

LEVERAGE RATIOS AND FINANCIAL PERFORMANCE OF LISTED INSURANCE FIRMS IN NIGERIA

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Abstract

The study examined the Leverage ratio and financial performance of listed insurance firms in Nigeria within the period 2013 to 2020, and Census is applied to employ all 25 insurance firms however filter sampling techniques are used to select 15 listed insurance firms based on the availability of data within the period of study. Data were extracted from the published annual reports and accounts of the insurance firms understudy, multiple regression analysis using STATA 13 version was employed to analyzing the data and testing the formulated hypotheses. The results suggest that debt to equity ratio, interest coverage ratio, and debt ratio have a significant impact on the financial performance (ROA), The study concludes that financial leverage has a positive and significant impact on the financial performance (ROA) of listed insurance firms in Nigeria during the period of the study. The findings, therefore recommend that the quoted insurance firms in Nigeria should improve their financial performance through careful use of financial leverage ratios and the Government should encourage firms by formulating policies that will guard against the cost of acquiring debt.

Keywords: Leverage ratios, debt to equity, Interest coverage, debt ratio, return on assets

INTRODUCTION

Assessing the financial performance of firms over the past years has been a challenge of great concern that generates major interesting findings in the area of corporate finance. Therefore, the term financial performance is an ability of a company to generate new resources from everyday operations over a given period, time and it is measured by net income and cash from operation (Rajkumar & Hanitha, 2015). Organizational researchers generally use either accounting-based measures of profitability such as return on asset, return on sales and return on equity or stock market-based measures such as Tobin's Q and market return to assess financial performance. Accounting measures may be seen as reflections of past or short-term financial performance, while market measures are reflections of future or long-term financial performance.

Financial performance is a measure of how well a firm makes its investment decisions on assets from its primary mode of doing business, the higher the yield on investments the higher the income to the firm. It is also used as a general measure of the firm's overall financial stability over a given period, time which can be used to compare the financial performance of similar firms across the same industry or to even compare different industries in an economy (Alsamaree, Adnan & Hashim, 2013). It is so vital that it determines the long-term survival of the organization. However, many organizations are yet to identify the appropriate determining factors of financial performance which may help achieve profit and even growth and development objectives of the firm (Boigues, 2016).

Financial leverage is the company's ability to utilize fixed financial charges to increase the earnings before interest and tax of a company's earnings per share. If a company

does not utilize fixed cost-bearing securities, earnings before interest and tax will change and consequently lead to a change in earnings per share. If a firm has no fixed financial charges especially preference dividend and interest it's an indication of financial leverage (Pandey, 2019). Financial leverage gives a firm the ability to magnify its earnings before interest rate and tax thus increasing earnings per share (Saleem, Rahman & Sultana, 2014)

Leverage is measured using various ratios. Within the capital structure of the firm, the ratios indicate the ability of the firm to satisfy the interests of its various stakeholders and to quantify the debt the firm has. The financial statements provide information used to derive the ratios which mainly focus on the firm's stockholders' equity and liabilities to debt holders. In addition, they are used to assess the ability of the firm to service its fixed payments associated with its debts. Harris and Artur (1991) cautioned that different outcomes and hence likely divergent interpretations could be encountered when different measures of leverage are used. Unlike the market's leverage that fluctuates very frequently, book leverage is favored as a measure of leverage (Myers, 1977).

Several related studies were carried out, in both developing and developed nations however, studies in listed insurance firms in Nigeria are highly limited. For instance, Dao (2016) carried out similar studies on Finnair and Scandinavian Airlines, Finland, Sarkodie, Addai, and Asiedu (2015) conducted on Microfinance Institutions in Ghana while Banerjee (2019) carried out similar studies on firms in United Arab Emirate (UAE) among others.

Objectives of the Study

The main objective of this study is to examine the impacts of financial leverage and financial performance of listed insurance firms in Nigeria. Other specific objectives of the research include:

- i. To determine the impact of debt to equity ratio on Return on Assets of listed insurance firms in Nigeria;
- ii. To determine the influence of interest coverage ratio on Return on Assets of listed insurance firms in Nigeria; and
- iii. To determine the impact of debt ratio on return on assets of listed insurance firms in Nigeria.

