and training to enhance staff capability	1	2	3	4	5
35	The bank provides infrastructure such as equipment and facilities to enhance staff performance	1	2	3	4	5
36	The bank focuses on creating knowledge of risk management through risk awareness culture	1	2	3	4	5
37	The bank applies skills, knowledge and experience to enhance competitive advantage	1	2	3	4	5
38	The bank has devised credible reward system and recognize employees and managers for their high performance and goal achievements to support capacity development	1	2	3	4	5
39	The bank promotes staff proficiency level through professional qualification and certification to support ERM implementation	1	2	3	4	5
40	The bank provides full time educational studies in risk management to support ERM implementation	1	2	3	4	5

**Regulatory influence that support ERM implementation in
the bank (Please circle all that apply)**

		SD	D	IND	A	SA
41	The bank focuses on compliance with Nigerian codes (CBN & SEC) of corporate governance	1	2	3	4	5
42	The bank focuses on consistent compliance with procedures and policies of the bank	1	2	3	4	5

43	The bank focuses on compliance with stock exchange listing requirements	1	2	3	4	5
44	The bank focuses on compliance with government rules and regulations	1	2	3	4	5
45	The bank focuses on compliance with Basel 11 accord principles	1	2	3	4	5
47	The bank focuses on compliance with risk management standards and guidelines	1	2	3	4	5

Top management commitment that influence ERM implementation in the bank (Please circle all that apply)

47	Top management assumes the responsibility of initiating and maintaining ERM goals and cultural awareness	1	2	3	4	5
48	Top management vision, mission and commitment to ERM implementation is continually communicated to all employees	1	2	3	4	5
49	Top management is accountable for ERM implementation and is involved in reviewing progress report towards ERM processes	1	2	3	4	5
50	Top management develops policies and guidelines for risk management implementation	1	2	3	4	5
51	Top management makes risk management a top priority and spends a significance proportion of time on ERM issues	1	2	3	4	5
52	Necessary policy changes have been made to encourage employees participation and involvement in ERM process	1	2	3	4	5
53	Top management have Sufficient Skills, knowledge and experience in ERM process and decision making	1	2	3	4	5
54	Top management Encourages employees competency development by providing needed funds for training and education on the ERM essential technique	1	2	3	4	5
55	Top management is committed to ERM process through the implementation of internal audit recommendation	1	2	3	4	5

56	Top management Promotes risk optimization and exploits opportunities to enhance competitive advantage	1	2	3	4	5
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Section 3; Board characteristics as a moderating variable

Board characteristics that support ERM implementation

		SD	D	IND	A	SA
57	The larger boards with diverse background have knowledge and are more experienced to support ERM implementation.	1	2	3	4	5
58	Internal and external directors have skills and expertise that support ERM implementation	1	2	3	4	5
59	Frequency of board meetings support ERM implementation	1	2	3	4	5
60	The presence of risk management committee support ERM implementation	1	2	3	4	5
61	Higher percentage of independent board directors support ERM deployment	1	2	3	4	5
62	The board directors with equity ownership are more committed to ERM implementation					
63	Greater percentage of women board directors support ERM implementation	1	2	3	4	5
64	The directors with related educational background are committed to ERM implementation	1	2	3	4	5

Part B: Section 1: Relate to the personal profile of the respondent and some general information about the bank.

From your experience in the bank, Please answer the following questions by ticking (/) only one item in the appropriate box.

65. What is your age?

Less than 30 Years	[]
31 - 40 Years	[]
41 - 50Years	[]
51 Years and above	[]

66. What is your gender? Male [] Female []

67. Which category of staff do you belong to?

Top level management	[]
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Middle level management []

Lower level management []

68. Which department/unit do you belong to?

Risk management department/unit []

Internal audit/compliance department/unit []

Others (Please specify) _____ []

69. What is your designation?

Board Committee Member []

Executive Director []

General Manager []

Deputy/Assistant General Manager []

Principal Manager/Senior Manager []

Manager []

Others, (Please specify) _____ []

70. How many years of experience do you have in risk management?

1-5 Years []

6-10 Years []

10 and above []

71. What is your highest educational qualification?

Doctoral degree []

Master degree []

Bachelor degree or equivalent []

Diploma or A-level or equivalent []

GCE or o-level or equivalent []

72. Are you a member of any professional accounting/auditing body?

Yes [] No []

73. If yes, please tick all that apply

Association of National Accountants of Nigeria (ANAN) []

Institute of Chartered Accountants of Nigeria (ICAN) []

74. Are you a member of any other professional body apart from ANAN and ICAN?

Chartered Institute of Management Accountants, Nigeria (CIMA) []

Association of Chartered Certified Accountants (ACCA) []

Institute of Internal Auditors (IIA) []

Others (Please specify) _____

Section 2: General information about the bank

75. How long has your bank been in existence?

Less than 5 Years []

6 - 10 Years []

11 - 15 Years []

16 - 20 Years
21 Years and above []

76. Is your bank listed on the Nigerian Stock Exchange?

Yes [] No []

77. Does your bank have a chief risk officer (CRO)?

Yes [] No []

78. Which Audit firm does audit for your bank?

Big4 []
None big4 []

79. What is the total asset of your bank as at 31st December, 2012?

Less than 25 billion Naira []
25Billion - 50 Billion Naira []
51Billion - 75 Billion Naira []
76 Billion - 100 Billion Naira []
101 Billion Naira and above []

80. What is the number of your branches?

Less than 30 Branches []
31 - 60 Branches []
61 - 90 Branches []
91 - 120 Branches []
121 branches and above []

Section C: Respondents comments/ suggestions

Kindly make comments/Suggestions -----

Thank you.

