

RELATIONSHIP BETWEEN FINANCIAL LEVERAGE AND FINANCIAL PERFORMANCE OF DEPOSIT MONEY BANKS IN NIGERIA

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Abstract

The general objective of this study is to investigate the relationship between financial leverage and financial performance of deposit money banks in Nigeria, with specific reference to how debt- equity ratio and debt ratio affect return on equity of deposit money banks in Nigeria. This study selects 11 deposit money banks from Tier 1, Tier 2 and Tier 3 classification of banks using convenience sampling technique for the period 2005- 2013. This study adopted both descriptive and correlation analysis in describing the data set and in investigating the relationship between financial leverage and financial performance. Findings from the correlation analysis reveal that there is significant relationship between debt- equity ratio and financial performance proxy by return on equity. However, the findings also indicate that there is no significant relationship between debt ratio and financial performance surrogated by ROE. Furthermore, findings from the descriptive analysis show that about 84% of total assets of deposit money banks in Nigeria are financed by debts, confirming that banks are highly levered financial institutions. The study recommends among others that an appropriate debt- equity mix should be adopted by banks if they must improve their financial performance, survive and remain competitive.

Keywords: Financial Leverage, Financial Performance, Deposit Money Banks, Nigeria

INTRODUCTION

Capital structure is one of the most puzzling issues in corporate finance literature. The concept of capital structure is generally described as the proportion of long-term debt and equity that make up the total capital of a firm. The proportion of debt and equity is a strategic choice of corporate managers (Velampy & Niresh, 2012). Similarly, the capital structure decision is a significant managerial decision because it influences the shareholder's return and risk (Pandey, 2010). Consequently, the market value of a share may be affected by the capital structure decision, and the company will have to plan its capital structure initially, at the time of its inception. Subsequently, whenever funds have to be raised to finance investments, a capital structure decision is involved (Pandey, 2010).

A company can finance its investments by debt and equity, and a company may also use preference shares. The ratio of the fixed-charge sources of funds, such as debt and preference shares to owners' equity in the capital structure is described as financial leverage or gearing (Pandey, 2010). The other alternative term 'trading on equity' is derived from the fact that it is the owners' equity that is used as a basis to raise debt. The supplier of debt (lender) has limited participation in the sharing of company's profits and therefore, may impose certain restrictions (protective covenants) on the firm (Waterman, 1953). Such restrictions include provision relating to collateral, sinking funds, dividend policy and further borrowing. The issuing firm agrees to these so-called protective covenants in order to market its bonds to investors (Bodie, Kane & Marcus, 2004). Financial leverage decision is a vital one since the performance of a firm is directly affected by such decision; hence, financial managers should trade with caution when taking debt-equity mix decision.

The theory of capital structure and its relationship with firms' performance has been an issue of great concern in corporate finance and accounting literature since the seminal work of Modigliani and Miller in 1958 (Al-Taani, 2013; Mohammed, 2010; Ogebe, Ogebe & Alewi, 2013). Modigliani and Miller (1958) assert irrelevance of debt-to-equity ratio for firm value. However, since they considered the assumptions of perfect markets, which no taxes, absence of transaction and bankruptcy costs, the theory about the debt irrelevance is hardly realistic. Later, Modigliani and Miller (1963) relaxed a no-tax assumption and developed a theory about tax benefits of debt. That paper gave rise to a serious academic discussion on the theory of capital structure (Iavorskyi, 2013).

There are two main benefits of debt for a company. The first one is tax shield, interest payments usually are not taxable; hence the debt can increase the value of a firm. Second benefit is that debt disciplines managers (Jensen, 1986). Managers use free cash flows of the company to invest in projects to pay dividends, or to hold-on cash balance. But if the firm is not

committed to some fixed payments such as interest expenses, managers could have incentives to “waste” excess free cash flows. That is why in order to discipline managers, shareholders attract debt. It has been argued that profitable firms were less likely to depend on debt in their capital structure than less profitable ones, and that firms with high growth rates have high debt to equity ratios (Akintoye, 2008; Harris & Raviv, 1991; Krishnan & Moyer, 1997; Tian & Zeitun, 2007). Does it then mean that a firm should go on increasing the debt proportion in its capital structure? If every increase in debt financing were going to increase the earnings for the shareholders, then every firm would have been 100% debt financed. However, there are certain costs associated with debt financing. So, between the two extremes of whole equity financing and whole debt financing, a particular debt-equity mix (financial leverage) is to be decided. Therefore, a financial leverage decision should be designed in such a way that it maximizes shareholders return and minimizes risk.

