



Effects of Supervision on Financial Stability and Performance of Insurance Companies in Nigeria

Tarila Boloupremo¹, Samson Ogege²

Abstract: The paper examines the influence of supervision on financial stability and profit performance of insurance firms in Nigeria. Time series data spanning from 2011 – 2017 were sourced from structured research questionnaires, financial reports, industry reports, and the Nigerian insurers association (NIA) Digests. The data collected were analyzed using correlation matrix and regression analysis (OLS technique). Results from the data analyzed suggests that Insurance supervision significantly influences profit performance. Based on these findings, it is therefore recommended that Nigeria's insurance regulatory agency should strengthen insurance operational guidelines issued to insurance firms via the execution of efficient and effective enforcement strategies.

Keywords: Finance; Profitability; Insurance; Firms; Nigeria

JEL Classification: G22; E58; G52

1. Introduction

Insurance supervision entails ensuring that insurance companies operations are conducted within regulatory frameworks, assessing the behavior of the market as well as investment activities, determining the system of governance in the undertaking, examining financial accounting and reporting, monitoring the operation of managing bodies and complying with the code of conduct of the professional bodies in actuarial and insurance profession. Insurance Supervision can also be referred to as insurance regulation, Regulation is broadly defined as rules imposed

¹ University of Africa, Toru-Orua, Nigeria, Address: 4449+PJ5, 561101, Arua, Nigeria, Corresponding author: taribolou@yahoo.com.

² University of Lagos, Nigeria, Address: Akoka, Yaba, Lagos, Nigeria, Tel.: +2348034721305, E-mail: ogegesamson@yahoo.com.

by the government, whether in the executive or legislative arms, accompanied by the application of penalties for noncompliance with the intention to change the economic and social behavior of individuals as well as companies in the private sector OECD (2018).

One of the main pre-occupations of institutions saddled with supervisory role of insurance companies is to ensure that insurance companies are consistently able to carry out their financial obligations to the insured as well as third parties who may bear any kind of damages set off by the insured. In a similar direction, insurance regulation is also saddled towards ensuring the protection of policyholders/consumers, guarantee the insurers' solvency and the stability of the insurance industry, as well as prevent unhealthy competition within the industry (Webb, Grace & Skipper (2002).

The major objective of this work is to examine the influence of supervision on the financial stability and performance of insurance firms in Nigeria. However, the specific objectives are to examine:

- i. the significance of Insurance Supervision to the profitability of the Nigerian Insurance firms.
- ii. the efficiency of the Insurance Supervisory Authorities in promoting the financial stability of Insurance firms in Nigeria.
- iii. the degree in which Insurance Supervision has minimized systemic risk within Insurance sector in Nigeria.
- iv. the efficacy of supervisory guidelines in building capacity for bridging insurance gap, optimizing local retention and reducing capital flight within the sector.
- v. the adequacy of the supervisory guidelines in building investors' and public confidence in the Nigerian insurance firms.

2. Literature Review

2.1. Theoretical Review

Private Empowerment Theory

This theory asserts that the strategies of financial institutions supervisory should center on how the incentives and ability of private parties will be enhanced in order to surmount barriers to information and provide corporate monitoring and control on financial institutions and as well restrain the supervisory agencies' powers. Hence this theory attempts to restrain the supervisory agencies' powers to the extent that the government is not able to engage financial institutions supervision to attain other aims. On the other hand, the private empowerment theory also aims at providing

adequate power to supervisory authorities towards ensuring the disclosure of valid information in order to enhance easy monitoring and control of financial institutions Hay and Shleifer (1998).

Independent Supervision Theory

This theory contends that establishing an independent agency is a valuable mechanism to balance the market and also political challenges. The independent supervision theory acclaims that if the supervisors are not under the control of the government and are adequately remunerated it will curtail the chance of the supervisory agencies being used by the political office holders to persuade financial institutions to grant credit to their cronies. In the same vein, if the financial institutions do not subject the supervisory agencies to their control and that the supervisory agencies have adequate incentives then the chance of being captured by the financial institutions will be minimized. Hence, the view of this theory suggests a compromise to establish supervisory agencies that possess the required resources to surmount the information barriers and that are adequately independent in order that regulatory and political capture is avoided. By so doing, the corporate governance of financial institutions can be stimulated and the problems of external financing of companies can be curtailed Beck et al. (2003).

