



ASSETS TANGIBILITY AND MARKET PERFORMANCE OF LISTED FIRMS IN NIGERIA

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Abstract: This study was carried out to investigate the effect of assets tangibility on market performance of listed firms in Nigeria. The population of the study was Consumer and Industrial goods sectors. Ex post facto method was employed as the study design; and was anchored on the Resource based theory. It proxy assets tangibility (the independent variable) using tangible and intangible non-current assets ratios; while market based performance (the dependent variable) was measured using earnings per share and market price per share. The study purposively selected 13 listed consumer and industrial goods sector firms quoted on the floor of the Nigeria Exchange Group, which were used as the study sample. The data collected were for the period of 2013 to 2022 and were analyzed using descriptive statistics, correlation and regression techniques. Findings showed that assets tangibility was significant in predicting market performance of firms at 5% significant level. Specifically, the results showed that tangible non-current assets had negative and insignificant effect on market performance indicators of the sampled firms; while intangible non-current assets had positive and significant effect on performance. Accordingly, the study recommended that entities should invest minimally in tangible non-current assets since it had insignificant effect on both earnings per share and their market price per share; but should rather invest more in intangible resources in order to grow their market performance indicators.

Keywords: Assets tangibility, Market Performance, Earnings per share, Market price per share

1. INTRODUCTION

The survival of every firm arguably depends on a number of factors, including its investment in assets (resources). These assets are meant to be used in generating earnings. Assets constitute the core of firm value. It also determines, to a large extent, how firm perform arguably. According to the International Accounting Standards Board's (IASB) conceptual framework for financial reporting, assets are resources under the control of the entity arising from past event from which future economic benefits are expected to flow to the entity. Both tangible and intangible assets constitute part of these resources that can also bring those

benefits to entity. Tangible assets are physical items acquired by the entity for use, which life span are usually for a period of more than one accounting year. Examples include building, land, or computer equipment. Essentially, they are mainly used either for production of goods and services, for administrative purposes or for rentals (IASB, 2010). Intangible non-current assets, on the other hand, are assets (without physical form) acquired by the entity for use for more than one accounting year. They are assets which cannot be seen physically, yet are capable of generating potential revenue to the firm. Examples such assets include:

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intellectual property, software costs, patents, copyrights, brand names, internally generated goodwill, etc.

One or a combination of these assets must be employed in the right mix in order to maximize the firm's earnings potential; as well as ensure the long term survival of the company. Siblikov (2009) argued that the investment in assets is a useful metric in measuring the long run survival, performance and capital structure of a firm, especially firms which relies on leverage financing.

Statement of the Problem

The interconnectedness between assets tangibility and firm performance is a topic that has generated a lot of controversies among researchers and managers, alike. Arguably, assets tangibility is believed to have impact on the firms' key performance indicators. Accordingly, every financial manager cautiously makes decisions concerning the right amount or optimal proportion of tangible and intangible assets to be employed by the firm in order to maximize his firm's market value and other performance indices, by extension.

Prior studies by Igbru and Onuora (2020), Olatunde, Ogbeide and Aribaba (2017), Mwaniki & Job (2017), and Mou (2014) have all looked at the subject matter of assets tangibility. However, they are limited in scope spanning period of their study, variables employed, methodology used as well as jurisdiction of the study. Not only that; but the findings of prior studies were inconsistent and very contradictory. This study tries to resolve those contradictions as well as lend its voice to the debate. That forms our point of departure from previous studies.

2. LITERATURE REVIEW

Concept of Assets Tangibility

Assets tangibility reveals the ratio of tangible to intangible assets used by a firm to finance its operations. These assets play a crucial role in the production and provision of goods and services and are used to generate income for the company. Picker (1992) argued that assets tangibility (quality and nature) has the capacity of conveying information to the lender about the borrower's repayment prospect and help reduce the adverse selection problem.

