



Effect of Liquidity Risk on the Investment of the Nigerian Insurance Industry

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This study was on the effect of liquidity risk on the investment of the Nigerian insurance industry. The specific objectives of the study were to examine the effect of liquidity risk on insurance industry investments in federal government securities; and evaluate the effect of liquidity risk on insurance industry investments in stocks and bonds. The research design applied was Ex-post facto design. Hypotheses formulated were tested using the Ordinary Least Squares statistical technique. It was found that liquidity risk did not have a positive and significant effect on insurance industry investments in federal government securities. Also, liquidity risk did have a positive and significant effect on insurance industry investments in stocks and bonds. Based on the findings it was concluded that liquidity risks affect insurance industry investment in Stocks and Bonds but not investment in federal government securities. In line with the findings of the study, it was recommended that the insurance industry should not put in more resources in federal government securities. It is not a very attractive financial instrument and tends to sell based on the performance of the government team in power. In addition, the insurance industry should mix their purchase of Stocks and Bonds with both local and foreign financial instruments. This will aid the industry to have a diversified portfolio and that can bring in foreign currency returns

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ABSTRACT

Keywords: Nigerian Insurance Industry; Liquidity Risk; Insurance Industry Investments

Introduction

Liquidity is an important variable in business operations. It shows that a business organization has the ability to meet its short-term obligations without suffering undesirable losses (Bala, Salisu and Sani, 2022). For the very survival of business, the firm should have requisite degree of liquidity. It should be neither excessive nor inadequate. Excessive liquidity means accumulation of ideal funds. Which may lead to lower profitability, increase speculation, and unjustified extension, extension of liberal credit terms, liberal dividend policy etc.; whereas inadequate liquidity result in interruptions of business operations. A proper balance between these two extreme situations therefore should be maintained for efficient operation of business through skill full liquidity management. Traditionally, liquidity refers to the speed and certainty with which an asset can be converted back into cash whenever the asset holder desires (Acharya and Naqvi, 2012). Liquidity means how quickly you can get your hands on your cash. In simpler terms, liquidity is to get your money whenever you need it.

The issue of liquidity cannot be kept far from insurance. Insurance companies indemnify the ones who suffer a loss and stabilize the financial position of individuals and firms with possibility of transfer of different kinds of risks to insurance companies. Again, firms exposed to various risks of their liability, property, illness and disability of their employees and life of key employees, have the possibility of managing those risks by transfer to insurance companies. This allows firms to concentrate their attention and resources on their core business which can lead to willingness and ability to take real investment which will help to generate higher level of economic growth (Oke, 2012). This means that without pooling and transferring of risk which insurance companies provide, part of the economic activities would not take place and positive effects on social welfare would fail (Oke, 2012). For example, general insurance companies help firms and households limit the financial costs associated with the occurrence of various risks to their physical property, legal liability and miscellaneous financial loss. Second, insurance companies channel savings into investment (French and Vital, 2015). Life insurance companies, for example, help individuals to cover risks arising from uncertainty about their health and lifespan, and one way that they do this is by gathering funds from policyholders and investing these in debt, equity and other assets.

Despite providing risk cover, the industry faces the crisis of liquidity at all times. This is given that a claim can arise at any time. Such claim can fall into when the insurer does not have the financial muscle to settle it due to no cash or little cash or illiquid assets. An insurance firm requires the ability to pay its liabilities in a timely manner, as they come due for payment under their original payment terms. Having a large amount of cash and current assets on hand is considered evidence of its high level of liquidity. It shows the degree to which its assets or securities can be quickly bought or sold in the market without affecting the asset's price. Regardless of the reasons for which an insurance company may be called upon to pay claims, the simple fact that much of its equity is invested in securities, which cannot be readily or without costs converted into cash, constitutes a liquidity risk.

The Financial Services Authority (FSA, 2014) cited in Pattni and Agrawal (2016) defines liquidity risk as “the risk that a firm, though solvent, either does not have sufficient financial resources available to enable it to meet its obligations as they fall due, or can secure them only at excessive cost”. Simply put, firms face liquidity risk when, in spite of holding a higher level of assets than liabilities, these assets are ‘illiquid’, and not easily convertible to cash. This forces it to sell its assets at a discount to quickly raise the required cash resources. Alternatively, the firm may borrow funds, which will further require a payment of interest on the loan, therefore giving rise to the ‘excessive cost’. In other words, this is risk that arises from the difficulty of re-selling an asset, particularly a financial instrument earlier invested in. Such an investment may sometimes need to be sold quickly. Unfortunately, an insufficient secondary market may prevent the liquidation or limit the funds that can be generated from the investment.