APPENDIX 2: QUESTIONNAIRE DEVELOPMENT

Part One:

Variables	Elements/Items	Items	Source
The current focus of risk management efforts in my bank	<p>Integration of risk management into day to day operations</p> <p>Risk management considerations are explicitly factored into decision making</p> <p>Existence of the rank of chief risk officer (CRO)</p> <p>ERM integrates risk management with corporate strategic planning</p> <p>Align ERM initiatives to bank objectives and strategies</p> <p>Put a system in place to promote risk optimization and opportunities</p> <p>Integration of ERM across all functions and bank business units</p> <p>Creation of risk awareness culture</p>	7	(Colquitt <i>et al.</i> , 1999; Klefner <i>et al.</i> , 2003 ; Kassim & Hussin, 2010; Manab & Kassim, 2012; Yegon, Mouni & Wanjau, 2014)
Development of ERM framework in my bank	<p>Continuous improvement of the existing risk management framework</p> <p>Adoption from Basel 11 Capital Accord</p> <p>Adopt from the CAN/CSA-Q850-97, Risk Management Guideline for decision makers</p> <p>Adopt from the COSO, 2004 Enterprise Risk Management Integrated Framework, USA, 2004</p> <p>Adoption of Nigerian code of corporate governance by SEC and CBN, 2006.</p>	5	(Fadun, 2013; Manab & Kassim, 2012)
Motivations for my bank to adopt risk management	<p>Compliance with regulatory demands</p> <p>Mandate from the Board of Directors</p> <p>Desire to Protect and improve shareholder value</p> <p>External/Internal auditors influence</p>	6	(Beasley <i>et al.</i> ,2010; Hoyt & Liebenberg, 2008; Klefner <i>et al.</i> , 2003)

Variables	Elements/Items	Items	Source
	Emerging corporate governance requirements Emerging best business practices		
Areas of risk which present the greatest potential threats and become a priority for my bank	Compliance risk Credit risk Information security risk Market risk Operational risk Reputational risk Liquidity risk	7	Desender, 2007; Fadun, 2013; Manab <i>et al.</i> , 2010; Njogo, 2012)
Part two	Antecedents of risk management implementation		
Stage of enterprise risk management implementation	Complete ERM in Place Partial ERM in Place Planning to implement ERM Investigating to adopt ERM No plan Exist to implement ERM	5	Beasley <i>et al.</i> , (2005 ; 2006; 2011; Daud, Haron & Ibrahim, 2011)
Regulatory Influence	The bank focuses on compliance with Nigerian codes (CBN & SEC) of corporate governance The bank focuses on consistent compliance with the procedures and policies of the bank The bank focuses on compliance with stock exchange listing requirements The bank focuses on compliance with government rules and regulations The bank focuses on compliance with Basel 11 accord The bank focuses on compliance with risk management standards and guidelines	6	(Desender, 2007; Liebenberg & Hoyt, 2008; Paape & Spekle, 2011)
Internal Audit Effectiveness	Internal audit independence and objectivity support ERM implementation in my bank		(Al-Twajjry <i>et al.</i> , 2004; Badar & saidin,

Variables	Elements/Items	Items	Source
	<p>Internal audit Scope of work covers bank</p> <p>Capital and liquidity management which support ERM implementation in my bank</p> <p>My bank recognizes and promotes standards of proficiency, technical competence and personal moral integrity among the internal audit to support ERM implementation</p> <p>Internal audit educational background is relevant to banking operations which support ERM implementation in my bank</p> <p>Internal audit has sufficient knowledge of banking operations to support ERM implementation in my bank</p> <p>Internal audit knowledge of internal auditing standards supports ERM implementation in my bank</p> <p>Availability of audit manual in my bank support ERM implementation</p> <p>Top management implements internal audit recommendation to support ERM implementation in my bank</p>	8	<p>2014;</p> <p>Beasley <i>et al.</i>, 2006; Cohen & Sayag, 2010; Fadzil <i>et al.</i>,2005; Mihret & Yismaw, 2007)</p>
<p>Human resource competency</p>	<p>My bank focuses on education and training to enhance staff capability</p> <p>My bank provides infrastructure such as equipment and facilities to enhance staff performance</p> <p>My bank focuses on creating knowledge of risk management through risk awareness culture</p> <p>My bank applies skills, knowledge and experience to enhance competitive advantage</p>	7	<p>Al-Twajiry <i>et al.</i>, 2004; Colquit, Hoyt & Lee., 1999; Yaraghi & Langhe, 2011;</p>

Variables	Elements/Items	Items	Source
	<p>My bank has devised a credible reward system and recognize employees and managers for their high performance and goal achievements to support capacity development</p> <p>My bank promotes staff proficiency level through professional qualification and certification to support ERM implementation</p> <p>My bank provides full time educational studies in risk management to support ERM implementation</p>		
<p>Top Management commitment which influence ERM implementation in my bank</p>	<p>Top management assumes the responsibility for initiating and maintaining ERM goals and culture</p> <p>Top management vision, mission and commitment to ERM implementation is continually communicated to all employees</p> <p>Top management is accountable for risk management implementation</p> <p>The policy and strategy of our bank are based on the concept of ERM</p> <p>Top management development bank-wide guidelines for risk management and is involved in reviewing progress towards ERM process</p> <p>Top management makes risk management a top priority and spends a significant proportion of time on ERM issues</p> <p>Necessary policy changes have been made to encourage employees participation and involvement in the ERM process Top management provides needed funds for infrastructure such as equipment and</p>	<p>10</p>	<p>Manab & Kassim, 2012; Ren, Chandrasekar & Bin Li, 2012; Yaraghi & Langhe, 2011; Walker <i>et al.</i>, 2002)</p>

Variables	Elements/Items	Items	Source
	<p>facilities</p> <p>Top management has Sufficient Skills, knowledge and experience in ERM process and decision making</p> <p>Top management Encourages employee competency development by providing needed funds for training and education on the ERM essential technique</p> <p>Top management is committed to ERM process through the implementation of internal audit recommendation</p> <p>Top management Promotes risk optimization and exploit opportunities to enhance competitive advantage</p>		
Board Characteristics	<p>Larger Boards with diverse background have knowledge and are more experienced to support ERM implementation</p> <p>Internal and external directors have the skills and expertise that support ERM implementation</p> <p>Frequency of board meetings, supports ERM implementation</p> <p>The presence of risk Management committee support ERM implementation</p> <p>The higher percentage of independent Board directors support ERM deployment</p> <p>The board directors with equity ownership are more committed to ERM implementation</p> <p>The greater percentage of women</p>	8	<p>Adams and Ferreira, 2009; Beasley, 1996; Desender, (2007; Ren, Chandrasekar & Bin Li, 2012; Yazid & Daud, 2011)</p>