2.2. Empirical Review

According to the study conducted in Nigeria by Eugene (2018) the influence of selected regulatory instrument on the performance insurance companies in Nigeria was investigated. The study employed classical linear square method to analysis data collected spanning from 1981-2015. Findings from the study indicates that an investment friendly environment can stimulate economic growth and development. The study therefore recommended that conducive investment climate should be created by the adoption of regulatory policies to facilitate the emergence of sound insurance companies that will encourage local as well as foreign investments.

In another, study conducted by Mathews and Peter (2017) in the insurance sector of Nairobi, the determining factors of financial performance of studied insurance companies were determined. The study investigated a total of 55 licensed insurance companies in Nairobi. Both secondary and primary data were utilized in this work and the primary data were collected via semi structured questionnaire. The data obtained were subject to qualitative and quantitative analysis employing percentages, means and frequency distribution. Bivariate – ANOVA analysis was employed to ascertain the determining factors of financial performance of the studied firms. Findings from the study indicated that the selected insurance companies possessed liquid investments which enable them to cover claims particularly if their underwriting income is not sufficient enough to settle claims. It was recommended

that a well-suited assets and liability portfolio with respect to cash flows should be established by the insurance companies.

In a similar vein, Teklit and Jasmindeep (2017) conducted a study in the Ethiopian insurance industry to assess the key determining factors that influence the profit performance of insurance firms. Basically, the work examined the internal components (size, capital availability, leverage, liquidity and loss ratio) of firms and external components (growth rate of GDP, inflation rate and market share). The fixed effect model was adopted following the outcome of hausman test in the regression model. Findings from the study indicated that firm's size, liquidity ratio, capital availability as well as GDP growth rate were the main determining factors that have significant influence on the profit performance of the studied firms. Conversely, leverage and loss ratio, rate of inflation and market share were revealed to impact on the profit performance of the studied firms insignificantly. Hence, the study recommended that strict measures should be taken by the managers of insurance firms and the policy makers by formulating policies as well as strategies with the aim of enhancing the profit performance of the insurance firms.

Furthermore, Kashema et al. (2018) carried out a study in the banking industry of Nigeria to ascertain the influence of banking supervision on liquidity and credit risk. This work seeks to appraise the degree in which liquidity and credit risk affect banking supervision and to assess the inter correlation between CR, LR and banking supervision. The study employed the use of time series data obtained from the National Deposit Insurance Corporation spanning from 2007-2017 and the data were analyzed through the adoption of unit root test, vector autoregressive model and the autocorrelation test. In view of the analysis of data, it was revealed that banking supervision has an influence on LR since LR is positively associated with banking supervision. The outcomes of this work also revealed the positive influence of banking supervision on CR in the economy of Nigeria. However, at certain periods of time, the influence will be negative, by that means some time will be taken to impact positively on the economy.

3. Methodology

Primary and secondary data were employed for the study through the use of structured questionnaires while secondary data were obtained from financial and industry reports. This study adopted 59 insurance firms as the study population while 50 insurance firms were drawn as the sample size. Correlation matrix and regression analysis were deployed to ascertain the association between the variables observed. For the purpose of ascertaining the influence of supervision on the financial stability and performance of the Nigerian insurance firms, the following models captured in a schematic form are hereby specified:

$$Y = f(x_1, x_2, x_3, x_4) \quad 1$$

To achieve the objective of this work, debt to equity ratio, equity ratio and debt ratio are used to measure financial stability proxy by solvency margin. Hence, the model is expressed as:

$$F_s = SM = f(D/E_R, Eq_R, Db_R) \quad 2$$

$$Y = SM = \beta_0 + \beta_1 D/E_R + \beta_2 Eq_R + \beta_3 Db_R + \acute{e} \quad 3$$

Where:

Y = Financial Stability

SM = Solvency Margin

D/E_R = Debt-Equity Ratio

Eq_R = Equity Ratio

Db_R = Debt Ratio

β₀ = Constant coefficient

β₁-β₃ = Coefficient of Independent Variables

é = Stochastic Error Term

While premium growth, loss ratio, expense ratio, combined ratio, underwriting profit margin, ROE, ROA and investment yield are used to measure performance/profitability proxy by the Profit After Tax. Thus, the model is expressed as:

$$\pi = PAT = f(P_G, L_R, Exp_R, Cb_R, UWP_M, ROE, ROA, INV_i) \quad 4$$

$$\pi = PAT = \beta_0 + \beta_1 P_G + \beta_2 L_R + \beta_3 Exp_R + \beta_4 Cb_R + \beta_5 UWP_M + \beta_6 ROE + \beta_7 ROA + \beta_8 INV_i + \acute{e} \quad 5$$