Similarly, since the value of a firm is directly related to its performance, financial experts study the relationship between leverage and firm performance in order to validate Jensen’s (1986) theory. However, empirical studies have not reached a consensus about the relationship between leverage and firms’ performance. This study is therefore, an attempt to contribute to the empirical studies by investigating the relationship between financial leverage and financial performance using selected deposit money banks in Nigeria.

Statement of the Research Problem

Many studies have been carried out on financial leverage and firms’ performance; however, these studies have failed to reach an agreement that is applicable to firms in all circumstance (Al-Tally, 2013). Myers (2001) argued that that there is no complete theory of the debt-equity choice and no reason to expect one. Additionally, Brealey and Myers (1991) identified financial leverage as one of the ten unresolved problems in corporate finance.

Surveys of empirical studies revealed that consensus have not been reached on the relationship between financial leverage and financial performance. Many researchers found a significant negative relationship between leverage and firms’ performance (see Al-Taani, 2013; Al-tally, 2014; Arowoshegbe & Emeni, 2014; Chinaemerem & Anthony, 2012; Majumdar & Chhibber, 1999; Ogebe et al., 2013; Onalapo & Kajola, 2010).

Despite the negative relationship revealed by the above empirical studies, many researchers also found a significant positive relationship between financial leverage and financial performance (for example, Akhtar, Maryam & Sadia, 2012; Berger & Bonaccorsi di Patti, 2006; Fosu, 2013; Gweji & Karanja, 2014; Ojo, 2012; Rehman, 2013).

It can be seen from the above reviews of empirical literature that results from investigations into the relationship between financial leverage and financial performance are inconclusive and requires more empirical studies. An important financing decision that firms must take is to decide the proportion of debt and equity that will constitute their capital structure. Moreover, despite the widespread interest in the way firms make their financing decisions, most of the research on financial leverage has been conducted in the advanced countries' using non-financial quoted companies. This study is an attempt to fill this gap in knowledge; hence, the main problem of this research will be to investigate the relationship between financial leverage and financial performance of selected deposit money banks in Nigeria.

Objectives of the Study

The general objective of this study is to investigate the relationship between financial leverage and financial performance of selected deposit money banks in Nigeria.

The specific objectives are:

- i. To investigate the relationship between debt-equity ratio and financial performance of selected deposit money banks in Nigeria.
- ii. To assess the relationship between debt ratio and financial performance of selected deposit money banks in Nigeria.

Research Hypotheses

The following hypotheses were tested:

H₀1: There is no significant relationship between debt-equity ratio and financial performance.

H₀2: There is no significant relationship between debt ratio and financial performance.

REVIEW OF LITERATURE

Concept of Financial Leverage

Financial leverage is a measure of how much firm uses equity and debt to finance its assets. As debt increases, financial leverage increases. Management tends to prefer equity financing over debt since it carries less risk (Matt, 2000). Financial leverage takes the form of a loan or other borrowing (debt), the proceeds of which are re-invested with the intent to earn a greater rate of return than cost of interest. An unlevered firm is an all-equity firm, whereas a levered firm is made up of ownership equity and debt (Andy, Chuck & Alison, 2002). Leverage allows a greater potential returns to the investor than otherwise would have been available, but the potential loss is also greater if the investment becomes worthless, the loan principal and all accrued interest on the loan still need to be repaid (Andy et. al., 2002).

Similarly, Pandey (2010) assert that the financial leverage employed by a company is intended to earn more return on the fixed-charge funds than their costs. The surplus (or deficit) will increase (or decrease) the return on the owners' equity. The rate of return on the owners' equity is levered above or below the rate of return on total assets. Thus, financial leverage is considered as a double-edged sword because it provides the potentials of increasing the shareholders' earnings as well as creating the risks of loss to them.