Variables	Elements/Items	Items	Source
	Board Directors support ERM implementation The directors with educational background are committed to ERM implementation		
Total	Items	69	



Appendix 3 Logistic Output for Model 1

```
. logit SERM RIS IAE HRC
Iteration 0:   log likelihood = -153.1231
Iteration 1:   log likelihood = -145.30992
Iteration 2:   log likelihood = -143.95844
Iteration 3:   log likelihood = -143.95641
Iteration 4:   log likelihood = -143.95641

Logistic regression               Number of obs   =       435
                                LR chi2(3)        =       18.33
                                Prob > chi2       =       0.0004
Log likelihood = -143.95641      Pseudo R2      =       0.0599
```

SERM	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
RIS	.32652	.1690884	1.93	0.053	-.0048872	.6579272
IAE	.2867093	.1659002	1.73	0.084	-.0384492	.6118678
HRC	.2783901	.15435	1.80	0.071	-.0241303	.5809105
_cons	-1.609381	.8401628	-1.92	0.055	-3.25607	.037308



Appendix 4: Logistic Regression Output for Model 2

```

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```

```

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```

Notes:

1. (/v# option or -set maxvar-) 5000 maximum variables

```
. use "C:\Users\User\Desktop\Working Dab..41.dta", clear
```

```
. do "C:\Users\User\AppData\Local\Temp\STD04000000.tmp"
```

```
. logit SERM RIS IAE HRC TMC BCS
```

```

Iteration 0: log likelihood = -153.1231
Iteration 1: log likelihood = -142.88925
Iteration 2: log likelihood = -141.40921
Iteration 3: log likelihood = -141.40357
Iteration 4: log likelihood = -141.40357

```

```

Logistic regression          Number of obs      =    435
                             LR chi2(5)            =    23.44
                             Prob > chi2           =    0.0003
Log likelihood = -141.40357   Pseudo R2       =    0.0765

```

SERM	Coef.	Std. Err.	z	P>z	[95% Conf. Interval]	
RIS	.1429708	.1925115	0.74	0.458	-.2343447	.5202864
IAE	.3418751	.1796155	1.90	0.057	-.0101648	.6939151
HRC	.3752854	.1662721	2.26	0.024	.049398	.7011728
TMC	.4305922	.1839006	2.34	0.019	.0701536	.7910308
BCS	-.642989	.2922642	-2.20	0.028	-1.215816	-.0701616
_cons	-.6027392	.9829101	-0.61	0.540	-2.529208	1.323729

```
. lfit,group(10) table
```

Logistic model for SERM, goodness-of-fit test

(Table collapsed on quantiles of estimated probabilities)

Group	Prob	Obs_1	Exp_1	Obs_0	Exp_0	Total
1	0.7977	33	30.6	11	13.4	44
2	0.8493	34	36.4	10	7.6	44
3	0.8817	35	37.4	8	5.6	43
4	0.8981	39	39.1	5	4.9	44
5	0.9113	41	39.8	3	4.2	44

```

-----+-----+-----+-----+-----+-----+
6  0.9203    40  39.4    3    3.6    43
7  0.9319    43  41.7    2    3.3    45
8  0.9425    44  45.0    4    3.0    48
9  0.9506    37  36.0    1    2.0    38
10 0.9897    40  40.5    2    1.5    42
-----+-----+-----+-----+-----+

```

```

Number of observations    = 435
Number of groups         = 10
Hosmer-Lemeshow chi2 (8) = 4.81
Prob > chi2              = 0.7772

```

```
. lstat
```

```
Logistic model for SERM
```

```

----- True -----
Classified  D      ~D      Total

+           384      46      430
-           2       3       5

Total      386      49      435

```

```
Classified + if predicted Pr (D) >=.5
True D defined as SERM          = 0
```

```

Sensitivity                Pr (+ D)   99.48%
Specificity                Pr (~D)    6.12%
Positive predictive value  Pr (D +)  89.30%
Negative predictive value  Pr (~D -) 60.00%

False + rate for true ~D   Pr (+~D)  93.88%
False - rate for true D    Pr (- D)  0.52%
False + rate for classified + Pr (~D +) 10.70%
False - rate for classified - Pr (D -)  40.00%

```

```
Correctly classified          88.97%
```

```
. linktest
```

```

Iteration 0:  log likelihood = -153.1231
Iteration 1:  log likelihood = -145.25373
Iteration 2:  log likelihood = -141.68896
Iteration 3:  log likelihood = -141.34618
Iteration 4:  log likelihood = -141.34558
Iteration 5:  log likelihood = -141.34558

```

```

Logistic regression          Number of obs = 435
                             LR chi2(2)          = 23.56
                             Prob > chi2         = 0.0000
Log likelihood = -141.34558   Pseudo R2      = 0.0769

```

SERM	Coef.	Std. Err.	z	P>z	[95% Conf. Interval]	
_hat	.7866096	.6629395	1.19	0.235	-.512728	2.085947
_hatsq	.0655661	.1942621	0.34	0.736	-.3151806	.4463128
_cons	.1325888	.5783009	0.23	0.819	-1.00086	1.266038

```
. mfx comput,eyex at(mean)
Elasticities after logit
y = Pr(SERM) (predict)
= .9044621
```

variable	ey/ex	Std. Err.	z	P>z	[95% C.I.]	X
RIS	.0587186	.07891	0.74	0.457	-.095947	.213385		4.29885
IAE	.143788	.0754	1.91	0.057	-.003985	.291561		4.4023
HRC	.1515758	.06628	2.29	0.022	.02166	.281491		4.22759
TMC	.1720225	.07274	2.36	0.018	.029449	.314596		4.18161
BCS-	.2537687	.11263	-2.25	0.024	-.474521	-.033017		4.13103

Appendix 5: Logistic Regression Output for Model 3

```
(R)
-----
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Notes:

1. (/v# option or -set maxvar-) 5000 maximum variables

