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An Analysis of the Use of Insurance by Banks: Evidence from the Nigerian Banking Sector

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Abstract
The global financial crisis in the banking sector centred on range of issues connected with risk and its management. In effect, many banks were seen as being excessively focused on the potential rewards of high-hazard activities; but focused less on the negative consequences of those activities. The study also identified insurance policies suitable for managing banking risks, and articulated the need for banks to use appropriate insurance policies to manage their risks. Using data collected through questionnaire from 1050 participants selected through stratified sampling technique; the study analysed the use of insurance in the Nigerian banking sector. The study was based on the theoretical aspects of insurance practice. The findings suggest that: banks have insurance company or subsidiary firm, banks purchase insurance through insurance brokers/intermediaries; banks are statutorily required to purchase insurance, and centralisation of insurance and risk management practices are paramount risk management practices among banks in Nigeria. Generally, the study indicated that banks should clearly articulate risk management policies in order to promote organisation-wide effort and effective management of risks across organisational spectrum; thereby, integrating risk management into banks' philosophy, practices and business plans. The implication for practice is that insurance is a risk management tool, suitable for managing banking risks.
Keywords: Insurance, banking risks, banking sector, risk management, Nigeria

1. Introduction

The global financial crisis of 2007/08, especially in the context of the banking sector, centred on range of issues connected with risk and its management. In effect, many banks were seen as being excessively focused on the potential rewards of high-hazard activities and not focused enough on the negative consequences, the 'risks', of those activities. However, some commentaries on the financial crisis ignored the fundamental principle that risk is inevitable in business, as there is no opportunity for reward without the existence of risk. Knowledge of risks and the ability to identify and control them are crucial for security and stability in both the private and public sector (Govtvan & Mansurov, 2010). Business activities are essential for economic growth; but, these activities are undertaken in an environment where risk is a reality. It is, therefore, crucial for businesses, including banks, to develop and incorporate effective risk management measures into their operations. Banks, specifically, are exposed to wide range of risks arising from their activities and operations, such as credit risk, market risk, operational risk, and performance risk (Kanwar, 2005; Skipper

& Kwon, 2007; Apostolik, Donohue & Went, 2009). Risk, as it is commonly conceived, tends to reduce business value, thereby limiting management's ability to achieve its objectives (Marshall, 2001; Fadun, 2015). Banks are in the business of taking on and managing risks; however, such institutions are also expected to adequately manage their owners' (shareholders) investments. Consequently, banks need to identify, evaluate, manage and finance these risks (Gordon, 2003; Kaye, 2009). Given both its long history and its global reach, insurance is seen as one of the pre-eminent methods of financing risks, although as Park, Borde and Choi (2002) have discussed, almost 90% of global premiums have been attributable to developed North American, Japanese and Western European economies. This research is based on the premise that, subject to availability of necessary information, many of the risks to which banks are exposed, which are not confined to those risks inherent to banking, are measurable and transferable to insurance companies (Atkins & Bates, 2009; Thoyts, 2010). Specifically, the study analyses the use of insurance in the Nigerian banking sector.

2. Literature Review

The main objective of the study is to analyse the use of insurance in the Nigerian banking sector. In view of axiomatic existence of risk in the banking sector, the study was based on the theoretical aspects of insurance practice. The study attempt to fill a research gap and contribute to knowledge by emphasising that insurance is a suitable risk transfer mechanism for risks in the Nigerian banking sector. In this regard, relevant literature is reviewed in the remaining part of the section.

