INFORMATION ASYMMETRY AND PERFORMANCE OF LISTED INSURANCE FIRMS IN EMERGING ECONOMY

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Abstract
Information Asymmetry (IA) is crucial to the performance of business entities. Universally, the firm particularly insurance flourishes when information asymmetry (IA) is curtailed to a manageable level. Information asymmetry encourages insider dealings. Activities of insider dealings reduce investors' confidence, worsen the public's fear, and impede insurance firms' performance. Existing studies that evidence the effects of information asymmetry on the performance of insurance firms in Nigeria are rare.Thus, this study examined the effects of information asymmetry on the performance of insurance firms in Nigeria, the country with the largest economy in Africa. The study adopted the purposive sampling technique to select 28 firms quoted in the Nigerian Exchange Group. Data were collected from the annual financial report of firms for the period 2007 to 2022 which were analysed by means of the system generalized method of moments (GMM). Divulgence-variance was employed to measure information asymmetry while performance was represented by investment income. Findings showed that information asymmetry significantly inhibits the performance of insurance firms in Nigeria. The study recommends that insurance regulators should enforce full disclosure of all aspects of insurance operations and make them accessible to public consumption. This measure will promote business transparency, stimulate investors' interest, and improve penetration as well as increase the performance of insurance firms.
Keywords: *Asymmetry, Dividend policy, Information disclosure, Investment income, Performance.*

Introduction

Empirical evidence suggests that managers overseeing enterprises possess more comprehensive information about both the company and the industry they are responsible for, in comparison to owners and prospective investors. Despite their extensive understanding of lucrative and precarious enterprises, this may have an unprecedented effect on business performance (Khatali, 2020). Information asymmetry arises when one party in a transaction is believed to possess a greater or higher quality of information than the other side, leading to an imbalance in knowledge between the two parties. Individuals who possess better knowledge

might use it to outperform the market and generate abnormal profits or fulfill personal aspirations. Nevertheless, when there is a lack of information shared between two parties involved in a transaction, it results in information asymmetry, which significantly impacts the performance of a company. The impact of information asymmetry may have either a favorable or unfavorable outcome, depending upon the objectives of the managers responsible for overseeing the operations of the organization to maximize shareholder value. A strong and vibrant insurance industry is central to the growth and development of countries across the globe. The centrality of the insurance industry is anchored on its risk absorption role which cannot be overemphasised in the financial sector and the nation's overall economic development (Chang *et al.,* 2013; Bhupendra, Namita, Pooja, Olubiyi, & Yagnam, 2022). Mishkin (1973) contends that the financial subsector promotes financial stability for business enterprises. Supporting this view, Shi, Feng and Ivantsove (2014) pointed out that the insurance industry is a stop-gap for the economic loss of a nation and that the survival of an economy without insurance backing is debatable. Equally, Hussein and Salam (2019) alluded that the insurance sector provides alternative earnings for the sudden loss of jobs, death, and illness as well as war and natural disasters. While various financial intermediaries fund the mobilisation of the insurance industry at different levels, the subsector distinguished itself, particularly in the advanced and developing economy (De Mey, 2007; Hussain & Prieto, 2016; Baruti, 2020).

Despite the phenomenal benefits arising from the insurance industry importance, the financial subsector performance in developing economies like Nigeria falls below expectations (Arokodare, Falana, & Olubiyi, 2023; Odusanya *et al.,* 2018). Between 2007 and 2019, data have shown that the Nigerian insurance industry's contribution to the nation’s GDP was extremely low compared to other insurance industries in Africa. For instance, the financial sub-sector in Nigeria contributed less than 0.5 percent. This is far behind the South African insurance industries' contribution of 14.27 percent to the GDP (Africa Insurance Barometer, 2018). Conscious of the importance of the insurance industry, governments of developing countries like Nigeria continue to make remarkable efforts to improve the subsector’s contribution to economic development. Notwithstanding the government’s efforts, the performance of the Nigerian insurance industry remains appalling. Among several factors that have been recognised as vital issues for improving performance in the insurance industry, information asymmetry remains a major concern for various reasons.