In this study, asset tangibility is measured by the ratio of tangible and intangible assets to total assets, as discussed below;

Tangible Non-current Assets Ratio- Tangible non-current assets ratio is simply the ratio of tangible non-current assets

to the total assets of the firms. Tangible non-current assets are usually acquired or constructed either for use in the production of good and services by the entity or for administrative purposes. They are distinct from other classes of assets possessing the following: the entity expects to be in use for more than one year; the assets will lead to inflow of economic benefits to the entity in future periods usually more than one accounting period; the entity can reliably measure the acquisition costs of the asset; and the risks related to such tangible asset has been transferred to the entity..

Intangible Non-Current Assets Ratio- According to International Accounting Standard (IAS) 38, intangible assets are identifiable non-monetary asset without physical substance. Hence, intangible assets are future economic benefits controlled by the entity as a result of past transactions or other past events, but just do not have a physical form. They include patented technology, computer software, licensing, franchise agreements and trademarks, etc. Intangible assets affect the firm's core competitive competence. Tsai, Lu and Yen. (2012) opined that intangible assets represent the future growth potentials that helps to increase firm value. Erawati and Sudana (2005) argued that the value of intangible assets impact significantly on companies' performance. In this study, intangible non-current assets ratio was conceptualized as the ratio of intangible non-current assets to the total assets of the firms.

Concept of Market Performance

Entities can be measured by their performance in the market, aside other key performance indices such as profitability, efficiency, liquidity, etc. These can be done using some identified market based ratios. Two of the most common market based ratios are the market price per share and earnings per share.

Market Price per Share- Market price per share (MPS) is the market price of a company's share. It is the market value per share at which a company's share is currently traded on the floor of the stock exchange. It is the price at which a company share can be purchased and sold in an arm's length transaction. Several factors can influence market value per share, including the firm's financial performance, the outlook of the industry or sector to which the company belongs, market demand and supply conditions, investor's attitude, and a range of other macroeconomic conditions.



Earnings per Share- Earnings per share (EPS) is the total earnings attributable to each unit of ordinary share of a company. It is calculated as a company's profit after tax less preference dividend, divided by the number of ordinary shares. A better EPS shows greater value of the company or greater earnings quality because investors will pay more for a company's shares if they perceive will increase their earnings capacity relative to its share price in the future.

Theoretical Review

This study is hinged on Resource Based Theory. Warnerfelt (1984) coined the term Resource Based View (RBV) while emphasizing the value of focusing on firm's resources rather than their products and afterwards. The RBV is based on the thought that tangible and intangible firm-level resources and the capability to coordinate those assets or inputs of production in a strategically successful way form the grounds for competitiveness in the dynamic business environment (Brown & Blackmon 2005). The role of company managers is crucial to firm-level competitiveness, since their perceptions of the environmental circumstances dictate the selection of resources to be exploited, developed and protected. In addition, in structuring the firm-level resource portfolio, managers should also be able to make successful decisions on strategic resource divestments.

Barney (1991) established that sustained competitive advantage (performance) of firms in a competitive environment is a function of the firm's specific resources and capabilities. To support this theory, Modigliani and Miller (1958) posited that firm value is determined by company's asset earning's power. Thus, extant use of firm internal resources which are not limited to conceiving and implementing of strategies but include tangible assets (all kinds of physical assets including machinery and equipment, plants and building, physical technology, raw materials), intangible assets (knowledge and information, organizational attributes and capabilities, firm name and reputation, patents and copyrights etc.) and human resources would bring about superior market performance, higher profitability and higher market value relative to their competitors. Barney (1991) emphasized that if these firms' resources are generally homogenous, there would be only improved effectiveness and efficiency to the same extent however, it would be difficult to explain the observed performance superiority among these firms. According to this theory, the resources must be valuable, rare, imperfectly

imitable and absence of strategically equivalent substitutes to generate competitive advantage.

Empirical Review

Igburu and Onuora (2020) examined the determinants of assets tangibility of small cap firms in Nigeria. The study measured the determinants using leverage, financial performance and firm age whereas assets tangibility was proxy by assets tangibility. Three hypotheses were formulated to guide the investigation and was tested using OLS regression model. Ex-post facto design was employed by the study, implying that data were sourced from annual financial statements of the sampled firms from 2014 to 2018. The finding showed that leverage and firm age had negative but significant impact on assets tangibility while firm performance had positive and insignificant impact on assets tangibility at 1% significant level.

