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RESEARCH ARTICLE

Effect of Leverage on the Profitability of an Insurance Company in Nigeria: A Study of Consolidated Hallmark Insurance Plc.

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ABSTRACT

This study investigated the effect of leverage on the profitability of an insurance company in Nigeria: a study of Consolidated Hallmark Insurance Plc. The specific objectives of the study were to examine the effect of Debts-to-Assets ratio on Earnings per Share of Consolidated Hallmark Insurance Plc and to assess the effect of Debts-to-Equity ratio on Earnings per Share of Consolidated Hallmark Insurance Plc. Data was generated from the annual reports of the company. The period of the study was from 2016-2020. Multiple regression techniques were applied in the analysis of data. It was found that Debt-Asset ratio had no significant impact on Earnings per Share of Consolidated Hallmark Insurance Plc. Also, Debt-Equity ratio had no significant impact on Earnings per Share of Consolidated Hallmark Insurance Plc. In line with the findings, it was recommended that the company should maintain the status quo of not deepening its leverage practice. Instead, the company should deepen more on its Contingency reserve and statutory reserve in adjusting its capital balances.

Keywords: *Insurance Company; Consolidated Hallmark Insurance Plc.; Profitability; Leverage*

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Introduction

No society can run without its insurance industry (Mathur, 2022). The world we live in is full of uncertainties and risks. Individuals, families, businesses, governments, properties and assets are exposed to different types and levels of risks. While it is not always possible to prevent unwanted events from occurring, insurance is a financial product that reduces or eliminates the cost of loss or effect of loss caused by different types of risks. Economically, insurance serves a number of valuable functions. The indemnification and risk pooling properties of insurance facilitate commercial transactions and the provision of credit by mitigating losses as well as the measurement and management of non-diversifiable risk more generally (Brainard, 2008). Insurers also contribute specialized expertise in the identification and measurement of risk. This expertise enables them to accept carefully specified risks at lower prices than non-specialists. On the investment side, due to the long-term nature of their liabilities, sizeable reserves, and predictable premiums, life insurance providers can serve an important function as institutional investors providing capital to infrastructure and other long-term investments as well as professional oversight to these investments.

The insurance industry of Nigeria consists of 57 registered insurance companies. Fourteen (14) of them are in the life insurance business while 43 are the non-life insurers. There are also 2 reinsurance companies whose roles are to provide technical security and capacity for the insurance companies. There are 460 registered insurance brokers and about 15,000 insurance agents. The Nigerian Insurance Industry ranks 62nd in the world with $1.64 billion premium representing 0.2 percent of premium collected globally (Omobola, 2021). The Nigerian insurance industry grew by 8.01 per cent in 2021, compared to a negative growth rate of 13.29 per cent in 2020. The NBS, in its Gross Domestic Product report for the fourth quarter of 2021, said the insurance industry also accounted for 7.82 per cent of the finance sector. According to the report, the underwriting industry recorded negative growth of 2.08 per cent in the first quarter of 2021. It, however, expanded by 16.41 per cent, 7.86 per cent and 13.61 per cent in the second, third and fourth quarters of 2021.

As a whole, the sector grew at 24.92 per cent in nominal terms (year-on-year), with the growth rate of financial institutions as 25.99 per cent and 13.61per cent growth rate recorded for insurance. “The overall rate was higher than that in Q4 2020 by 26.02 per cent points, and lower by 1.54 per cent points than the preceding quarter. Quarter on quarter growth was 25.34 per cent, while annual growth rate stood at 11.88 per cent in 2021. “The sector’s contribution to the overall nominal GDP was 3.10 per cent in Q4 2021, higher than the 2.80 per cent it represented a year previous, and higher from the contribution of 2.70 per cent it made in the preceding quarter. “Growth in this sector in real terms totaled 24.14 per cent, higher by 27.76 per cent points from the rate recorded in 2020 fourth quarter and up by 0.90 per cent points from the rate recorded in the preceding quarter. Quarter on quarter growth in real terms stood at 26.99 per cent, while annual growth was 10.07 per cent in 2021. The report said the contribution of finance and insurance to real GDP totaled 3.66 per cent, higher than the contribution of 3.07 per cent recorded in the fourth quarter of 2020 by 0.59 per cent points, and higher than 3.16 per cent recorded in Q3 2021 by 0.50 per cent points (Popoola, 2022).