Information asymmetry encourages conflict of interest between the shareholders/investors and Managers in insurance firms (Berle & Mean, 1932; Loto, 2012; Khatali. 2020). (Rothschild & Stiglitz, 1970; Huynh, Wu & Duong, 2020; Lai & Lin., 2020) argued that information asymmetry inspires the management of a firm

to embark on investments and projects that satisfy personal interest as against shareholders/investors' interest. Information asymmetry encourages information disclosure on the business activities of firms which misleads investors' financial decisions, discourages investment, and hinders a firm's performance (Hi, 2008; Che & Mehenthiran, 2008; Cheng &Cheng, 2013; Chan &Liu, 2023). Consequently, drastic action is required to reduce if not totally eliminate information asymmetry in the insurance industry in Nigeria for effective firms' performance. There are a plethora of studies on information asymmetry and firms' performance (Rothschild & Stiglitz, 1970; Huynh, Wu & Duong, 2020; Lai & Lin., 2020; Herakeh *et al.,* (2020). However, there is a drought of research studies on the impact of information asymmetry on the insurance industry's performance in Nigeria. This is despite the economic relevance of the insurance industry for economic sustainable growth and national development especially in Nigeria whose GDP is the biggest in Africa (Africa Insurance Barometer, 2018; Adeyemi, & Olubiyi, 2023). The study therefore is important for the insurance stakeholders like, insurance regulators and policymakers with the practitioners to design appropriate policies that will reduce the presence and impact of information asymmetry on the insurance industry's performance. In addition, this study will assist the public who engage in the service of insurance to identify the transparency among insurance firms for their business risks. This study, thus, used a suitable measure of insurance performance to investigate the effect of information asymmetry on insurance firms' performance in Nigeria. Consequently, this study sought to hypothesized thus:

Ho1: There is no significant effect of information asymmetry on on insurance firms' performance in Nigeria.

Literature Review

In the literature, existing studies on information asymmetry and insurance firm performance abound (Kecskes *et al.*, 2013; Alves *et al*., 2015; Asongu *et al*., 2016; Lin *et al.*, 2017; Chowdhury *et al*., 2018; Khalil *et al*., 2019; Du *et al*., 2020; Yao *et al*., 2023). Kecskes *et al.* (2013) explored information asymmetry and investors' value in the bond market. The attention of the study is on the effect of information disclosure on the share value of the investors and the firms that sell short-term shares. The authors use descriptive statistics to analyse data from publicly quoted firms between the years 1988 to 2011. Data is obtained from over 30,000 securities firms in the bond market through monthly data from the NYSE, NASDAQ, and AMEX as well as, and from Compustat. The research outcome shows that firms that sell short-term shares disseminate more information and promote firm performance.

Alves *et al.* (2015) extended the existing studies of information by investigating voluntary disclosure, information asymmetry, and insight into governance quality in the Iberian Peninsula for the year 2007. The study uses the baseline technique to

examine the roles of voluntary disclosure and non-disclosure of information on firm performance in the Iberian Peninsula. Using a sample of 140 firms with 38 firms from Portugal and 102 firms from Spain through the Thomson DataStream database, the Portuguese Securities Market Commission, and the Spanish Securities Market Commission. Structural equation model analysis (SEM) is engaged for the analysis. Voluntary disclosure is captured by voluntary index in market and competition; management and production; marketing, and human capital. Information asymmetry is measured by Bid-ask spread and the turnover ratios. The proxy for firm performance is the return on equity. The result reveals that information asymmetry encourages insider dealing, and earnings management, and drags the quality of corporate governance in a firm.