Financial Leverage Propositions

There are broadly two schools of thought that gave birth to capital structure theory. The first school believes that the cost of capital is determined by the composition of the capital structure of a firm. The suggestion is that an optimal capital structure will occur at a level where the overall cost of capital is lowest; hence the overall capital structure in a firm would contribute to its market value. This is known as the relevance of capital structure which comprises the net income approach and the traditional view. According to the net income approach, a firm can increase its value or lower the overall cost of capital by increasing the proportion of debt in the capital structure. The net income (NI) approach is based on the assumptions that (i) the equity capitalization rate and debt capitalization rate remain constant with changes in leverage, and (ii) the equity capitalization rate is greater than debt capitalization (Kurfi, 2003). Since equity capitalization rate and debt capitalization rate are constant and debt capitalization rate is lower than equity capitalization rate, increased use of debt will increase the shareholders' earnings, and that will result in higher value of the firm because of the higher value of equity. The resultant effect will lower the overall, or the weighted average cost of capital. Similarly, the traditional view has emerged as a compromise to the extreme position taken by the NI approach (Solomon, 1963). Like the NI approach, it does not assume constant cost of equity with financial leverage and continuously declining weighted average cost of capital (WACC). According to this view, a judicious mix of debt and equity capital can increase the value of the firm by reducing the WACC up to certain level of debt. This suggests clearly that WACC decreases only within reasonable limit of financial leverage and after reaching the minimum level, it starts increasing with financial leverage. Hence a firm has an optimum capital structure that occur when WACC is minimum, and thereby maximizing the value of the firm. The traditional theory assumed that at moderate level of leverage, the increase in the cost of equity is more than offset by the lower cost of debt. The assertion that debt funds are cheaper than equity funds carries the clear implication that the cost of debt plus the increased cost of equity, together on a weighted basis, will be less than the cost of equity that existed on the equity before debt financing (Barges, 1963).

Additionally, Solomon (1963) maintain that the traditional theory on the relationship between capital structure and the firm value has three stages. In the first stage, the cost of equity, the rate at which the shareholders capitalize their net income, either remains constant or rises slightly with debt. The cost of equity does not increase fast enough to offset the advantages of low-cost debt. During this stage, the cost of debt remains constant since the market views the use of debt as a reasonable policy. As a result the overall cost decreases with increasing leverage, and thus, the total value of the firm, also increases. In the second stage, once the firm has reached a certain degree of leverage, any subsequent increases in leverage have a negligible effect on WACC and hence, on the value of the firm. This is so because the increase in the cost of equity due to the added financial risk just offsets the advantage of low-cost debt. Within that range or at the specific point, WACC will be at minimum, and the maximum value of the firm will be achieved. In the third and final stage, beyond the acceptable limit of leverage, the value of the firm decreases with leverage as WACC increases with leverage. This is so because investors perceive a high degree of financial risk and demand a higher equity-capitalization rate, which exceeds the advantage of lower-cost of debt. The overall effect of these three stages is to suggest that the cost of capital (WACC) is a function of leverage. It first declines with leverage and after reaching a minimum point or range, starts rising.

However, the traditional view suffered from the following criticisms: the traditional theory implies that investors valued levered firms more than unlevered firms. This means that they pay a premium for the shares of levered firms. The claim of the traditional theory, that moderate amount of debt in 'sound' firms does not really add very much to the 'riskiness' of the shares, is an easy one to challenge. There is no existence of sufficient justification for the assumption that investors' perception about of risk of leverage is different at different levels of leverage (Pandey, 2010).

The second school, acting on the assumptions of a perfect market 'ideal world', believes that the composition of firms' financing mix does not affect the cost of their capital. Hence, the costs of capital are the same irrespective of the composition, so capital structure would be irrelevant in the valuation of a company. The major actors of this school are Modigliani and Miller (1958) who argued that the composition of the capital structure is an irrelevant factor in the market valuation of a firm. They introduce a behavioural dimension into the capital structure debate which is based on seven assumptions. These are first, there are no corporate or personal taxes; hence the impact of tax shields associated with debt is the same; second, there are no bankruptcy cost, therefore the assets of a bankrupt company can be sold at their economic value without incurring any liquidating and legal expenses; this statement eliminates any bias in favour of an unlevered (firm with zero debt) firm due to the existence of bankruptcy

costs; third, the firm is allowed to issue and repurchase any amount of debt or equity and these transactions can be executed instantly without any time lag, thus implying that securities are infinitely divisible; fourth, the composition of capital structure can be changed without any transaction costs like issue expenses and underpricing; fifth, the firm consistently follows the policy of 100 percent dividend pay-out, therefore the possible impact of dividend policy on the valuation of the firm is eliminated; sixth, that all investors in the market have the same expectations (homogenous) of the expected future earnings of all the firms, consequently, the expected value of the subjective probability distributions of the anticipated future earnings (operating income) is identical for all the investors and seventh, the operating earnings of the firm are expected to remain constant for all future periods. Hence there is neither any growth nor decline in expected future earnings. However, these assumptions were later modified and relaxed (Mohammed, 2010).

Review of Empirical Studies

The reviews of theoretical literatures on financial leverage provide different views on the relationship between financial leverage and financial performance. While some theories predict positive relationship between leverage and firm's performance, others predict negative relationship and MM proposition I predicts the irrelevance of debt-equity choice on the value of a firm. This section is therefore devoted to reviewing empirical studies on financial leverage and firms' performance conducted around the world in order to validate theoretical predictions.