Hypotheses of the Study

In line with the above objectives, the following hypotheses were formulated to be answered at the end of the study:

- i. H₀₁: debt to equity ratio have no significant impact on return on assets of listed insurance firms in Nigeria;
- ii. H₀₂: interest coverage ratio has no significant influence on return on assets of listed insurance in Nigeria; and
- iii. H₀₃: debt ratio has no significant impact on return on assets of listed insurance firms in Nigeria.

This study proves to be beneficial to the various stakeholders of the Nigerian corporate firms and academics in several ways. The result of the study will be of benefit to corporate decision-makers in Nigeria as its emphasis on the benefits and costs of their

financing decision on their firms. This is important because a better understanding of the benefits and costs of leverage ratio enhances the financial performance of listed firms in Nigerian. The various policymakers of the Nigerian corporate world could benefit immensely from this study, since both the characteristics of the financial structure of Nigeria's listed firms and its impact on their financial performance will be empirically determined. It will also enhance their policy decisions towards improving the profitability of the public and private sectors. As earlier stated, this study is directed towards adding to the body of literature on the study of corporate financing in the Nigerian as a whole and therefore is bound to trigger further empirical investigation on the topic; even as it will give some empirical understandings to existing findings of the financing methods and their impacts on Nigerian listed firms. The study focused on the leverage ratio and financial performance of insurance firms quoted on the Nigerian Stock Exchange. Data were extracted from the website of the listed insurance firms and the Nigerian Stock Exchange for the period under study. The justification for this period (2013-2020) is the year 2012 marks the onset of preparation of the International Financial Reporting Standard (IFRS) compliance financial statement in Nigeria, though the year 2012 is excluded because of the level of compliance by insurance firms, to IFRS law was low. The variables employed for leverage ratio in this study are Debt to Equity ratio, Debt Ratio, and Interest Coverage Ratio, while Return on Asset proxied financial performance.

The remaining part of the study is structured into four segments. Section one is a literature review and theoretical framework, section two is the methodology, section three is result and discussion of findings, and finally section four deals with conclusion and recommendations.

Review of Related Literature

Conceptual Framework

This context adds to this research information in at least two means as it identifies research study variables and relationships among the study variables. This study examines the leverage ratio on the financial performance of insurance firms listed in the Nigeria stock exchange. The conceptual framework of this study points out the relationship between financial performance (profitability) which will be measured by firms' growth and productivity. Financial Performance = Return on Assets (ROA) = Net profit before Interest and Tax/Total Assets while the independent variables of the study will be leverage ratio which will be measured as the Debt to equity ratio = total debt /equity, Interest Coverage Ratio = Earnings before interest and Tax/Interest Expenses, and Debt = Total Debt/Total assets.

Financial Performance

Financial performance is the firm's financial well-being, its willingness and ability to meet its long-term financial obligations, and its commitment to provide services in a foreseeable future (Ganya & Ivungu, 2019). The number of financial performance measures often used by academics and practitioners can be categorized into traditional, economic, and market-based measures of financial performance. Thus, the traditional measures of financial performance as much empirical pieces of evidences, shreds of evidence showed that Return on Assets (ROA), Return on Equity (ROE), and Net Interest Margin (NIM) are the most common proxies used to measure financial performance as pointed out by (Francis, 2013). For this study, one of the traditional

measures of financial performance will be employed. This traditional measure of financial performance is Return on Assets (ROA). Return on Assets is one of the common indicators of a company's profitability that shows the fraction of how profitable the firm's total assets are generating revenue. This simply indicates the firm's managements ability to generate income for shareholders by efficiently and effectively utilizing the firm's total assets at their disposal (Khrawish, 2011; Kennon, 2011). Return on Asset (ROA) is calculated by dividing a company's annual earnings by its total assets.

