
FINANCIAL LEVERAGE AND PROFITABILITY OF RECAPITALIZED BANKS IN NIGERIA FROM 2010 - 2021

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ABSTRACT

The study's primary focus was on financial leverage and profitability of Nigeria's recapitalized banks from 2010 to 2021. The study adopted an ex post facto research design and relied on secondary data obtained from annual reports and financial statements of deposit money banks from 2010 to 2021. The population of the study comprised 8 listed deposit money banks in Nigeria. The study used the multiple regression statistic to analyze the data. The study found that financial leverage has a significant negative impact on banks' profitability (proxied by return on assets and net interest margin); and that bank size considerably increases profitability. The study thus concludes that financial leverage is harmful to the expansion of banks' profits in Nigeria. The study suggest that future studies should incorporate more financial institutions so as to determine if the outcome will be consistent or vary with the current result.

Keywords: Financial Leverage, Profitability, Banks and Performance.

INTRODUCTION

One of the most perplexing topics in corporate finance literature is capital structure. The ratio of long-term debt to equity that makes up a firm's total capital is how the idea of capital structure is typically defined. Corporate managers make a strategic choice about the balance between debt and equity (Velnampy & Niresh, 2012; Abubakar, 2015). In the recent time, the banking industry in Nigeria has undergone tremendous change that has pushed out many banks that could not buildup and solidify their capital base. The banking industry shifted from being a fair playing ground for high profiled fraudsters to an industry where customers' fund and investor equity is safely protected.

Banks generally contribute to economic growth through their intermediation functions and financing of economic activities (Ünvan & Yakubu, 2020). A central aspect of banks that smoothens economic activities, is level of profitability. The significance of banks' profit growth is manifested at both the micro and macro levels (Alhassan et al., 2021). Profitability at the micro level is a prerequisite to competitiveness and ensures sustainable banking institutions. Because of the current competitiveness in the banking sector, profit is crucial to maintaining ongoing operations. Macroeconomic shocks significantly impact banking activities; but successful banks can withstand them; and contribute to stable financial system.

In lieu of the importance of bank profitability, management of banks and regulators have launched several studies to determine primary drivers of profit growth. Extant literature suggests that banks' profitability is informed by macroeconomic variables, industry-level factors, and factors specific to banks. Among bank-specific factors, capital structure (financial leverage) is one of most commonly cited driver of profitability. However, an agreement is yet to be reached on how financial leverage affects profitability.

In addition, studies on impact of financial leverage on profitability tend to focus more on non-financial companies than financial ones. The few studies on capital structure (financial leverage) and banks' profitability in Nigeria are those of Yakubu et al. (2017), Awunyo-Vitor and Badu (2012), Thomas et al. (2012) and Gatsi and Akoto (2010). There is thus limited information on financial leverage and banks' profitability in Nigeria. Hence, this study joins the discourse by critically investigating the influence of financial leverage on profitability of Nigerian banks. The study makes two significant contributions to literature. Firstly, in addition to return on assets which is widely studied, the study introduced net interest margin as an additional proxy of profitability to ensure robustness of results. Secondly, unlike other studies, this study employ recent data of newly recapitalized banks in Nigeria.

LITERATURE REVIEW

Concept of Financial Leverage

The amount of stock and debt a company utilizes to fund its assets is known as financial leverage. Leverage in the financial system rises as debt does. Due to its lower risk, equity financing is typically preferred by management (Matt, 2000). Financial leverage is achieved by loans or other forms of borrowing (debt), the revenues from which are reinvested with the goal of outpacing cost of interest. In contrast to a leveraged business, which combines ownership equity and debt, an unleveraged firm is entirely made up of equity (Andy et al., 2002).

Pandey (2010) argue that a corporation uses financial leverage in order to get higher return on fixed-charge capital than their costs. The return on owners' equity will grow (or fall) depending on surplus or deficit. Leverage over or below the rate of return on total assets is the rate of return on owners' equity. Financial leverage is thus viewed as having two sides since it both has the ability to increase shareholders' profits and increases their danger of financial loss.

