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Assets Tangibility and Firms' Financial Performance: Evidence from Nigeria

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Abstract:
The study examined assets tangibility and stock returns in Nigeria. The ex-post facto research design was adopted in the methodology of the study. A sample of 43 companies was examined for 2008-2015 financial year. Secondary data from annual reports and accounts of the sampled firms were used for the study. The data analysis technique used is panel Estimated Generalized Least Squares (EGLS) regression with fixed effect after the regression assumption test as well as preliminary analyses. The study finding indicates that asset tangibility is significant and positive on the firms' financial performance. Size was ascertained was not statistically significant at engendering the financial performance of the quoted firms. Long term debts positive and significant on the firms' financial performance. The recommendation flowing from this study is that firms are encouraged to occasionally employ a model to examine how the level of fixed non-current assets in relation to the total noncurrent assets is yielding financial returns as this will guide them at taking very wise investment assets. This is because it is a common knowledge in literature that excess investment in assets may mean the capital is being tied down, thus resulting to a waste of resources.

Keywords: *Asset tangibility, Size, Long term debt, performance*

1. Introduction

One of the major means of sourcing for finances, promoting prosperity and expansion by firms is asset tangibility. The assets of a firm are both tangible and intangible. The tangible assets are visible and can easily be felt by touching but not so with the intangible assets. Firms finance their operations with tangible assets based on type of business and level in production of goods. More often most firms in the manufacturing sector based on the level of activities and seasons differentials would invest more in fixed assets than firms in the service industry. A gap in literature specifically on the empirical front is the extent to which the impact of asset tangibility in one industry to the other differs. For instance, the level and impact of fixed assets to total assets in manufacturing firms may not be similar to firms in the service industry. In the same vein, the fewer existing literatures on asset tangibility have not really revealed the actual proportion of what should constitute asset tangibility of quoted firms and the implication on performance as well as the impact on shareholders wealth. Firms that invest more in fixed assets are generally considered as more aggressive than others that do not. Asset tangibility may be seen as proportion of tangible on- current assets to the total non- current assets of a company. Thus, one of the purposes firms use asset tangibility is to engender returns on investment and consequently on performance. Asset tangibility varies from firms in one industry to the other based on sizes. Generally, a larger firm should have higher investments in tangible assets depending on the nature of the business line than smaller firms. This presupposes that total non- current assets, which is commonly used to measure size, is an important factor in the level of a company's asset tangibility.

In examining capital structure determinants, asset tangibility is recognized in both accounting and finance literatures as one of the factors. Baloch, Ihsan and Sethi (2016) state tangibility refers to the degree to which the firm is financed by the fixed assets. Akintoye (2008) notes explicitly that a company may retain large investments in tangible assets in order to have smaller cost at the slight of the occurrence of bankruptcy compared to a firm which depends on assets that are intangible. In the context of this paper, it may be held sway given the 'returns' generated from the tangible assets sometimes outweigh the

cost of acquisition for a particular period. Similarly, firms with more tangible assets may have creditors' loan facility consideration and serve as a collateral or surety perhaps during liquidation. Daskalakis and Psillaki (2008) stress clearly that if a company retains huge investments in tangible assets, it will suffer from little effect of bankruptcy than companies that invest more in other assets. Olakunle and Oni (2014) point out assets tangibility is to a firm because of the benefit it may obtain from leverage. Intuitively, the cost of financial distress should depend on the types of assets that a firm has (Harc,2015).

Asset tangibility is both beneficial to firms in the period of start-up, solvency and distress. Companies that have higher asset tangibility intuitively should issue higher debts for financing; and vice versa. Similarly, a firm that holds more investments in tangible assets may be seen to have a constant return if the assets are judiciously used; this tends to increase the internal revenue base and lower the tendency to turn to external source of raising funds for operations and expansion purposes. There is paucity of empirical literatures that have robustly examined the nexus between asset tangibility and companies' performance in a developing country. Hence this study is the first in this direction to the best of the researchers' knowledge to empirically determine how asset tangibility enhances firms' financial performance in Nigeria. The foregoing is concerned with introduction, section 2contains the review of related literature; section 3 is methodology, section 4 is empirical analysis and discussion of findings while section 5 is conclusion and recommendations.