```
. use "C:\Users\User\Desktop\Working Dab..41.dta", clear
```

```
. logistic SERM RIS IAE HRC TMC BCS Auditfirm Assets Branches NSE CRO
```

```
Logistic regression
Number of obs = 435
LR chi2(10) = 25.98
Prob > chi2 = 0.0038
Pseudo R2 = 0.0848
Log likelihood = -140.13376
```

SERM	Odds Ratio	Std. Err.	z	P> z	[95% Conf. Interval]
RIS	1.118208	.2179637	0.57	0.567	.7631406 1.638479
IAE	1.455346	.267569	2.04	0.041	1.015011 2.086709
HRC	1.460179	.2421964	2.28	0.022	1.05492 2.021124
TMC	1.598764	.3005296	2.50	0.013	1.10606 2.310947
BCS	.5436327	.1594861	-2.08	0.038	.3059058 .966103
Auditfirm	1.206677	.4114435	0.55	0.582	.6185214 2.354113
Assets	1.141677	.1966062	0.77	0.442	.8146276 1.600026
Branches	.8086472	.2583327	-0.66	0.506	.4323464 1.512468
NSE	1.993575	1.380105	1.00	0.319	.5132934 7.742822
CRO	.7149352	.7788854	-0.31	0.758	.0845135 6.047937
_cons	.341225	.8195378	-0.45	0.654	.0030808 37.79339

```
. do "C:\Users\User\AppData\Local\Temp\STD04000000.tmp"
```

```
. logit SERM RIS IAE HRC TMC BCS Auditfirm Assets Branches NSE CRO
```

```
Iteration 0: log likelihood = -153.1231
```

```
Iteration 1: log likelihood = -141.81898
Iteration 2: log likelihood = -140.14065
Iteration 3: log likelihood = -140.13376
Iteration 4: log likelihood = -140.13376
```

```
Logistic regression                               Number of obs   =       435
                                                    LR chi2(10)    =       25.98
                                                    Prob > chi2    =       0.0038
Log likelihood = -140.13376                       Pseudo R2      =       0.0848
```

```
-----+-----
```

	SERM	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
RIS	.1117277	.1949223	0.57	0.567	-.270313	.4937683
IAE	.3752437	.1838525	2.04	0.041	.0148993	.735588
HRC	.3785592	.1658676	2.28	0.022	.0534648	.7036536
TMC	.469231	.1879762	2.50	0.013	.1008045	.8376576
BCS	-.6094814	.293371	-2.08	0.038	-1.184478	-.0344849
Auditfir.	.1878702	.3409724	0.55	0.582	-.4804235	.8561638
Assets	.1324978	.1722083	0.77	0.442	-.2050242	.4700199
Branches-	.2123926	.3194628	-0.66	0.506	-.8385282	.413743
NSE	.6899293	.6922765	1.00	0.319	-.6669076	2.046766
CRO	-.3355634	1.089449	-0.31	0.758	-2.470844	1.799717
_cons	-1.075213	2.401752	-0.45	0.654	-5.782561	3.632134

```
-----+-----
```

```
r(111);
```

```
. do "C:\Users\User\AppData\Local\Temp\STD04000000.tmp"
```

```
. lfit,group(10) table
```

```
Logistic model for SERM, goodness-of-fit test
```

```
(Table collapsed on quantiles of estimated probabilities)
```

```
-----+-----
```

Group	Prob	Obs_1	Exp_1	Obs_0	Exp_0	Total
1	0.7838	33	30.3	11	13.7	44
2	0.8514	35	35.3	8	7.7	43
3	0.8790	34	38.1	10	5.9	44
4	0.8974	38	38.3	5	4.7	43
5	0.9108	39	39.8	5	4.2	44
6	0.9223	42	39.4	1	3.6	43
7	0.9358	40	40.9	4	3.1	44
8	0.9451	43	42.3	2	2.7	45
9	0.9578	40	39.9	2	2.1	42
10	0.9939	42	41.7	1	1.3	43

```
-----+-----
```

```
number of observations =       435
number of groups =       10
Hosmer-Lemeshow chi2(8) =       6.85
Prob > chi2 =       0.5526
```

```
. do "C:\Users\User\AppData\Local\Temp\STD04000000.tmp"
```

```
. lstat
```

```
Logistic model for SERM
```

Classified	True		Total
	D	~D	
+	385	47	432
-	1	2	3
Total	386	49	435

Classified + if predicted Pr (D) >= .5
 True D defined as SERM! = 0

Sensitivity	Pr (+ D)	99.74%
Specificity	Pr (- ~D)	4.08%
Positive predictive value	Pr (D +)	89.12%
Negative predictive value	Pr (~D -)	66.67%
False + rate for true ~D	Pr (+ ~D)	95.92%
False - rate for true D	Pr (- D)	0.26%
False + rate for classified +	Pr (~D +)	10.88%
False - rate for classified -	Pr (D -)	33.33%
Correctly classified		88.97%

.do "C:\Users\User\AppData\Local\Temp\STD04000000.tmp"

. linktest

Iteration 0: log likelihood = -153.1231
 Iteration 1: log likelihood = -144.02849
 Iteration 2: log likelihood = -140.26614
 Iteration 3: log likelihood = -139.95848
 Iteration 4: log likelihood = -139.95806
 Iteration 5: log likelihood = -139.95806

Logistic regression Number of obs = 435
 LR chi2 (2) = 26.33
 Prob > chi2 = 0.0000
 Log likelihood = -139.95806 Pseudo R2 = 0.0860

SERM	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
_hat	.6581609	.6126187	1.07	0.283	-.5425497	1.85887
_hatsq	.1043578	.1785594	0.58	0.559	-.2456123	.4543279
_cons	.2123382	.5427895	0.39	0.696	-.8515096	1.276186

do "C:\Users\User\AppData\Local\Temp\STD04000000.tmp"

mfx comput,eyex at(mean)

Elasticities after logit
 y = Pr(SERM) (predict)
 = .90682032

variable	ey/ex	Std. Err.	z	P> z	[95% C.I.]		X
RIS	.0447542	.07804	0.57	0.566	-.108202	.19771	4.29885
IAE	.1539267	.07494	2.05	0.040	.007051	.300802	4.4023
HRC	.149124	.06489	2.30	0.022	.021951	.276297	4.22759
TMC	.1828316	.07211	2.54	0.011	.041508	.324156	4.1816