2.1 Risk, Risk Management and Risk Perception

There is a conceptual debate on the definition of the term 'risk', centring around whether this should include both upside (opportunities) and downside (threats) (Hulett, Hillson & Kohl, 2002; Raz & Hillson, 2005), with some emphasising that the term 'risk' refers exclusively to uncertainties with negative consequences (Chapman & Ward, 2002; 2003), whilst others prefer a broader definition, incorporating positive and negative consequences (Hillson, 2003). Whilst recognising the undoubted merits of the second school of thought, the main focus of this research is on the negative aspects of risk, given that insurance, a key element of the study, is designed to ameliorate the financial consequences of negative events. Notwithstanding this debate, risk is inextricably associated with the uncertainty which exists in all aspects of life (Luhmann, 1993), since causal relationships between present and future events are complex and difficult to predict (Beck, 1992; Arnordi, 2009). Furthermore, the perception of risks is a key driver of attitudes towards them (Hillson & Murray-Webster, 2007) and specific ways in which they can be conceptualised and rendered controllable (Zinn & Taylor-Gooby, 2006). Risks have been described as an objective concept for management of future uncertainties through rational actions (Alaszewski, Alaszewski & Potter, 2006; Kaye, 2009). Many business-related risks in themselves may be identified and their potential consequences understood and measured, however there will remain uncertainty over their probability, frequency and severity. This uncertainty arises from lack of information which may result in taking decisions without relevant facts, leading to organisational imperative of maximisation of information and data gathering as a mechanism for improvement of the quality of decision making in the face of doubt (Hillson, 2003; Thoyts, 2010).

It is axiomatic that business grows through greater risk taking (Drucker, 1977) and eliminating too much risk undermines the source of value creation and potential opportunities (Knight & Petty, 2001; Graziano & Aggarwal, 2005; Garvan, 2007). Assuming that all businesses must accept a level of risk; its degree varies with

the extent of exposure, and this exposure creates the motivation to manage risks. Risk management is the identification, measurement, control, financing, and transferring of risks which threaten the life, property and viability of business (Coyle, 2002; Gordon, 2003; Feridun, 2006; Lowe, 2010). Generally, the strategies employed to manage risk include: avoiding the risk - risk avoidance; reducing its negative effects - risk reduction; transferring its consequences to another party, e.g. to an insurance company - risk transfer; and accepting some or all of its consequences - risk retention (Feridun, 2006; Ale, 2009). A major challenge of risk management is the identification and management of subjective attitudes to and perceptions of risk, rather than just dealing with the objective side of probability, frequency, and severity of loss (Fone & Young, 2005). The perceptions of risk play a prominent role in decision making, and are often responsible for disagreements about the best way of managing risk (Finucane, Slovic, Mertz, Flynn & Satterfield, 2000; Coyle, 2002; Slovic & Weber, 2002; Weber, Blais & Betz, 2002). The reason we choose to undertake an activity is closely associated with our judgement on whether the risk is worth taking and the kind of activities which generate the risk (Ale, 2009), in effect a reward - risk calculation. A company's perception of and attitude towards risk determines its management perspective on taking risks in achieving the corporate objectives (Coyle, 2002).

2.2 Risk Financing and Insurance

Risk financing is that part of risk management whereby an organisation puts in place a system which will fund both losses and also programmes to reduce uncertainty and risk. At a conceptual level, risk financing encompasses three main areas: risk reduction, risk retention, and risk transfer. In an operational and organisational context, the risk financing decision, therefore, involves two distinct financial functions, investment and financing (Gordon, 2003; Fone & Young, 2005). Investment is concerned with the application of funds and ensuring return for their deployment. For an example, investment in loss prevention and reduction expenditure or the replacement of assets after a loss. Financing is, however, concerned with the source and costs of funds obtained for expenditure needed to meet the cost of losses. The major risk financing options are generally accepted to be: contractual transfer of risk or its financial responsibility to a third party; retention of financial responsibility for the risk; the transfer of financial responsibility for the risk through insurance and a combination of insurance transfer, and retention of risk (Marshall, 2001; Gordon, 2003; Banks, 2004; Fone & Young, 2005; Feridun, 2006; Ale, 2009). Given the focus of this research, the discussion is restricted to the theoretical aspects of insurance.

The theory of insurance is that it is a contractual relationship between two parties, the insured (buyer) and the insurer (seller), whereby the insurer, in exchange for payment of premium, undertakes to indemnify the insured, subject to the contract terms and conditions, in the event of a loss (Skipper & Kwon, 2007; Atkins & Bates, 2009; Boland, Collins, Dicken, Ransom & Steel, 2009; Thoyts, 2010). Blunden and Thirlwell (2010) describe insurance as a contract of fortuity which depends on occurrence of something that is not foreseen and over which the insured ostensibly has no control. In that respect, it is a mechanism which, to a degree, ameliorates the problem of uncertainty. However, not all risks can be insured and there are issues of law, finance, mathematics, custom and practice and public policy to be addressed before insurance may be available (Skipper & Kwon, 2007; Stein, 2007; Boland *et al.*, 2009; Thoyts, 2010). Assuming, however, that the risk is insurable, the primary function of insurance is to act as a risk transfer mechanism; i.e., shifting the cost of the risk away from the insured to the insurer (Boland *et al.*, 2009; Marshall, 2001;