Despite the successes recorded so far, the environment in which the Nigerian insurance industry operates is filled with lots of challenges. Decades after the industry took its root, Nigeria’s insurance industry, sadly, stands at less than five per cent penetration (Orimisan, 2021). The poor adoption is a big threat to the survival of various stakeholders, insurance firms, brokers, reinsurers, insurance institutes, etc. across the country. Already, the industry grapples with a series of challenges ranging from poor financials to low patronage, insecurity and negative public perception. The insecurity in the country has increased claim responsibilities whereas premium growth has failed to match the rate of claim increase. Customers often complain about the lack of flexibility and technology-driven innovation in terms of the kind of insurance policies and packages that meets today’s upwardly mobile audience of contemporary insurance (Egwuatu, 2021). Other pressing challenges include inappropriate pricing and risk profiling, poor product-market fit, inadequate distribution channels and low public confidence currently plague the Nigerian insurance industry (Makatiani, 2021). Indigenous insurance firms’ inability to handle multi-billion-naira policies involving large companies, especially oil giants constitute a drawback to the sector’s growth (Orimisan and Otaru, 2021). Weakly capitalized insurers need to recapitalize or to restructure their businesses (Deloitte, 2022).

In response to these challenges insurers often resort to strategic financing leveraging to meet their objectives. Leverage is the extent of a company's capital that was borrowed (Imeokparia, Adesanmi and Fadipe, 2021). In this era of globalization and the most competitive business world, financing decisions such as leverage play a significant role in sustaining profitability of the firms (Ofulue, et. al, 2022). The primary objective of every rational investor be it an institutional investor or individual investor, is to maximize expected returns on their investments within an acceptable level of risk. Thus, they prefer to invest their funds in shares of companies with increasing prices that will eventually boost their wealth in the stock market. Most investors prefer persistent increase in the value of their shares in the stock market in order to earn more return on their investments and maximize their wealth. Financial leverage is a measure of how much firm uses equity and debt to finance its assets. As debt increases, financial leverage increases. Financial leverage refers to application of debt financing and borrowed capital in an attempt to increase firm's operations and profitability (Senan et. al, 2021). A firm is considered leveraged when the firm is partially financed by both debt and equity.

Most firms survive with a significant liquidity level which is mainly achievable through use of equity and debt to leverage their profits and capital. However, financial leverage is associated with some challenges. As Ibrahim and Isiaka (2021) noted, capital markets in developing economies are largely inefficient when compared to those of advanced economies because of the information asymmetry as such, it is not likely that inferences drawn from data obtained from countries with much more sophisticated financial systems would be applicable to a developing economy such as Nigeria. Therefore, it becomes important to know how our local insurance firms finance their operations as well as what it is paying back to its equity investors in the form of dividend to maximize long-term free cash flow, and manage its relationships with all of its stakeholders. Analysis of the profit profile of Nigerian insurance firms is important because it provides the basis for judging whether insurers run efficiently or otherwise. Barthwal (2000) asserts that profit is the primary measure of a firm's efficiency and success. Secondly, a deeper understanding of the trends and patterns of firm's profitability assist managers in evolving policies to enhance the profit level of their organizations. In addition, knowledge of the relationship between leverage and profitability helps to show how effectively firms are able to debt finance. It is in view of this background that this study looks at the effect of leverage on the profitability of an insurance company in Nigeria.

