Effect of Financial Risk on the Performance of Insurance Firms in Nigeria, 2013 – 2022

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Abstract

Research Objectives: The study examined the effect of financial risk on the performance of insurance firms in Nigeria. Specifically, the study examined the effect of liquidity risk on return on asset of insurance firms in Nigeria; and assessed the effect of solvency risk on return on asset of insurance firms in Nigeria.

Methodology: The data employed for the study were time series data, and were sourced from financial publication of the Insurance industries under review. The panel least square multiple regression model was used in analyzing the data.

Findings: Liquidity risk with a p-value of 0.9871 is greater than the level of significance at 0.05 which means that it has no significant effect on return on asset of insurance companies in Nigeria; Solvency risk on the same hand has a p-value 0.7451 which is also greater than the level of significance at 0.05 and thus has no significant effect on return on asset of insurance companies in Nigeria.

Conclusion: Liquidity and solvency risk have no significant effect on the performance of insurance companies in Nigeria.

Recommendation: Insurance firms should forestall solvency risk challenges by moderately widening their bond portfolio, considering that it remains relatively stable.

Key words: Insurance, Financial risk, Liquidity risk, Solvency risk, Return on asset.

1.0 INTRODUCTION

Insurance sector plays an intermediary role in the financial system through their provision of financial protection from the occurrence of possible hazards in the future. They mitigate the financial losses faced in the economy by compensating the unfortunate with the resources contributed by the fortunate. Insurance companies like banks provide financial intermediation by facilitating the flow of funds from the surplus units to deficit units through the process of issuing insurance cover to policyholders and investing the premium generated in productive sectors (Gatsi & Gadzo, 2013). The insurance industry being recognized as one of the financial sectors is faced with many financial risks which if not properly managed may



endanger their performance. This often can happen by the different types of risks they assume (Wani & Showket, 2015). The financial risks which will be the main focus of this study is liquidity and solvency risk.

Liquidity risk arises from the possibility that an entity would be unable to resolve risks arising from changes in its cash inflows and outflows (Githinji, 2013). Liquidity indicates a firm's readiness to settle both expected and unexpected demands of cash at any time (Mukino, 2018). Thus, firms ought to be liquid to maintain their operations and remain in existence for the longest time possible.

Mukino, 2018 defined Solvency as the capability of firms to meet their long-term obligations and sustains continued growth and expansion. Solvency risk is therefore the inability of a company to meet its financial obligations. When a company can satisfy its financial commitments, it is considered to be stable and solvent, but when it cannot, it is insolvent. Elmehdi and Mohammed (2014), argue that solvency risk exists when a financial institution is unable to satisfy its short, medium and long-term financial obligations

These risks if not well managed may affect the financial performance of the insurance sector, and these financial performance will be measured by return on assets of the insurance sector. In order to manage/ minimize the effect of these risks, insurance companies will apply the function of risk management which is a process of identifying, measuring, monitoring and controlling of risk, which is why this study will focus on determining how liquidity risk and solvency risk affects the performance of insurance firms in order to suggest the best risk management procedure to adopt in handling these risks.

REVIEW OF RELATED LITERATURE 2.0

Conceptual Review

Risk

Ralph (2000) defined risk as the existence of uncertainty about future outcomes. The probability of an outcome having a negative impact on people, systems, or assets is another way to define risk. Hansel (1999) sees risk as likelihood of loss and probability of casualty. Risk are of many types but for the purpose of this study, we would be concentrating on liquidity and solvency risk.

Liquidity Risk

The insurer's inability to draw on sufficient cash to meet its obligations when they arise is known as liquidity risk. The majority of insurance claims and benefits are paid to policyholders by insurance companies. According to Authority (2013), the business must therefore have procedures in place to convert investments and other assets into sufficient cash to meet its liabilities. The policy follows the Keynesian Liquidity Preference Theory, which emphasized that a company needs liquidity for speculative, transactional, and safety reasons (Keynes, 1936). As a result, a business should manage its liquid assets in such a way that it



has enough money to carry out its day-to-day operations, put any extra money into investments to earn money, and still has some money that can be easily accessed in the event of an emergency. Liquidity risk, measured as Current assets to Current liabilities (Sisay, 2017 and Arif & Showket, 2015).

