RISK ASSET MANAGEMENT AND FINANCIAL PERFORMANCE OF INSURANCE COMPANIES IN NIGERIA

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Abstract
This study analyses risk asset management and financial performance in the Nigerian economy using the return on asset in relationship between claims settlement, premium valuation period, leverage risk and return on equity. Annual time's series data for the period 1986-2016 was sourced from the Central Bank of Nigeria statistical database; and used to estimate both long and short-run relationship as well as causal effects. The Multiple Regression Analysis was used to analyze the data empirically with the aid of Eview9 Statistical Software. The Unit root test show that all variables to be evaluated at the first difference I(1), utilizing the trend of the variables which were discovered to possess unit root and were stationary at the first difference as the all exhibited ADF t-statistics greater than the critical values at all levels such as 1%, 5% and 10%, in simpler terms. The Johansen Co-integration tests no evidence of co-integrating equations which explains the none existence of long run relationship amongst employed variables that lead to the integration vector error correction estimates. The regression analysis was adopted with Ordinary Least Square Method shows the coefficient of the constant (C) is 3.7 and 2.7 which signifies that if all other variables are kept at a constant or zero, the criterion variables Return on Asset and Return on Equity respectively will be altered by approximately 3.7 and 2.7 units, The R-squared (R^2) coefficient of correlation, showing an output of Return on Asset was 0.286698 and Return on Equity was 0.952134 signifies that the predictors account for approximately 29/95 percent (%) variation in the criterion variable while 71/5 % are captured by other variables not in the model (The white noises or unobserved variables), while the adjusted R-squared, showing the co-efficient of variation with a relationship, which indicate credibility in the goodness of fit in the model. However, the Durbin Watson reveals an output of 0.6 with does not falls within the relevant range (1.5-2.5) shows the presence of no autocorrelation and is within the relevant range. The F-statistics given its Probability level of 0.0000 an appropriate model of the goodness of fit, while the t-statistics show short run significance of the predictor variables on the criterion variables of return on equity using the probability level of their t-statistics against the 0.05 (5%) level of significance on Leverage Risk correlates with Return on Equity (0.0154). The Granger Causality test shown from the results indicates there are four uni-directional and two bi-directional causality among the variables. Overall, all the results obtained are not in line with *apriori* expectations. Based on the conclusive analysis, it could be recommended among others that the study recommends that to promote risk asset management in Nigeria, the government sector should be encouraged to increase the financing of the insurable projects so as to boast financial performance and development in the country.

Keywords: Risk Assets Management, Financial Performance, claims settlement, Return on Assets, Insurance.

Introduction

The financial performance of insurance companies in Nigeria is very vital. The performance is the major determinant of its survival and sustainability in the business environment. In the late nineteen eighties, life assurance secondary market came into being in response to the HIV-AIDS scourge, as people experienced sudden need for money to pay for medical treatment and maintain their life styles. People wanted money from their assets which included life assurance policies (Doherty & Singer, 2002). The clients' insurance policies do affect the financial performance of an insurance company as they comprise both an income and cost components to the organization. There is scanty scholarly information relating to financial performance of insurance companies, measured in terms of profits and investments using annual turnover, underwriting profitability, return on assets, net premium earned and return on equity. The performance is in most cases influenced by decisions made by management and the size of organization.

According to Angell & Brewer (2017), financial performance is determined by asset utilization, relative profitability and company's financial leverage. Angell & Brewer (2017) warn that the major problem with these three determinants is that they depend on each other and no one of them can work independently to influence financial performance. Rakshit (2006) on exploration of Economic Value Added based performance measurement in Dabur India limited, indicates that performance of organizations is measured using Net Profit Margin, Earning per Share, Return on Equity, Return on Asset and Operating Profit Margin. Rakshit (2006) further argues that Return on Assets is the most popular profit indicator though it does not tell true profits and does not show if it covers the cost of capital or not. The capital base of the insurance industry is continuously growing showing that the industry is becoming stronger.

Due to globalization and intense competition, risks are increasing and risk asset management is becoming an integral part for the success of almost every organization, especially for the insurance sector because of their high-risk businesses, as the risks are associated with every client in the business and their own risk. Insurance companies are in the core business of managing risk. The companies manage the risks of both their clients and their own risks. This requires an integration of risk asset management into the companies' systems, processes and culture. The risk asset management process consists of a series of steps, which are establishing the context, identifying, analysing, assessing, treating, monitoring and communicating risks, which allow continuous improvement of decision making (Standards Australia). By implementing risk asset management organization can reduce unexpected & costly surprises and effective allocation of resources could be more effective. It improves communication and provides senior management a concise summary of threats, which can be faced by the organization, thus ultimately helping them in better decision making.