To operate profitably, insurers must earn more from premiums, which are invested across a range of asset classes, than they pay out in claims (Zacks, 2017). Investment in insurance business is concerned with the application of insurance funds which are not immediately required for expenditure, or for payment of insurance claims and benefits (Chiejina, 2017). When the funds are not meant for immediate "consumption", they are employed to be productive and increase in value or even multiply, depending on how long they are engaged in the productive activities (Chiejina, 2017). An insurance company through its investments aim at improving the financial position of

their company relative to its competitors, so that year by year it is gaining on them on its ability to add to premium volume, to stand large insurance exposure, to innovate, to raise capital, to acquire companies, and to increase dividends (Herron, 1999). Financial instruments are attractive to insurance companies because regular principal and interest payments can be matched against expected claims (Zacks, 2017). These include corporate debt, municipal bonds, structured securities, federal government securities and foreign government bonds (National Association of Insurance Commissioners, NAIC, 2010). According to McMnamin, Paulson, Plestis and Rosen (2013) insurers generally choose assets with features that are aligned with the characteristics of the insurance products that they sell. For example, proceeds from a long-term insurance product would be invested in a long-duration asset. This means that the risks from insurance liabilities will generally be balanced by the risk's insurers assume through their investment activities. Although insurers invest in a diverse set of industries, they have significant investments in industrial and manufacturing firms, financial firms, and real-estate-related securities (McMnamin, Paulson, Plestis and Rosen, 2013).

In Nigeria, the insurance industry is bound by law on where to invest. Section 25 of Insurance Act 2003 provides that an insurer shall at all times in respect of the insurance transacted by it in Nigeria, invest and hold invested in Nigeria assets equivalent to not less than the amount of policy holder's funds in such accounts of the insurer. Nigerian insurers will typically hold cash in the form of bank deposits, Treasury Bills, commercial paper, stocks and bonds and other money market instruments to meet outflows. The same investments from time to time, may not be readily or without costs converted into cash when an insurance company may be called upon to pay out, and this constitutes a risk (Gaspar and Sousa, 2010). Facing this challenge of likelihood of illiquidity of its investments, casts a black shadow on goodwill of insurers because their ability to pay short-term liability may be doubted by the insured and general public at large. Given the uncertainty of liquidity risk arising and the limitation it puts on the insurance industry it proves to be an issue of great concern, hence this study.

Statement of the Problem

Liquidity risk presents a lot of challenges to the investments of the insurance industry which are basically spread between investments in government securities, stocks and bonds, policy loans, bills of exchange and real estate. The insurance industry is limited in its maneuverability of investments in equities whether locally or internationally due to liquidity risk challenges. When an investment opportunity arises that require insurers to offload their investment in a particular equity to take advantage of another equity the liquidity level of the former equity determines the ease with which an insurer can invest in the later equity. Added to this, with larger classes of insurance policies falling under non-life insurance sector it exposes the industry to mostly short – term contracts which require that insurers are able to respond immediately once called upon. This leaves the industry making investments in short term instruments in order to be able to respond in the aftermath of shocks to the insured. Through this the tenure of investments made by insurers are limited by the liquidity risk exposures they face. Also, when interest rates change, these differences can give rise to unexpected changes in the cash flows and earnings spread among assets, liabilities, and off-balance-sheet instruments of similar maturities or re-pricing frequencies (Edem, 2017). As such, whatever instrument serves as the vehicle of investments made by the insurance industry is unavoidably affected. This creates cash calls and exposes insurers to increased liquidity risk. As such it seems liquidity risk poses much problem to the investment of the insurance industry in Nigeria. To empirically determine how significant the premise, this study investigated the extent to which liquidity risk affects investments made by the Nigerian insurance industry.