2.Review of Related Literature

2.1. Theoretical Framework

This study principally relies on the agency theory. Agency theory has to do with the relationship between the principal (shareholders) and the agent of the principal (company's managers) in the management of the business; an agency relationship arises whenever one or more individual, called principals, hire one or more other individuals, called agents, to perform some service and then delegate decision- making, authority 'to the agents (Akeem, Tever, Kiyanjul&Kayode, 2014). Investment in assets is solely the responsibility of the agent, the manager in firms. The choice of the mix of financing is more often a critical decision to the managers. He has to decide the proportion of amount to spend on fixed assets, borrow to acquire the assets at the least cost. Leveraging on own fixed assets to guarantee debt security assist the firm to expand the business operation and engender performance. In achieving this, the agent must do so with caution so as to minimize cost and maximize shareholders wealth.

2.2. Empirical Review

Gamlath and Rathiranee(2012) examined how capital intensity and tangibility influence firms' financial performance in Sri Lank banking and insurance companied listed in Colombo Stock Exchange for the period 2007 to 2011.The findings showed there is a significant relationship between the capital intensity and tangibility on the financial performance of firms. They further report that as companies' capital intensity and tangibility increases, it significantly increases firms' financial performance and future stability such that financial managers will always act to increase firms' value in order to maximize the shareholders' wealth. Rajan and Zingales (1995), Titman and Wessels (1988) empirically examined asset tangibility measured by non- current assets divided by total non - current assets as a determinant of capital structure. They found that there is a positive relationship between asset tangibility and leverage, while in a similar study by Booth, Airaxian, Demirguc-kunt and Maksimovic (2001), Huang and Song (2006) ascertained aninverse relationship between asset tangibility and leverage. This of course is a mere correlation but not a significant impact, which makes this study under investigation very peculiar. Muritala (2012) investigate the nexus between capital structure and firms' performance in Nigeria. The study used asset turnover, size, firms, age and firms' asset tangibility to relate to performance. The finding showed that there is evidence of a negative relationship between asset tangibility and ROA as a measure of performance. Hadlock and James (2002) and others reported positive relationship between debt and financial achievement of firms while study by Fama and French (1998) and others submit a negative relationship between debt and financial performance firms.

Salim and Yadav (2012) empirically examined capital structure and firm performance with evidence from Malaysian listed companies during the period 1995 – 2011. The study used performance measures like return on equity, return on asset, Tobin's Q and earnings per share as dependent variables. Five capital structure components including long-term debt, short – term debt, total debt ratios and growth as independent, with size as a mere control variable. The results revealed that firm performance which is measured by return on asset (ROA), return on equity (ROE) and earnings per share (EPS) have negative relationship with short – term debt (STD), long – term debt (LTD), total debts (TD). It was reported that Tobin's Q has a significant relationship between short - term debt (STD) and long – term debt (LTD). They also state that total debt (TD) has a significant a negative relationship with the performance of the firm.

The measurement of firm size differs from one researcher to the other. Wang and Li (2013) in an empirical study measured firm size with the proxies, namely, total assets, total 'sales and market value' of equity. The finding made was that effect of size differs because of the numerous proxies and industries / sector differentials. For example, they emphasize that using market capitalization as proxies for firm size can be mechanically correlated. It suggests that a measure of firm that is sensitive, positively signed and significant should be considered as a right proxy to report as to how effective firm size is and its correlation with all other variable in an econometric framework/model. Economic theory prescribes that increasing firm size allows for incremental advantages because the size of the firm enables it to raise the barriers of entry to potential entrants

as well as gain leverage on the economies of scale to attain higher profitability (Ramasamy, Ong&Yeunag, 2005). Thus, it becomes prettily difficult to argue straight and establish with empiricism that firm size predominantly determines profitable, particularly across all industries. Thus, there is need for re-verification in this study for the purpose of contributing to existing literatures.

The association existing between size and performance of a company has been discussed in both theoretical and empirical literatures. At the early stage of research in this regard, Simon (1962) found a statistically significant relation between profitability and firm size. Hall and Weiss (1967) ascertained a positive relation between firm size and profitability in the study they carried on over Fortune 500 firms. On the contrary, Shepherd (1972) found a negative relation between firm size and profitability. Dogan (2013) notes that big firms have more competitive power when compared to small firms in fields requiring competitions; and since they have a bigger market share, big firms have the opportunity to profit more. In this stance, big firms are able to seize the opportunity to work in the fields which require high capital rates since they have larger resources, and this situation provides them the opportunity to work in more profitable fields with little competition (Bayyurt, 2007).Akbas and Karaduman (2012) ascertained effect of firm size on profitability on the firms operating in manufacturing sector, listed in 1SE between the years 2005-2011 and there silts of the study showed that firm size has a positive effect on profitability.