Tian and Zeitun (2007) investigated the effect of capital structure on corporate performance of corporations in Jordan using a panel data approach of 167 companies for a period of 15 years from 1989 to 2003. The study used ROA, ROE, EBIT and tax plus depreciation to total assets (PROF) as proxies for accounting performance measurements and Tobin's Q, market value of equity to book value of equity (MBVR), price/earnings (P/E) ratio and market value of equity plus book value of liabilities divided by book value of equity (MBVE) as market performance measures. The results show that a firm's capital structure has significant negative effect on the firms' performance using both the accounting and market measurements. The study also finds that the short term debt to total assets (STDTA) as a measure of leverage has a significantly positive effect on the market performance proxy by Tobin's Q.

Berger and Bonaccorsi di Patti (2006) proposed a new approach to testing the agency theory of capital structure on the United States banking industry using parametric measure of profit efficiency as indicator to measure agency costs. The study employs dualistic (the use of two-equation: simultaneous equations and econometric techniques) to account for reverse causality from performance to capital structure, using annual information for 695 United States

commercial banks to test for agency theory for the period 1990 – 1995. The study finds that there is reverse causality from performance to capital structure and that data on the United States banking industry are consistent with the agency theory of capital structure. In other words, they found that higher leverage is associated with better firm performance. Margaritis and Psillaki (2007) considered a similar relationship for a sample of New Zealand small and medium sized enterprises using distance functions as a measure of firm performance, and also found that financial leverage has a significant positive relationship with firm performance.

Mwangi, Makau and Kosimbei (2014) investigate the relationship between capital structure and performance of 42 non-financial companies listed in the Nairobi Securities Exchange, Kenya. The study used secondary panel data contained in the annual reports and financial statements of the sampled listed firms, and employs panel data models (random effects) and feasible generalized least square (FGLS). The results show that financial leverage is statistically negatively related to performance measured by return on assets and return on equity.

Maina and Kondongo (2013) in an attempt to validate Modigliani and Miller (1963) theory in Kenya, examined the effects of debt-equity ratio on performance of firms listed at the Nairobi Securities Exchange for the period 2002- 2011. The study finds that firms listed at Nairobi Securities Exchange rely more on short term debt. The result also reveals that significant negative relationship exists between debt-equity ratio and all measures of performance. The result also provides support for MM theory that capital structure is relevant in determining the performance of a firm.

Ebaid (2009) carried out a study to investigate the impact of choice of capital structure on the performance of firms in Egypt. ROE, ROA, and gross profit margin were used as proxies for performance while financial leverage was measured using short-term debt to asset ratio, long-term debt to asset ratio, and total debt to total assets. Multiple regression technique was applied to determine the relationship between the leverage and performance. The result reveals that leverage has no impact on a firm's performance.

Maroko (2014) examined the influence of capital structure on organizational financial performance of firms listed in Nairobi Securities Exchange. The study employs secondary data sourced from financial statements of sampled listed firms', which were selected using stratified random sampling technique. Multiple regression technique was used to explain the relationship between financial leverage, cost of equity, debt interest and organization financial performance. The findings showed that positive relationship exist between financial leverage, cost of equity, debt interest and organization financial performance.

Gweji and Karanja (2014) investigated the effect of financial leverage on firm performance of deposit taking savings and credit co-operative in Kenya. The study utilized secondary data sourced from financial statements of 40 savings and credit co-operative societies (SCCOS) sampled for the study from 2000 to 2012. Descriptive and analytical designs were both adopted. The result show perfect positive correlation between financial leverage surrogated by debt-equity ratio with ROE and profit after tax at 99% confidence interval, and a weak positive correlation between debt-equity ratio with ROA and income growth.

Innocent, Ikechukwu and Nnagbogu (2014) conduct a study on the effect of financial leverage on financial performance: evidence from quoted pharmaceutical companies in Nigeria for the period 2001- 2012. Financial leverage surrogated by debt ratio (DR), debt-equity ratio (DER), and interest coverage ratio (ICR) was used as independent variable while financial performance proxy by ROA was used as dependent variable. The study utilized secondary data sourced from financial statements of 3 pharmaceutical companies quoted on the Nigerian Stock Exchange. Descriptive statistics, Pearson correlation and multiple regressions were employed in order to determine the relationship between financial leverage variables and performance measure variable identified in the study. The results showed that debt ratio and debt-equity ratio have negative relationship with ROA, while interest coverage ratio has a positive relationship with ROA in Nigerian pharmaceutical industry. The study also reveals that on aggregate financial leverage variables have no significant effect on financial performance of sampled companies.