Thoyts, 2010); thereby, reducing the cash flow volatility for individual insured firms (Fone & Young, 2005; Skipper & Kwon, 2007). This is possible because an insurer has a large and diversified portfolio of exposures, based on the Law of Large Numbers, which help to decrease unexpected losses. However, organisational over-emphasis on insurance has the general tendency to externalise risk. Insurance does not eliminate risk, but acts as a mechanism which ensures that risks which cannot be removed are compensated for (Levitas, 2005). Adams, Lin and Zou (2011) argue that in the presence of market imperfection, corporate risk management demonstrates that appropriate insurance can enhance firm value through the lowering of the cost of financial distress, mitigating the assets substitution and underinvestment problems and forcing managers to invest in positive loss control and safety projects.

2.3 Banking and Banking Risks

Risk management is a constant challenge to financial institutions; hence the need for banks to consistently develop and improve their operational and technical practices (Feridun, 2006). In broad terms, banking risks may be classified into four categories: credit risk, market risk, operational risk, and performance risk (Kanwar, 2005; Skipper & Kwon, 2007; Apostolik *et al.*, 2009). Credit risk is the potential loss a bank would suffer if a bank borrower (also known as the counterparty) fails to repay the loan and interest in accordance with the agreed terms. Market risk is the potential loss due to changes in underlying economic factors such as interest rates, exchange rates, and equity and commodity prices. Operational risk is the risk of loss resulting from costs incurred through mistakes or errors during business transactions. Performance risks constitute losses resulting from the failure to properly monitor employees or to use appropriate methods, including model risk, liquidity risk, business risk, reputational risk. The mechanisms for controlling these risks will vary in scope and complexity, but at a conceptual level the risks will be: those that can be eliminated or avoided by straightforward business practices, those that can be transferred to other parties, e.g. to insurance company, and those that must be actively and robustly managed at the firm level (Jurion, 2009; Fadun, 2015).

The focus of the study, i.e. Nigerian banks, operate under the legal framework of the Banks and Other Financial Institutions Decree (BOFID) 1991, as amended, and supervision by The Central Bank of Nigeria (CBN). Banking reforms in Nigeria, which have resulted in significant consolidation, have been driven by the need to ensure that the sector realises its objectives in advancing the economy (CBN, 2008; Osabuohien, 2008; Solanke, 2010). Other issues addressed by reforms include: governance, risk management, and operational inefficiencies (Ajayi, 2005; Adegbaju & Olokoyo, 2008). The advocates of the past banking consolidation argued that it would reduce industry risk through elimination of weak banks and create better diversification opportunities (Bergers, 2000; Damodaran, 2008). In contrast, De Nicolo, Batholowem, Zaman and Zephirin (2003) argue that consolidation could increase banks propensity towards risk taking through increases in leverage and off balance sheet operations. Meanwhile, consolidation of banks may not necessarily be a sufficient tool of financial stability for sustainable development (Megginson, 2005; Somoye, 2008). In 2009, the CBN initiated a departure from the 10 years old Universal Banking Business Model by introducing a new structure for the banking sector along two lines: Monoline (Specialised) Banking, and Holding Company Framework (HOLDCO) (CBN, 2000; Cowry, 2009; CBN, 2010; Solanke, 2010). This was a consequence of the global banking crisis and the need to address the risks associated with high levels of risk and multiple weaknesses in regulation and banking structures (Cowry, 2009; Afrinvest, 2010; Gale, 2010; Solanke, 2010). In addition,

advances in information technology, telecommunications, and financial theory and practice have drastically transformed banking business in Nigeria into a data-intensive risk management operation (Frame & White, 2009).

The implication of the discussion in the section is that there are several risks associated with the banking sector. Given the axiomatic existence of risk in banking, coupled with the apparent availability and efficacy of insurance as a risk financing mechanism, we posed the hypothesis that: insurance is a suitable risk transfer mechanism for managing risks in the Nigerian banking sector.