A study in the Netherlands by Laeven & Perotti (2010) has shown that the last financial crisis has had dramatic impact on the solvency level of insurance companies. The actual solvency capital was on a level above 300% of the required solvency level before the crisis and dropped dramatically in the years 2007 and 2008. Various individual insurance

companies dropped to the level, or below, of the bare minimum requirements of solvency capital as stated by the Dutch Central Bank. In the insurance business, capital is referred to as surplus. Surplus is required for insurance companies to have collateral for outstanding policies. Without it, insurance companies cannot fulfill their obligations towards the customers. Legislation requires insurance companies to hold certain levels of surplus to cover default risks (Myers & Read, 2011). Surplus is costly for several reasons. First there are agency and information costs attached to invested capital (Merton & Perold, 2013). Second, some tax systems subject investment income to double taxation, both at corporate level and later when it is realised on shareholder level. Because of the costliness of surplus, insurance companies want to minimize their surplus amounts (Myers & Read, 2011). Evidence found in earlier studies show that insurance companies have suffered in different extends during the recent crisis. Some insurance companies had some setbacks and decreasing surplus, while other companies had to be bailed out by the government to prevent default (Eling & Schmeiser, 2010); Laeven & Perotti, 2010)). This shows the impact of the crisis on insurance companies.

Insurance industry offer solutions to risks faced by players in other industries. Soekarno & Azhari (2009), assert that individuals and even business firms transfer their uncertainties to insurance firms upon payment of small amounts of money, the premiums which are relatively small compared to the possible losses faced by the firms. Insurance firms and their services started many days ago with the Romans, but formalized in the eighteenth century. It has helped in spreading financial risk amongst many persons who pay the premiums to make a pool, from which those who suffer losses are paid. This reduces the cost for those who end up suffering unexpected misfortunes. Financially disadvantaged persons spend about 9.2 percent of their income trying to reduce risks to help them deal with unexpected shocks and protect their assets (Njuguna & Arunga, 2017). One of the solutions provided by insurance companies is that of paying hospital bills for the sick. Wilper (2009) expressed that health insurance help individuals to get access to health care services and reduce a person's cost on chronic illnesses which is usually expensive. Wilper (2009) asserts that an insured is more likely to receive recommended screening and good health care for critical diseases. Life assurance companies provide a good medium of mobilizing money required for national development and provision of job opportunities.

According to Shahroudi (2017), insurers engage in social programs of government and also have positive effects on a country's economic growth. Life assurance provides cover against old age, premature death and disability where persons pay premiums which represent savings for them and their families. Insurers use the premiums collected to do their investments and hence bring about economic development (Saeidy & Kazemipour, 2011). Life insurance protects one's survivors and dependants against financial challenges. The policy pays the sum assured upon the death of an assured. In most cases, life insurance is combined with a savings component in it. Probably the rationale for combining savings and life insurance is that life insurance savings are taxed cheaply than most of other types of savings (Doherty & Singer, 2012).

Chaudhary & Kiran (2011) assert that there has been a tremendous growth in life assurance industry in India: The total number of offices of life insurers operating in India increased from 2199 in 2000-01 to 5373 in 2006-07, registering a growth rate of 11.9 per cent during the period of study while the number of offices of Life Insurance Corporation of India (LIC) increased from 2186 in 2000-01 to 2301 in 2006-07, registering a growth rate of 0.6 per cent, the number of offices of private life insurers increased from 13 in 2000-01 to 3072 in 2006-07, registering a very high growth rate of 92.4 per cent.

Chaudhary & Kiran (2011), further indicate that the life assurance financial advisors grew by 39.99 per cent in the year 2006-07 while those from Life Insurance Corporation of India (LIC) grew by 4.75 per cent in the same year. Those from private life assurers grew by 140.3 per cent. Chaudhary & Kiran (2011) also explain that new businesses in life assurance industry grew by 16.1 per cent while the premiums went up by 35.1 per cent. New businesses for Life Insurance Corporation of India (LIC) grew by 10.4 per cent while the premiums had gone up by 26.7 per cent and new businesses from private life assurers grew by 72.7 per cent and their premiums by 189.6 per cent. All this growth is attributed to the wide range of insurance products, brand promotion and some additional benefits like riders meant to suit the clients' changing needs. Growth of insurance industry is also brought about by mergers where the acquirer and the target companies are revalued upwards.