```

BCS | -.2346067      .11091   -2.12   0.034  -.451995  -.017219   .45433
Auditf~m.0240653   .04365  0.55   0.581  -.061496  .109626   1.3747
Assets |.0500088      .06489   0.77   0.441  -.077182  .1772    4.05057
Branches-.0955867  .14299  -0.67   0.504  -.375842  .184669   4.82989
NSE | .0696077      .06921   1.01   0.315  -.066042  .205257   1.08276
CRO | -.0319146      .10352  -0.31   0.758  -.234808  .170978   1.02069

```

```
. gen bcsiae= BCS* IAE
```

```
. gen bcshrc= BCS* HRC
```

```
. gen bcstmc= BCS* TMC
```

```
. gen bcsris= BCS* RIS
```

```
. logit SERM IAE HRC TMC RIS BCS bcsiae bcshrc bcstmc bcsris
```

```

Iteration 0:  log likelihood = -153.1231
Iteration 1:  log likelihood = -138.79345
Iteration 2:  log likelihood = -135.26958
Iteration 3:  log likelihood = -135.12018
Iteration 4:  log likelihood = -135.1199
Iteration 5:  log likelihood = -135.1199

```

```

Logistic regression                Number of obs   =           435
LR chi2(9)                        =           36.01
Prob > chi2                       =           0.0000
Log likelihood = -135.1199        Pseudo R2      =           0.1176

```