Asongu *et al.* (2016) contributed to the existing literature by reviewing information asymmetry and banks' performance in Africa to promote financial development dynamics between the years 2004 and 2011. The study introduces Public Credit Registers (PCRs) and Private Credit Bureau (PCBs) to measure information asymmetry while indicators of financial development structure and database capture the level of financial development. Generalized Moments of Method (GMM) was used to carry out the analysis in 54 African countries. The results show insignificantly negative effects on banks' performance. Also, the findings reveal that PCBs have a positive and significant impact on the performance of the banking industry in Africa. The literature is further extended by Lin *et al.* (2017) through the examination of research on information asymmetry and non-financial firms' performance in the People's Republic of China. The dividend policy, and ownership structure of the firms that were listed on the floor of Shenzhen and Shanghai exchanges from 2003-2012. Dividend payout is a proxy by the firm's dividend policy while the earnings forecast is measured by the Analyst's measured information asymmetry. The author divides the entire firms selected into State-owned and Non-state-owned using descriptive statistics for exhaustive analysis. The findings indicated that information asymmetry adversely affects the payment of dividends. The results also showed that state-owned firms paid higher dividends than non-state-owned. The study failed to classify the Non-state-owned firms into public or private-owned firms. A mere forecast may not be adequate to measure information asymmetry.

Chowdhury *et al.* (2018) contributed to the empirical literature by exploring information asymmetry and financial firms' performance in the USA for the years 2000-2012. The research targeted at finding out the roles played by some influential personalities who have an information advantage over outside investors in the manipulation of dividend benefits. The independent variable is represented by the Bid-Ask spread; insider trading is captured with the Capital Adequacy Ratio and Net Product Revenue while management earnings proxy discretionary accrual. A sample

of 2,269 non-financial firms was employed. Ordinary Least Square (OLS) and Generalized Moments of Method (GMM) were used for the analysis. The outcome of the study shows that information asymmetry influenced higher insiders' earnings.

Khalil *et al.* (2019) investigated information asymmetry and firms' performance in the US bond market for the years 2000 to 2012. The study scrutinises the impact of the late filing of financial statements on the value of firms. Information on 30 securities firms is collected using the Trade Reporting and Compliance Engine Database (TRACE), Fixed Income Securities Database (FISD), and Lehman Brothers Fixed Income Database (LBFI) to analyse the study. The independent variable was measured by firms' late filling and Bid-Ask spread while the dependent variable is measured by leverage, total assets, book assets, ROA, market capitalization, and firm age. The findings exhibit that the late filing of financial statements negatively impacted companies' financial status, and bond value and may encourage shareholders to appropriate extreme wealth from the bondholders. Du *et al*. (2020) extend empirical literature when examining information asymmetry and financial performance in India for the period 2014 to 2018. Performance is measured by the investment status of a firm and information asymmetry is measured by the residual model. One hundred and thirty-three (133) firms consisting of small and medium enterprises are selected from the Shanghai Stock Exchange through the China Stock Market and Accounting Research (CSMAR) database. The authors employed STATA to run the analysis. The findings disclose a negative impact of information asymmetry on the investment level of a firm. Yao *et al.* (2023) examine the information asymmetry and financial firm performance in the U.S.A for the period January 1976 to December 2007. The study focuses on the reaction of the financial market as a result of the presence of information asymmetry. Share price and trade volume proxy information while investors' confidence and stock value measure financial firm performance. The sample of the research has collected the list of stocks on the New York Stock Exchange (NYSE) and American Stock Exchange (AMSX) using the Centre for Research in Security Prices (CRSP) database. Engaging in descriptive statistics and analysis, the result reveals that information asymmetry diminishes investors' confidence in the stock markets. The low confidence of the investor adverse effect on both the price and volume of stock and drags firms' financial performance.