According to Soverall (2017), the collapse of Colonial Life Insurance Company of Trinidad was the worst monetary distress ever experienced in the wider Caribbean region since it resulted to a financial loss of 17 percent of the region's Gross Domestic Product and even Trinidad's government is still struggling to bring its financial system back to normal by resolving the crisis that was caused by the collapse and reduce the resulting contagion risk. The collapse affected the economy of both Trinidad and Tobago by 3.5 percent in year 2009. Soverall (2017) further explains that the causes of this collapse were colonial Life Insurance Company's Investment Bank liquidity problems brought about by high cash withdrawals which increase liabilities over assets, insurance legislation remaining the same for a long time, the result of the reduction in prices of methanol and real estate on their agent's overall financial condition and a high rate of interest to finance their equally, highly risky investments. Soverall (2017) concluded by asserting that public officers should be trained to handle financial innovations and the affiliated risk asset management practices, financial organizations be regulated to act in the public interest and availability of a political system which supports financial regulatory reforms.

Ongore & Kusa (2017), conclude in their study about determinants of financial performance of financial intermediaries firm in Kenya that the financial performance is influenced by decisions made by the management and the board of directors. Ongore & Kusa (2017), indicate that macroeconomic factors like inflation and gross domestic product have influence on performance though minimal. That when the economy is doing well and gross domestic product is growing, people go in for loans and when the economy and gross domestic product go down, people shy away from loan facilities which reduce financial institutions' profitability.

Mudaki et al. (2017) assert that the profitability of insurance business in Kenya is low due to the increasing mortality rates caused by ailments, poverty, lack of food and low living standards which result to inability to raise premium for buying insurance. The performance of insurance industry in Kenya may have been poor about three decades ago due to lack of a regulatory body which made several firms to operate without enough capital and hence leading to their statutory management or collapse (Mudaki et al., 2017). According to Gitau (2017), penetration of insurance industry in Kenya has been very low which has been caused by collapsing of the firms like Lake Star and Stallion insurance companies in year 2002.

According to Akhigbe & Madura (2001), the acquirer and the target companies in Nigeria receive favorable valuations after the consolidation. This is due to economies of scale brought about by provision of services at relatively lower costs. The other reasons are reduction of redundant branches and companies benefitting from the expertise of each other (Akhigbe & Madura, 2001). Despite the impressive growth, some Nigeria insurance companies have performed poorly and even ended up going under.

Literature Review
This chapter will discuss the predictor variables and criterion variable proxies. This would be express in the theoretical framework, conceptual framework, empirical review of literature.

This study utilized the following theories to analyze risk assets management and financial performance in Nigeria. These are the Multivariate Theory, Arrow- Debreu Theory of General equilibrium, Data Envelopment Analysis (DEA) Theory and Dupont theory of ratio analysis.

Powell (2008) asserts that multivariate analysis involves the examination of two or more variables at the same time and then considers their interactions as predictors of losses in insurance industry. According to Nyce (2007), multivariate analysis includes advanced regression and time series models which are used by business firms to predict the trends or relationships of balance sheet and profit and loss account items which enable them to know likely situations in the future. Nyce (2007) confirmed that insurers heavily depend on estimating the activities in future. This estimation helps them to avoid adverse selection which is a situation where those who buy insurance are individuals with high chances of encountering big perils with higher claims than premiums paid. According to Nyce (2007), traditionally, insurers calculated premiums using univariate analysis which involves one factor analysis like use of only the age of an insured. But because of technology, multivariate analysis which involves many factors is nowadays used to get the premiums. This has led to predictive analytics used to determine the additional information required to get the premium, (Nyce, 2007). The results produced by predictive analytics show the likely occurrences with most results showing higher probability of the event occurring.

Risk asset management
Corporate insurance and hedging are two popular types of risk asset management. Corporate insurance protects against financial consequences of actions by representative

of the firm, malfunctioning products or faulty services and contains several types of insurance. One type is general liability insurance, which protects against claims against employees, products or services. A second type is the professional liability insurance, which protects against claims from clients of malpractice, negligence or errors. A third type is the directors and officers insurance,' which protects against claims of mismanagement. The second and third examples are often excluded from the general liability insurance (Kumaraswamy, 2005). Both these methods cost money but when viewed as part of the firm's financing policy, may increase firm value (Liebenberg & Hoyt, 2017).