Solvency Risk

Solvency is the ability of an institution to meet its short, middle and long term financial obligations (Kyule, 2015). "It refers to a company's capacity to fulfill its obligations in the event of liquidation or activity cessation. A company is said to be solvent if its total assets are greater than or equal to its total liabilities. However, the company runs the risk of insolvency and will be unable to pay its debts if total assets are less than current liabilities (Jackson et al., 2002). Dissolvability influences a company"s capacity to get credits, funding and speculation capital. This is because the ratio of a company's assets to liabilities, or solvency, indicates a company's current and long-term financial health and stability. Solvency risk, measured as Net income to Total liabilities (Mukino, 2018).

Risk Management

Risk management is a set of procedures and methodologies used to identify, measure, monitor and control risks arising from an activity, be it insurance or banking. Risk management aims to manage risks for the organization to survive, and or to optimize risk (Mardina et al., 2018).

Performance

Performance of a firm can be measured with their financial performance or non-financial performance, but this study focused on their financial performance. The degree to which a company is able to use capital from its primary market effectively and generate returns is known as its financial performance. A company's financial performance relies on the ability to predict, track and handle risks and on the likelihood of insurance to compensate damages incurred by risks occurring. A company's overall financial performance is a measure of how well it makes use of its resources. Financial performance is a desired objective for all profit oriented businesses, including insurance companies (Yahaya & Lamidi, 2015). A company's financial performance can be measured by their return on assets.

Return on Asset

Return on assets shows the percentage of how profitable a company's assets are in generating revenue. If the Return on Asset increases, the profitability of the company increases. It affects the increase in profitability gained by shareholders (Husnan, 1998).

Theoretical Review

Enterprise Risk Management Theory (ERM)

Enterprise risk management theory was originally created by COSO (Committee of sponsoring organisations) in 1992. Enterprise risk management (ERM) is a framework that



focuses on adopting a systematic and consistent approach to managing all of the risks confronting an organization. Moreover, enterprise risk management is defined as the overall process of managing an organization's exposure to uncertainty with particular emphasis on identifying and managing the events that could potentially prevent the organization from achieving its objective. This study is anchored on this theory because the study is interested in pinpointing those risks that affect an organization's return on assets and suggesting measures of how to manage them.

Empirical Review

Liquidity risk on performance of insurance firms in Nigeria

Maaka (2013) studied the relationship between liquidity risk and financial performance of commercial banks in Kenya. The study was an ex post facto research and data was sourced from annual reports of 33 Kenyan banks during 2008-2012. Multiple regressions were applied to assess the impact of liquidity risk on banks' profitability. The findings of the study were that profitability of the commercial bank in Kenya is negatively affected due to increase in the liquidity gap and leverage.

Manyo and Ogakwu (2013) examined the impact of liquidity on return on assets of firms: evidence from Nigeria. Ex-post facto research design was adopted for the study. Data was sourced from published annual reports and statements of accounts of quoted companies on NSE from 2000-2009. The multiple regression technique was used in analyzing the specified models. The study found out that liquidity has a significant impact on Return on Assets. The study recommended that firms should work towards improving their overall state of liquidity so as to have a favorable return on profitability.

Onyekwelu et al (2018) appraised the effect of liquidity on financial performance of deposit money banks in Nigeria. A sample of five (5) banks was used for the study. Secondary data were collected from the firms for a ten year period, 2007 - 2016. The data were analyzed using multiple regression analysis. Results show that Liquidity has positive and significant effect on banks' profitability ratios and that liquidity also has positive and significant effect on Return on Capital Employed. The study recommends that there is a need to replace being practiced in the advanced economies of the world.

Olga et al (2019) investigated the impact of liquidity on bank profitability following implementation of the Basel III regulations. A data set of 45 European banks with 180 observations during 2014-2017 and 37 observations for 2018 was sourced from the financial statements of the banks under study. Ordinary Least Squares techniques were employed for data analysis. The study found out that liquidity risk measures have a significant and positive impact only on some profitability proxies, and an insignificant effect on others. The Basel III liquidity measure, LCR, was an insignificant contributor to all return proxies, which requires



further investigation. The results also indicated that an increase in bank size and net provision for loan losses decreases profitability proxies.

Maria and Cross (2021) studied the effect of risk management (credit and liquidity risk) on the financial performance of commercial banks in Nigeria. Data was sourced from the annual reports of the commercial banks. In analyzing the relationship between risk management and performance of Nigerian commercial banks, panel data regression was employed using Eviews software for the analysis. The study found out that there is a significant and positive relationship between risk management and banks return on assets. This suggests that effective and efficient risk management strategy plays a key role in commercial banks financial performance in Nigeria. To that end, the study recommended that Banks need to develop and design a credit strategy that ensures that in the event of defaults or bad debts they can still remain solvent.