Nangih, Turakpe and Davies (2020) investigated the effect of intangible non-current assets investment on profitability of Guaranty Trust Bank Plc. The study adopted the ex-post facto research design. Data were sourced from the banks' annual financial reports from 2009 to 2019, and was analyzed using the Least Squares Multiple Regression statistical technique. Findings showed that both goodwill and computer software costs didn't significantly affect profitability of the company.

Olatunde, Ogbeide and Aribaba (2017) carried out a study on how assets tangibility affect stock returns in listed firms in Nigeria. They adopted the quasi experimental design to collect data for sampled firms from 2008 to 2015. Analysis was carried out using the secondary data collected and the results showed that asset tangibility had strong and positive effect on financial performance.

Chukwu, Nwanyanwu and Ohaka (2017) examined the impact of intangible assets on market value of quoted money deposit banks in Nigeria. The study proxy intangible assets using goodwill and computer software costs, while market performance was indicated by the banks' earnings per shares. The analyses results indicated that computer software costs did not strongly impact earnings per share but internally generated goodwill did affect market performance significantly and positively.

Mou (2014) examined the effect of asset tangibility on financial performance listed firms on the Shanghai Stock Exchange. The study employed the descriptive research design. Data collected were analyzed using regression



technique and the results showed that assets tangibility had significant effect on financial performance of firms listed on Shanghai Stock Exchange. Secondly, it was revealed that a positive and significant relationship exists between assets tangibility and firm performance

Okwo, Ugwunta and Nweze (2012) investigated the effect of fixed assets investments on its operating profit margin. Using a sample 4 firms in the Nigerian brewery sector, data were sourced from 1999 to 2009, and was analyzed using regression method. The results showed that though the relationship is positive, but the result is not statistically significant.

3. METHODOLOGY

This study adopted the descriptive and ex post facto research designs in a bid to examine the functional relationship between assets tangibility and the market performance of listed firms in Nigeria. The choice of ex-post design was also based on the nature of the data which already existed and the research made no attempt to manipulate its value or nature. The purposive sampling technique was adopted to select the companies used as samples for the study. The study covered the period from 2013 – 2022. The data employed in this study was generated from the financial statements of the listed firms and were analyzed using descriptive statistics, correlation and regression analyses. The descriptive statistics was used to

evaluate the characteristics of the data: Mean, maximum, minimum, and standard deviation and also to check for normality of the data. The random effect regression model was used in analyzing the relationship between the variables of study, after applying the Hausman Test. The decision rule was to reject the null hypothesis if the probability of the t-statistic is less than or equal to 0.05, otherwise accept.

Model Specification

In modelling the afore-mentioned relationship, the assumption is as follows:

$$MPS = \beta_0 + \beta_1TNCAR + \beta_2INTGR + \mu$$

$$EPS = \beta_0 + \beta_1TNCAR + \beta_2INTGR + \mu$$

Where, MPS= Market Price Per Share,

EPS=Earnings Per Share; TNCAR= Tangible non-current assets ratio; INTGR=Intangible non-current assets ratio; β_0 = the intercept; $\beta_1 - \beta_2$ = coefficient of the variables; and μ = Error Term

4. DATA ANALYSIS AND DISCUSSION OF FINDINGS

The data collected were analysed using both descriptive, correlational and regression analyses as indicated below;

Descriptive Statistics

The descriptive statistics are meant to provide information regarding the basic properties of the data employed. Such information include the mean, median, standard deviation, skewness and kurtosis. The result is presented in Table 4.2.