Where:

π = Profitability

PAT = Profit After Tax

P_G = Premium Growth

L_R = Loss Ratio

Exp_R = Expense Ratio

Cb_R = Combined Ratio

UWP_M = Underwriting Profit Margin

ROE	=	Return On Equity (ROE)
ROA	=	Return On Assets (ROA)
INV_i	=	Investment Yield
β_0	=	Constant coefficient
$\beta_1 - \beta_8$	=	Coefficient of Independent Variables
\acute{e}	=	Stochastic Error Term

Due to the nature of the data adopted, the estimates of OLS formulated in equations (3) and (5) majorly suffer from endogeneity bias by means of variable omitted. This is justified as a result of the fact that there may be some time-invariant supervisory features like policies and operational guidelines not observed which may be associated with the independent and dependent variables. In view of this, the following linear models are formulated to take into cognizance the unobserved supervisory specific features:

$$Y = SM = \beta_0 + \beta_1 D/ER + \beta_2 EqR + \beta_3 DbR + \beta_4 SM + [\delta + \mu] \quad 6$$

$$\pi = PAT = \beta_0 + \beta_1 P_G + \beta_2 L_R + \beta_3 Exp_R + \beta_4 Cb_R + \beta_5 UWP_M + \beta_6 ROE + \beta_7 ROA + \beta_8 INV_i + [\delta + \mu] \quad 7$$

Where:

\acute{e}	=	$\delta + \mu$
\acute{e}	=	Stochastic Error Term
δ	=	Unobserved regulatory/supervision specific effect

4. Data Analysis

4.1. Correlation Matrix

In this section, the association between the study variables is analyzed. Statistically, the correlation coefficient r estimates the strength and direction of a linear association between two variables on a scatter plot. The value of r is always between -1 and $+1$.

Table 4.1. Correlation Matrix for Financial Stability Model

	SOLVENCY MARGIN	DEBT EQUITY RATIO (DERIVED)	EQUITY RATIO (DERIVED)	DEBT RATIO (DERIVED)
SOLVENCY MARGIN	1.000000	0.944113	-0.934234	0.934234
DEBT EQUITY RATIO (DERIVED)	0.944113	1.000000	-0.992492	0.992492
EQUITY RATIO (DERIVED)	-0.934234	-0.992492	1.000000	-1
DEBT RATIO (DERIVED)	0.934234	0.992492	-1	1.000000

Source: EViews 9

In response to table 4.1, Solvency Margin is revealed to have a significant positive association with Debt-Equity Ratio and Debt Ratio with r of 0.944113 and 0.934234 respectively, while its association with Equity Ratio is strong and negative at -0.934234. Debt-Equity Ratio has significant positive relationship with Solvency Margin and Debt Ratio of 0.944113 and 0.992492 respectively, while its relationship with Equity Ratio is strong and negative (-0.992492). Equity Ratio has strong negative association with Solvency Margin and Equity-Debt Ratio at -0.934234 and -0.992492, while it has a perfect negative relationship of -1 with Debt Ratio. Finally, Debt Ratio has significant positive association of 0.934234 and 0.992492 with Solvency Margin and Debt-Equity Ratio respectively while it has a perfect negative association of -1 with Equity Ratio.

Table 4.2. Correlation Matrix for Profitability Model

	LPAT	PREMIUM GROWTH	LOSS RATIO	EXPENSE RATIO	COMBINED RATIO	UNDERWRITING PROFIT MARG	RETURN ON EQUITY (ROE)	RETURN ON ASSETS (ROA)	INVESTMENT YIELD
LPAT	1.000000	-0.259558	0.940767	0.710786	0.988163	0.687230	0.984886	-0.038367	0.651085
PREMIUM GROWTH	-0.25956	1.000000	-0.169481	-0.602561	-0.315304	-0.605001	-0.392918	0.148828	0.501320
LOSS RATIO	0.940767	-0.169481	1.000000	0.462004	0.968687	0.720572	0.889282	-0.011947	0.677948
EXPENSE RATIO	0.710786	-0.602561	0.462004	1.000000	0.667668	0.508473	0.810733	0.063030	0.111908
COMBINED RATIO	0.988163	-0.315304	0.968687	0.667668	1.000000	0.749663	0.973233	0.004062	0.597833
UNDERWRITING PROFIT MARG	0.687230	-0.605001	0.720572	0.508473	0.749663	1.000000	0.702565	-0.123145	0.170823
RETURN ON EQUITY (ROE)	0.984886	-0.392918	0.889282	0.810733	0.973233	0.702565	1.000000	-0.012915	0.522993
RETURN ON ASSETS (ROA)	-0.03837	0.148828	-0.011947	0.063030	0.004062	-0.123145	-0.012915	1.000000	-0.142022
INVESTMENT YIELD	0.651085	0.501320	0.677948	0.111908	0.597833	0.170823	0.522993	-0.142022	1.000000