```

-----+-----
SERM |      Coef.      Std. Err.      z    P>|z|    [95% Conf.
Interval]
-----+-----
IAE |  -2.180757   .958337    -2.28   0.023   -4.059063   -.3024513
HRC |   .1552604   .8894239    0.17   0.861   -1.587978    1.898499
TMC |   3.350197   1.259638    2.66   0.008    .881352    5.819041
RIS |  -1.12832    1.135869   -0.99   0.321   -3.354583    1.097943
BCS |  -1.162986   1.203376   -0.97   0.334   -3.52156    1.195588
bcsiae | .6779493   .2446708    2.77   0.006    .1984032    1.157495
bcshrc |.0264829   .2332383    0.11   0.910   -.4306559    .4836216
bcstmc |-.7584487   .309364    -2.45   0.014   -1.364791   -.1521065
bcsris |.2537448   .2853578    0.89   0.374   -.3055462    .8130357
_cons |2.679096   4.749348    0.56   0.573   -6.629454   11.98765
-----+-----
--

```

Appendix 6: Structural Equation Modeling

_____ (R)

1. sem (SERM -> IAE) (SERM -> HRC) (SERM -> TMC) (SERM -> RIS) (SERM -> BCS), latent(SERM)
nocapslatent

note: The following latent variable name is also present in the data: SERM.

Endogenous variables

Measurement: IAE HRC TMC RIS BCS

Exogenous variables

Latent: SERM

Fitting target model:

Iteration 0: log likelihood = -2491.3781

Iteration 1: log likelihood = -2491.2616

Iteration 2: log likelihood = -2491.2615

Structural equation model
Estimation method = ml
Log likelihood = -2491.2615

Number of obs = 435

(1) [IAE]SERM = 1

		OIM					
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]		
-----+-----							
Measurement							
IAE <-							
SERM	1 (constrained)						
_cons	4.402299	.0397241	110.82	0.000	4.324441	4.480157	
-----+-----							
HRC <-							
SERM	1.122806	.1496294	7.50	0.000	.8295375	1.416074	
_cons	4.227586	.0450756	93.79	0.000	4.13924	4.315933	
-----+-----							
TMC <-							
SERM	1.188396	.1488288	7.98	0.000	.8966969	1.480095	
_cons	4.181609	.0418019	100.03	0.000	4.099679	4.263539	
-----+-----							
RIS <-							
SERM	1.587772	.1760256	9.02	0.000	1.242769	1.932776	
_cons	4.298851	.0436871	98.40	0.000	4.213225	4.384476	
-----+-----							
BCS <-							
SERM	1.027192	.121338	8.47	0.000	.7893742	1.265011	
_cons	4.131034	.0318822	129.57	0.000	4.068546	4.193523	
-----+-----							
Variance							
e.IAE	.5039532	.0386014			.4337011	.585585	
e.HRC	.6537868	.0500332			.5627235	.7595864	
e.TMC	.5024091	.0407743			.4285249	.5890321	

e.RIS	.3701951	.0420437		.2963181	.4624909
e.BCS	.2496308	.0227015		.2088765	.2983366
SERM	.1824781	.0363464		.1234999	.2696216

LR test of model vs. saturated: $\chi^2(5) = 2.79$, Prob > $\chi^2 = 0.7328$

2. m (SERM -> HRC) (SERM -> TMC) (SERM -> RIS) (SERM -> IAE) (SERM -> BCS), latent(SERM)
nocapslatent

note: The following latent variable name is also present in the data: SERM.

Endogenous variables

Measurement: HRC TMC RIS IAE BCS

Exogenous variables

Latent: SERM

Fitting target model:

Iteration 0: log likelihood = -2491.3277

Iteration 1: log likelihood = -2491.2616

Iteration 2: log likelihood = -2491.2615

Structural equation model Number of obs = 435

Estimation method = ml

Log likelihood = -2491.2615

(1) [HRC]SERM = 1

		OIM				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	

Measurement						
HRC <-						
SERM	1 (constrained)					
_cons	4.227586	.0450756	93.79	0.000	4.13924	4.315933

TMC <-						
SERM	1.058412	.132326	8.00	0.000	.7990575	1.317766
_cons	4.181609	.041802	100.03	0.000	4.099679	4.26354

RIS <-						
SERM	1.414104	.1630188	8.67	0.000	1.094593	1.733615
_cons	4.298851	.0436872	98.40	0.000	4.213225	4.384476

IAE <-						
SERM	.8906193	.1186877	7.50	0.000	.6579956	1.123243
_cons	4.402299	.0397241	110.82	0.000	4.324441	4.480157

BCS <-						
SERM	.914841	.1070193	8.55	0.000	.705087	1.124595
_cons	4.131034	.0318823	129.57	0.000	4.068546	4.193523

Variance						
e.HRC	.6537863	.0500332			.5627231	.7595858
e.TMC	.5024092	.0407743			.4285249	.5890322
e.RIS	.3701953	.0420437			.2963183	.462491
e.IAE	.5039537	.0386015			.4337014	.5855856

e.BCS	.2496308	.0227015	.2088765	.2983367
SERM	.2300517	.0465234	.15477	.341951

LR test of model vs. saturated: $\chi^2(5) = 2.79$, Prob > $\chi^2 = 0.7328$

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Appendix 7: List of Commercial Banks and Location of their Head Offices

S/No.	Bank	Head Office	Location
1	Access Bank Plc.	1665, Oyin Jolayemi Street, Victoria Island, Lagos.	Lagos
2	Citibank Nigeria Limited	11 Idowu Taylor Street, Lagos	Lagos
3	Diamond Bank	Plot 1261 Adeola Hopewell Street, Lagos	Lagos
4	Ecobank Bank Limited	2, Ajose Adeogun Street, Lagos	Lagos
5	Enterprise Bank Limited	Plot 143, Ahmadu Bello Way, Victoria Island, Lagos	Lagos
6	Fidelity Bank Plc	2 Kofo Abayomi Street, Lagos	Lagos
7	First Bank of Nigeria Plc	35 Marina, Lagos	Lagos
8	First City Monument Bank Plc	Primrose Towers, 6-10 Floors 17A Tinubu Square, Lagos	Lagos
9	Guaranty Trust Bank Plc	Plot 1669, Oyin Jolayemi Street, Lagos	Lagos
10	Heritage Bank Ltd.	292B Ajose Adeogun Street, Victoria Island, Lagos	Lagos
11	Key Stone Bank	Plot 707, Adeola Hopewell Street, Lagos	Lagos
12	Main Street Bank	94, Broad Street, Lagos	Lagos
13	Skye Bank Plc	Plot 708/709, Adeola Hopewell Street, Victoria Island, Lagos	Lagos
14	Stanbic IBTC Bank Ltd	Walter Carrington Crescent, Victoria Island Lagos	Lagos

15	Standard Chartered Bank Nigeria Ltd.	105B, Ajose Adeogun Street, Lagos	Lagos
16	Sterling Bank Plc	Sterling Towers, 20 Marina, Lagos	Lagos
17	Union Bank of Nigeria Plc	36, Marina, Lagos	Lagos
18	United Bank For Africa Plc	57, Marina, Lagos	Lagos
19	Unity Bank Plc	Plot 785, Herbert Macaulay Way, Abuja	Abuja
20	Wema Bank Plc	Wema Towers 54, Marina Lagos Island	Lagos
21	Zenith Bank Plc	Plot 292, Ajose Adeogun Street, Victoria Island, Lagos	Lagos

Source: Central Bank of Nigeria (CBN), 2012



Appendix 8: Letter for Data Collection from Supervisor



School of Accountancy (SOA)
UUM College of Business
Accounting Building
Universiti Utara Malaysia
06010 UUM Sintok
Kedah DarulAman, Malaysia
Tel: 604 928 7201
Fax: 604 928 7216

UUM/COB/SOA/P-89

8th October 2014

TO WHOM IT MAY CONCERN

Dear Sir/Madam

DATA COLLECTION

PROGRAMME: DOCTOR OF PHILOSOPHY
PROJECT TITLE: "THE LEVEL OF RISK MANAGEMENT IMPLEMENTATION IN NIGERIAN BANKING SECTOR"