3. Methodology

The study population is from the Nigeria banking sector. There were over 55 commercial banks in Nigeria at the time of study in second and third quarters of 2011. 35 commercial banks were selected through random probability sampling for the study. 1050 participants, 30 each from these banks, were selected for the study using stratified sampling technique. In March - August 2011, 1,050 questionnaires with covering letters were personally delivered to selected respondents in Nigeria. To ensure accurate response and enhance the response rate, the purpose of the research was clearly explained to the respondents. This technique was adopted to ensure that the respondents appreciate the importance of the research; thereby, facilitating collection of necessary data to enable us analyse the use of insurance by banks in Nigeria. The survey yielded 588 usable completed questionnaires, representing 56 per cent response rate.

3.1 Characteristics of the Sample

The characteristics of the sample, selected through stratified sampling techniques, are summarised in Table 1

Table 1: Characteristics of the sample

	Number	Per cent
Respondents' Gender		
Male	341	58
Female	247	42
Total	**588**	**100**
Respondents' Status		
Top level management	176	30
Middle level management	288	49
Clerical/Lower Cadre	123	21
Total	**588**	**100**
Years of experience on risk management and insurance purchase decision-making		
Above 20 years	141	24
15 - 20 years	171	29
10 - 15 years	182	31
5 - 9 years	94	16
Total	**588**	**100**
Rating of services offered by insurance companies		
Excellent	106	18
Good	300	51
Fair	123	21
Poor	59	10

Total		588	100

Source: Field Survey (2011)
Note: N = 588

The respondents consist of 58 per cent male and 42 per cent female (Table 1). The respondents consist of three statuses, 30 per cent top level management, 49 per cent middle level management and 21 per cent clerical lower cadre. With regard to years of experience of respondents in terms of in risk management and insurance purchase decision-making in commercial banks; 24 per cent have above 20 years' experience, 29 per cent have 15 - 20 years' experience, 31 per cent have 10 - 15 years' experience, and 16 per cent have 5 - 9 years' experience. 18 percent of the respondents indicated that service offered by insurance companies underwriting their organisations insurance policies is excellent; 51 per cent indicated that service offered by insurance companies is good; 21 per cent indicated that service offered by insurance companies is fair; and 10 per cent indicated that service offered by insurance companies is poor.

3.2 Data Analysis

First, we test the relative importance of insurance and risk management practices among banks in Nigeria and insurance policies purchase by banks in Nigeria by comparing differences in means; hence, *T*-test was conducted. To examine the hypothesised relationships, Pearson product-moment correlation was first computed, followed by computation of co-efficient of determination.

4 Results and Discussion

4.1 Level of Insurance and Risk Management Practices

The rank order of relative importance of insurance and risk management practices among commercial banks in Nigeria are presented in Table 2.

Table 2: Relative Importance of Insurance and Risk Management Practices among Banks in Nigeria

Rank	Level of Insurance and Risk Management Practices	Mean	SD
1	Banks have insurance company or subsidiary firm	4.54	0.52
2	Banks purchase insurance through insurance brokers	4.44	0.64
3	Statutory obligation to purchase certain insurance policies	4.26	0.87
4	Centralisation of insurance and risk management activities	4.15	1.08
5	Banks purchase insurance to manage their risks	3.67	1.34
6	Risk management policy or statement	2.82	1.6
7	Banks have insurance department/unit/section	2.67	1.54

Source: Field Survey (2011)
Notes: N = 588

(a) Mean is the average on the scale of 1 (strongly disagree) to 5 (strongly agree);
(b) SD = standard deviation; and
(c) Mean scores are significantly different on one-sample t-test ($p < 0.01$).