Objectives of the Study

The broad objective of the study is to assess the effect of liquidity risk on Nigerian insurance industry investments. The specific objectives of the study are to;

- I. Examine the effect of liquidity risk on insurance industry investments in federal government securities
- II. Evaluate the effect of liquidity risk on insurance industry investments in stocks and bonds

Statement of Hypotheses

The following null hypotheses were formulated:

H₀₁: Liquidity risk did not have a positive and significant effect on insurance industry investments in federal government securities

H₀₂: Liquidity risk did not have a positive and significant effect on insurance industry investments in stocks and bonds

Review of Related Literature

Theoretical Review

The theoretical basis of this study is the liquidity preference theory. It was propounded by John Maynard Keynes in 1936. According to Keynes, individuals value money for, “the transaction of current business and its use as a store of wealth.” For this reason, Keynes purports that they tend to relinquish interest earnings on their money in order to spend their money in the present. He also suggests that these individuals prefer to keep their money on hand as a precautionary measure. Keynes also theorizes that when higher interest rates are offered, individuals are more willing to hold on to less money in order to obtain a profit. The liquidity preference theory suggests that an investor demands a higher interest rate, or premium, on securities with long-term maturities, which carry greater risk, because all other factors being equal, investors prefer cash or other highly liquid holdings. Investments that are more liquid are easier to sell fast for full value.

According to the liquidity preference theory, interest rates on short-term securities are lower because investors are sacrificing less liquidity than they do by investing in medium-term or long-term securities. The theory pointed out that investors preferred highly liquid financial instruments. Such are easier to sell fast for full value. For the Nigerian insurance industry, it needs to recall its investments intermittently given that majority of the policies it sells are in the general insurance class which is mostly short-term policies. As such the insured are likely to suffer loss regularly which does not grant the industry sufficient time for its investments to be long term. In line with liquidity preference theory the industry then invests in assets that in short term will be liquid. In making such investments consideration is given to the likely outcome on such investments in the event that interest rates change, in particular, the possibility and extent of change in cash-flows and earnings spread among assets. In other words, the insurance company weighs an investment opportunity in the light of whether in the aftermath of loss suffered by customers it can offer the insurers the ability to respond.

Empirical Review

Bala, Salisu and Sani (2022) examined the influence of firms’ liquidity on the financial performance of quoted insurance companies in Nigeria. The study used GLS random-effects regression method to analyze the data of the study. The outcome of the study revealed that the capital adequacy ratio is the major factor that influences the financial performance of quoted insurance firms in Nigeria. Msomi (2022) evaluated the influence of leverage and liquidity on financial performance of general insurance companies in Sub-Saharan Africa. The pooled OLS, fixed effects and random effects models were estimated with the financial performance measures (proxied by ROA) as the dependent variables where the Hausman test was employed to test the hypothesis. The study found that there is a negative negligible link between leverage and financial performance, whereas there is a positive association between liquidity and financial performance.

Kariuki, Muturi and Njeru (2021) investigated the influence of liquidity on the financial performance of insurance companies in Kenya. The research applied a correlational research design. The investigation found that liquidity had an enormous positive effect on financial performance (Return on assets and return on equity). Otekunrin, et. al, (2019) studied the performance of selected quoted money banks in Nigeria and liquidity management of 17 banks listed on the Nigerian Stock Exchange (NSE) between 2012 and 2017, the study extracted secondary data from the financial statements of 15 quoted banks for six years and analyzed it using Ordinary Least Square (OLS) method. Capital ratio, current ratio and cash ratio were the proxies for liquidity management while performance proxies were return on assets. The study found that liquidity management and banks’ performance are positively related. Laminfoday (2018) worked on the association between liquidity risk management and financial performance of

commercial banks in Sierra Leone. The results of the research showed a significant and negative relationship between liquidity risk management and financial performance of commercial banks in Sierra Leone. The study also revealed that liquid assets to total assets had the greatest impact on financial performance and had an inverse relationship.

Sisay (2017) examined the effect of financial risk on performance of insurance companies in Ethiopia and interprets the result by relating with the regulations. The regression result show that credit risk, liquidity risk, solvency risk, underwriting risk and technical provisions risk show negative and significant effect at 1% and 5% significance level on performance of insurance companies in Ethiopia, whereas reinsurance risk has insignificant effect at 5% significance level on performance of insurance companies. Ariwa, Ani, Onyele, Ekeleme and Okwuchukwu (2017) investigated the impact of stock market liquidity and efficiency on performance of the manufacturing sector in Nigeria using time series data from 1985-2014, employing ARDL bounds test approach to co-integration. The ARDL bounds test result revealed that the variables in the specified model were bound together in the long-run. The associated equilibrium correction was also significant attesting to the existence of long-run relationship. The findings also indicated that stock market efficiency and number deals were significant variables that explained the changes in the Nigerian manufacturing sector. Mucheru, Shukla and Kibachia (2017) determined the effects of liquidity management on the performance of commercial banks. Multiple regression analysis was employed to determine relationship between liquidity management and financial performance of commercial banks in Rwanda. The findings revealed that holding Liquidity decisions, Cash management, non-core investment, and Loan repayment to a constant zero, financial performance would be at 0.347.