Ishaq et al (2021) investigated the impact of liquidity management risk on the financial performance of Saudi Arabian banks for the period of 2002-2019. The data were sourced from the banks' annual financial reports. The methodology adopted for the study was the Ordinary Least Square (OLS) method. The results found a negative effect of liquidity risk on the financial performance of Saudi Arabian banks. Based on the findings, the study recommends that banks should take advantage of the excess liquidity available during granting loans and increase their investment.

Racha et al (2021) investigated the relationship between liquidity risk and bank profitability for the banking sector in Egypt including public and private banks. Data was collected from the official website of the banks and the annual reports during the period from 2013 to 2019. The research methodology was built upon a quantitative approach by collecting panel data (secondary data) for the assigned period to examine the research hypotheses. Pooled regression, as well as the fixed effect and random effect analyses were used as the statistical tools to analyze the collected data. Results revealed that there was a significant relationship between liquidity risk and bank profitability in the period 2013 to 2019 in the Egyptian banking sector.

Solvency risk on performance of insurance firms in Nigeria

Kyule (2015) conducted a study on impact of liquidity risk and solvency risk on financial performance (measured by return on assets (ROA)) of firms listed in Nairobi Securities and Exchange. A descriptive research design was used. The study covered a period of five years (5) from 2009 to 2013. The study used secondary data and the data was analyzed using a regression analysis model and SPSS 21 and Microsoft Excel 2010 was also used as tools of statistical analysis. The findings showed that liquidity positively impacted on the ROA of the firms listed at NSE. However, the effect of liquidity on ROA is not statistically significant at 5% level of significance. Solvency negatively affects ROA of firms listed at NSE.



Dabo et al (2018) conducted a research on solvency risk and financial performance: Evidences from listed firms in Nigeria covering the period seven (7) years from 2010 to 2016. Census sampling design was used to determine the sample size and simple regression analysis was employed to analyze the data. The study found that solvency risk is significant and positively influences the listed insurance firms performance (return on asset) in Nigeria. The study focused on all listed insurance firms using only solvency risk variables but the current study is on all the listed insurance companies using six variables.

Mukino (2018), conducted research on the effect of financial risk on the financial performance of insurance companies listed at Nairobi Securities Exchange. The study used quantifiable secondary data which was analyzed using descriptive and inferential statistics to analyze on SPSS version 22. The study sourced its data from NSE handbook and company's annual report. The study found that liquidity risk and solvency risk negatively affect ROA which had a statistically insignificant effect.

Ibrahim et al (2020) examined the effect of financial risk on financial performance of listed insurance companies in Nigeria from 2009 to 2018. Population of the study consists of 27 listed insurance companies and a sample size of (19) firms. The study used secondary data obtained from the annual reports of the firms. Fixed effect regression was used for data analysis. The results from the fixed effect regression proved that credit risk has negative and significant effect on financial performance, Liquidity risk has negative and insignificant effect on ROA and solvency risk has positive and significant effect on ROA. The study concludes that credit risk has adverse influence on ROA of listed insurance companies in Nigeria.

3.0 **METHODOLOGY**

Research Design

This study was conducted using Ex-post facto research design. This design was required due to the fact that the study was based on a time-series. It is a type of research design inquiry that begins after the event has already occurred without any intervention from the researcher. *Ex-post facto* design is deemed suitable when a study involves data that has already collated (Onwumere, 2020).

Model Specification

The model for the study was based on Olalekan (2018). Their model is written as:

ROAit = β 0it + β 1LVit + β 2CLit + β 3PGit + ϵ it(i)

Where: Return on Asset (ROA) serves as a measure of financial performance,

 $\beta 0$ = constant, $\beta 1$... $\beta 3$ = the slope which represents the degree in which financial performance changes as the independent variable change by one unit variable., LV = Leverage, CL = claim loss ratio, PG= premium growth, $\varepsilon = error term$, t = measure of time, i = number of insurance firm observation.