Mayers & Smith (1982) stated that corporate insurance affects firm value through its effects on investment policy, contracting costs and the tax liabilities. Theory suggests that corporate insurance helps to reduce expected bankruptcy costs, the tax burden and the cost of regulatory scrutiny. These theories are supported by several studies (Mayers & Smith, 1990; Ashby & Diacon, 1998; Hoyt & Khang, 2000). Just as corporate insurance, corporate hedging also reduces expected bankruptcy costs. This is done by reducing the probability of financial distress (Smith & Stulz, 1985). The hedging literature (see Smith & Stulz, 1985; MacMinn, 1987; Campbell & Kracaw, 1990; Bessembinder, 1991; Froot, Scharfstein & Stein, 1993; Nance, Smith & Smithson, 1993) also suggests that hedging reduces expected taxes and improves the firm's ability to take advantage of attractive investment opportunities (Liebenberg & Hoyt, 2017).

Claims Settlement
Claims management involves claim processing, cost monitoring role, servicing aspect as well as the role of people handling the claim. Good claims management should result in dealing with claimants courteously, payment of legitimate claims, accurate reserving, avoidance/reduction of protracted litigation and reduction in the insurer's expense. Reinsurers provide both expertise and underwriting capacity and are often systemically important to the primary insurance market. Disciplined adherence to underwriting controls and implementation of an integrated reinsurance programme are all important elements of strong catastrophe risk asset management (Yusuf & Dansu, 2018; Berger &Udel, 1993; Cummins & Trainar, 2009).

An entity seeking to transfer risk (an individual, corporation, or association of any type, etc.) becomes the 'insured' party once risk is assumed by an 'insurer', the insuring party, by means of a contract, called an insurance policy. Generally, an insurance contract includes, at a minimum, the following elements: identification of participating parties (the insurer, the insured, the beneficiaries), the premium, the period of coverage, the particular loss event covered, the amount of coverage (i.e., the amount to be paid to the insured or beneficiary in the event of a loss), and exclusions (events not covered). An insured is thus said to be "indemnified" against the loss covered in the policy (Gregory, 2013). .

When insured parties experience a loss for a specified peril, the coverage entitles the policyholder to make a claim against the insurer for the covered amount of loss as specified by the policy. The fee paid by the insured to the insurer for assuming the risk is

called the premium. Insurance premiums from many insured are used to fund accounts reserved for later payment of claims in theory for a relatively few claimants and for overhead costs. So long as an insurer maintains adequate funds set aside for anticipated losses (called reserves), the remaining margin is an insurer's profit (Feldstein, 2008).

Claims and loss handling is the materialized utility of insurance; it is the actual "product" paid for. Claims may be filed by insured directly with the insurer or through brokers or agents. The insurer may require that the claim be filed on its own proprietary forms, or may accept claims on a standard industry form, such as those produced (Hofer, 2013).

Financial Performance
Financial performance is a measure of a firm's overall financial health over a given period of time. It can be measured from various perspectives including: solvency, profitability, and liquidity. Solvency measures the amount of borrowed capital used by the business relative to the amount of owner' equity capital invested in the business. For insurers, profitability is the excess of revenues from underwriting activities over the costs incurred in generating them. (Liquidity measures the ability of the business to meet its financial obligations as and when they fall due without disrupting normal operations (Ross et.al. 2009; Zender, 2004; Almajali, et.al, 2017). The financial performance of an insurance company depends on many other factors, some of which are difficult to quantify, including the quality of its management, organizational structure and systems and controls in place. An assessment of financial soundness thus needs to take into account both quantitative and qualitative indicators to achieve an acceptable degree of reliability (Udaibir, et.al, 2017) Various authors have asserted that risk asset management (RM) often leads to enhanced financial performance. Proper and efficient risk asset management by firms is essential to the survival of most organizations and will generally influence their financial performance.

Return on assets
To measure the performance of a company, multiple methods can be used such as the return on assets (ROA), this is the dependent variable. The ROA is a ratio used for the measurement of performance in different studies. The ROA is used by Baxter et al. (2017) as a measure of accounting performance in their study on the benefits of ERM on performance. The ROA is used in a performance study by Clarke et al. (2011, Smithson & Simkins, 2005; Hoyt & Liebenberg, 2011; Quon, Zéghal & Maingot, 2017). The ROA will be calculated using the same formula as is used in the Orbis database and by Clarke et al. (2011). The ROA will be calculated by dividing the profit before tax by the total assets (Palia, 2001; Cummins, Lewis & Wei, 2006; Elango, Ma & Pope, 2008; Hoyt & Liebenberg, 2011).

Relationship between Risk Asset Management and Financial Performance
Insurance companies play an important role in the financial services sector of most countries by lowering total risk, contributing to economic growth and efficient resource allocation, reducing transaction costs, creating liquidity, facilitating economies of scale and spreading financial losses. They do this through underwriting of risks inherent in most sectors of the economy and provide a sense of peace to most economic entities.