Table 4.1: Descriptive Statistics

	TNCAR	INTGR	MPS	EPS
Mean	44.90480	2.819612	125.7652	1.286607
Median	42.47962	0.452585	18.50000	0.541300
Maximum	88.48197	28.20598	1556.500	8.180000
Minimum	3.042672	0.000000	0.860000	-5.740000
Std. Dev.	20.01761	6.483222	340.5565	1.925923
Skewness	0.077292	2.870225	3.363314	1.181185
Kurtosis	1.954412	10.10108	12.97102	6.149689
Jarque-Bera	6.051228	451.6315	783.6219	83.96554
Probability	0.048528	0.000000	0.000000	0.000000
Sum	5837.624	366.5495	16349.47	167.2589
Sum Sq. Dev.	51690.88	5422.149	14961259	478.4843
Observations	130	130	130	130



Source: Author’s Computation using E-Views

The results in Table 4.2 indicate that TNCAR and INTGR have mean values of 44.9 and 2.8, while MPS and EPS have mean values of N126 and N1.3, respectively. The standard deviations show that all the variables have higher spreads, given that their standard deviations are higher than their means, except for TNCAR. All the variables are skewed and also peaked, except for TNCAR. However, the Jarque-Bera statistics reveal that none of the variables were normally distributed.

Table 4.3 Correlation Matrix

	TNCAR	INTGR	MPS	EPS
TNCAR	1.000000			
INTGR	0.109105	1.000000		
MPS	0.012823	-0.004034	1.000000	
EPS	-0.062320	0.245605	-0.056929	1.000000

Source: Author’s Computation using EViews

The result in Table 4.3 indicates a correlation coefficient of 0.109 between TNCAR and INTGR, which implies that the variables are positively associated. The correlation coefficient of 0.109 suggests an unlikelihood of multi co-linearity between the variables estimated in the research model.

Table 4.4 Multiple Regression (Model 1)

Dependent Variable: MPS

Method: Panel EGLS (Cross-section random effects)

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Variable	Coefficient	Std. Error	t-Statistic	Prob.
TNCAR	-0.598782	0.531865	-1.125816	0.2624
INTGR	4.402701	1.539954	2.858981	0.0050
C	140.2394	84.02630	1.668994	0.0976

Effects Specification

	S.D.	Rho
Cross-section random	374.6041	0.9514
Idiosyncratic random	84.69165	0.0486

Weighted Statistics

R-squared	0.016085	Mean dependent var	8.968532
Adjusted R-squared	0.000590	S.D. dependent var	84.08903
S.E. of regression	84.06422	Sum squared resid	897482.8

Correlation Statistics

The correlation statistics ascertained whether or not there are associations between the data employed. It also provides information about the likelihood or unlikelihood of multi co-linearity in the variables captured in the research model. The result of the correlation statistics are presented in Table 4.3 below;

Multiple Regression

The multiple regression analysis was employed to ascertain the possible effects of the independent variables on the dependent variables. The results are shown in Tables 4.4 and 4.5.



F-statistic	1.038079	Durbin-Watson stat	1.998922
Prob(F-statistic)	0.357120		

Unweighted Statistics

R-squared	-0.009199	Mean dependent var	125.7652
Sum squared resid	15098885	Durbin-Watson stat	0.059376

Source: Author's Computation using EViews

The result in Table 4.4 indicates that the independent variables determine 1.6% of the variations in the MPS of manufacturing firms in Nigeria. The t-statistic reveal that TNCAR has insignificant negative effect on EPS while INTGR has a significant positive effect on MPS at 5% level of significance.

Table 4.5 Multiple Regression (Model 2)

Dependent Variable: EPS

Method: Panel EGLS (Cross-section random effects)

Sample: 2013 2022

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TNCAR	-0.000637	0.011153	-0.057130	0.9545
INTGR	0.076425	0.036658	2.084827	0.0391
C	1.099730	0.629566	1.746807	0.0831

Effects Specification

	S.D.	Rho
Cross-section random	1.078373	0.3091
Idiosyncratic random	1.612298	0.6909

Weighted Statistics

R-squared	0.023355	Mean dependent var	0.549937
Adjusted R-squared	0.007975	S.D. dependent var	1.610681
S.E. of regression	1.604246	Sum squared resid	326.8478
F-statistic	1.518500	Durbin-Watson stat	1.340559
Prob(F-statistic)	0.222990		