Thaddeus and Chigbu (2012) studied the effect of financial leverage on bank performance using 6 banks from Nigeria. The study utilized secondary data from Nigerian Stock Exchange fact book and the financial statements of the sampled banks. Debt-equity and coverage ratios were taken as proxies for financial leverage and these constitute the independent variables, while earning per share (EPS) representing performance is the dependent variable. Multiple regression technique was used to establish whether relationship exist between financial leverage and performance of sampled banks. The findings show mixed results. While some banks report positive relationship between leverage and performance, others revealed negative relationship between leverage and performance.

Laurent (2002) studied the relationship between leverage and corporate performance in France, Germany and Italy. The multiple regression technique was adopted on the study variables (leverage, tangibility, short-term liabilities, inventory and size). The study found mixed evidence depending on the country; while negative relationship was reported in Italy, the relationship between leverage and corporate performance is significantly positive in France and Germany.

Laurent (2008) investigates the relationship between leverage and corporate performance of medium-sized firms from seven European countries using a maximum likelihood procedure to estimate a stochastic cost frontier and the parameters of an equation relating cost inefficiency to leverage simultaneously. Findings indicate that relationship between leverage and corporate performance varies across countries which tend to support the influence of institutional factors on this relationship.

Akhtar et al. (2012) examined the relationship between financial leverage and financial performance using the Fuel and Energy Sector of Pakistan. The findings showed a positive relationship between financial leverage and financial performance of the companies thus confirming that the firms having higher profitability may improve their performance by having high levels of financial leverage. In addition, the study provides evidence that the players of the fuel and energy in Pakistan can improve their financial performance by employing the financial leverage and can arrive at a sustainable future growth by making vital decisions about the choice of their optimal capital structure. Akinmulegun (2012) tests the effect of financial leverage on selected indicators of corporate performance [Earnings per Share (EPS), Net Assets per Share (NAPS)] in Nigeria using the Vector Auto-Regression (VAR) technique. Findings indicated that leverage shocks exert significantly on corporate performance. Also, the measures of corporate performance (EPS, NAPS) depends more on feedback shock and less on leverage shock but the leverage shocks on EPS indirectly affect NAPS of firms as the bulk of the shock on NAPS was received from EPS of the firms.

Akande (2013) apply the Ordinary Least Square (OLS) regression analysis on panel data collected from financial statements of 10 Nigerian firms over 20 years from 1991- 2010. ROA, ROE, EPS and DPS on one hand and DC (total debts to capital employed) on the other hand, were surrogated for firm's performance and debt financing respectively. The findings show that positive relationships exist between DC and ROE, EPS and DPS, while negative relationship exists between DC and ROA. The study therefore, concluded that financial leverage will considerably impact on firm performance.

Onaolapo and Kajola (2010) investigate the effect of capital structure on financial performance of companies listed on the Nigerian Stock Exchange. This study was performed using 30 non-financial companies in 15 industry sectors in a 7-year period from 2001 to 2007. The results showed that financial leverage (debt ratio) has a significant negative effect on financial performance (ROA and ROE) of sampled firms.

Fosu (2013) examined the relationship between capital structure and firm performance using panel data approach comprising 257 South African firms for the period 1998- 2009. The

results uncover evidence that provides support for significant positive relationship between financial leverage and firm performance.

David and Olorunfemi (2010) study the impact of capital structure on corporate performance of firms in the Nigerian petroleum industry for the period 1999- 2005. The study employed panel data analysis using fixed-effect estimation, random-effect estimation and maximum likelihood estimation. The study found that there is positive relationship between leverage and firm performance surrogated by earning per share and dividend per share.

Chinaemerem and Anthony (2012) carry out a study on the impact of capital structure on financial performance of Nigerian firms using a sample of 30 non-financial quoted companies on the Nigerian Stock Exchange (NSE) for a period of 7 years from 2004- 2010. Panel data for the selected companies were generated and analyzed using ordinary least squares (OLS) method of estimation. The results show that a firm's capital structure surrogated by debt ratio has a significantly negative relationship with the firm's financial performance surrogated by ROA and ROE. This finding provides evidence in support of agency cost theory.

Al-Taani (2013) investigate the relationship between capital structure and firm's performance across 45 Jordanian manufacturing companies listed on Amman Stock Exchange for a period of 5 years from 2005- 2009. The study variables include: return on assets (ROA), profit margin (PM), short term debt to total assets (STDTA), long term debt to total assets (LTDTA) and total debt equity (TDE). ROA and PM constitute the dependent variables and were used as proxies for performance, while STDTA, LTDTA and TDE represent the independent variables and were taken as proxies for capital structure. Two multiple regressions in which ROA was regressed on STDTA, LTDTA and TDE, and PM was also regressed on the same explanatory variables were used. The results show that there is no significant relationship between STDTA and ROA, TDE and ROA, STDTA and PM, LTDTA and PM, and TDE and PM. However, the result also reveals that significant negative relationship exists between LTDTA and ROA.