Table 2 shows the rank order of relative importance of insurance and risk management practices among commercial banks in Nigeria based on: (1) risk management policy or statement; (2) insurance department/unit/section; (3) statutory obligation to purchase insurance (compulsory insurance); (4) purchase of insurance policies to manage potential risks; (5) purchase of insurance through insurance brokers/intermediaries; (6) Centralisation of insurance and risk management activities; and (7) ownership of and interest in insurance company or subsidiary. The median measure is exceeded by all the seven levels of insurance and risk management practices among banks, in that: banks in Nigeria have insurance company or subsidiary firm (4.54), banks in Nigeria purchase of

insurance through insurance brokers/intermediaries (4.44), banks in Nigeria are statutory required to purchase insurance - compulsory insurance (4.26), centralisation of insurance and risk management activities by banks in Nigeria (4.15), banks in Nigeria purchase of insurance policies to manage potential risks (3.67), banks in Nigeria have risk management policy or statement (2.82), and banks in Nigeria have insurance department/unit/section (2.67).

The results presented in Table 2 indicate that: banks in Nigeria have insurance company or subsidiary firm; banks in Nigeria purchase of insurance through insurance brokers/intermediaries; banks in Nigeria are statutorily required to purchase insurance (compulsory insurance); and centralisation of insurance and risk management activities are ranked as the most important insurance and risk management practices among banks in Nigeria. The finding also indicated that banks use insurance policies to manage risks. This implies that banks in Nigeria use and purchase insurance to manage their risk exposures. This finding suggests that concentration on risk management statement and creation of insurance department/unit/section appear to be less important among banks in Nigeria. Possible explanation for this is that there is fierce competition among banks because there are several commercial banks in the country. The implication is that banks in Nigeria need to clearly articulate risk management policies and statements to promote organisation-wide effort in order to ensure effective management of risks across organisational spectrum (Fone & Young, 2005); and to integrate risk management into banks philosophy, practices and business plans, rather than being viewed or practised as a separate programme (Calvalho, 2000). In addition, centralisation of insurance and risk management can save cost and prevent duplication of efforts; thereby promoting effective risk management practices in the Nigerian banking sector.

Furthermore, the implication for practice is that it is necessary for banks in Nigeria to be aware of their exposures, identify who owns or takes responsibility for managing these risks, and continually improve their operational and technical practices (Feridun, 2006, Apostolik *et al.*, 2009). This is because banks are susceptible to several types of risk because they operate in dynamic environment and business decisions are encompassed with uncertainty. However, measurement of uncertainty is a core element of insurance principles and practices (Knight, 1921; Thoyts, 2010); and insurers have diversified portfolio of exposures which help to minimise unexpected losses (Marshall, 2001, Boland *et al.*, 2009). Moreover, insurance is a mechanism which advocates that since risks cannot be removed, they must be compensated for (Levitas, 2005). Hence, banks can transfer their risks to insurers by purchasing appropriate insurance policies in exchange for payment of premium based on degree of risk exposure – frequency and severity of loss (Coyle, 2002; Gordon, 2003; Derek & Bates, 2008).

Another practical implication of the finding in terms of statutory obligation on the part of banks to purchase insurance (compulsory insurance) is that banks in Nigeria are conscious of consequences of not complying with the law. Although, compliance with compulsory insurance requirements are not adequately enforced until recently when the nation's insurance regulatory authority, National Insurance Commission (NAICOM), in partnership with other law enforcement agencies collaborated to enforce compulsory insurance laws in Nigeria (Alabadan, 2009; Akanbi, 2011; Nwoji, 2011; Oladele, 2011). In addition, the finding that banks in Nigeria have insurance company or subsidiary firm; and banks in Nigeria purchase of insurance through insurance brokers/intermediaries also have important

theoretical and practical implications for both banking and insurance sectors from the theoretical aspect of insurance practice. This is because at the time of the research, banks in Nigeria operate universal banking which allows commercial banks to undertake businesses or own subsidiaries outside their core function of financial intermediation, including insurance services (CBN, 2000; Ojukwu-Ogba, 2009; Omoh, 2010). This suggests that banks that have insurance company subsidiaries are likely to purchase insurance, from or through their insurance subsidiary. Although, this practice makes both business and economic sense, as insurance premiums would be retained within the bank group or conglomerate, thereby consolidation the group operations. However, it is unhealthy for bank-owned insurance companies to single-handedly insure or underwrite insurances of its parent's company and subsidiaries. Although such practice does not contravene the principle of risk transfer (insurance), but adequate reinsurance contracts must have been arranged to cover primary liabilities of the insurance company subsidiary (Fadun, 2015).