3.Methodology

This study uses both the ex-post facto and longitudinal research designs. The study covers the period 2008to 2015 for forty-three (43) listed firms in Nigeria. The firms were selected using convenience sampling technique.

3.1. Model Specification

This study model is a modification of the work of Olukunle and Oni (2014). It is specified stochastically as:

$Roe_{it} = \beta_o + \beta_{1ASSTit} + \beta_{2LTDit} + \beta_3 fsize_{it} + \varepsilon_{it}$.

Where$\beta_1 - \beta 3$ are the coefficients of the parameters of estimation.

ROE represents return on equity, a proxy for firm financial performance and is the dependent variable. Asst represents asset tangibility. Ltd represents long term debt. Fsize represents firm size.ε represents the stochastic error term, β_o is the intercept. i= represents cross- section and t is the time period, 2008 -2015 the study covers. The a priori expectation in the model is of the form; $\beta_1 \_ \beta 3>0$; implying that all the independent variables are expected to positively influence firms' financial performance. The relationships among the variables were examined through descriptive statistics and inferential statistics, basically using pool and panel least squares. That is, the study uses panel estimations of pooled OLS estimations.

3.2. Operationalization of Variables

Variables	Types of Variable	Operationalization
Financial performance	Dependent	using Return on equity (ROE)
Asset tangibility	Independent	This is operationalized using total non- current assets divided by total non- current assets.
Size	Independent	Measured using total non- current assets of the companies.
Debt	Independent	This is operationalized using the long-term debt.

Table 1

4.Empirical Analysis

Variance inflation factors (VIFs)		
Coefficient variance Centered VIF		
ASSTAN	0.005646	1.009890
LTD	1.390000	2.046170
SIZE	1.010000	1.911832
Breusch – Godfrey – serial correlation LM test		
F-statistic = 11.78754	Prob.F(2, 336)	0.0000
Obs * R-squared = 22.48836		Pro. Chi-square (2) 0.0000
Heteroskedasticity test		
F-statistic 45.50999	Prob. F(3,339)	0.0000
Obs * R-squared 98.47914	Prob. Chi-square (3)	0.0000
Ramsey Reset Test		
t-statistic = 2.276123	Df = 337	0.0235
F-statistic = 5.180735	Prob.F(1, 337)	0.0235

Table 2: Diagnostic tests

Source: Researcher compilation from Eview 8.0 (2017)

The diagnostic table above shows that the variance inflation factor statistic is less than 10 (centered vif< 10) for each of the variables. This indicates absence of multicollinearity among the explanatory variables. The ARCH: Heteroskedasticity test shows the presence of homoscedasticity (0.0000> 0.05), thus confirming the constant variance assumption of the ordinary least square estimator. The Breusch-Godfrey serial correlation LM test result of 0.0000> 0.05) points out the absence of higher order correlation. The Ramsey Reset Test result of (0.0235> 0.05) substantiate validity of the regression model.

4.1. Pearson Correlation Statistics

VARIABLES	RETOE	ASSTAN	TLDT	SIZE
RETOE	1	0.0200	-0.3104	-0.2543
ASSTAN	0.0200	1	-0.0840	-0.0752
TLDT	-0.3104	-0.0840	1	0.9783
SIZE	-0.2543	-0.0752	0.2783	1

Table 3: Correlation matrix
Source: E-View 8.0

The table above depicts the matrix of the Pearson Products Moment Correlation coefficient for all the variables used. The correlation results show that all the explanatory variables, asset tangibility (ASSTAN), long term debt and size have both positive and negative association with the return on equity in the period evaluated. For example, asset tangibility and long-term debt have negative association the value of (r= -0.084, r= -0.3104) respectively. Asset tangibility and size are negatively related (r=-0.0752 and r=-0.2543). Similarly, long term debt and size have both strong positive and negative relationship (r= 0.2763, r= -0.2543). The correlations coefficients do not in any way shows signs of multi-collinearity considerably. In a nutshell, it can be said that all the variables re-enforce in a mutual perspective.

4.2. Presentation of Hausman Test

Test Summary	Chi-Square Statistic	Chi-Sq. d. f.	Prob.	
Cross section random	0.000000	3	0.0000	
Cross section random effects test comparisons:				
Variable	**Fixed**	**Random**	**Var(Diff.)**	**Prob.**
ASSTAN	-0.0298	-0.0287	-0.0002	NA
LTD	-0.0000	-0.0000	0.0000	0.1134
SIZE	0.0000	0.0000	0.0000	0.0166

Table 4
Source: Data computation by researcher, 2017

Based on the result of the Hausman test, the fixed effect estimator is preferable. This is because statistically significant at the 1% level, thus indicating significant differences.