Concept of profitability

Profitability is the ability of a business to make profit. It is a financial metric used to assess a firm's ability to generate earning in excess of the combination of all its operating expenses. Businesses generally, have profitability as a fundamental goal because their long term survival is closely tied to their ability and capacity to make profit (Ateke & Simeon, 2018; Ateke & Didia, 2017). Profit is the monetary earning a firm achieves after cost of operations have been deducted. Nickels et al. (2011) states that such costs may include salaries, wages, expenses and other operating costs.

Return on Assets (ROA) and Return on Equity (ROE) are common indicators of profitability identified in literature, though anyone of them can be used to measure profitability depending on the objective of the user. Profitability is an important concept in business; and has been a topical concern for managers, shareholders and researchers since the dawn of commerce (Ateke & Simeon, 2018). Though managers often resort to profitability as a primary measure of business wellness, Ateke and Didia (2017) notes that enhanced profitability is determined by sundry quantitative and qualitative factors. In this study however, profitability is proxied by ROA is net interest margin (NIM).

Financial Leverage and Profitability

Studies on impact of capital structure on financial and non-financial sector businesses exists; and these report differently, on how the construct predict different aspects of business wellness.

Shubita and Alsawalhah (2012) examined the relationship between capital structure and earnings of publicly traded enterprises in Jordan from 2004 to 2009. The study reported that capital structure has significant adverse impact on earnings of the studied firms. Similarly, Anthony (2013) reported that a negative significant impact of financial leverage on earnings of Ghanaian non-financial sector enterprises. Mwangi et al. (2014) investigated the relationship between debt and business performance levels in Kenyan non-financial sector firms. The results showed that financial leverage had significantly negative impact on firms' earnings.

Yapa (2015) reported that the ratio of long-term debt to total assets, which gauges a firm's leverage, has negative impact on profitability of UK-based SMEs. Also, by Habib et al. (2016), observe that financial leverage has significantly negative impact on profitability of Pakistani non-financial sector enterprises, even as Minnema and Anderson (2018) found an inverse relationship between financial leverage and profitability of Swedish companies.

In contrast, Kartikasari and Merianti (2016) provided evidence of positive significant influence of debt ratio on profit growth of Indonesian manufacturing enterprises. Rahman et al. (2019) found a comparable outcome in Bangladesh; and Musah and Kong (2019) found that debt-to-equity and debt-to-total assets ratios of businesses as capital structure indicators have direct, albeit little, influence on profitability of non-financial sector enterprises in Ghana.

Tian and Zeitun (2007) investigated the effect of capital structure on corporate performance of corporations in Jordan using ROA, ROE, EBIT and tax plus depreciation to total assets 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 accounting and market measurements. The study also found that short term debt to total assets as a measure of financial leverage has significantly positive effect on market performance, proxied by Tobin's Q.

Mwangi et al. (2014) investigate the relationship between capital structure and performance of 42 non-financial sector companies listed in the Nairobi Securities Exchange. The study used secondary panel data contained in the annual reports and financial statements of the sampled firms, and employs panel data models (random effects) and feasible generalized least square (FGLS). The results show that financial leverage has statistically significant negative relationship with performance, measured by ROA and ROE.

In addition, Maina and Kondongo (2013) in an attempt to validate Modigliani and Miller (1963) theory in Kenya, examined effects of debt-equity ratio on performance of firms listed at the Nairobi Securities Exchange for the period 2002- 2011. The study found 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 measures of performance. The result also provides support for MM theory that capital structure determines performance of firms.

In a related study, Innocent et al. (2014) studied effect of financial leverage on financial performance of quoted pharmaceutical companies in Nigeria for 2001- 2012. Financial leverage was represented by debt ratio, debt-equity ratio, and interest coverage ratio; while financial performance was proxied by ROA. 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 Nigeria's pharmaceutical industry. The study also reveals that on the aggregate, financial leverage have no significant effect on financial performance of sampled companies.