Objectives of the Study

The main objective of the study is to investigate the effect of leverage on the profitability of an insurance company in Nigeria. The specific objectives of the study are to:

I. Examine the effect of Debts-to-Assets ratio on Earnings per Share of Consolidated Hallmark Insurance Plc
II. Assess the effect of Debts-to-Equity ratio on Earnings per Share of Consolidated Hallmark Insurance Plc

Scope of the Study

The study is firm specific. Consolidated Hallmark Insurance Plc will be used in the study. The standard practice in financial reporting of corporate establishments is to usually conduct a five-year financial summary. In line with this practice and given that the specific insurance firm selected for the study has already published its 2020 annual report the study will set five years backwards. In other words, the period of the study is from 2016 to 2020. In addition, the study is firm specific.

Empirical Review

Akinlo and Asaolu (2012) examined the impact of leverage on profitability for the period 1999-2007. The results show that aggregate profit level for the firms decreased by 0.02 percent yearly over the study period. However, when disaggregated into sectors, a few firms actually experienced an increased profit level. The results show that firm size has a significant positive effect on profitability, while leverage has negative effect. Akomeah, Bentil and Alhassan (2018) studied 20 non-financial firms in Ghana to ascertain the impact of capital structure choice on firm performance using data covering a period of 7 years (2010-2016). The study found that the 2 proxies of leverage (Short term debt to equity ratio and long-term debt to equity ratios) were found to be negatively related to firm performance.

Kajola, Alao, Sanyaolu and Ojuringbe (2019) examined the effect of liquidity and leverage on financial performance of Nigerian listed consumer goods firms. The sample size of the study was selected from seventeen consumer goods firms listed on the Nigerian Stock Exchange. The time period was within 2012-2017. The pooled regression technique was employed to determine the econometric relationship of the dependent variables and independent variables. The findings of the study revealed that degree of operating leverage and degree of combined leverage has significant effect on financial performance while current ratio and quick asset ratio has significant effect on financial performance. The study was unable to give a vivid distinction between financial performance and firm value using EPS (Earning per share) to measure financial performance may not have indicated. EPS (Earning per share) has a firm value proxy and not financial performance which looks from the holistic perspectives. Also using degree of operating leverage and combined leverage, does not aid to expose or capture the risk and cost implication in terms of measurement.

Ibrahim and Isiaka (2021) evaluated the long-run effect of financial leverage on firm value with evidence from a sample of 62 firms quoted on the Nigerian Stock Exchange. The study covered the period from 2014 to 2018. The study determined the degree of long-term causality by employing an auto-regressive model estimated by the Generalized Method of Moments (GMM) technique. The regression results show that financial leverage has a significant positive effect on the firm value both in the short and long run, while the result of the correlation analysis carried out reveals that there is a significantly positive and strong linear relationship between the time series of firm value and its lagged version implying that firm value does not demonstrate traits of Mean reversion.

Yinusa, Ariyibi, Yunusa and Olaiya (2021) investigated the impact of operating leverage on firm value of quoted manufacturing firms in Nigeria. The study selected twenty-two (22) listed (Consumer goods sector) manufacturing firms listed on Nigeria Stock Exchange from 2013-2019. Panel least square technique data were used. The result of this study revealed that DVAS (Variability in sales) has a negative insignificant effect on firm value at (β=-1.04, P>0.05). DVPBIT (Variability in profit before interest and tax) has a positive insignificant effect on firm value at (β=12.6, P>0.05). OPLE (Operating leverage in asset) has a negative significant effect on firm value at (β=-18.95, P<0.05). Based on the findings of the study, it was therefore recommended that; firms would benefit from the quick variability in fixed assets to current assets (Changes in fixed cost into variable cost influences sales and long-run profit).

Ezejiofor and Emeneka (2022) investigated the effect of leverage on the social sustainability reporting of listed oil and gas firms in Nigeria. Secondary data were extracted from the annual reports and analyzed using descriptive statistics and the Panel Least Square (PLS) regression technique. Findings showed that Leverage had a significant effect on Social Sustainability Reporting in Nigeria.

Methodology

An ex-post facto research design was applied. Secondary data was sourced from annual reports of Consolidated Hallmark Insurance Company. The Statistical Technique applied was Multiple Regression.

Independent Variable:

Debt-Asset ratio: This is an indicator of the proportion of a company's assets that are being financed with debt, rather than equity (Hayes, 2022).