Methodology

This research adopted a descriptive research design with which longitudinal in nature, having considered data from 2007 to 2022 from Nigerian Exchange Group.This part treats model specification in line with the objective of the research, a priori expectations, statistics measurement, and sources alongside the technique of analysis. To achieve the objective of the study, secondary data was employed and model that relates the effects of information asymmetry on insurance firm's

performance was specified following the studies of Saha, (2018) and Ihenyen & Mieseigha (2020), with modifications as follows:

$$ifp_{it} = f(ifp_{it-1}, asym_{it}) \quad 3.1$$

Where the subscript i=1... 28 signifies the number of firms considered in the study and t = 2007 - 2019 indicates the time frame of the study. ifp denotes insurance firms' performance, ifpit-1 stands for the one-period lag of insurance firm performance, asym represents asymmetry information. The respective model is in line with the objectives of the study are shown in Equations 3.1

To put the variable in equation 3.1 on the same scale of measurement and an estimable form, both sides of the equation were log-linearized, and the stochastic disturbance term. Equation 3.1 can be re-specified in regression form as:

$$Lifp_{it} = \phi_0 + \phi_1 Lifp_{it-1} + \phi_2 Lasym_{it} + \mu_{it} \quad 3.2$$

Where ϕ_0 represents constant or intercept, $\phi_1,...,\phi_5$ represents various slope coefficients, L represents the natural log of the variables while fp_{it-1} continued as defined and asymit enters the model in the level form to eliminate variance in the variables. μ_{it} is the disturbance term (white noise) with mean and constant variance and is meant to capture the effect of other factors/variables that influence ifp that is not specified in the model. Information asymmetry has effects on the performance of insurance firms. The population of the study consists of all the twenty-eight insurance firms listed in the Nigerian Stock Exchange (NSE, 2019).

Data Source and Measurement

The study employs a panel data set of 28 insurance firms from 2007 to 2019 comprising 308 annual observations. The choice of 2007 as the beginning year is because it corresponds with the last insurance firms' recapitalization of 2007 by NAICOM while 2019 is built on data accessibility. Specifically, the study makes use of secondary data obtained from published annual reports of the selected firms via the Nigerian Stock Exchange (NSE), Information asymmetry is measured using divulgence-variance computed as the difference between expected information disclosure and the disclosed information by the insurance firms, using data obtained from Nigerian Stock Exchange (NSE, 2019). Insurance industry performance is measured using investment income in billion naira. Insurance unlike other firms where a mere increment in the stock or profit is regarded as a performance, the ability to multiply the available premium income is key to measuring performance. This is because performance is usually measured by the ability to generate enough income for prompt claims' payment, dividends, and business expansion.

Technique of Analysis

To estimate the effects of the independent variables on the dependent variable and in line with the objectives, regression analysis is employed. Given that the study combines cross-section with time series, panel analysis is considered appropriate. Specifically, the study employs a dynamic panel model, the choice of this model is informed by the dynamic nature of insurance firms' performance which makes the fixed or random effects method produce biased estimates. Following the specification of the model and to estimate the impact of the independent variables on the dependent variable and in line with the objective, regression analysis was used in analysing the data for the study. To estimate the impact of the independent variables on the dependent variable and in line with the objective, regression analysis is used. Given that the study combines cross-section with time series, panel analysis is considered appropriate. Specifically, the study employs a dynamic panel model, the choice of this model is informed by the dynamic nature of insurance firms' performance which makes the fixed or random effects method produce biased estimates. Following the specification of the model and to estimate the impact of the independent variables on the dependent variable and in line with the objectives, regression analysis was used in analysing the data for the study.

System Generalized Method of Moments (SYS-GMM). The estimators are developed for dynamic models of panel data suggested by Rodman, (2009) which is an advancement on the difference GMM advanced by Holtz-Eakin *et al.* (1990), Arellano and Bond (1991), and Arellano and Bovver (1995). The option of SYS-GMM is based on incentives, as follows (Asongu and Nwanchukwu, 2016). There are two justifications for the adoption and efficiency of GMM as a better estimation technique. First, the estimator has been debated to be of a good fit in a condition where the dependent variables' goodness is found to be determined. Second, the series is characterized by large N and small T (N>T). In this study, the number of insurance firms (N) =28 while the number of years per insurance firm (N) = 13.