Source: EViews 9

With respect to table 4.2, Profit After Tax is revealed to be strongly and positively related to all the variables apart from Premium Growth and ROA where a feeble and adverse relationship is indicated. It also shows that Premium Growth has a moderate adverse association with all variables apart from ROA and Investment Yield where

a moderate positive association is indicated. Inclusive, a positive association of Loss Ratio with all variables is indicated apart from premium growth and ROA where the association is adversely weak. Expense ratio is strongly and positively correlated with other variables apart from ROA and investment yield where the association is positively weak and adversely moderate for premium growth. Similar relationship of Combined and Expense ratios is revealed, apart from the adverse and weak association of combined ratio with premium growth. Underwriting Profit margin strongly and positively correlated with other variables apart from its strong adverse relationship with premium and weak adverse association with ROA; this is similar with ROE, apart from its feeble adverse association with premium growth and ROA. A weak association of ROA with all variables is revealed which are majorly negative. Finally, it is indicated that Investment yield is moderately and positively association with most of the variables, but feeble positive association with Underwriting Profit Margin and Expense Ratio while it has weak adverse relationship with ROA.

4.2. Regression Results

In an attempt to ascertain the cause-effect association between observed variables, the OLS regression analysis (Panel) is adopted due to the time series nature of the data. Two models are expressed in this study: Solvency Margin (as a proxy for financial stability) and Profit After Tax (as a proxy for Profitability).

4.3. Solvency/Financial Stability Model

Solvency Margin (SM) as the dependent variable is regressed against the independent variables including Debt-Equity ratio (D/E_R) and Equity Ratio (Eq_R). The outcome derived are displayed in table below.

Table 4.3. Regression Results for Financial Stability Model

Dependent Variable: SOLVENCY_MARGIN				
Method: Panel Least Squares				
Date: 11/27/19 Time: 13:07				
Sample: 2011 2017				
Included observations: 7				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
Debt-Equity ratio (derived)	1.419823	1.690163	0.840051	0.4482
Equity ratio (derived)	1.271129	9.159083	0.138783	0.8963
C	-33.16677	622.5835	-0.053273	0.9601
R-squared	0.891869	Mean dependent var		218.0143
Adjusted R-squared	0.837804	S.D. dependent var		38.03364
S.E. of regression	15.3175	Akaike info criterion		8.593396
Sum squared resid	938.5028	Schwarz criterion		8.570214
Log likelihood	-27.07688	Hannan-Quinn criter.		8.306878
F-statistic	16.49616	Durbin-Watson stat		1.793089
Prob(F-statistic)	0.011692			

Source: EViews 9

Based on Table 4.3, it is indicated that the values of R^2 and adjusted R^2 are (0.891869) and (0.837804) implying that 89.2 % changes in Financial Stability proxied by Solvency Margin can be accounted for by all the independent variables investigated across the sampled variables in this work within the study duration. While the balance 10.8% of the variations in SM can be accounted for by other variables not considered in the model. This signifies that when the various explanatory variables are included in any model, they might be suitable in accounting for the 10.8% of SM. The F-statistics (16.49616) and its p-value (0.011692) mean that the model is significant at 5% level. Also, the Durbin Watson statistics of 1.793089 (< 2) shows the existence of a positive auto-relationship which reveals the model validity and shows that the model is devoid of auto-relationship problems. The significant level of each independent variable is equally revealed in the table. The t-statistic for debt-equity ratio and equity ratio have p-values of 0.4482 and 0.8963 respectively, which indicate that the independent variables are significant since the p-values are > 0.05 level of significant.

4.4. Profitability Model

Profit-After-Tax (PAT) as the dependent variable is regressed against the independent variables including Premium Growth (P_G), Loss Ratio (L_R), Expense Ratio (Exp_R), Underwriting Profit Margin (UWP_M) and Return on Equity (ROE). The results obtained are presented in table below.