Debt-Equity ratio: This is a leverage_ratio that calculates the weight of total debt and financial liabilities against total shareholders'_equity (Corporate Finance Institute, 2022).

Dependent Variable

Earnings per Share: measures the amount of a company's net_income that is theoretically available for payment to the holders of its common stock

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Model Specification

The functional relation of the model for the study is given as:
EPS = f (DAR + DER) …(i)
The model is specified as follows:
EPS = $\beta_0 + \beta_1 DAR + \beta_2 DER + \mu$ …(ii)
Where:
EPS =
DAR =
DER =
β_0 = Constant parameters
β_1, β_2, = Coefficient parameter of DAR and DER
μ = error term

Data Presentation

Table 1: **Data in Original Form**

Year	*Debt (Millions)*	*Assets (Billions)*	*Equity (Billions)*	*Earnings per Share (kobo)*
2016	195,101,601	6,964,209,568	4,229,077,946	3.30
2017	244,704,571	7,392,512,630	4,367,000,805	5.91
2018	180,817,178	9,393,327,840	4,601,752,008	6.27
2019	343,406,713	11,291,006,944	6,481,514,648	9.77
2020	208,764,373	13,872,756,819	8,126,240,232	7.56

Source: Consolidated Hallmark Insurance Annual report 2020-2016

Debt was proxied by other payables and provision
Equity was proxied by Shareholders Fund
Assets was proxied by Total assets
Profits was proxied by Earnings per share
Given that all figures were not in the same unit of measurement (ratios and kobo) all data were converted to natural logarithm before being used in analysis.

Deriving the Debts-to-Assets ratio we have
Table 2: Debts-to-Assets Ratio

Year	*Debt*	*Assets*	*Ratio*
2016	195,101,601	6,964,209,568	0.028015
2017	244,704,571	7,392,512,630	0.033102
2018	180,817,178	9,393,327,840	0.01925
2019	343,406,713	11,291,006,944	0.030414
2020	208,764,373	13,872,756,819	0.015049

Source: Researcher's calculation using Excel

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Deriving the Debts-to-Equity ratio we have

Table 3: Debts-to-Equity Ratio

Year	*Debt*	*Equity*	*Ratio*
2016	195,101,601	4,229,077,946	0.046133
2017	244,704,571	4,367,000,805	0.056035
2018	180,817,178	4,601,752,008	0.039293
2019	343,406,713	6,481,514,648	0.052982
2020	208,764,373	8,126,240,232	0.02569

Source: Researcher's calculation using Excel

Table 4: Data on Debt-Asset Ratio, Debt-Equity Ratio and Earnings Per Share

Year	*Debt-Asset ratio*	*Debt-Equity ratio*	*EPS*
2016	0.028015	0.046133	3.30
2017	0.033102	0.056035	5.91
2018	0.01925	0.039293	6.27
2019	0.030414	0.052982	9.77
2020	0.015049	0.02569	7.56

Source: Researcher's compilation from earlier calculations

Across the years of the study, it is seen that there was low risk of investing in Consolidated Hallmark Insurance Plc given that its Debt-Asset ratio was less than 1. In 2016 only 2.8% of assets of the company was financed with debt. From 2017 to 2020 it was 3.3%, 1.9%, 3% and 1.5% respectively.
In other words, 97.2%, 96.7%, 98.1%, 97% and 98.5% were financed by owners' (shareholders') equity and not creditors. On the other hand, from 2016 to 2020, 4.6%, 5.6%, 3.9%, 52% and 2.5% of Consolidated Hallmark Insurance Plc's capital structure is tilted either toward debt and the rest were equity financing.

Given that all figures were not in the same unit of measurement all data will be converted to natural logarithm before being used in the analysis.