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Where:

Return on Asset (ROA) = Profit before tax/Total Asset

Leverage (LV) = Total Liabilities/Total Asset

Loss Ratio (CLR) = Net claims incurred/ Net earned premiums

Premium Growth (PG) = Current Premium – Previous Premium/Previous Premium

With respect to this study the model was modified in accordance with the hypotheses formulated. The modelled is stated below:

ROA = f (LR + SR).....(ii)

 $ROA = \beta 0 + \beta 1LR + \beta 2SR + \mu t$ (iii)

Where:

LR = Liquidity risk, SR = Solvency risk, ROA = Return on Asset, $\beta 0$ = Constant parameters, $\beta 1$ = Coefficient parameter of LR, $\beta 2$ = Coefficient parameter of SR, μ = error term

4.0 DATA PRESENTATION AND ANALYSIS

Table 4.1Data on Return on Assets, Liquidity risk and Solvency risk

YEARS	FIRMS	ROA	LR	SR
2022	AIICO	0.024794	0.434566	0.172451
2021	AIICO	0.026623	0.473832	0.197094
2020	AIICO	0.025367	0.378257	0.176531
2019	AIICO	0.042276	0.458644	0.213732
2018	AIICO	0.024631	0.449346	0.146147
2017	AIICO	0.029048	0.396437	0.121202
2016	AIICO	-0.01577	0.400553	0.112849
2015	AIICO	-0.02759	0.463956	0.118974
2014	AIICO	0.017155	0.719877	0.201094
2013	AIICO	-0.00943	0.73465	0.255092
2022	AXA	0.056699	0.754044	0.323663
2021	AXA	0.032338	0.723284	0.326019
2020	AXA	0	0.694668	0.425485
2019	AXA	0.071591	0.629558	0.341698
2018	AXA	0.03034	0.627983	0.313794



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2017	AXA	0.026891	0.600479	0.325479
2016	AXA	0.024726	0.63031	0.346554
2015	AXA	0.012292	0.666402	0.406042
2014	AXA	0.036096	0.838099	0.409984
2013	AXA	0.033341	0.889592	0.469772
2022	CORNER	0.045984	0.738587	0.379047
2021	CORNER	0.067813	1.229328	0.368072
2020	CORNER	0.047645	0.671968	0.356013

Table 4.1 continued

2019	CORNER	0.099964	0.616611	0.360643
2018	CORNER	0.053493	0.632131	0.310984
2017	CORNER	-0.12389	0.540807	0.297819
2016	CORNER	-0.10288	0.834096	0.452385
2015	CORNER	-0.02989	0.942776	0.566014
2014	CORNER	0.086497	0.773535	0.547633
2013	CORNER	0.06674	0.75945	0.498929
2022	LASACO	0.064338	1.060583	0.497587
2021	LASACO	0.024618	1.050037	0.472016
2020	LASACO	-0.01379	0.858911	0.379916
2019	LASACO	0.003077	0.887094	0.431076
2018	LASACO	0.045387	1.05195	0.497498
2017	LASACO	0.028238	0.64079	0.439196
2016	LASACO	0.04894	0.551285	0.406874
2015	LASACO	0.017561	0.533992	0.407774
2014	LASACO	0.032751	0.720201	0.450698
2013	LASACO	0.020768	0.658809	0.438085



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2022	LEADWAY	0.022012	0.202366	0.153186
2021	LEADWAY	0.023878	0.167087	0.161229
2020	LEADWAY	0.021616	0.117841	0.12976
2019	LEADWAY	0.027489	0.266089	0.13753
2018	LEADWAY	0.020877	0.32718	0.144743
2017	LEADWAY	0.047055	0.37436	0.173049
2016	LEADWAY	0.040117	0.391864	0.189872
2015	LEADWAY	0.046444	0.398494	0.147816
2014	LEADWAY	0.027932	0.46097	0.1587
2013	LEADWAY	0.031238	0.511068	0.15919

Source: Researcher's computation, 2023

AIICO in 2022 had its Return on Assets, Liquidity risk and Solvency risk at 0.024794, 0.4345602 and 0.172451 respectively. AXA MANSARD in 2022 had its Return on Assets, Liquidity risk and Solvency risk at 0.056699, 0.75404357 and 0.323663 respectively. CORNERSTONE in 2022 had its Return on Assets, Liquidity risk and Solvency risk at 0.045984, 0.73858738 and 0.379047 respectively. LASACO in 2022 had its Return on Assets, Liquidity risk and 0.497587 respectively. LEADWAY in 2022 had its Return on Assets, Liquidity risk and 0.022012, 0.202366 and 0.153186 respectively.