Return on asset (ROA) is an indicator of financial performance that measures the efficiency of a firm in terms of generating profits relative to a total assets as shown in the company's balance sheet (Ongore & Kusa, 2013). This implies that the return on asset is the return that can be earned from the total asset. It further explains that firms that get a higher returns on the assets are most likely to generate cash from within. Return on asset is a good indicator of whether the firm is capable of generating a return that is worth whatever risk the total asset may entail (Berman, Knight & Case, 2013).

Considering all of the above, this study sees financial performance as the measurement of how well a company uses or can use its available resources to generate revenues and it is thus used in measuring the organization's overall financial well-being within a given period, time.

Concept of Leverage Ratio

The term 'Leverage' may be defined as the percent of change in one variable by the percent of change in some other variable or variables. In the area of financial management, the term leverage is used to describe the firm's ability to use fixed cost

assets or funds; the former is popularly known as operating leverage and the latter is known as 'Financial Leverage (Ivo & Anyanwaokoro, 2019).

Total Debt to Total Equity

Total debt to equity ratios measures the fraction of creditors' funds with shareholders' funds. This particular ratio is what creditors may rely on, in deciding on whether to grant a loan or not as well as the amount to be granted, taking the value of the total debt to equity ratios into consideration.

Total debt to total equity ratios measures the proportion of creditors' funds to shareholders' funds. Creditors would like this ratio to be lower; because the lower the ratio the higher the level of the firm's financing, that is being provided by shareholders, and the larger the cushion (margin of protection) in the event of shrinking asset values or outright losses. This is a measure of how much suppliers, lenders, creditors, and obligors have committed to the company versus what shareholders have committed (Kurfi, 2003). Total debt to total equity refers to the ratio of debt to the equity capital of a company. As a result of the payment of interest and repayment of the principal amount of the debt, a large part of the firm's cash flow would decrease (Magpayo, 2011).

The total debt to total equity ratio is a measure of a mix of debt (total liabilities) and equity within the firm's total capital. It states the amount of owners' equity to a company's total liabilities, it is an important measure of risk because of interest charges. This makes the firm's profitability fragile in reversionary times (Nuhu, 2014). The ratio further signifies the higher the ratio, the better the position of the company in the eyes of its creditors, lenders, investors, and shareholders.

Interest Coverage Ratio

This ratio is also called the time's interest earned ratio. It is used to determine a firm's ability to pay interest on outstanding debt. It is probably seen as the most important of debt ratios. This is because other debt ratios fail to explain or indicate the firm's ability to meet its interest and other fixed-charges obligations. Thus, the interest coverage ratio shows whether a firm is earning enough revenues to be able to pay for its interest costs of debentures and bank loans. It indicates the number of times interest and fixed charges are covered by earnings/profits. The interest coverage ratio is computed by dividing Earnings Before Interests, Taxes, Depreciation, and Amortization (EBITDA) by the Interest. However, if the ratio is too high, it is an indication that the firm is very conservative in its use of debt and that it is not using credit to the best advantage of the shareholders.

The interest coverage ratio is a measure of financial leverage which signifies the capacity of a company to meet fixed financial charges. This ratio recognizes the fact that some organizations in Nigeria make use of assets on a lease contract and incur long-term payments of premiums (Ahmad, Alam & Yameen, 2019). Investors usually have an idea of the financial risk of a firm by comparing the interest coverage ratios with the acceptable industry standard. The higher the interest coverage ratio is, the better the ability of the firm to service interest obligations on debt (Zalalem, 2020).

The interest coverage ratio is used to ascertain a company's ability to pay interest on outstanding debt. The greater the multiple, the less risk to the lender, and typically, if the company has a multiple higher than one, it is considered to have enough capital to pay off its interest expenses. It is expected that a company should cover interest and

fixed charges by at least a factor of two, or even more ideally, 3:1, if not, its ability to meet interest payments may be questionable (Afolabi, Olabisi, Kajola & Asaolu, 2019).

Stability in interest coverage ratios is one of the most important things to look for when analyzing the interest coverage ratio in this way. A declining interest coverage ratio is often something for investors to be wary of, as it signifies that a firm may be unable to pay its future debt. Generally, the interest coverage ratio is a good assessment of a firm's short-term financial health. While making future projections by analyzing a firm's interest coverage ratio history may be a good way of assessing an investment opportunity, it is difficult to accurately predict a firm's long-term financial health with any ratio (Katua, 2020).