Consequently, the financial performance of insurers is of major importance to various stakeholders such as shareholders, policyholders, agents and policymakers (Duompos et.al, 2017; Charumathi, 2017; Udaibir, et.al, 2017).

The main focus of risk asset management has mainly been on controlling and for regulatory compliance, as opposed to enhancing financial performance (Banks, 2016). However, this risk asset management often leads to enhanced financial performance as regulatory compliance and control of risks enables the organization to save on costs. Banks (2016) further suggests that by managing risks, the managers are able to increase the value of the firm through ensuring continued profitability of the firm. Standard and Poor's identifies poor liquidity management, under-pricing and under reserving, a high tolerance for investment risk, management and governance issues, difficulties related to rapid growth and/or expansion into non-core activities as main causes of financial distress and failure in insurance companies. It is important that these factors be managed efficiently by insurance companies, to avoid financial failure and bankruptcy to the firm.

In the 21st century has seen great efforts to risk asset management. Babbel & Santomero (2016) note that insurers should assess the various types of risks they are exposed to and devise ways of effectively managing them. They further suggest that insurers should accept and manage at firm level, only those risks that are uniquely a part of their services. This will reduce the risk exposure.

Risk asset management is a viable economic reason why firm managers, might concern themselves with both the expected profit and the distribution of firm returns around their expected value, hence providing a rationale for aligning firm objective functions in order to avoid risk. Proper risk asset management is important in the daily operations of any insurance company to avoid financial losses and bankruptcy. This is in line with Jolly (2017) contribution that preventing losses through precautionary measures is a key element in reducing risks and consequently, a key driver of profitability. The efficiency of risk asset management by insurance companies will generally influence their financial performance. Gold (2009), asserts that insurance companies could not survive with increased loss and expense ratios. Meanwhile, risk asset management has been linked with shareholder value maximization proposition. A firm will only engage in risk asset management if it enhances shareholder value; Banks (2016) contributed that it is important for each firm to retain and actively manage some level of risk if it is to increase its market value or if the probability of financial distress is to be lowered; Pagano (2015), confirms that risk asset management is an important function of insurance institutions in creating value for shareholders and customers. Generally, company operations are prone to risks and if the risks are not managed the firm's financial performance will be at stake. Firms with efficient risk asset management structures outperform their peers as they are well prepared for periods after the occurrence of the related risks.

This study hopes to come up with an expected positive relationship between risk asset management and performance of insurance companies. In the aftermath of global financial crisis and corporate failures, entity stakeholders are demanding greater oversight of key risks facing the enterprise to ensure that stakeholder value is preserved

and enhanced. One response to these growing expectations is the emergence of a new paradigm known as "Enterprise Risk asset management" as an internal control system. At the same time, organizations have been implementing "Performance Measurement System" as one of management control systems vital for corporate success. Considering the importance of these two control systems, the possibility of incorporating ERM into the existing performance measurement system needs to be explored. It is expected that risk asset management will complement performance measurement system by identifying and mitigating risks in achieving strategic objectives.

Hypothesis

The hypothesis was stated in null form, wit:
There is no significant relationship between claims settlement and return on assets of insurance companies in Nigeria.

Methodology
This section shows the methodology used to evaluate the long run equilibrating relationship and short run dynamics in the variables if any to achieve the sat objectives of the study. The research design applied is ex-post facto research design (Nwaiwu J.N. 2017). Strikingly, the secondary data regarding the variables were sourced from the central bank of Nigeria, statistical bulletin, annual CBN reports, National Burean of Statistics, debt management office and financial statement of years 2013-2017.

We utilized the ordinary least square test for estimable equations examining the short run relationship between the dependent and independent variables. The significance of the 't'-values determines their rejection or acceptance accordingly. While the f-statistics provides information on the fitness of the equation.

Model Specification
The model specification is based on the theory that risk assets management and financial performance. The model specification, the model specified was formulated in the following functional forms.

$$FP \quad = \quad (CS) \quad - \quad - \quad - \quad - \quad - \quad - \quad \text{(i)}$$

Introducing the econometrics model as thus

$$FP \quad = \quad \alpha_0 + \beta_1 CS + \mu \quad - \quad - \quad - \quad - \quad - \quad \text{(ii)}$$

Empirical Results and Discussions
This section proceeds to the presentation of data, as well as interpretation of results in light of the statistical method which ahs been adopted for the investigation so as to evaluate the interrelationship of the claims settlement and return on assets.

Data Presentation

Table 1: Data Presentation of claims settlement (CSM) and Return on Assets in Nigeria over the period of 1986-2016.