4.2 Insurance Policies Purchase by Banks in Nigeria

Table 3 shows the rank order of relative importance of insurance use by banks in Nigeria to manage their risks.

Table 3: Relative Importance of Insurance Purchase by Commercial Banks

Rank	Insurance Policies Purchase by Commercial Banks	Mean	SD
1	Money Insurance	4.81	0.39
2	Fidelity Guarantee Insurance	4.67	0.50
3	Public liability insurance	4.58	0.48
4	Workmen Compensation/Group Personal Accident	4.56	0.50
5	Motor/Automobile Insurance	4.56	0.50
6	Fire Policies (Material Damage) Insurance	4.54	0.50
7	Key-man insurance	4.45	0.57
8	Professional Indemnity Insurance	4.33	0.49
9	Marine and Aviation Insurances (Cargo and Hull)	3.33	1.56
10	Product Liability insurance	3.13	1.63
11	Goods-In-Transit Insurance	2.31	1.27
12	Other insurance Policies	1.77	1.40

Source: Field Survey (2011)
Notes: N = 588

(a) The mean is the average on the scale of (1 = Not at all important) to (5 = Very important);
(b) SD = standard deviation;
(c) Mean scores are significantly different on one-sample t-test ($p < 0.01$); and
(d) Other insurance policies entails insurance policies other than those specifically mentioned.

The results presented in Table 3 shows that ten of the twelve insurance policies use by banks in Nigeria to manage their risks exceeded the median measure; while, the remaining two results are below the median measure. Those results which exceeded the median measure include: money insurance (4.81), fidelity guarantee insurance (4.67), public liability insurance (4.58), workmen compensation/group personal accident insurance (4.56), motor/automobile Insurance (4.56), fire policies (material damage) insurance (4.54), key-man insurance (4.45), professional indemnity insurance (4.33), marine and aviation insurances (cargo and hull) (3.33), and product liability insurance (3.13). However, the results indicated that goods-in-transit

insurance (2.31) and other insurance policies (1.77) are below the median measure. Hence, the findings suggested that money insurance, fidelity guarantee insurance, public liability insurance, workmen compensation/group personal accident insurance, motor/automobile Insurance, fire policies (material damage) insurance, key-man insurance, and professional indemnity insurance are ranked to the most important insurance policies use by commercial banks in Nigeria to manage their risks. On the other hand, goods-in-transit insurance and insurance policies other than those specifically mentioned appear to be considered less important among banks in Nigeria. The implication of the findings for practice is that it is essential for banks to use appropriate insurance policies to manage their risks.

4.3 Hypothesis Testing

H_o: Insurance is not a suitable risk transfer mechanism for managing risks in the Nigerian banking sector.

H_1: Insurance is a suitable risk transfer mechanism for managing risks in the Nigerian banking sector.

To test the hypothesis, results of 'insurance is a suitable risk transfer mechanism for banks' and 'respondents' experience in risk management and insurance purchase decision-making' are used. Responses to these questions are appropriate for testing the hypothesis, as we envisaged that respondents involved in insurance purchase decision-making in banks are familiar with insurance and its suitability for management of risks associated with the Nigerian banking sector. The hypothesis is tested with a bi-variate Pearson product-moment correlation, as shown in Table 4. For the purpose of hypothesis testing; X represents 'insurance is a suitable risk transfer mechanism for banks' and Y represents 'respondents' involvement in insurance purchase decision-making'.

Table 4: Correlation of: 'insurance is a suitable risk transfer mechanism for banks' and 'respondents' experience in risk management and insurance purchase decision-making'

		(X) Ins is a suitable risk transfer tool for banks	(Y) Respondents' experience in risk management and insurance purchase decision-making
Ins is a suitable risk transfer tool for banks (X)	Pearson Correlation	1	.063
	Sig. (1-tailed)		.346
	N	588	588
Respondents' involvement in insurance purchase decision making (Y)	Pearson Correlation	.063	1
	Sig. (1-tailed)	.346	
	N	588	588

The output shows that the relationship between X and Y is positive and significant with a correlation coefficient of $r = 0.63$ which is $p < .05$. Thus higher X responses are associated with higher responses in X, i.e. respondents' experience in risk management and insurance purchase decision-making. The null hypothesis (H_o) connotes that the correlation between X and Y is $\rho = 0.0$. We therefore proceed to

ascertain the probability that the correlation obtained in the sample came from a population where the parameter $\rho = 0.0$. Since the correlation between X and Y ($r = 0.630$) is significant at $p < 0.05$, the null hypothesis is rejected which affirms that the two variables are positively related in the population. This suggests that banks in Nigeria use insurance to manage their risk; hence, insurance is a suitable risk transfer mechanism for managing risks associated with the Nigerian banking sector.