Thaddeus and Chigbu (2012) studied the effect of financial leverage on banks' performance in Nigeria. The findings show mixed results. While some banks report a positive relationship between financial leverage and performance, others revealed a negative relationship. More so, Akande (2013) found that financial leverage impacts on firm performance considerably; while Chinaemerem and Anthony (2012) found that a firm's capital structure proxied by debt ratio has significantly negative relationship with firms' financial performance in terms of ROA and ROE.

Theoretical Framework of the Study

Literature has extensively debated how capital structure affects business value. The major debate centers on whether businesses retain appropriate amount of capital structure or whether taking on additional debt affects the value of a business. The work of Modigliani and Miller (1958) influenced capital structure research and provided the groundwork for the formation of various theories. According to Modigliani and Miller, capital structure has no bearing on how valuable a corporation is. This M&M model claim is supported by a number of assumptions that are deemed unfeasible and constrictive. The hypothesis made the following assumptions: a perfect capital market, businesses paying no taxes, and no transaction costs.

Myers (1984) supposed that businesses may maximize value by maintaining a debt structure that offers tax advantages and lowers the danger of bankruptcy. As a result, the trade-off hypothesis, which is an offshoot of M&M model supports a firm's capital structure at its ideal level. On the other hand, the pecking order theory (Myers & Majluf 1984) assumes a preference order that businesses must follow when deciding on their capital structure. First, companies prioritize internal finance, and when outside capital is needed, they turn to debt. According to the pecking order concept, stock issuance is the final method of funding used by businesses.

METHODOLOGY

This study adopted an ex post facto research design, and covers 12 years period (2010 to 2021). The reason for choosing this time horizon is to reduce estimation bias associated with short term measurement instability. Also, the beginning year (2010) corresponds to the period when Nigerian banks were mandated to recapitalize from ₦2 billion to ₦25 billion and the end year (2021) is the first year after Nigeria's adoption of International Financial Reporting Standards (IFRS) in January 2012. The population of the study consists 23 deposit money banks in Nigeria as at 31st March, 2021. Convenience sampling technique was used to select 8 banks out of the 23 deposit money banks in Nigeria that has international authorization license (CBN, 2021). This study used secondary data obtained from annual reports and financial statements of sampled deposit money banks for various years. Data on the variables were computed for the period 2010 - 2021 using the annual reports of the 8 selected banks.

Description of variables

NIM and ROA were employed as proxies of banks' profitability in the study. In this context, ROA is understood to be the proportion of a bank's total assets to net income. The ratio of net interest earned by banks to total assets is used to calculate NIM. The independent variable (financial leverage), is the proportion of total indebtedness to total assets. We account for the

impact of bank size (BSIZE), which has received attention in literature as a factor that affects profitability. The size of a bank is explained by the natural log of its total assets. These variables were chosen from earlier empirical investigations.

Variables Measurement

This study took a panel approach and the model can be generally expressed as:

$$Y_{it} = \alpha + \beta'X_{it} + \varepsilon_{it} \dots\dots\dots (1)$$

Where the dependent factor is Y and X signifies the explanatory factors. The cross-sectional dimension of our data is denoted by *i* and the time dimension is indicated by *t*. α , β , and ε represent the constant, coefficients of the independent factors, and error term respectively.

To empirically analyze the effect of financial leverage alongside bank size on bank profitability, the model can be further expanded as:

$$ROA_{it} = \alpha_0 + \beta_1LEV_{it} + \beta_2BSIZE_{it} + \varepsilon_{it} \dots\dots\dots (2)$$

$$NIM_{it} = \alpha_0 + \beta_1LEV_{it} + \beta_2BSIZE_{it} + \varepsilon_{it} \dots\dots\dots (3)$$

The study used the fixed and random effects techniques. Ordinary least squares (OLS) estimation ignores the group and temporal effects of panel data, which are taken into account by these methodologies. The Hausman (1978) test was used in the study to determine the best approach. The random effects assumptions are disproved by a probability value (p-value) of less than 5% statistical significance, which points to the choice of the fixed effects approach. The Breusch-Pagan test findings are used to determine whether to use the OLS or the random effects model when the fixed effects model is rejected with a p-value larger than 5%.