4.3. Fixed Effect Model Regression Equation

ROE =24.290C+ 0.018ASSTAN-3.720LTD - 2.590SIZE
(14.305) (0.835) (-4.440)(0.048)
(0.000) (0.404)(0.000) (0.961)
R-squared = 0.808
Adjusted R-squared = 0.780
F-statistic = 28.048
Prob (F-statistic) = 0.000
Durbin Watson statistic = 1.625

Source: E-View 8.0

The above table shows the R-square is 0.808997, portraying that all the exogenous variables explain 80% systematic variation on the dependent variable, return on equity, leaving 20% unexplained due to the stochastic error term. The adjusted R-squares after adjusting for the degree of freedom is 0.780154 that is about 78%systematic variationis explained by the independent variables, leaving about 22% systematic variation in the dependent variable, return on equity unexplained due to the stochastic error term in the construct. the F-statistic value of28.04 when compared with the F-prob (Statistic) value of 0.00000 is statistically significant at 99%level, suggesting that all the independent variables were significant at enhancing return on equity of the firms in the Nigerian Stock Market under the period examined. On the basis of the individual coefficients, a unit change in asset tangibility will result to 0.018680-unit increase in financial performance of the selected

firms in the Nigerian Stock Market, and was statistically not significant at 95% level. A unit change in long term debt is observed to reduce the return on equity by 3.72 units and is however statistically significant at 99% level. A unit change in size will results to 0.229-unit increase in stock return and is statistically not significant at 95% level while the Durbin-Watson statistic value of 1.62 points out clearly the removal of serial autocorrelation in the regression result.

4.4. Discussion of Findings

The relative importance of asset tangibility to firms in the non- service industry cannot be over emphasized. This is because companies suffer less from financial distress if they possess a higher proportion of tangible assets. Asset tangibility is both beneficial to firms in the period of start-up solvency and distress. Firms with more tangible assets are expected to issue more debts for financing; and vice versa. Similarly, a firm that holds more investments in tangible assets may be seen to have constant returns; this tends to increase the internal revenue base and lower the tendency of the firm to turn to external source of raising funds for operations and expansion purposes. Asset tangibility should vary from one firm to the other based on size. More precisely, a larger firm should have higher investments in tangible assets depending on the nature of the business line than smaller firms. The empirical finding arising from this study is that asset tangibility is positively and significantly improves the financial performance of companies in Nigeria. Higher asset tangibility has the propensity to enable companies' access financial resources, positively influence operation, increases expansion, have competitive edge over other firms in the same line of business operation and above all enhances its market value with a view to raising the level of shareholders' wealth. This empirical finding is in tandem with Gamlath and Rathiranee (2012), Rajan and Zingales (1993), Friard and Zang (1988), Titman and Wessels (1988), Huang and Song (2002), Muritala (2015), while it not similar with the study by Booth Airazian, Demirguc-kunt and Maksimoric (2001), Huang and Song (2002) that ascertained a negative relationship. While size positively influences financial performance, long term debt was found to have negative impact on firm performance. The finding disagrees with the finding of Akbas and Karaduman (2012); Dogan (2013) and however go in tandem with the finding ofGweyi and Minoo (2013). The inconclusiveness of the empirical finding may not be unconnected with measurement of the variable, sample size and period of study. The importance of the empirical finding arising from this study is that asset tangibility enhances the performance of companies, enables them have easy access to loan facility for financing and increase expansion of business operation. However, caution should be exercised by managers when investing in assets so as to avoid suffering from liquidity crisis and bankruptcy problems.

5.Conclusion and Recommendations

A gap in literature has been the extent the tangible on- current assets in relation to the total non- current assets especially influence the performance of quoted companies. Firm performance by way of return on equity in general is commonly believed to respond to level of asset tangibility. This study provides greater insight into how asset tangibility may influence performance of companies. Arising from the study is indeed that asset tangibility enhances firm financial performance. Flowing from this, the recommendations below are made:

1. Firms are encouraged to occasionally employ a model to examine how the level of non- fixed current assets in relation to the total non- current assets is yielding financial returns as this will guide them at investing on tangible assets. This is because it is a common knowledge in literature that excess investment in assets may mean tying down of capital and results to waste of resources.
2. For certain firms that must have enough fixed assets, it is suggested that they have to first consider the driving factors, weigh the benefits and costs so as to be able to maximize wealth of the shareholders from time to time.
3. Future researchers should undertake a study specifically on the impact of asset tangibility from one industry to the other.

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