Debt Ratio

Debts are the second source of capital in addition to equity. This means that a firm may source funds externally from the surplus economy to fund its operations and execute long-term investment plans to maintain the level of operations, market share, productivity, and conversely financial performance (Pandey, 2015). The total debt ratio is a financial ratio that is expressed as a proportion of a firm's assets that are provided in comparison to debt and it is calculated by dividing total debt by total assets (Nasimi, 2016). Debt ratios measure the ability of a company to meet its financial obligations when they fall due. Debt ratios signify the capacity of a firm to repay the principal amount of its debts, pay interest on its borrowings, and meet its other financial obligations (Falk & Steiger, 2018).

Theoretical Framework

The study is anchored on Pecking Order and Trade-off Theories.

The Pecking Order theory postulates that the cost of financing increases with asymmetric information and that financing comes from three sources namely, internal funds, debt, and new equity, also companies prioritize their sources of funding, first internal that is, equity financing, secondly debt and raising new equity as its last resort. The theory in its view in asymmetric information that managers know more about their companies' prospects, risks, and value more than the outside investors, is anchored in line with the theory that most firms prefer the Pecking Order Theory for their investment. By, under of the theory, the management prefers ready funds to fund investment first in their activity and if the fund is not available they use debt and finally benefit from external share (Gweyi & Karanja, 2014). The result of the Pecking Order of financing is as follows: an internally generated fund first is followed by respectively low-risk debt financing and share financing.

Theory Trade-off Theory is another theory used by the authors to properly situate this study. The theoretical base of trade-off theory was laid down by Myers (1984). Other researchers who also contributed to theory include; Fisher *et al.* (1989), Kim and Sorensen (1986). These proponents of trade-off theory suggest that the firm will borrow up to the point where the marginal value of tax shields on additional debt is just offset by the increase in the present value of the possible cost of financial distress. According to Trade-off theory, benefits and costs are associated with debt and firms should follow a targeted debt ratio where benefits are maximum against minimum loss (Graham, 2000; Kim and Sorensen, 1986). According to Fisher *et al.* (1989), the trade-off point of financial leverage is achieved at the point where the marginal present value of the tax on additional debt is equal to the increase in the present value of the financial distress costs.

Empirical Review

Akhtar, et al (2012) examines the relationship between financial leverage and financial performance, evidence from the fuel and energy sector of Pakistan. The result shows that there is a general perception that a relationship exists between the financial leverage and the performance of the companies' i.e most of the financial performance indicators have a positive relationship between leverage and the financial performance when compare with debt to equity ratio while the gearing ratio indicates negative relationships with the leverage indicators. The gearing ratio also takes into account the effect of capital with return numerator which not only accommodates the debt but also the outstanding shares of preferred stock. The result adds that the gearing ratio may differ from that of the debt to equity ratio while the debt-equity ratio takes into account the long-term debt.

Rehman (2013) studies the relationship between financial leverage and financial performance in listed sugar companies of Pakistan. The results show a positive relationship of debt-equity ratio with return on asset and sales growth, and a negative relationship of debt-equity ratio with earning per share, net profit margin, and return on equity. This negative relationship between the debt-equity ratio and earnings per share (EPS) supports the fact that as debt increases, the interest payment will also rise, so EPS will decrease.

Nawaz et al. (2015) investigated the impact of financial leverage and the Profitability of the cement sector operating in Pakistan. The sample size for 18 firms for six (6) years consists of 108 observations. They used the Ordinary Least Square model on the data to establish a causal relationship between the variables. The researchers found that

financial leverage has a statistically significant inverse impact on profitability at a 99% confidence interval.

Gweyi and Karanja (2014) investigated the effect of financial leverage on the financial performance of deposit-taking Sacco in Kenya. The sample data was extracted from 40 Savings and Credit Cooperative Societies (Saccos) registered by Sacco Society Regulatory Authority extended from the period 2010 to 2012. The secondary data used for analysis was collected from the financial statements of the various deposit-taking Saccos. Two basic approaches descriptive and analytical design were adopted. The results show a perfect positive correlation between debt- equity ratio (DER) with return on equity (ROE) and profit after tax at 99% confidence interval and a weak positive correlation between debt-equity ratio with return on assets and income growth.