Table 4.4. Regression Results for Profitability Model

Dependent Variable: LPAT				
Method: Least Squares				
Date: 11/27/19 Time: 12:15				
Sample: 2011 2017				
Included observations: 7				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
premium growth	0.008979	0.005701	1.575043	0.3601
loss ratio	0.004443	0.061482	0.072272	0.9541
expense ratio	-0.045817	0.138168	-0.331604	0.7962
underwriting profit margin	0.007612	0.015517	0.490584	0.7096
return on equity (ROE)	0.25712	0.163785	1.569861	0.3611
C	15.92523	5.650763	2.818245	0.2171
R-squared	0.998085	Mean dependent var	16.73681	
Adjusted R-squared	0.988507	S.D. dependent var	0.577337	
S.E. of regression	0.061894	Akaike info criterion	-2.95843	
Sum squared resid	0.003831	Schwarz criterion	-3.00479	
Log likelihood	16.35449	Hannan-Quinn criter.	-3.53146	
F-statistic	104.2117	Durbin-Watson stat	3.193366	
Prob(F-statistic)	0.074229			

Source: EViews 9

As regard to Table 4.4, it is indicated that the values of R^2 and adjusted R^2 are ((0.998085) and (0.988507) implying that 99.8 % systematic changes in Profitability proxied by Profit-After-Tax can be accounted for by all the independent variables investigated across the sampled variables in this work within the study duration.

While the balance 0.2% of the variations in PAT can be accounted for by other variables not considered in the model. This signifies that when the various explanatory variables are included in any model, they might be suitable in accounting for the 0.2% of PAT. The F-statistics (104.2117) and its p-value (0.074229) mean that the model is significant at 10% level. Also, the Durbin Watson statistics of 3.193366 (> 2) shows the existence of a negative auto-relationship which creates much precision in the average. The significant level of each independent variable is equally revealed in the table. The t-statistic for Premium Growth, Loss Ratio, Expense Ratio, Underwriting Profit Margin and Return on Equity have p-values of 0.3601, 0.9541, 0.7962, 0.7096 and 0.2171 which indicate the significant level of the independent variables since the p-values are > 0.1 level of significant.

4.5. Discussion of Findings

Firstly, the outcomes of this work show the significant of insurance supervision to the profit performance of the Nigerian Insurance firms. This is supported by the finding that Premium Growth, Loss Ratio, Expense Ratio, Underwriting Profit Margin and Return on Equity are significant to profitability of insurance firms. This outcome corroborates with the findings of Hirtle et al. (2019) indicating that the adequate supervision of the insurance sector is significant and instrumental to the profit performance of insurance firms

Also, the findings reveal that the supervisory authorities of the insurance sector have been effective and efficient in enhancing the financial stability of insurance firms in Nigeria. This is in line with the result of the study conducted by International Association of Insurance Supervisors (2011), in its report on *Insurance and Financial Stability*, a supervisory view on the (re)insurance sector and financial stability matter was presented by the IAIS. The role of the sector was analyzed in the financial markets, such as its dealings with other financial institutions, as well as its influence on the real economy. Insurance assets constitute about 12% of all financial assets across the globe, which positions the insurers in a similar class as mutual and pension funds. Thus, this strong market presence qualifies the insurance industry as a significant player in the financial system. Thirdly, the study observes that Insurance Supervision has greatly minimized systemic risk within the Nigerian insurance sector. This also support the finding of the study by Faten et al. (2014) on bank supervision and profitability revealed that by increasing the powers of supervisor minimizes risk-taking as well as stimulate banking stability.

Fourthly, the outcomes of the analysis shows that supervisory guidelines are quite significant enough to build the needed capacity to bridge insurance gap, enhance local retention as well as reduce capital flight within the industry. This agrees with the finding of the study by Laniyi. (2018) indicating that there has been success recorded by the Local Content Act in the insurance industry, but it is limited. It was

discovered that the regulator frequently emphasize the desire to increase the capital base, which is long overdue, so as to fill the gap revealed by the academia and professionals, and supported through the outcomes of his work. Lastly, insurance supervisory guidelines are sufficient to build the confidence of the investors and the general public in the sector.. This result supports the report of PriceWatersCoopers (2015) on Africa Insurance Trends which provides a justification for the increasing interest of both local and foreign investors in the Nigerian Insurance Industry together with the growing efforts of the NAICOM in persistently placing the sector on the forward path to growth stability as regard to financial stability and profitability.