Data Presentation

Table 1 Return on asset (ROA), Claims settlement (CSM) in Nigeria over the period of 1986 to 2016.

YEAR	ROA	CSM
1986	1.89	81.2
1987	0.69	69.5
1988	7.58	183.2
1989	7.15	126.0
1990	11.36	157.0
1991	0.01	136.6
1992	2.63	188.0
1993	1.56	352.9
1994	0.78	961
1995	2.15	1125.2
1996	4.13	1659.5
1997	2.89	2623.8
1998	2.82	7123.8
1999	1.19	7386.8
2000	4.89	6569.2
2001	4.72	20128
2002	4.63	12608.0
2003	9.57	6431
2004	6.58	26410
2005	6.51	21652.6
2006	6.03	38039.8

2007	6.45	34728.8
2008	5.98	38702.5
2009	6.96	42676.2
2010	7.98	46649.8
2011	7.43	47892.6
2012	6.58	477679.8
2013	6.89	477778.8
2014	6.89	486724.5
2015	7.37	488676.2
2016	7.23	496493.8

Source: CBN STATISTICAL BULLETIN, 2017

Descriptive Statistics
To access underlying trend amongst employed data, the study employs the Descriptive statistics as a form of Univariate Analysis:

Table 2: Results of Descriptive Statistics of Return on asset (ROA), Claims settlement (CSM) in Nigeria Over the period of 1986 to 2016.

	ROA	CSM
Mean	5.071667	76778.00
Median	6.005000	7255.300
Maximum	11.36000	496493.8
Minimum	0.010000	69.50000
Std. Dev.	2.851706	163515.9
Skewness	-0.066633	2.118313
Kurtosis	2.272634	5.564494
Jarque-Bera	0.683526	30.65704
Probability	0.710516	0.000000
Sum	152.1500	2303340.
Sum Sq. Dev.	235.8346	7.75E+11

Mean: The Real ROA on public health had the smallest mean value of 5.071667 in long term while the value of claims settlement was highest with a value of 76778.00.
Median: The median value for total claims settlement index was 28933.65 being the highest among the five variables under consideration. This is followed by recurrent claims settlement with a value of 18068.05

Standard Deviation: Standard deviation which is a measure of risk (error) showed that the claims settlement has more estimation error with an SD of 163515.9, while ROA has the least error of 2.851706.

This is the measure of the range of the distribution. A probability density function (PDF) with values of K less than 3 are called platy Kurtic (fat or short tailed) and those with values greater than 3 are leptokurtic (slim or Iongtailed) and a PDF with a kurtosis value of 3 is mesokurtic which mean a normal distribution.

From the computed data the distribution are as follows. The ROA had a value of -0.066633, and claims settlement (2.118313)   which are less than 3 levels they are platy kurtic distribution. Whereas, none is leptokurtic distribution as their value are not greater than 3. Finally, the value of return on equity, recurrent, leverage risk and return on asset are less than the benchmark value of 3 hence the distribution is platy kurtic.

Skewness: It measures the direction of the distribution. A distribution to the left is a negative skew while to the right is a positive skew. It is the 3rd movement about the mean over the cube of the standard deviation.

From the distribution statistic both the ROA (-0.066633) is negatively skewed but other variables are positively skewed.

The JB test for normality is an asymptotic or large - sample test based on the OLS residuals and uses the test statistic by the side. The normally distributed variable $S = 0$ and $K = 3$ respectively in this case the JB statistic is expected to be 0. If the P-value of the JB Statistic is very low which happen when the value is statistically different from 0, one can reject the hypothesis that the residuals are normally distributed but if the P-value sufficiently high which happens if the values of the statistic is close to 0, we do not reject the normality assumption.

From the probability value of some variables the null hypotheses were rejected on the normal distribution test. The JB test hence accepted that some of the data are normally distributed.

Some variables are seen to be positively oriented based on their positive skewness output, and the kurtosis shows that the premium valuation period has seen the sharpest rise overtime as it possess the highest and sloppiest kurtosis while the external reserve is identified to possess the least kurtosis over the study period. It was subsequently discovered that there exist a normal distribution amongst employed variables as they possessed probability level less than 0.05 (5%) significance level.

Data Analysis

In analysing the above data set, it is just right to determine the successful capture of the model by the employed variable towards determining the relevance and worthiness of employed variables. We therefore utilize the multiple regression model, Preceded by unit

root testing, and proceed towards the Co-integration, Error Correction and concluding with the diagnostic test.