The validity of SYS-GMM estimates relies on the post-estimation tests bothering on the first and second-order correlation based on the null hypothesis of no autocorrelation. The rule of thumb is that the null hypothesis should not be rejected. More so, the Sagan and Hansen over-identification should be a well-observed couple with the Fisher test. However, in dynamic panel models, the unobserved country-specific effect that is correlated with the lagged dependent variable can lead to inconsistent estimates (Okada, 2015). To handle the challenges and estimate dynamic models consistently, the instrumental variables (IV) methods are usually employed. However, the IV technique approach- requires that an observable variable that is not in the regression equation and is not correlated with error distribution whose mean is correlated with the effects of endogenous variables;

$$\Delta\, y_{it} = \delta\, \Delta\, y_{i,t-1} + \Delta\, X'_{it}\beta + \Delta\, u_{it} \qquad 3.3$$

By transforming the independent variables by first differencing the fixed country-specific effect is removed, because it does not vary with time. The authors argue that although the first difference takes care of the OLS estimation problem due to a correlation between individual effect and explanatory variables it also creates another problem, which is a correlation between lagged dependent variable and the error term, that is,

$$E(\Delta y_{i,t-1}, \Delta v_{i,t}) \neq 0 \qquad 3.4$$

Implying that the model is biased and inconsistent, to eliminate this problem, employed lagged dependent variable and in level as an instrumental variable (IV) in the GMM to overcome the above problem. Generally, the asymptotically efficient GMM estimate based on the set of moment conditions minimizes the criterion

$$G_N = \left(\frac{1}{N} \sum_{i=1}^{N} \Delta v_i, 'Z_i \right) W_N \left(\frac{1}{N} \sum_{i=1}^{N} Z_i' \Delta v_i \right) \qquad 3.5$$

The weighted matrix of the equation is given as

$$W_N = \left[\left(\frac{1}{N} \sum_{i=1}^{N} \hat{v}_i, 'Z_i Z_i' \hat{\Delta} v \right) \right]^{-1} \qquad 3.6$$

Where $\hat{\Delta} v$ is a consistent estimation of the first difference residuals obtained from a preliminary consistent estimator which is the 2-step GMM estimator: Under the assumption of homoscedasticity, vit, the structure of the first difference model implies that an asymptotically equivalent GMM estimator can be obtained in a 1-step. However, Bound (2002) points out that the use of 1-step rather than 2-step is common in the literature, maybe because simulations have shown that modest efficiency gains exist when using 2-sets even in the presence of heteroscedasticity. Most importantly, the dependence of the 2-step matrix on estimated parameters makes the asymptotic distribution approximation less reliable for a 2-step estimation.

In the case of the treatment of stationarity, Bound, Jaeger, and Baker (1995) state that when the individual series have near unit root properties, the instrument available for the equation in the first difference is likely to be weak. To solve this problem, the use of IV in level form is non-stationary and is a weak instrument. Blundell and Bond (1995) and Khatali. (2020) suggest the use of SYS-GMM developed by Arellano and Bovver (1995). In this case, lagged difference instead of the level terms is possible IV to solve the problem of unit root or remove unit root. When the coefficient of the lagged dependent variable is close to unity, the efficiency of using the SYS-GMM is greatly improved. According to the author, the coefficient of the lagged dependent variable from macroeconomic data is close to unity and so, they employed the robust one-step SYS-GMM of Blundell and Bond

(1998) to estimate the relationship between economic growth and energy consumption and also tested the Granger causality between the two variables.