5. Conclusion and Recommendations

The focal point of this work is how the insurance supervision influences the financial stability and performance of insurance firms in Nigeria. In view of the outcomes of the data analysis with the support of the theoretical analysis of this work, It appears that there is a definite and collective agreement amidst the views of researchers that insurance supervision is a significant instrument that can be engaged in the insurance sector to enhance the profit performance and financial stability of the insurance firms since the improvement of financially stable and profitability is one of the main objectives which the insurance regulator seeks to achieve in the insurance industry as a result of its significant to the entire financial system of a country. Furthermore, In view of the survey and the analysis conducted in this work, there exists a congruence in views, thoughts as well as observations as the existence of the significant association of insurance supervision with the profit performance of the Nigerian insurance firms was revealed by the study and that the Insurance Supervisory Authority (NAICOM) has been quite effective and efficient in enhancing the financial stability of the sector.

Based on the above findings and conclusion, the following recommendations are made:

- i. NAICOM should strengthen the insurance operational guidelines issued to the insurance firms via the execution of efficient and effective enforcement strategies.
- ii. The frequent interference of the political and industry powers with the policies and guidelines of the supervisory authority should be prevented for the purpose of enhancing the efficacy and workability of its policies and guidelines.
- iii. The maneuvering by insurance firms, which is accounting for poor supervision of the sector, should be strictly eliminated.
- iv. Conscious efforts must be made by the government to making sure that the financial and economic policies are not negatively affecting the existing provisions

and guidelines of the regulatory authority which are tailored towards building a sterile insurance sector.

Reference

- Beck, T.; Asli D-K. & Ross L. (2007). Finance, Inequality and the Poor. *Journal of Economic Growth*, 12(1), pp. 27–49.
- Eugene I. (2018). Insurance Industry Performance and the Selected Regulatory Instruments in Nigeria. *Journal of Economics and Finance*, 9, pp. 67-77.
- Fabiana G. & Jorge P. (2018). *Systemic Risk and Insurance Regulation*. A paper presented to Department of Accounting and Finance, University of Bristol, UK.
- Faten, B. B.; Hachmi, B. A.; Abdoukarim, I. C. & Fredj, J. (2014). The Effects of Regulation and Supervision on European Banking Profitability and Risk: A Panel Data Investigation. *The Journal of Applied Business Research*, 30(6).
- Hay, J. R. & A. Shleifer. (1998). Private Enforcement of Public Laws: A Theory of Legal Reform. *American Economic Review Papers and Proceedings* 88, pp. 398-403.
- Hirtle, B.; Kovner, A. & Plosser, M. C. (2019). *The Impact of Supervision on Bank Performance FRB of NY Staff Report No. 768*. <https://ssrn.com/abstract=2750313>
- International Association of Insurance Supervisors (IAIS) (2011). Insurance and Financial Stability'. *Working Paper* issued in November 2011.
- Kashema, B.; Gylych, J. & Bilal, C. (2018). Impact of Banking Supervision on Liquidity Risk and Credit Risk: Evidence from Nigeria. *International Journal of Economic and Finance*, 4(3), pp. 200-204
- Laniyi S. A. (2018). *Challenges on the Domestication of Oil and Gas Insurance in Nigeria*. A project submitted to Middlesex University in partial fulfilment of the requirements for the award of Doctor of Professional Studies.
- Mathews, A. G. & Peter, S. S. (2017). Determinants of Financial Performance of Insurance Firms: A Survey of Selected Insurance Firms in Nairobi County. Paper published in *the Strategic Journal of Business & Change Management*. www.strategicjournals.com.
- OECD (2018). *The Institutional Structure of Insurance Regulation and Supervision*.
- Price Waters Cooper (PWC) (2015). *Africa Insurance Trends*. An analysis of insurance industry's performance in Nigeria and Africa.
- Teklit, A. B. & Jasmindeep, K. (2017). Determinants of Insurance Companies' Profitability: Analysis of Insurance Sector in Ethiopia. *International Journal of Research in Finance and Marketing (IJRFM)*, 7(4).
- Webb, I. M.; Grace, F. & Skipper, H. (2002). The effect of Banking and Insurance On the growth of Capital and Output. *Centre for risk Management and Insurance Working*, paper, 02-1, Robinson College of business, Georgia State University, Atlanta.