Table 5: Data in Logarithm

Year	*Debt-Asset ratio*	*Debt-Equity ratio*	*EPS*
2016	-1.55261	-1.33599	0.518514
2017	-1.48015	-1.25154	0.771587
2018	-1.71557	-1.40568	0.797268
2019	-1.51693	-1.27587	0.989895
2020	-1.82249	-1.59024	0.878522

Source: Researcher's Calculation using Excel

Table 3: Multiple Least Square Regression Analysis Result

Dependent Variable: EPS				
Method: Least Squares				
Date: 08/28/22 Time: 18:07				
Sample: 1 5				
Included observations: 5				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.340987	1.359149	0.250883	0.8253
DAR	-1.137686	3.246321	-0.350454	0.7595
DER	1.013289	3.480178	0.291160	0.7983
R-squared	0.073811	Mean dependent var		0.791157
Adjusted R-squared	-0.852379	S.D. dependent var		0.174559
S.E. of regression	0.237579	Akaike info criterion		0.247077
Sum squared resid	0.112888	Schwarz criterion		0.012739
Log likelihood	2.382308	Hannan-Quinn criter.		-0.381861
F-statistic	0.079693	Durbin-Watson stat		1.523665
Prob(F-statistic)	0.926189			

Source: Researcher's calculation using Eviews 10

Discussion of Findings

The debt-asset ratio had a regression coefficient of -1.137686. This was a negative coefficient. It showed that there is a decreasing interaction between the Debt-Asset ratio and Earnings per Share of Consolidated Hallmark Insurance Plc. That is to say for any unit increase in the Debt-Asset ratio, the extent of change that the amount of the company's net income that is theoretically available for payment to the holders will decrease by 1.137686 basis points. With its p-value at 0.7595 which is higher than the level of significance of 0.05, it shows there was statistical insignificance. In other words, there was not enough evidence against the null hypothesis. That is to say, Debt-Asset ratio had no significant impact on Earnings per Share of Consolidated Hallmark Insurance Plc. This implies that the extent of asset structure of the company that was financed by debt was not strong enough to influence Earnings per Share of Consolidated Hallmark Insurance Plc.

Debt-Equity ratio had a regression coefficient of 1.013289. This was a positive coefficient. It showed that there is an increasing interaction between Debt-Equity ratio and Earnings per Share of Consolidated Hallmark Insurance Plc. That is to say for any unit increase in Debt-Equity ratio, the extent of change that the amount of the company's net income that is theoretically available for payment to the holders will increase by 1.013289 basis points. With its p-value at 0.7983 which is higher than the level of significance of 0.05 it shows there was statistical insignificance. In other words, there was not enough evidence against the null hypothesis. That is to say, Debt-Equity ratio had no significant impact on Earnings per Share of Consolidated Hallmark Insurance Plc. This implies that the extent of capital structure of the company that was financed by equity was not strong enough to influence Earnings per Share of Consolidated Hallmark Insurance Plc.

The Adjusted Co-efficient of Determination which was 0.852379 shows that in the model the variable, Debt-Asset ratio and Debt-Equity ratio can only explain jointly 85.2379 percent of any variation seen in net income of Consolidated Hallmark Insurance Plc that is theoretically available for payment to the holders of its common stock. The remaining 14.7621 percent can be attributed to other variables not used in the model.

The findings of the study agreed on debt-to-equity ratio with Akomeah, Bentil and Alhassan (2018) who found that the proxies of leverage (Short term debt to equity ratio and long-term debt to equity ratios) were negatively related to firm performance. Also, it agreed with Olaiya (2021) whose result Operating leverage in asset has negative significant effect on firm value. Isiaka (2021) held a different view having found that financial leverage has a significant positive effect on the firm value both in the short and long run.

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Recommendations

I. Consolidated Hallmark Insurance Plc should maintain the status quo of not deepening its leverage practice. The company by virtue of industry regulation and practice that requires setting aside
II. Contingency reserve in addition to its statutory reserve has in place these mechanisms for adjusting its capital balance to address any financial shocks that arise.