Unit Root Test (Augmented Dickey Fuller).
Due to the underlying shocks inherent in time series variables, and also shocks that could be found in the error terms (other variables not captured by the model), we therefore intend to capture the stationarity of the employed variables, since a stationary variables is useful in forecasting and predicting and has a great possibility of the effect if shock to die out gradually, while non-stationary data are not suitable for long run test.

Table 3: Summary Output of Unit Root Output (Augmented Dickey Fuller)

Variable	ADF t-statistics	Critical Value 5%			Order of Integration	Prob.
		1%	5%	10%		
D(ROA)	-8.368791	-3.679322	-2.967767	-2.622989	I(1)	0.0000
D(CSM)	-6.078230	-3.769597	-3.004861	-2.642242	I(1)	0.0000

Going by the critical values of (1%), (5%) and (10%), it can be identified that all variables are stationary at the first difference (1) showing a great level of co-integration amongst variables, since the prerequisite of co-integration is the integration of all variables at same level. This parameter therefore leads to the co-integration of employed variables.

Summary Output of Correlation Statistics
The correlation of the variables shows how positive and negative relationship exists among the variables.

Correlation statistics

	ROA	CSM
ROA	1.000000	0.297277
CSM	0.297277	1.000000

From the above table, the return on asset and return on equity has the highest and perfect correlation, whereas the claims settlement has a low correlation which indicate the presence of multi-colinearity in the variable

Co-integration Test
The researcher proceeds to test the long run association/Relationship amongst employed variable which includes Return on asset (ROA), Claims settlement (CSM), over the period of 1986 to 2016.

Table 5: Results of Co-integration Test (Johansen Co-integration).

Date: 04/23/18   Time: 13:27
Sample (adjusted): 3 29
Included observations: 27 after adjustments
Trend assumption: Linear deterministic trend
Series: ROA CSM
Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigen value	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.676318	50.27948	47.85613	0.0291
At most 1	0.330831	19.82369	29.79707	0.4349
At most 2	0.280678	8.977267	15.49471	0.3675
At most 3	0.003040	0.082212	3.841466	0.7743

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigen value)

Hypothesized No. of CE(s)	Eigen value	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.676318	30.45579	27.58434	0.0208
At most 1	0.330831	10.84642	21.13162	0.6626
At most 2	0.280678	8.895055	14.26460	0.2950
At most 3	0.003040	0.082212	3.841466	0.7743

Max-eigen value test indicates 1 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegrating Coefficients (normalized by b'*S11*b=I):

ROA	CSM
0.104221	1.30E-05
0.172193	-7.37E-06
0.496546	3.89E-06
-0.028324	1.05E-05

Unrestricted Adjustment Coefficients (alpha):

D(ROA)	-0.431546	-0.653677	-1.278645	-0.015834
D(CSM)	-264.7735	36927.83	-11049.70	2182.713
D(PVP)	5596.742	1169.022	-485.1202	-59.74183
D(LVR)	6563.038	2233.808	-469.7943	-305.2104

1 Cointegrating Equation(s):	Log likelihood	-933.7199

Normalized cointegrating coefficients (standard error in parentheses)

ROA	CSM
1.000000	0.000124
	(2.7E-05)

Adjustment coefficients (standard error in parentheses)

D(ROA)	-0.044976
	(0.06140)
D(CSM)	-27.59483
	(1779.76)

2 Cointegrating Equation(s):   Log likelihood   -928.2967

Normalized cointegrating coefficients (standard error in parentheses)

ROA	CSM
1.000000	0.000000
0.000000	1.000000

Adjustment coefficients (standard error in parentheses)

D(ROA)	-0.157534	-7.83E-07
	(0.11505)	(8.5E-06)
D(CSM)	6331.115	-0.275515
	(3030.42)	(0.22464)

3 Cointegrating Equation(s):   Log likelihood   -923.8492

Normalized cointegrating coefficients (standard error in parentheses)

ROA	CSM
1.000000	0.000000
0.000000	1.000000
0.000000	0.000000

Adjustment coefficients (standard error in parentheses)

D(ROA)	-0.792441	-5.75E-06	0.000215
	(0.26728)	(7.7E-06)	(0.00036)
D(CSM)	844.4285	-0.318468	2.821115
	(7962.72)	(0.22914)	(10.6551)

The co-integration test seeks to empirically define the long-run association/relationship between a given set of variables i.e. identifying the stochastic drift amongst variable (to know if the variables move together) carried out using the johansen cointegration output. Assuming all study variables is endogenous using the trace and Eigen value test.