Unweighted Statistics

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R-squared	0.061339	Mean dependent var	1.286607
Sum squared resid	449.1346	Durbin-Watson stat	0.975563

Source: Author’s Computation using EViews

The result in Table 4.5 indicates that the independent variables determine 2.3% of the variations in the EPS of manufacturing firms in Nigeria. The t-statistic reveal that TNCAR has insignificant negative effect on EPS while INTGR has a significant positive effect on EPS at 5% level of significance. In summary, the formulated hypotheses tested using the t-statistic, and the results and decisions are presented in Table 4.6 below;

Table 4.6 Summary of Hypotheses Test

Hypothesis	Instrument Variable	Target Variable	t-statistic	P-value	Decision
HO ₁	TNCAR	MPS	-1.125816	0.2624	Accept
HO ₂	TNCAR	EPS	-0.057130	0.9545	Accept
HO ₃	INTGR	MPS	2.858981	0.0050	Reject
HO ₄	INTGR	EPS	2.084827	0.0391	Reject

Source: Compiled from Tables 4.4 and 4.5

Discussion of Findings

From the panel regression results presented in Tables 4.4 and 4.5, tangible non-current assets have insignificant negative effects on both the market price per share and the earnings per share of manufacturing firms in Nigeria. These results are inconsistent with the a priori expectation, and imply that an increase in the tangible non-current assets ratio leads to a decrease in both the MPS and the EPS. This is probably as a result of the indirect contribution of tangible assets to a firm’s operations. It may also be as a result of the diminishing returns that could set in when more than appropriate units of tangible assets are employed in the operation of the firm. This result is in contrast to the result of Nangih and Onuora (2020). Also the findings was inconsistent with the result of Okwo, Ugwunta and Nweze (2012) who assessed the impact of a company's investment in fixed assets on its operating profit margin which study regression result showed that fixed assets and had positive but insignificant effect on the operating profit reported by Nigerian brewery firms.

On the other hand, intangible non-current assets was found to exert significant positive effects on both the MPS and the EPS. These results are consistent with the a priori expectation and imply that increasing levels of intangible non-current assets are likely to enhance the market value of the manufacturing firms in Nigeria. This is hinged on the

role that intangible assets play in enhancing efficiency and sustainability of business firms. For example, goodwill can enhance customer patronage and loyalty whereas investments in software could lead to greater efficiency in the operations of a firm, hence the positive effect of intangibles on market value of manufacturing firms in Nigeria. The above result did not agree with the findings of Nangih, Turakpe and Davies (2020) who found out that both goodwill and computer software costs did not significantly impact profitability. It did not also agree with the findings of Chukwu, Nwanyanwu and Ohaka (2017).

5. CONCLUSION AND RECOMMENDATIONS

This study sought to find out the effect of assets tangibility on market performance of listed firms in Nigeria. It employed tangible and intangible assets ratios respectively as proxies of assets tangibility, while it measured market performance using earnings and market price per share respectively. The results of the analysis carried out indicated that (i) tangible non-current assets had negative and insignificant effect on market price per share of the firms; (ii) intangible non-current assets had positive and significant effect on market price per share; (iii) tangible non-current assets had negative and insignificant effect on earnings per share, while (iv) intangible non-current assets had positive and significant effect on earnings per share of listed consumer and industrial goods firms in Nigeria.



Based on the above findings it was recommended that: (i) firms should not invest so much in tangible non-current assets since it had insignificant effect on their MPS; (ii) the firms should mind their investments in intangible non-current assets since that showed significant influence on their MPS (iii) Entities should minimize their investments tangible non-current assets had negative and insignificant effect on EPS and finally, the firms are encouraged to acquire more intangible non-current assets, in order to grow their EPS.

However, the findings and recommendations of the study are not without some limitations. Cautiously, it should be noted that the study itself was limited by its scope. For instance, the content was intended to cover all listed consumer and industrial goods firms in Nigeria listed on the floor of Nigeria Exchange Group as at 31st December 2022, but the study collected data for selected firms.

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