Leon (2013) investigate the impact of capital structure on financial performance of 30 listed manufacturing firms in Sri Lanka for a period of 5 years from 2008- 2012. The study used correlation and regression techniques in the analysis of data using statistical package for social sciences (SPSS). The results show on one hand, that there was a significant negative relationship between leverage and return on equity, and on the other hand, there was no significant relationship between leverage and return on assets.

Rehman (2013) investigate the relationship between financial leverage and financial performance of 35 listed sugar companies in Pakistan for a period of 6 years from 2006- 2011. Correlation technique was used by taking financial leverage proxy by debt-equity ratio as

independent variable and financial performance surrogated by EPS, NPM, ROA, ROE and sales growth as dependent variables. The results show that financial leverage has a positive relationship with ROA and sales growth, and negative relationship with EPS, NPM and ROE.

Yoon and Jang (2005) conduct a study on the relationship between return on equity (ROE), financial leverage and size of 62 restaurant firms in US for the period 1998 to 2003 using ordinary least squares (OLS) regressions. Results show that high leveraged firms were less risky in both market and accounting-based performance measures. The results also found support for positive relationship between financial leverage and both measures of performance. Additionally, the results further indicate that firm size had a more dominant effect on ROE than debt, and regardless of the level of leverage, smaller firms were relatively more risky than larger firms.

Ujah and Brusa (2013) examine the effects of financial leverage and cash flow volatility on earnings management using 559 US firms for a period of 20 years from 1990 to 2009. The findings provide evidence that suggest that financial leverage and cash flow has an impact on the extent to which firm's manage their earnings. The results also revealed that earnings management of firms varies according to industry they belong.

Evidence from the review of above empirical studies reveals that most of the studies have been carried out on non-financial companies and there is no consensus on the relationship between financial leverage and financial performance. As such, further research is needed to uncover the relationship. This study therefore provides empirical evidence for existing financial leverage theories and contribute to existing body of knowledge by investigating the relationship between financial leverage and financial performance of selected deposit money banks in Nigeria.

METHODOLOGY

Population, Sample Technique and Sample Size

The population of this study consists of all the twenty three (23) deposit money banks in Nigeria as at 31st December, 2013. Convenience sampling technique was used to select 11 banks out of the 23 deposit money banks in Nigeria. Six (6) banks were selected from the 7 Tier 1 banks, 4 from 12 Tier 2 banks and 1 from the 4 Tier 3 banks. Tier 1, Tier 2 and Tier 3 represent international, national and regional banks respectively. Three (3) out of the 12 national banks (Tier 2) that had their toxic assets purchased by Asset Management Corporation of Nigeria (AMCON) due to their inability to meet the apex bank September 30, 2011 deadline to fully recapitalize or be liquidated, were excluded from this study.

This study covers the period of 9 years from 2005 to 2013. The reason for choosing this time horizon is to reduce estimation bias associated with short term measurement instability. Additionally, the beginning year 2005 corresponds to the period in which banks in Nigeria were mandated to recapitalize from ₦2 billion to ₦25 billion and the end year 2013 is the first year after Nigeria's adoption of International Financial Reporting Standards (IFRS) in January 2012.

The list of banks that were sampled for this study are:

1. First bank of Nigeria Limited.
2. Ecobank Nigeria Plc.
3. United Bank for Africa Plc.
4. Guaranty Trust Bank Plc.
5. Zenith Bank Plc.
6. First City Monument Bank Plc.
7. Access Bank Plc.
8. Fidelity Bank Plc.
9. Sterling Bank Plc.
10. Diamond Bank Plc.
11. Wema Bank Plc.

Data Sources

This study uses secondary data obtained from annual reports and financial statements of sampled deposit money banks for various years. Data on debt-equity ratio, debt ratio and return on equity were computed for the period 2005- 2013 using the annual reports of selected banks.

Variables Measurement

This study adopted debt-equity ratio and debt ratio as proxies for financial leverage while return on equity (ROE) which is accounting measure was used as proxy for financial performance. These variables were selected from previous empirical studies (for example, Abiodun, 2012; Akande, 2013; Chinaemerem & Anthony, 2012; Ebaid, 2009; Gweji & Karanja, 2014; Innocent et al., 2013, Leon, 2013; Maina & Kondongo, 2013; Muritala, 2012; Onaolapo & Kajola, 2010; Rehman, 2013; Thaddeus & Chigbu, 2012; Velnampy & Niresh, 2012). The Table below presents the study's variables and their measurements.