Kurotamunobaraomi, Giami and Obari (2017) empirically investigated the interrelationship between liquidity and corporate performance of banks in Nigeria with the use of annual data from 1984 to 2014. Empirical results indicate a significant negative short-run relationship between Cash Reserve Ratio and corporate performance as well as a positive relationship between Loan-to- Deposit Ratio and Liquidity Ratio on one hand and corporate performance on the other albeit significantly and insignificantly respectively. Also, Cash Reserve Ratio and Liquidity Ratio are statistically significant enough to influence Return on Shareholders' Fund in the long run, while the Loan-to-Deposit Ratio exhibits complacency in instigating Performance in deposit money banks in Nigeria; a position corroborated by the Causality results, implying that other factors could be responsible for banks' performance such as industry structure and government policies or regulations.

Mazviona, Dube and Sakahuhwa (2017) examined factors affecting the performance of insurance companies in Zimbabwe utilizing secondary data from twenty short-term insurance companies. Using factor analysis and multiple linear regression models to determine the factors affecting performance and identifying their impact, findings revealed that expense ratio, claims ratio and the size of a company significantly affect insurance companies' performance negatively whilst leverage and liquidity affect performance positively. Ondigi and Muturi (2016) assessed the factors that affect profitability of insurance firms in Kenya, case of firms listed on the NSE. Secondary data obtained from the annual published financial statements were quantitatively analyzed using descriptive statistics like mean and percentages. The study found out that liquidity of insurance firms was one of the major determinants of Kenyan insurance firms' profitability. Equity has a direct influence on insurance firms' profitability. Bassey, Tobi, Bassey and Ekwere (2016) examined liquidity management and the performance of banks in Nigeria within the period 2000-2010. Data were analyzed using simple percentages and simple regression model. Findings indicate that a strong relationship exists between bank deposit and bank reserve requirement, and bank investment and cash ratio.

Demirgüneş (2016) analysed the effect of liquidity on financial performance (in terms of profitability) by using a time-series data of Turkish retail industry (consisting of Borsa Istanbul (BIST) listed retail merchandising firms) in the period of 1998.Q1-2015.Q3. Casual relationships between the series were tested by Hacker and Hatemi (2012) boot strap causality test. Results of Maki (2012) test show that the series are co-integrated in the long-run. While long-run parameters estimated posit a significantly positive relationship between financial performance and liquidity, causality test does not indicate any direction of causality between the series. Okaro and Nwakoby (2016) assessed the effects of liquidity management on performance of deposit money banks (DMBs) in Nigeria. The hypotheses were tested using OLS regression analysis. The result showed that there is a negative and significant relationship

between liquidity ratio and DMBs' profitability and there is a positive and significant relationship between cash to deposit ratio and profitability of the DMBs.

Badreldin and Zaroug (2016) investigated the liquidity position and its impact on the financial performance of Omani Banks with the eventual objective to advice policies to improve the management of liquidity risk in Omani banks. Multiple regression analysis was applied. The study concluded significant relationship between the bank's loans to total assets ratio, illiquid assets to liquid liabilities ratio and bank's ROA; bank's Liquid assets/deposits; Liquid assets/Short term liabilities and ROE; and bank's Loans/ Total assets, Loans/ Deposits & short-term liabilities; Bank's loans – customer deposits/ Total assets and ROAA. However, the study finds no significant relationship between Omani bank liquidity position (such as a bank high ability to absorb shocks, liquidity at short-term, ability to cope with long term liquidity risk, less liquidity and less risk exposure) and NIM.