Analysis of Regression Results

Table 1 shows the result of the impact of asymmetry information on insurance firm performance in line with the objective of the study. The study begins by testing the validity of the moment conditions to determine the consistency of the estimates. In doing this, the study used the test of over-identifying restrictions introduced in the context of GMM by Hansen-J statistics. As shown in the result, the Hansen-J test indicates that the instruments are valid. This is based on the chi-square and probability values of 0.000 which is above the critical value of the five percent level of significance. This indicates that the estimates do not suffer from weak instruments. The coefficient of information asymmetry using divulgence-variance is in line with expected a priori. The variable shows a negative and significant impact on the performance of insurance firms in Nigeria. This finding is in line with Huynh *et al.,* (2020) submission that information asymmetry has a negative influence on share value in Vietnam. The findings revealed that information asymmetry captured with divulgence-variance negatively impacted insurance firms' performance. The result supports the expected outcome that information asymmetry hinders insurance firms' performance.

Table 1: Result of the Impact of Information Asymmetry on Insurance Firms Performance.

Variable	Model I	Model II
Log investment income L1.	0.3203(0.0000)	0.2864(0.0000)
Divulgence Variance		-0.1517(0.0060)
Constant	-2.688467(0.1850)	-2.456736(0.7634)
AR (1)	0.021	0.0020
AR (2)	0.168	0.6300
No of instruments	24	24
No of groups	28	28
Hansen test	0.142	0.152
Prob > F	0.000	0.000

Note: the values in parenthesis are the p-values
Source: Authors' Computation (2024).

Conclusion and Policy implications

The study examines the effects of information asymmetry on insurance firms' performance in Nigeria for the period 2007 to 2022. The study used 28 insurance firms listed on the Nigerian Stock Exchange (NSE). This study has explored various aspects of information asymmetry and insurance firms' performance in Nigeria and has presented compelling evidence and arguments to support its claims. Through an extensive review of literature, careful data analysis, and thoughtful discussion, the

findings presented in the study will be appreciated by policymakers, practitioners, and economics researchers who are interested in addressing the effects of information asymmetry on the performance of the insurance firms industry. From the findings, the study concluded that; information asymmetry affects the performance of insurance firms in Nigeria. Specifically, high information asymmetry dampens insurance firms' performance. Again, high information disclosure is required in all the activities of the insurance business because of the opaque nature of the insurance operation. This will encourage business transparency, inspire investors, and enhance insurance firms' performance. Overall, the study has demonstrated that information asymmetry is a complex phenomenon that requires collaborative efforts from the Government and practitioners to fully identified and address its negative effects on the Nigerian insurance industry.

Recommendations and areas of future research

The government/regulators should design appropriate policies that will reduce information asymmetry, and strengthen corporate governance ethics. This action will attract investors, and boost the risk absorption of the insurance industry to mobilize enough funds necessary to strengthen the Nigerian economy and grow the abysmal contribution of the financial subsector to the Country's GDP. To curtail the negative impact of information asymmetry on insurance performance, insurance policymakers should enforce disclosure of information relating to the three vital aspects of insurance operations namely: financial status, activities of the board/management, and issues on the firms' share value. These three aspects of insurance firms are vital in reducing information asymmetry, increasing business ethics, promoting patronage, and attracting investors, as well as improving the overall performance of insurance firms. Also, at the firm level, indulgent variance is strongly recommended as an indicator of information asymmetry. It is more scientific and realistic than any known traditional method of measures whose results among economists, and scholars' pundits are inconsistent. This research mainly focused on listed insurance firms and hence the findings cannot be replicated in the entire listed companies or insurance industry in Nigeria. Future research should continue to build on the study and explore new avenues of inquiry to further advance the understanding of the effects of information asymmetry on insurance firms' performance and other business entities in Nigeria. Further research should be done on other financial institutions like commercial banks, Microfinance institutions, and other listed companies. An analysis of several emerging economies might enhance our comprehension of how business entities particularly the financial sector react to the impacts of information asymmetry.

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