Table 1: Summary of Variables Measurement

Variables	Measurements
Debt-Equity Ratio	Total Liabilities divided by Total Shareholders' Equity.
Debt Ratio	Total Liabilities divided by Total Assets.
Return on Equity (ROE)	Profit after Tax divided by Total Shareholders' Equity.

Method of Data Analysis

Descriptive and Correlation analysis was carried out in order to describe the data set and to assess the relationship between financial leverage and financial performance of selected deposit money banks in Nigeria respectively. Financial leverage is the independent variable and financial performance is the dependent variable, and the functional relationship between the dependent and independent variables is expressed as follows:

$$FP = f (FL)$$

Where: FP = Financial Performance, FL = Financial Leverage

EMPIRICAL RESULTS AND DISCUSSIONS

Descriptive Statistics

Table 2 shows the description of Nigerian deposit money banks data set for the period 2005-2013, in terms of minimum value, maximum value, mean and standard deviation. The descriptive statistics show that during the period under review, debt-equity ratio and debt-ratio as measures of financial leverage are averaged 796.99% and 84% respectively. The debt-ratio reveals that 84% of Nigerian deposit money banks' total assets are financed by debt. This further portrayed that banks are highly leveraged financial institutions. The minimum and maximum values for debt-equity ratio are 388.5% and 2351.95% respectively. This indicate a very highly significant variation in debt-equity composition among banks sampled for this study.

In addition, the descriptive analysis also show that the return on equity (ROE) as measure of financial performance is averaged 3.65%. This very low percentage signifies that shareholders are receiving very low value for their investments in terms of equity, although, other financial performance measures may reveal a different result. The minimum and maximum values for ROE are -21.3% and 22.54% respectively. This shows that while some banks are recording a negative return on equity, others are generating as much as about 23% on equity. This result should not be surprising, considering the composition of the banks that make up the sample. As stated in the methodology, the sampled banks comprises Tier 1, Tier 2 and Tier 3 which varies significantly in terms of their volume of transactions, staff strength, assets, ownership structure, branch network and coverage among others.

Table 2: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Debt Equity Ratio	9	3.885727	23.519450	7.96987011	6.027692391
Return on Equity	9	-.213650	.225445	.03635178	.130077401
Debt Ratio	9	.794018	.874227	.84004656	.029783230

Correlation Results

Table 3 shows the degree of relationship between financial leverage surrogated by debt-equity ratio and debt ratio, and financial performance proxy by return on equity (ROE). The results revealed that a significant negative relationship exists between debt-equity ratio and financial performance, while the relationship between debt ratio and financial performance is not significant. The relationship between debt-equity ratio and financial performance (ROE) is significant at 0.05 level of significance as shown by the asterisk in parenthesis in Table 3.

Table 3: Correlations

		Debt Equity	Return on Equity	Debt Ratio
Debt Equity	Pearson Correlation	1	-.705(*)	.475
	Sig. (2-tailed)		.034	.197
	N	9	9	9
Return on Equity	Pearson Correlation	-.705(*)	1	-.474
	Sig. (2-tailed)	.034		.198
	N	9	9	9
Debt Ratio	Pearson Correlation	.475	-.474	1
	Sig. (2-tailed)	.197	.198	
	N	9	9	9

* Correlation is significant at the 0.05 level (2-tailed).

Test of Hypotheses

Hypotheses testing were done using the correlation results generated in Table 3. The decision to reject or fail to reject the null hypothesis will be dependent on the result obtained from the comparison of the probability value (P-value) and the chosen level of significance which in this case is 0.05. The decision rule is to reject the null hypothesis (H_0) if the P-value is less than 0.05 level of significance, or accept it if the P-value is greater than 0.05 level of significance.

Test of Hypothesis One

The correlation results in Table 3 show that the Pearson Correlation between debt-equity ratio and financial performance (ROE) is -0.705 and the P-value (Sig.) is 0.034. Since the P-value (0.034) is less than 0.05 level of significance, we reject the null hypothesis one (H_{01}), and concludes that there is significant negative relationship between debt-equity ratio and financial performance of deposit money banks in Nigeria.