Omekara, Okereke & Ukaegeu (2016) undertook a study on Forecasting Liquidity Ratio of Commercial Banks in Nigeria. Autoregressive fractionally integrated moving average (ARFIMA) model was used for modeling and forecasting of liquidity ratio of commercial banks in Nigeria. ARIMA model was fitted for the liquidity ratio data. On the basis of minimum AIC values, the best model was identified for each of ARFIMA and ARIMA models respectively. Mushtaq, Chishti, Kanwal and Saeed (2015) investigated the trade-off between liquidity and profitability in the five sectors of Pakistan, (Chemical, Fuel & Energy, Paper-Board & Products, Food (Sugar) Sector & Cement Sectors). Correlation and Panel regression analysis, respectively, are employed to examine the nature and extent of the relationship between the variables and determine whether any cause-and-effect relationship between them. The results show that all the measures of liquidity except Debtors Turnover and Debt to Equity Ratio are contributing positively towards the profitability of the firms.

Kamau and Njeru (2015) took a look at effect of liquidity risk on financial performance of insurance companies listed at the Nairobi Securities Exchange, in Kenya from 2012 to 2015. It was found out that operational, market and credit risks have negative effect on the financial performance of these companies. Trabelsi (2015) investigated the impact of the significant determinants of liquidity risk on the profitability of Islamic commercial banks in Bahrain during the 2007-2013 periods as well as to assess the impact of the global financial crisis on the profitability of these banks during the recovery period. Using Ordinary Least Squares (OLS) the results revealed that all the independent variables are significant with both models ROA and ROE except financial leverage and deposits have a statistically insignificant impact on ROA- Capital adequacy, financial leverage, deposits and GDP have a positive and significant impact; whereas bank size and the global financial crisis have a negative impact and are statistically significant.

A significant gap observed from this empirical review is in the choice of variables used by the empirical studies above. Minimal consideration was given to the insurance industry in Nigeria and where there was one the choice of variables largely ignored the respective areas of investments made by the insurance industry which is believed to be where they face the most liquidity risk exposure. This study addressed this gap by using the investments of the insurance industry in federal government securities and stocks and bonds. Furthermore, the proxy for Liquidity was Asset liability modelling as against the norm of Quick ratio, Leverage ratio, Capital adequacy and Asset's portfolio mix.

Methodology

The research adopted *ex-post facto* research design. Data was taken from Central Bank of Nigeria Statistical Bulletin, and National Insurance Commission data publication of various years. The study took place in Nigeria.

The functional relation of hypothesis one model is given as:

$$\text{INVFGS} = f(\text{LQR}) \dots\dots\dots (1)$$

The model is specified as follows:

$$\text{INVFGS} = \beta_0 + \beta_1 \text{LR} + \mu \dots\dots\dots (2)$$

Where:

- INVFGS: = Insurance industry investments in federal government securities
- LR = Liquidity Risk
- β_0, β_1 = constant parameter

μ = the error term

The functional relation of hypothesis two model is given as:

$$\text{INVSB} = f(\text{LQR}) \dots\dots\dots (3)$$

The model is specified as follows:

$$\text{INVSB} = \beta_0 + \beta_1 \text{LR} + \mu \dots\dots\dots (4)$$

Where:

- INVSB = Insurance industry investments in stocks and bonds
- LR = Liquidity Risk
- β_0, β_1 = constant parameter
- μ = the error term

Considering that liquidity risk in this study was based on Assets modeling as mentioned in the gap in empirical studies it will be in the form of a ratio. To ensure there is a linear scale (uniform parameter of measurement) for all variables the other variables were also expressed as ratio.

Dependent Variable

Insurance Industry Investment in Federal Government Securities: This is the total of investments made by the insurance industry in treasury bills by the federal government of Nigeria. This variable is expressed as a ratio of insurance industry investment in federal government securities and total investment of the industry.

$$\text{INVFGS} = \frac{\text{industry investment in federal government securities}}{\text{total investment of the industry}}$$

Investment in Stocks and Bonds: This is the total investments made by the insurance industry in a mixture of purchase of shares of individual companies (Stocks) and giving loan to a government, corporation, or other entity that needs to raise cash and/or borrows money in the public market and subsequently pays interest on that loan to investors (Bonds). This variable is expressed as a ratio of insurance industry investment in stocks and bonds and total investment of the industry.

$$\text{INVSB} = \frac{\text{industry investment in stocks and bonds}}{\text{total investment of the industry}}$$

Independent Variable

Liquidity Risk: As used in this study, liquidity risk was based on Asset-liability modelling which is an effective tool for reducing liquidity risk in both life and non-life insurance as it co-ordinates the cash flows on the asset and liability side of the balance sheet (Pattni and Agrawal, 2018). This variable is expressed as a ratio insurance industry total assets and insurance industry total liability.

$$\text{LR} = \frac{\text{insurance industry total assets}}{\text{insurance industry total liability}}$$

Stationarity test was carried out using Phillips Perron method of unit root test. The models were estimated using Ordinary Least Squares. The level of significance is 5%.