From the trace test output above, it can be seen that the exists none co-integrating equation, which were all signed respectively, judging by the signed rank, there exist no long run association and movement amongst employed variables, indicating that there is presence of no long run co-integration amongst employed variable since the probability level exhibit values greater than 0.05 level of significance in which case we do proceed to Vector Error Correction, hence we cannot adopt the Bayesian Estimates Model.

Although the Maximum Eigen value denotes rejection of the null hypothesis at all cointegration equation level going against the output of the Trace statistics, as it could therefore be established that there exist evidence of long run relationship amongst employed variables, the study therefore chooses the trace statistics.

Multiple Regressions (Ordinary Least Square)

The multiple regression were carried out using the Ordinary Least Square regression tool, as it is the best unbiased linear regression estimator, it was carried out in the differenced form.

Table 7: Ordinary Least Square Output of Return on asset (ROA), Claims settlement (CSM), over the period of 1986 to 2016.

Dependent Variable: ROA
Method: Least Squares
Date: 04/23/18   Time: 13:45
Sample: 1 31
Included observations: 30

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.660071	0.647298	5.654385	0.0000
CSM	-3.51E-06	4.40E-06	-0.797004	0.4327
PVP	4.99E-05	0.000113	0.440615	0.6631
LVR	-7.43E-06	7.91E-05	-0.093971	0.9259
R-squared	0.286396	Mean dependent var		5.071667
Adjusted R-squared	0.204057	S.D. dependent var		2.851706
S.E. of regression	2.544168	Akaike info criterion		4.829050
Sum squared resid	168.2926	Schwarz criterion		5.015877
Log likelihood	-68.43575	Hannan-Quinn criter.		4.888818
F-statistic	3.478254	Durbin-Watson stat		1.690602
Prob(F-statistic)	0.030176			

Testing of Hypotheses One

Ho$_1$: There is no significant relationship between claims settlement and return on asset
Hi$_1$: There is significant relationship between claims settlement and return on asset

Interpretation of Results
We will reject the alternate hypothesis and accept the null hypothesis which states that there is no significant relationship between claims settlement and return on asset.

Testing of Hypothesis Two
Ho$_2$: There is no significant relationship between premium valuation period and return on asset.
Hi$_2$: There is significant relationship between premium valuation period and return on asset.

Interpretation of Result
We will reject the alternate hypothesis and accept the null hypothesis which states that there is no significant relationship between premium valuation period and return on asset.

Discussion of Findings

The first hypothesis sought to examine the relationship between claims settlement and return on asset. Hence, it was hypothesized that there is no significant relationship between claims settlement and return on asset. This hypothesis was tested using multiple regression analysis (OLSM). As can be seen from our analysis of data this alternate hypothesis was rejected. Based on the above, Dauda (2004) analyzed the impact of asset management on financial performance in Nigeria, by adopting the neo-classical growth model. She used the ordinary least square methods of estimation and found a positive relationship between risk asset management and financial performance. Several studies draw the link between good risk asset management with improved financial performances. In particular, Mohsen, Arezoo and Vahid (2018); Tony, Daniel and Michael (2018) and Mua, Gang, Douglas and Lachlan (2009) argued that there is a positive and significant relationship between total risk asset management and company's performance. Moreover, Smith (2017) and Schroeck (2017) revealed that prudent risk asset management practices reduce the volatility in institutions' financial performance, namely operating income, earnings, firm's market value, share return and return on equity.

Conclusion and Recommendations
This study examined the risk asset management and financial performance in Nigeria for the period 1986–2016. The study investigated the long run and short run relationship between the variables by using Johansen Co-integration and Error Correction Model (ECM) approach. The empirical result shows that return on asset, return on equity and leverage risk are all important determinants of Risk asset management in Nigeria both in the short run and the long run as these variables have negative effect and thus stimulates financial performance in Nigeria. While claims settlement and premium valuation period have negative impact on Risk asset management in Nigeria as these variables are found to be statistically insignificant in predicting the development of the economy.

This study concludes that there is a weak negative relationship between the selected variables on return on asset while return on equity was strong together and total risk asset

management. Also, this study concludes that the relationship between claims settlement on return on asset is inverse but insignificant.

Base on the findings of this study, the following recommendations are advanced:
i. That policymakers should be concerned with economy liquidity, given that return on asset is a strong indicator of risk asset management as it is positive and statistically significant.
ii.   To promote risk asset management in Nigeria, the government sector should be encouraged to increase the financing of the insurable projects so as to boast financial performance and development in the country.
iii.   The study recommends that the central bank of Nigeria (CBN) and other regulators should plan in advance and Influence the variables such as return on equity should be channel on the right direction. For instance the project should have sufficient money supply to ensure that there is enough money to invest of claims settlement in the economy.

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