Test of Hypothesis Two

The correlation results in Table 3 also reveal that the Pearson Correlation between debt ratio and financial performance (ROE) is -0.474 and the P-value (Sig.) is 0.198. Since the P-value of 0.198 is greater than 0.05 level of significance, we fail to reject (accept) the null hypothesis two (H_02), and concludes that there is no significant relationship between debt ratio and financial performance of deposit money banks in Nigeria.

Discussion of Findings

This study examined the relationship between financial leverage and financial performance of selected deposit money banks in Nigeria. The study covered the period 2005- 2013 using eleven (11) deposit money banks selected from Tier 1, Tier 2 and Tier 3 classification of banks. The findings are summarized below:

The mean value of debt- equity ratio is approximately 7.9699 while that of debt ratio stood at 0.8400 (see Table 2). The mean value of debt- equity ratio suggests that the value of debt is about 8 times higher than the value of equity. A debt- equity value of 2 according to Velnampy and Niresh (2012) is considered normal and safe. This results show that deposit money banks in Nigeria have more preference for debt over equity. It was found also that the mean value of return on equity is approximately 4%. This is very low and may be attributed to high interest payments on debt.

Similarly, the mean value of debt ratio suggests that about 84% of the total assets of deposit money banks in Nigeria is made up of debt. This further confirmed that banks are highly levered financial institutions.

In addition, the Pearson Correlation Coefficient between debt- equity ratio and return on equity (ROE) a proxy for financial performance is significantly negatively related. This is a testimony that an increase in debt will lead to increase in fixed interest charges, and decline in financial performance.

Moreover, the correlation between debt ratio and return on equity is not significant, meaning that the high debt ratio in the banks' capital structure does not impact on financial performance as measured by ROE. The increased usage of debt in the capital structure will result to increase in financial risk, and consequently, high probability of financial distress and bankruptcy.

CONCLUSIONS

Based on the major findings as enumerated above, the following conclusions are drawn: Nigerian deposit money banks are highly leveraged financial institutions. This is confirmed by both high debt- equity and debt ratios. Banks in Nigeria used less equity in their capital structure composition. In addition, Nigerian deposit money banks are generating very low return on equity for their shareholders.

It was also concluded that a significant negative relationship exists between debt- equity ratio and return on equity, and no significant relationship between debt ratio and ROE during the period of study.

RECOMMENDATIONS

Based on the major conclusions of this study, the following recommendations are made for consideration by management of deposit money banks in Nigeria:

1. Financial leverage decision is very critical to the survival and performance of banks. Therefore, an appropriate debt- equity mix should be adopted by banks if they must improve their financial performance, survive and remain competitive. The present study reveals that a significant negative relationship exists between debt- equity ratio and return on equity, meaning that an increase in debt in the capital structure will result in decline in financial performance as measured by ROE. Banks should therefore substitute an appropriate proportion of debt with equity in its capital structure if ROE is to be improved.
2. Nigerian banks should identify a more prudent and sustaining means of improving return on equity. A very low return on equity of 4% as revealed by this study may not be accepted by existing shareholders' and may not attract a potential investor. This trend will have to be reversed if further investment in equity is to be attracted.
3. The high debt ratio does not impact on return on equity (ROE). Banks should therefore, avoid excessive liquidity that may be caused by customers' deposits. Banks should find ways of investing this deposit in profitable projects that will generate a rate of return higher than the cost of deposits. In addition, banks should also set competitive interest rates that will attract customers' to request for loans in order to avoid keeping excess cash.
4. Nigerian banks should avoid over-reliance on debt, as increased in the proportion of debt in the capital structure increases the financial risk and the risk of financial distress and bankruptcy.

LIMITATIONS AND SCOPE FOR FURTHER STUDIES

This study is restricted to only deposit money banks in Nigeria. Therefore, the findings of this study could not be generalized to include other key players in the financial sector and non-financial companies. Eleven (11) out of twenty three (23) deposit money banks in Nigeria were sampled for this study using the period of 9 years (2005- 2013). Two (2) financial leverage variables (debt- equity ratio and debt ratio) and one (1) financial performance variable (ROE) are used in this study. Financial leverage variables such as interest coverage, short-term debt to total assets ratio, long-term debt to total assets ratio etc. and financial performance variables such as return on assets (ROA), net interest margin (NIM), earnings per share (EPS), dividend per share (DPS), profit after tax etc. are excluded from this study.

Given the limitations and scope of this study as mentioned above, further research involving more samples and additional variables should be conducted in the following related areas:

- i. Relationship between financial leverage and financial performance of non-interest banks in Nigeria.
- ii. Relationship between financial leverage and financial performance of micro finance banks in Nigeria.
- iii. Relationship between financial leverage and financial performance of non-banks financial institutions in Nigeria.

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