Table 1: Data on Ratio of Insurance Industry Investment in Federal Government Securities to Total Insurance Investment, Ratio of Insurance Industry Investment in Stocks and Bonds to Total Insurance Investment, and Ratio of Total Insurance Industry Assets to Total Insurance Industry Liability

YEAR	INVFGS	INVSB	LQR
1996	0.1249	0.32698	0.52357
1997	0.1478	0.30084	0.58719
1998	0.2648	0.23205	0.54907
1999	0.1384	0.19339	0.56816
2000	0.14127	0.19819	0.59733
2001	0.1195	0.21103	0.64764
2002	0.10157	0.22606	0.6052
2003	0.08216	0.21028	0.75475
2004	0.05589	0.26909	0.73387
2005	0.03429	0.50721	0.90308
2006	0.02245	0.56301	1.16994
2007	0.06352	0.67511	1.39143
2008	0.06352	0.67511	1.59614
2009	0.06352	0.67511	1.39736
2010	0.06352	0.67511	1.19264
2011	0.06352	0.67511	1.08335
2012	0.06352	0.67511	1.00112
2013	0.06352	0.67511	0.94165
2014	0.06352	0.67511	0.87797
2015	0.06352	0.67511	0.87027
2016	0.06352	0.67511	0.79609
2017	0.06352	0.67511	0.79609
2018	0.06352	0.67511	0.79609
2019	0.06352	0.67511	0.79609
2020	0.06352	0.67511	0.79609

Source: Researcher's calculation, 2022

Where: INVFGS = insurance industry investment in federal government securities to total insurance investment; INVSB = ratio of insurance industry investment in stocks and bonds to total insurance investment; LQR = ratio of total insurance industry assets to total insurance industry liability

Table 1 shows that in 1996, 12.49% of total insurance investment was made up of the industry's investment in federal government securities. In 2000, it was 14.127%, 6.352% in 2010 and still 6.352% in 2020. Total insurance investment was made up of the 32.698% of the industry's investment in 1996. This was at 19.819% in 2000, increased to 67.511% in 2010 and now at 67.511% in 2020. In 1996, the total liabilities of the Nigerian insurance industry could be addressed using 52.357% of the industry's assets. As at 2020 it was 79.609% of the industry's assets.

Unit Root Tests

The stationarity of the data was tested using the Philips-Perron test statistic. The summary of the test was displayed in Table 4.3.

Table 2: Result of Unit Root Tests

Variable	Phillips-Perron statistic	test	Critical value @ 5%	Order of Integration	P-value
INVFGS	-6.827781	-2.998064	1(1)	0.0000	
INVSB	-2.867574	-1.956406	1(1)	0.0062	
LQR	-2.685099	-1.956406	1(1)	0.0096	

Source: Researcher's calculation using the data in Table 1.

Table 2 reveals that all the time series were stationary at first difference.

Table 3: Result of Hypothesis One Test

Dependent Variable: INVFGS

Method: Least Squares

Date: 09/15/22 Time: 13:10

Sample (adjusted): 2 25

Included observations: 24 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.002387	0.008076	-0.295509	0.7704
LQR	-0.015057	0.068058	-0.221244	0.8269
R-squared	0.002220	Mean dependent var		-0.002558
Adjusted R-squared	-0.043134	S.D. dependent var		0.038560
S.E. of regression	0.039382	Akaike info criterion		-3.551338
Sum squared resid	0.034121	Schwarz criterion		-3.453167
Log likelihood	44.61606	Hannan-Quinn criter.		-3.525293
F-statistic	0.048949	Durbin-Watson stat		2.622760
Prob(F-statistic)	0.826943			