This is to certify that the following is a postgraduate student from the School of Accountancy, College of Business, Universiti Utara Malaysia. He is pursuing the above mentioned course which requires him to undertake an academic study and prepare an assignment. The details are as follows:

NO.	NAME	MATRIC NO.
1.	Ishaya John Dabari	94951

In this regard, I hope that you could kindly provide assistance and cooperation for him to successfully complete the assignment given. All the information gathered will be strictly used for academic purposes only.

Your cooperation and assistance is very much appreciated.

Thank you.

"SCHOLARSHIP, VIRTUE, SERVICE"

Yours sincerely

DR. SITI ZABEDAH SAIDIN
PhD Supervisor
School of Accountancy
College of Business, UUM
c.c - Student's File (94951)

Appendix 9: Letter of Data Collection from Oya, UUM.



OTHMAN YEOP ABDULLAH
GRADUATE SCHOOL OF BUSINESS
Universiti Utara Malaysia
06010 UUM SINTOK
KEDAH DARLIL AMAN
MALAYSIA



Tel: 004-028 711877/187130
Faks (Fax): 004-028 71180
Laman Web (Web): www.oysgbt.uum.edu.my

KEDAH AMAN MAKMUR • BERSAMA MEMACU TRANSFORMASI

UUM/OYAGSB/K-14
17 August 2014

TO WHOM IT MAY CONCERN

Dear Sir/Madam

DATA COLLECTION

PROGRAMME: DOCTOR OF PHILOSOPHY
SUPERVISOR: DR. SITI ZABEDAH SAIDIN

This is to certify that the following is a postgraduate student from the OYA Graduate School of Business, Universiti Utara Malaysia. He is pursuing the above mentioned course which requires him to undertake an academic study and prepare an assignment. The details are as follows:

NO.	NAME	MATRIC NO.
1.	Ishoya Jahn Dabar	94951

In this regard, I hope that you could kindly provide assistance and cooperation for him to successfully complete the assignment given. All the information gathered will be strictly used for academic purposes only.

Your cooperation and assistance is very much appreciated.

Thank you.

"SCHOLARSHIP, VIRTUE, SERVICE"

Yours faithfully,

ROZITA BINTI RAMLI

Assistant Registrar

for Dean

Othman Yeop Abdullah Graduate School of Business

c.c. - Student's File (94951)

Universiti Pengurusan Terkemuka
The Eminent Management University



30 UUM

Appendix 10: Table for Required Sample Size at the 5% Confidence Interval

given a finite population (N = Population size and n = Sample size)

N-n	N-n	N-n	N-n	N-n
10-10	100-80	280-162	800-260	2800-338
15-14	110-86	290-165	850-265	3000-341
20-19	120-92	300-169	900-269	3500-346
25-24	130-97	320-175	950-274	4000-351
30-28	140-103	340-181	1000-278	4500-354
35-32	150-108	360-186	1100-285	5000-357
40-36	160-113	380-191	1200-291	6000-361
45-40	170-118	400-196	1300-297	7000-364
50-44	180-123	420-201	1400-302	8000-367
55-48	190-127	440-205	1500-306	9000-368
60-52	200-132	460-210	1600-310	10000-370
65-56	210-136	480-241	1700-313	15000-375
70-59	220-140	500-217	1800-317	20000-377
75-63	230-144	550-226	1900-320	30000-379
80-66	240-148	600-234	2000-322	40000-380
85-70	250-152	650-242	2200-327	50000-381
90-73	260-155	700-248	2400-331	75000-382
95-76	270-159	750-254	2600-335	100000-384

Source: Krejcie and Morgan (1970).

Appendix 11: Literature Review Summary Table

Literature review on ERM implementation based on quantitative method using secondary data
Table 2.4 Literature Review Summary Table (Secondary Data)

S/No.	Author(s)/year/ Location	Independent Variables (IVs)	Results and Recommendation
1	Andre P. Liebenberg & Robert E. Hoyt, 2003, USA	Size, industry, earning volatility, stock price volatility, average leverage, av. Mkt. to book- ratio, financial operating average %, institutional ownership, UK Canadian Subsidiaries	No. differences in the financial and ownership characteristics. Findings indicate that firms with greater financial leverage are more likely to hire CRO. Appointment of CROs will reduce information asymmetry with regards to firms expected risk profile. Recommend further studies on ERM adoption determinants particularly organisational structure.
2	Donal Pagach, 2007, USA	Financial characteristics, Assets characteristics, Market characteristics, managerial incentives, controls	Study reveals that firms that are more leverage and have poor stock market performance are likely to commence ERM programme. If value of CEOs option and stock portfolio is increasing in stock volatility, the firm is more likely to adopt ERM practices.
3	Robert E. Hoyt & Andre P. Liebenberg, 2008, USA	Size, institutional ownership, diversification, industry, ERM engagement, leverage, profitability, industrial diversification, international diversification, dividend policy, growth opportunity	Results show that size and institutional ownership are positively related to ERM deployments, and negatively related to reinsurance use and leverage. The study reveals a positive relation between firm value and the use of ERM. Recommend further studies on the determinants of ERM implementation using questionnaire and other methods other industries
4	Lawrence A. Gordon, Martin P. Loeb & Chih-Yang Tseng, 2009, USA	ERM and Firm Performance	The findings show that firms should consider the implementation of an ERM practices in conjunction with contextual variables surrounding the firms.

5	Martin F. Grace, J. Tyler Leverty, Richard D. Philips & Prakash Shimpi, 2010,USA	CROs, dedicated risk committee and risk management entities.	CROs, dedicated risk management entities that report to CFOs witness higher efficiency cost and return on assets, life insurers benefit from the development and use of economic capital model to a greater extent than property casualty insurers.
6	Don Pagach & Richard Warr, 2010,USA	Risk characteristics, financial characteristics, Assets characteristics and Bank characteristics	Firms implementing ERM witness a reduction in earnings volatility. The study finds little impact from ERM adoption on a wide range of firm variables. The study fail to support that ERM adoption creates value.
7	Don Pagach & Richard Warr, 2011,USA	Financial characteristics Size, leverage, cash ratio, tax save, SDCF%. Assets characteristic Opacity, sales growth, market to book. Market characteristics SDRET%	Study reveals that ERM adoption is for direct economic benefit rather than comply with regulation. Furthermore, firms that are large, more volatile, and have greater institutional ownership are more likely to implement ERM. in addition, finding reveals that Banks with lower levels of tirel capital are also more likely to hire CRO. The studies recommend further research on the evolution of firms ERM programmes.