Enekwe et al.(2014) wrote on the effect of the financial leverage on financial performance of the Nigerian pharmaceutical companies over twelve (12) years (2001 – 2012) for the three (3) selected companies. Their work employed three (3) financial leverage for the independent variables such as: debt ratio (DR); debt-equity ratio (DER) and interest coverage ratio (ICR) in determining their effect on financial performance for Return on Assets (ROA) as: the dependent variable. They used secondary data obtained from the financial statement. Descriptive statistics, Pearson correlation, and regressions were employed and used for this study. The results of the analysis showed that debt ratio (DR) and debt-equity ratio (DER) have a negative relationship with Return on Assets (ROA) while interest coverage ratio (ICR) has a positive relationship with Return on Assets (ROA) in Nigerian pharmaceutical industry.

Methodology

The population of this study consists of all the 25 insurance firms listed on the floor of the Nigerian Stock Exchange as of 1st January 2013 and remains listed up to 31st December 2020. However, the selected sample size for the study consists of 15 listed insurance firms. This number was arrived at after applying census and filter. The census was employed to include all the listed firms while the filter was used based on the availability of the data during the period under study. The sample firms are as shown in the table below:

Sample Firms

S/N	Symbol	Insurance Firm
1	AFRINSURE	African Alliance Insurance Company
2	AIICO	AIICO Insurance Plc
3	CHIPLC	Consolidated Hallmark Insurance Plc
4	CONTINSURE	Continental Reinsurance Plc
5	CORNERST	Cornerstone Insurance Plc
6	GUINEAINS	Guinea Insurance Plc.
7	LASACO	Lasaco Assurance Plc
8	LAWUNION	Law Union and Rock Ins. Plc
9	LINKASSURE	Linkage Assurance Plc
10	MBENEFIT	Mutual Benefits Assurance Plc.
11	NIGERINS	Niger Insurance
12	PRESTIGE	Prestige Assurance Plc
13	REGALINS	Regency Assurance Plc
14	SOVRENINS	Sovereign Trust Insurance Plc
15	UNIVINSURE	Universal Insurance Plc

Source: Nigerian Stock Exchange 2021

A correlation research design was employed for the study and this is because it allows testing of the expected relationships between and among variables. The correlation

research design in this study was employed to examine the determining factors of the leverage ratio of listed insurance firms in Nigeria.

Longitudinal balanced panel data from secondary sources were used only and the data were extracted from the audited annual financial reports of the quoted insurance firms under study for a period 2013-2020. The data extracted from the audited annual reports of the firms under investigation are return on asset as the dependent variable; total debt to equity ratio, interest coverage ratio, and debt ratio as explanatory variables. The STATA13 software package is used to analyze the data while multiple regressions were employed to examine the model of the study.

The multiple regression models are specified as follows:

$$ROA_{it} = \alpha_0 + \beta_1 DTER_{it} + \beta_2 ICR_{it} + \beta_3 DR_{it} + \epsilon_{it}$$

ROA = Returns on Assets, measured as profit after interest and tax divided by total assets, Banerjee (2019).

DER= Total Debt to Equity Ratio, measured as total debts divided by shareholders equity, Enekwe (2015); and Banerjee (2019)

ICR = Interest Coverage ratio, measured by dividing the number of earnings before interest, taxes, depreciation, and amortization by interest Pandey (2010)

DR = Debt ratio measured by dividing total debt by total assets Ezeamama (2010)

α =Constant

β_1 to β_3 =Coefficient of the parameters

ϵ =error term,

i= insurance firms,

t=time

Results

This section presents the summary of regression results which examines the model that captures all the independent variables employed for the study.