Descriptive Statistics

	LR	ROA	SR
Mean	0.618696	0.025069	0.310340
Median	0.629934	0.027711	0.325749
Maximum	1.229328	0.099964	0.566014
Minimum	0.117841	-0.123890	0.112849
Std. Dev.	0.239859	0.038450	0.134992
Skewness	0.209533	-1.746685	0.025756
Kurtosis	2.874243	8.066473	1.676268
Jarque-Bera	0.398815	78.90161	3.656083
Probability	0.819216	0.000000	0.160728

Sum	30.93480	1.253440	15.51699					
Sum Sq. Dev.	2.819096	0.072442	0.892915					
Observations	50	50	50					
Source: Eviews	10, 2023.							
4.3 Test of	4.3 Test of Hypotheses							
Result of Hypo	Result of Hypothesis test							
Dependent Variable: ROA								
Method: Panel Least Squares								
Date: 08/08/23 Time: 02:19								
Sample: 2013 2022								
Periods included: 10								
Cross-sections included: 5								
Total panel (balanced) observations: 50								

Variable	Coefficient	Std. Error	t-Statistic	Prob.
	0.018353	0.015587	1 177/01	0.2440
C	0.018555	0.015567	1.1//401	0.2449
LR	-0.000640	0.039443	-0.016227	0.9871
SR	0.022916	0.070084	0.326986	0.7451
R-squared	0.005971	Mean de	pendent var	0.025069
Adjusted R-squared	-0.036328	S.D. dep	endent var	0.038450
S.F. of regression	0 039142	Akaike ii	nfo criterion	-3.58510 6
5.L. 01 10210351011	0.057172			U

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			-3.47038
Sum squared resid	0.072009	Schwarz criterion	4
			-3.54141
Log likelihood	92.62764	Hannan-Quinn criter.	9
F-statistic	0.141156	Durbin-Watson stat	1.196709
Prob(F-statistic)	0.868721		

Source: Eviews 10, 2023

Result of Hypotheses One

Step 1: Restatement of the null hypothesis

 H_01 : Liquidity risk has no significant effect on the return on assets of insurance firms in Nigeria.

Step 11: Presentation and discussion of results

With reference to Table 4.3.1 which is the result of the hypothesis test, it shows clearly that the p-value which is 0.9871 is greater than the level of significance at 0.05.

Step 111: Statement of Decision criteria

Accept null hypothesis if p-value is equal or greater than the level of significance at 0.05, otherwise reject.

Step 1V: Decision

The result shows that the p-value 0.9871 is greater than the level of significance 0.05, thus we accept the null hypothesis and conclude that liquidity risk has no significant effect on return on asset of insurance firms in Nigeria

Result of Hypotheses Two

Step 1: Restatement of the null hypothesis

 H_02 : Solvency risk has no significant effect on the return on assets of insurance firms in Nigeria.

Step 11: Presentation and discussion of results

With reference to Table 4.3.1 which is the result of the hypothesis test, it shows clearly that the p-value which is 0.7451 is greater than the level of significance at 0.05.

Step 111: Statement of Decision criteria

Accept null hypothesis if p-value is equal or greater than the level of significance at 0.05, otherwise reject.



Step 1V: Decision

The result shows that the p-value 0.7451 is greater than the level of significance 0.05, thus we accept the null hypothesis and conclude that solvency risk has no significant effect on return on asset of insurance firms in Nigeria.

5.0 PRESENTATION OF RESULTS

The result of hypothesis one shows that the p-value 0.9871 is greater than the level of significance at 0.05, thus the null hypothesis was accepted and we concluded that liquidity risk has no significant effect on return on asset of insurance firms in Nigeria. The coefficient of liquidity risk at -0.000640 shows it has a negative relationship with return on assets of the selected composite insurance companies. This implies that a unit increase in return on assets of the selected composite insurance companies is dependent on 0.000640 basis points decrease in liquidity risk.

The result of hypothesis two shows that the p-value 0.7451 is greater than the level of significance at 0.05, thus the null hypothesis was accepted and we concluded that solvency risk has no significant effect on return on asset of insurance firms in Nigeria. The coefficient of solvency risk at 0.022916 shows it has a positive relationship with return on assets of the selected composite insurance companies. This implies that a unit increase in return on assets of the selected composite insurance companies is dependent on 0.022916 basis points increase in solvency risk. The adjusted coefficient of determination at -0.036328 shows that liquidity risk and solvency risk can explain only 3.6328 percent variation in return on assets of the selected composite insurance companies in the model used.

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