Source: Researcher's Eviews 10 Output, 2022

From Table 3 it is seen that probability of the t-Statistic was 0.8269 and is greater than the level of significance of 0.05. Therefore, the null hypothesis is upheld. That is to say, liquidity risk did not have a significant effect on insurance industry investments in federal government securities

Table 4: Result of Hypothesis Two Test

Dependent Variable: INVSB

Method: Least Squares

Date: 09/15/22 Time: 13:10

Sample (adjusted): 2 25

Included observations: 24 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.012035	0.010932	1.100972	0.2828
LQR	0.217533	0.092122	2.361344	0.0275
R-squared	0.202203	Mean dependent var		0.014505
Adjusted R-squared	0.165940	S.D. dependent var		0.058370
S.E. of regression	0.053308	Akaike info criterion		-2.945817
Sum squared resid	0.062518	Schwarz criterion		-2.847646
Log likelihood	37.34981	Hannan-Quinn criter.		-2.919773
F-statistic	5.575945	Durbin-Watson stat		1.697268
Prob(F-statistic)	0.027481			

Source: Researcher's Eviews 10 Output, 2022

From Table 5 it is seen that probability of the t-Statistic was 0.0275 and is lower than the level of significance of 0.05. Therefore, the null hypothesis is rejected. That is to say, liquidity risk did have significant effect on insurance industry investments in stocks and bonds.

Discussion of Findings

The result of hypothesis one test reveals that liquidity risk does not significantly affect the insurance industry investment in federal government securities. This may be attributed to the nature of the financial instrument which has minimal risk exposure. Federal Government Securities are considered as the safest of all investments in domestic debt market because it is backed by the 'full faith and credit' of the Federal Government, and as such it is classified as a risk-free debt instrument (Debt Management Office, 2022). They have no default risk, meaning that it is absolutely certain your interest and principal will be paid as and when due. The interest income earned from the securities are tax exempt. With certainty of guarantee of payment at the due date insurance companies are not likely to lose their investment. This allows the industry to easily find a long-term investor to sell to in the event there is need to pay off obligations that arise. The negative coefficient of liquidity risk variable shows that it has a decreasing interaction with ratio of insurance industry investment in federal government securities. The result of hypothesis one test aligns with Kamau and Njeru (2015) who found that there was a negative relationship between liquidity risks and financial performance of insurance companies. On the other hand, it disagrees with Almajali, Alamro and Al-Soub (2012) who found that liquidity have a positive effect on the financial performance of insurance companies.

From result of hypothesis two test, we saw that liquidity risk has significant effect on the insurance industry investment in stocks and bonds. Buyers and sellers in the capital market are not under restraint and can move their investments now they deem it to be in their best interest. This can pull reverberating effect on some part or the whole market leading to gains and losses. The investment of the insurance industry is not exempted and when facing a loss or reduction in value the industry will find it hard to sell off in order to address an obligation that arises. With prices fluctuating everyday due to market forces insurance companies can lose their investment. This makes it difficult for the industry to easily find a buyer to sell to in the event there is need to pay off obligations that arise. The positive coefficient of liquidity risk variable shows that it has an increasing interaction with ratio of insurance industry investment in stocks and bonds. The result of hypothesis two test aligns with Mazviona, Dube and Sakahuhwa (2017) who revealed that liquidity affect insurance companies' performance positively. It is also in line with Msomi (2022) who found that there is a positive association between liquidity and financial performance.

Summary of Findings

It was found that liquidity risk did not have a positive and significant effect on insurance industry investments in federal government securities. Also, it was found that liquidity risk did have a positive and significant effect on insurance industry investments in stocks and bonds.

Conclusion

The insurance industry faces liquidity crisis a lot. When it is unable to resell its investments in order to raise fund and settle claims or other obligations the insurer is facing liquidity risk. It was in view of this challenge that this study sought to investigate the effect of liquidity risk on Nigerian insurance industry investments. Based on the findings of the study it was concluded that liquidity risks affect insurance industry investment in Stocks and Bonds, but not investment in federal government securities.

Recommendation

Based on the conclusion above the following recommendations are made:

- I. The insurance industry should not put in more resources in federal government securities. It is not a very attractive financial instrument and tend to sell based on the performance of the government team in power.
- II. The insurance industry should mix their purchase of Stocks and Bonds with both local and foreign financial instruments. This will aid the industry to have a diversified portfolio and that can bring in foreign currency returns.

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