4.4 Coefficient of Determination

The correlation coefficient (r) is 0.63, and coefficient of determination is r^2. Since r = the correlation between X and Y = 0.063; thus r^2 = the coefficient of determination = $(0.630)^2 = 0.3969$. The outcome implies that about 40 per cent of the variance in X can be explained by Y.

The findings suggest banks in Nigeria use insurance to manage their risk. The implication for practice is that insurance is suitable for managing risks in the banking sector. However, it is paramount that banks should purchase suitable insurance policies after identification and analysing of their risk exposures. This is consistent with the literature which suggests that insurance is a suitable risk management tool for exposure with extremely large potential losses; particularly, for banking risks, where the probability of loss is low and severity of potential loss is high (Dickson, 2000; Dorfman, 2003; Hamid, 2010).

5. Conclusion and Recommendations

The paper has analysed the use of insurance in the Nigerian banking sector. The study is based on the premise that, subject to availability of necessary information, many of the risks to which banks are exposed, which are not confined to those risks inherent to banking, are measurable and transferable to insurance companies. The theory of insurance is that it is a contractual relationship between two parties, the insured (buyer) and the insurer (seller), whereby the insurer, in exchange for payment of premium, undertakes to indemnify the insured, subject to the contract terms and conditions, in the event of a loss (Skipper & Kwon, 2007; Atkins & Bates, 2009; Boland *et al.*, 2009; Thoyts, 2010).

The study has shown that: banks have insurance company or subsidiary firm, banks purchase insurance through insurance brokers/intermediaries; banks are statutory required to purchase insurance (compulsory insurance), and centralisation of insurance and risk management activities are considered to important risk management practices among banks in Nigeria. However, the results indicated that banks need to clearly articulate risk management policies and statements in order to promote organisation-wide effort and management of risks across organisational spectrum; thereby, integrating risk management into banks' philosophy, practices and business plans. The relevance of insurance as a risk management tool is clearly supported by the findings that banks in Nigeria use insurance to manage banking risks is an important risk management practices among banks in Nigeria. The implication is that it is a necessity for banks to be aware of their exposures, identify who owns or takes responsibility for managing these risks, and continually improve their operational and technical practices.

The study also established that purchase of insurance by banks from their insurance company subsidiaries does contravene the principle of risk transfer. It highlighted that it is unhealthy for bank-owned insurance company to single-handedly insure or underwrite insurances of its parent's company and/or subsidiaries without arranging adequate reinsurance contracts to cover its primary liabilities. The study has enhanced our understanding in terms of insurance policies suitable for managing risks associated with the banking sector. The findings suggested that insurance is suitable for managing banking risks include: money insurance, fidelity guarantee insurance, public liability

insurance, workmen compensation/group personal accident insurance, motor/automobile Insurance, fire policies (material damage) insurance, key-man insurance, and professional indemnity. However, it is important that banks should prudently identify and assess their risks exposures before purchasing insurance. This is necessary to ensure that appropriate insurance policies are purchased to manage banking risks.

Lastly, not all risks can be insured and there are issues of law, finance, mathematics, custom and practice and public policy to be addressed before insurance may be available. The study is limited to the Nigeria banking sector. Notwithstanding these limitations, the findings of the study suggest that banks in Nigeria use insurance to manage their risks. Hence, insurance is a suitable risk transfer mechanism for managing risks associated with the banking sector. More broadly, a cross-national study could be carried out to analyse the purchase of insurance by banks and determinants of firms' insurance purchase decisions. It is also recommended that future study can investigate the reinsurance implications of the practice whereby a bank-owned insurance company insure or underwrite, partly or wholly, its parent and/or subsidiaries firms.

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