RESULTS AND DISCUSSIONS

Table 1 contains the results of the regression analysis on the influence of financial leverage on banks' profitability. The fixed effects (FE) approach is disregarded based on Model 1's estimations since the Hausman test's probability value is greater than the 5% threshold for significance.

The Breusch-Pagan test's significance at the 5% level supports the random effects method. As a result, Model 1's interpretation of our results is dependent on the estimation of the random effects (RE). The Hausman test in Model 2 has a 5% level of significance, which supports the use of fixed effects estimates. The R^2 values in Models 1 and 2 show that the explanatory factors only accurately predict differences in bank profitability to the extent of 16.9% and 36.8%, respectively.

Table 1: Summary of Results of Regression Analysis

<i>Variables</i>	Model 1 (ROA)		Model 2 (NIM)	
	FE	RE	FE	RE
LEV	-0.176***	-0.174***	-0.204***	-
	(0.067)	(0.066)	(0.039)	0.199***
BFSIZE	0.005*	0.007**	0.008***	0.010***
	(0.004)	(0.002)	(0.003)	(0.003)
C	0.128*	0.109	0.127**	0.108**
	(0.079)	(0.071)	(0.062)	(0.052)
<i>Diagnostics</i>				
R ²	0.169	0.157	0.368	0.384
Hausman test χ^2	0.57		7.65	
[Prob.> λ^2]	[0.058]		[0.047]	
Breusch-Pagan test λ^2	29.75			
[Prob.> χ^2]	[0.000]			
F-statistic	9.43		33.45	
Prob.(F-statistic)	[0.000]		[0.000]	
Wald χ^2	21.51		65.85	
[Prob.> λ^2]	[0.000]		[0.000]	
Observations	96	96	96	96
No. of Banks	8	8	8	8

Notes: *,** and *** represent 10%, 5% and 1% statistical significance respectively. Values in () and [] are standard errors and *p*-values respectively.

The assessment in Model 1 shows that financial leverage has negative impact on banks' profitability (measured by ROA) at 1% level of significance. When NIM is used as a proxy for banks' profitability in Model 2, a similar outcome was found. The research usually shows that when Nigerian banks increase their reliance on debt as a source of funding, their profit level declines.

It is conceivable that banks may have a tendency to use more of their revenues to pay off debt, leaving them with less money to carry out routine operations. The size of the bank has favorable and considerable impact on profitability in both models. This implies that banks' profitability levels increase as they grow. This is consistent with banks aggressive branch growth in Nigeria. The outcome also supports the claim that larger banks may readily implement diversification methods, which increases their profitability (Yakubu, 2019; Alhanssan, et al., 2021).

CONCLUSION AND RECOMMENDATIONS

The study examined financial leverage and profitability of recapitalized deposit money banks in Nigeria, covering 2010 to 2021. Unlike previous studies in Nigeria and other developing nations, a contradictory outcome was obtained. Two crucial profitability metrics were adopted in the study to guarantee reliable results. Regardless of the measure of profitability, the investigation revealed that leverage has strong negative impact on profitability of banks.

This bolsters the hypothesis of the pecking order; as both indicators of profitability were significantly impacted favorably by bank size. The study concludes that, notwithstanding the

importance of bank size for bank profits, financial leverage hinders profitability of deposit money banks in Nigerian.

Based on these outcome, the study recommends that deposit money banks should use internal finance to support their operations and initiatives since it was shown that financial leverage reduces profitability. By enhancing their asset base through branch development methods, banks may also guarantee profit growth. It also recommends that Nigerian banks should refrain from relying too heavily on debt, as increase in the share of debt in the capital structure raises dangers of financial trouble and insolvency as well as financial risk.

SUGGESTIONS FOR FURTHER STUDIES

The small sample size employed in this study remains a major weakness of this study. Whilst the ratio of number of predictors to cases criteria as suggested by Bartlett et al. (2001) was met, there are clear indications that the negative significant level of the links within the model might likely change if a larger sample is employed. Trivially small coefficients can be statistically significant with large sample sizes and very large coefficients can be non-significant with small sample sizes. Thus, further research with larger samples is suggested, as this provide additional insights into the dimensions that are important to profitability of deposit money banks in Nigeria.

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