8	Muhammed Altuntas, Thomas R. BERRY-Stolze,& Robert E. Hoyt, 2011, Germany	Managerial career concerns, performance, organisational form, business concentration, size, capital to assets, group membership &tax expenses.	The researchers postulate that top management's decision to adopt ERM is influenced by managerial career concerns. If performance declines, top management may get fire fired and might implement ERM to indicate that it can back the firm on track. The study further reveals that negative changes in past firm performance increase a firm's probability to adoption.
9	Robert E. Hoyt &Andre P. Liebenberg, 2011 USA	Size, leverage, sales growth, ROA. Div-Ind, Dividends, Insider, life, opacity, Beta, institutional ownership, rein	Findings show positive relation between firm value and the effect of ERM on firm value. The ERM premium is of about 20% statistically

		use, slack, value change , CV(EBIT) & LagInsdret	and economically significant. Recommend further research using larger samples and refined such as questionnaire.
10	Thomas R. Berry Stolzle & Jianren Xu, 2013, USA	ERM Adoption with Cost of capital as DV.	The findings reveal that ERM adoption significantly reduces firms cost of capital. The research further suggest that the cost of capital benefits determines how ERM can create value
11	Nadine Gatzert & Micheal Martin, 2013, Germany	Company size, financial leverage, earnings, cash flow volatility, asset opacity, growth opportunity, Diversification, institutional ownership.	Based the reviewed literature the result indicates that the company size and the level of institutional ownership are significantly positively related to the implementation of ERM. ERM has impact on corporate value and performance.



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Universiti Utara Malaysia

Appendix 12: Risk Management Frameworks, Standards And Guidelines

S/No	Date	Title	Standards body/ Publisher
1	1995	AS/NZS4360: 1995 Risk Management	Standards Australia, Homebush
2	1999	AS/NZS4360: 1999 Risk Management	NSW 2140, Australia, and
3	2004	AS/NZS4360: 2004 Risk Management	Standards New Zealand, Wellington, 6001, New Zealand
4	1997	CAN/CSA-Q850-97, Risk Management Guideline for Decision Makers	Canadian Standards Association, Ontario, Canada
5	1996	BS 8444-3: 1996 Risk Management-Part 3 Guide to risk Analysis of Technological Systems	British Standards Institution, London, UK.
6	2000	BS 6079-3: 2000 Project Management-Part 3 Guide to the Management of Business- related Project Risk	British Standards Institution, London, UK.
7	2000	PD 6688:Managing Risk for Corporate Governance	British Standards Institution, London, UK.
8	2002	PD ISO 31000/IEC Guide 73: 2002, Risk Management- Vocabulary- Guidelines for use in Standards	British Standards Institution, London, UK.
9	2001	Guidelines for Development and Implementation of Risk Management System	Japanese Standards Association Tokyo, Japan
10	2001	IEC 62198: 2001, Project Risk Management- application System	International Electronical Commission, Switzerland
11	2001	New Basel Capital Accord- Consultative Document	Basel Committee on Banking Supervision
12	2002	A Risk Management Standard	Institute of Risk Management (IRM) Association of Insurance and Risk Managers (AIRMIC) and National Forum for Risk Management in the Public Sector (Alarm), London
13	2004	ISO 14001: 2004, Environmental Management Systems- General Guidelines on principles, Systems and Support Techniques	Internal Organisation for Standization, Geneva, Switzerland.
14	2004	Enterprise Risk Management –Integrated Framework	The Committee of Sponsoring Organisations of the tread Way

			Commission, USA
15	2011 2012	2011 SEC Code of Corporate Governance in Nigeria CBN issued Exposure Draft CODE for Banks in Nigeria in 2012 .	Nigerian Code of Corporate Governance and International Best Practice on Corporate Governance CBN issued Exposure Draft CODE for Banks in Nigeria
16	2012	Malaysian Code on Corporate Governance 2012 (MCCG, 2012)	Malaysia Code of Corporate Governance

Source; (Adapted from Manab, (2009) as adopted from Hillson, 2006).

The standard was being updated and reissued from time to time



Appendix 13: Implementation of Sustainable Banking Principles for ERM Implementation



CENTRAL BANK OF NIGERIA

Financial Policy & Regulation Department
Central Business District
P.M.B. 0157
Garki, Abuja.

Tel: 09-46237401

E-mail: fpr@cbn.gov.ng

September 24, 2012

FPR/DIR/CIR/GEN/01/33

Circular to all Banks, Discount Houses and Development Finance Institutions

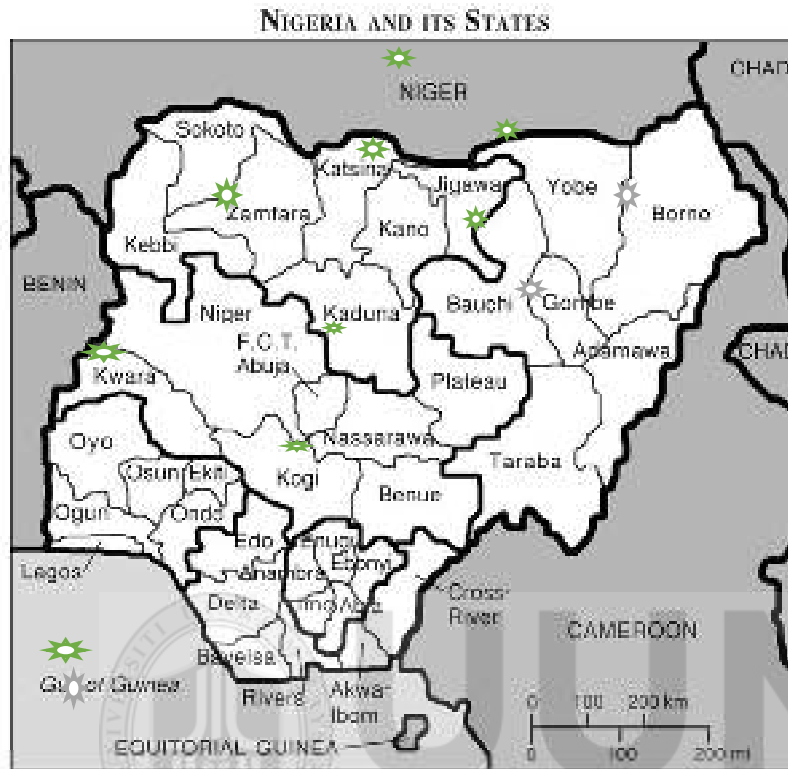
IMPLEMENTATION OF SUSTAINABLE BANKING PRINCIPLES BY BANKS, DISCOUNT HOUSES AND DEVELOPMENT FINANCE INSTITUTIONS IN NIGERIA

The Bankers' Committee, at its retreat of July 14, 2012, approved the adoption of the Nigeria Sustainable Banking Principles by banks, discount houses and development finance institutions in Nigeria. This is in furtherance of the Bankers Committee's commitment to deliver positive development impacts to society while protecting the communities and environment in which financial institutions and their clients operate.

To enable effective implementation of these principles, the following documents, which were considered at that meeting, are hereby issued to banks, discount houses and development finance institutions:

- 1) The Nigeria Sustainable Banking Principles
- 2) The Nigeria Sustainable Banking Principles Guidance Notes
- 3) Nigeria Sustainable Banking Principles Power Sector Guidelines;
- 4) Nigeria Sustainable Banking Principles Agriculture Sector Guidelines; and
- 5) Nigeria Sustainable Banking Principles Oil and Gas Sector Guidelines.

Appendix 14: Nigerian Map Showing cities For Location Of Studies In The Nigerian Map



Source: Retrieved [Http://www.puching.com/newsimmigration](http://www.puching.com/newsimmigration)
 Location of questionnaire distribution for main study
 Location for pilot test