Table 1: Summary of Regression Results

Variables	Coefficients	Z-values	P-values
DER	1.211013	2.64	0.008
ICR	0.3286273	2.01	0.044
DR	0.3214066	2.86	0.004
Constant	-0.0298282	-0.64	0.522
R ²			0.451
Wald Chi ²			186.38
Wald Chi Sig			0.0000

Source: STATA 13.1, Output 2021

It is shown in table 1 that all the independent variables employed in the study, debt to equity, interest coverage, and debt ratio is impacting positively on return on assets of insurance firms in Nigeria during the period under study. Here the implication is that the model fitness is okay and that the independent variables are selected properly, combined, and employed for the study. Furthermore, the results for the individual hypothesis are presented as follows:

H₀₁: Debt to equity ratios (DER) have no significant impact on the Return on Assets of insurance firms listed on the Nigerian Stock Exchange. The Debt to Equity ratio is found to be positively and significantly impacting on return on assets of insurance firms listed on the Nigerian Stock Exchange. This was confirmed from a positive coefficient of

1.211013 and a p-value of 0.008. This provides enough evidence to reject hypothesis one of the study which states that the debt to equity ratio has no significant influence on the return on assets of insurance firms quoted in Nigeria. Thus, the study rejects Hypothesis 1 (H_01).

H_02 : Interest Coverage Ratios (ICR) have no significant influence on the return on assets of insurance firms listed on the Nigerian Stock Exchange. The result reveals that Interest Coverage Ratio is positively and significantly impacting on return assets. The result was proved by the positive value of the coefficient of 0.3286273 and the corresponding p-value of 0.044. Given, this Hypothesis 2, (H_02) is rejected.

H_03 : Debt Ratios (DR) have no significant impact on the return on assets of insurance firms listed on the Nigerian Stock Exchange. The result found the debt ratio to be significantly and positively influencing the return on assets of listed insurance firms in Nigeria. This result is verified from the coefficient value of 0.3214066 and its significant level of 0.004. Because of the reported result, this provides evidence to reject the third hypothesis of the study. Thus, Hypothesis 3 (H_03) is hereby rejected.

Discussion of Results

It was observed from the study that some researchers have found a mixed relationship between leverage and financial performance. Such studies include: Akhar, et al (2012), who found a positive relationship between financial leverage and financial performance, evidence from the fuel and energy sector of Pakistan. Rehman (2013), Listed sugar companies in Pakistan, found that some financial leverage variables have a positive and negative significant relationships with financial performance. Akinmulegun (2012), Nawaz et al. (2015), in Pakistan, found that financial leverage has

a statistically significant inverse impact on profitability at a 99% confidence interval. Gweyi and Karanja (2014) in Kenya, Found a perfect positive correlation between debt-equity ratio (DER) with return on equity (ROE) and profit after tax at 99% confidence interval and a weak positive correlation between debt-equity ratio with return on assets and income growth. Enekwe et al. (2014) in Nigeria, found a negative relationship with Return on Assets (ROA) while interest coverage ratio (ICR) has a positive relationship with Return on Assets (ROA) in Nigeria pharmaceutical industry.

Conclusion

The study evaluated the leverage ratio and financial performance of listed insurance firms in Nigeria for the period 2013-2020. The research results showed that Debt to equity ratio (DER), Interest coverage ratio (ICR), and Debt Ratio are all significantly impact the Return on assets (ROA) of quoted insurance firms in Nigeria. In totality, the study has shown that leverage financing has a significant effect on the financial performance (ROA) of listed insurance firms in Nigeria. From the study, it is concluded that the financial leverage among others like market leverage, and book leverage may constitute a major determinant ratio of financial performance of quoted insurance firms in Nigeria. It is recommended that the listed insurance firms in Nigeria should improve their financial performance through careful use of financial leverage ratios. It is recommended also that the quoted insurance firms in Nigeria should try to monitor their cost of capital as it affects the firm's profitability (Return on Assets). The findings of the study show that debt to equity impacts on financial performance, it is therefore recommended that financial managers of listed insurance firms in Nigeria should leverage on debt (long term debt) while monitoring the interest charge at a low cost to

enhance the firm's financial performance (ROA). Government should encourage firms by formulating policies that will guard against interest paying on loans.

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