References

Akinlo, O. & Asaolu, T. (2012). Profitability and leverage: evidence from Nigerian firms. *Global Journal of Business Research*, 6(1)17-25

Akomeah, E., Bentil, P., & Musah, A. (2018). The Impact of Capital Structure Decisions on Firm Performance: The Case of Listed Non-Financial Institutions in Ghana. International Journal of Academic Research in Accounting, Finance and Management Sciences, 8(4), 1-15. http://dx.doi.org/10.6007/IJARAFMS/v8-i4/5050

Barthwal, R.R. (2000), Industrial Economics: An Introductory Textbook, New Delhi, New Age International Publishers

Brainard, L. (2008). What is the role of insurance in economic development? Second paper in the Zurich Government and Industry Affairs thought leadership series.

Corporate Finance Institute (2022). Debt Equity Ratio. Retrieved August 26, 2022 from https://corporatefinanceinstitute.com/resources/knowledge/finance/debt-to-equity-ratio-formula/

Deloitte (2022). Africa Insurance Outlook 2022: Navigating the insurance landscape. Retrieved August 26, 2022 from https://www2.deloitte.com/content/dam/Deloitte/za/Documents/financial-services/za-Africa-Insurance-Outlook-2022-publication.pdf

Ezejofor, R. & Emeneka, O. (2022). Leverage and social sustainability reporting on listed oil and gas firms in Nigeria. *International Journal of Advanced Academic Research*, 8(3), 1-14

Egwuatu, P. (2021). Insurance industry performing below capacity — PwC. Retrieved August 26, 2022 from https://www.vanguardngr.com/2021/03/insurance-industry-performing-below-capacity-pwc/

Hayes. A. (2022). Total-Debt-to-Total-Assets Ratio Retrieved August 26, 2022 from https://www.investopedia.com/terms/t/totaldebttototalassets.asp

Ibrahim, U. & Isiaka, A. (2021). Dynamic modelling of the relationship between financial leverage and firm value of selected firms quoted on the Nigerian Stock Exchange. *Research in Business & Social Science*, 10(3), 259-279

Imeokparia, L., Adesanmi, D. & Fadipe, O. (2021). Effect of financial leverage on financial performance: A Comparative Study of Deposit Money Banks and Manufacturing Companies in Nigeria. *Global Journal of Accounting*, 7(1), 37-46

Kajola, Alao, Sanyaolu & Ojuringbe (2019). Effect of liquidity and leverage on the financial performance of Nigerian listed consumer goods firms. *Contemporary Economy Journal*, Constantin Brancoveanu University, vol. 4(3), pages 91-102.

Makatiani, K. (2021). Unlocking the hidden potential of Nigeria's insurance industry. Retrieved August 26, 2022 from https://guardian.ng/opinion/unlocking-hidden-potential-of-nigeria-insurance-industry/

Mathur, D. (2022). Importance of insurance. retrieved august 26, 2022 from https://www.hdfcergo.com/blogs/general-insurance/importance-of-insurance

Ofulue, I., Ezeagba, C., Amahalu, N. & Obi, J. (2021). Financial leverage and financial performance of quoted industrial goods firms in Nigeria. *International Journal of Management Studies and Social Science Research*, 4(1), 172-181

Omobola, T. (2021). Insurance industry achieves minimal result in 2021. Retrieved August 26, 2022 from https://thenationonlineng.net/insurance-industry-achieves-minimal-result-in-2021/

Orimisan, B. (2021). Age-long patronage crisis threatens insurance survival. Retrieved August 26, 2022 from https://guardian.ng/business-services/age-long-patronage-crisis-threatens-insurance-survival/

Orimisa, B. & Otaru, (2021). Recapitalisation as bridge to insurance sector's stability, nation's economic growth. Retrieved August 26, 2022 from https://guardian.ng/saturday-magazine/cover/recapitalisation-as-bridge-to-insurance-sectors-stability-nations-economic-growth/

Popoola, N. (2022). Nigerian insurance sector rebounds, records 8.01% annual growth. Retrieved August 26, 2022 from https://punchng.com/nigerian-insurance-sector-rebounds-records-8-01-annual-growth/

Yinusa, O., Ariyibi, M., Yunusa, L. & Olaiya, K. (2021). Operating leverage and firm value of manufacturing firms in Nigeria. *International Journal of Commerce and Finance*, 7(1), 77-91