

# VALUE BASED DETERMINANTS OF MARKET PERFORMANCE OF LISTED COMPANIES IN NIGERIA: A DYNAMIC APPROACH

BY

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## ABSTRACT

*The study examined value-based determinants of the market performance of listed companies in Nigeria from 2013-2022. The study adopted signaling theory and longitudinal research design with a sample size of one hundred and thirteen (113) companies, which was drawn from the population of one hundred and sixty-four (164) listed companies on the Nigeria Exchange Group as of December 2022. Data were collected from the annual report of the sampled companies and a System Based Generalized Method of Moments (GMM) estimator was used for the analysis. The result indicated that market value-added, economic value-added, and refined economic value-added have positive and significant effects on market performance. The study suggests among others, that investors should consider the value-based determinants of a company's performance and competitive advantage. This involves assessing the company's ability to generate income higher than the cost of capital, which is a fundamental aspect of value creation and sustainable growth.*

**Keywords:** *Value-Based, Market Performance, Dynamic Approach*

## 1.0 Introduction

Corporate organisations exist for the sole reason of creating value for stakeholders, especially for shareholders. In recent years, we have seen more and more pressure on the boards of companies to show a rise in the value of their company. The expectation of the investors toward their capital invested in a company is to gain as much return as possible at a certain level of risk. The return on investment may come from periodic payments (such as dividends or interest) or an increase (decrease) in the price of securities (stocks and long-term debt securities), which can provide gains

(losses) for investors. Hence, investors need various kinds of information so that they can assess the performance of the company (Andhika & Yunita, 2016).

One of the primary ways that companies communicate their financial performance to investors is through accounting information. These provide information on a company's revenue, expenses, and net income. If a company's earnings exceed market expectations, its stock price may increase as investors become more confident in the company's future prospects. On the other hand, if a company's earnings fall short of expectations, its stock price may decline. According to Arifin (2007), stock price shift can be affected by many factors including internal and external factors which can be in form of the company's fundamental and outside the area of the company itself. Therefore, this market value of shares is influenced by number of factors, which can be company-specific or industry-specific. The traditional accounting indicators as well as the market-based indicators such as market value added, economic value added and refined economic value added are considered essential tools for evaluating the operational and financial performance of companies (Hirsch, 2000).

Economic value-added is the performance measure most directly linked to the creation of shareholders' wealth over time. More explicitly, the economic value-added measure gives importance to how much economic value is added to the shareholders' interests by the management of the company with which they have been entrusted. Economic value-added provides a reliable year-to-year indicator of value-based performance with the main goal of creating shareholder value (Stewart, 1991). Therefore, when the company's post-tax net operating profit exceeds the total capital cost of the investment, the economic value added is positive, and the value created by the company brings about an increase in the shareholder's wealth (Sabol & Sverer, 2017). Positive economic value added indicates that the company's management managed to increase enterprise value for company owners in accordance with the objective of maximizing corporate value (Mamun & Mansor, 2012). Company with a high economic value added may be seen as more attractive to investors, which could lead to an increase in its market performance. On the other hand, a company with a low economic value added may be seen as less attractive to investors, which could lead to a decrease in its market performance.

Market value added measures the investors' expectations for the total value they expect the company to create over the total capital invested. The greater the market value-added, the better it is. The negative market value added means that the value of investments generated by the

company's management is less than the financial capital submitted to the company by the capital markets, which means that wealth has not been created (Brigham & Houston, 2010). High refined economic value added indicates that a company is generating strong profits for its shareholders and creating value for them. This can be attractive to investors, as it suggests that the company is well-managed and has a strong competitive advantage. As a result, a high refined economic value added may lead to an increase in a company's stock price. On the other hand, a low refined economic value added may indicate that a company is struggling to create value for its shareholders, which could be a red flag for investors. This may lead to a decline in the company's stock price.

Furthermore, the price level also encompasses price history (past share prices), as there are intermediate-term inertia patterns in stock returns, with stocks that have done well (poorly) in the previous six to 12 months having good (poor) future prospects (Haugen & Baker, 1996). Also, if a stock went up significantly in price last month, this could signal a short-term setback for the next month due to price pressure induced by investors who are attempting to buy or sell a large amount of a particular stock quickly (Jagadeesh, 1990). Therefore, the trend in the previous share price of the company stands a chance of affecting the current share price.

Despite the growing interest in the Nigerian stock market and the increasing number of listed companies, there remains a lack of comprehensive understanding regarding the value-based determinants of market performance in the Nigerian context. While traditional financial metrics such as earnings per share and return on equity are commonly used to assess company performance, there is limited research focusing on value-based determinants and their influence on market performance.

Also, to the extent of the literature review, only the study of Rahman and Mustafa (2013) in the US that adopted dynamic analysis of value-based determinants of stock prices, despite their significance in affecting the company's current share prices. The dynamic approach is necessary when selecting measures, or a set of measures, to represent organizational performance, because it considers the time lag in the variables and the effects generated in the dependent measures. It is based on this backdrop that this study assessed how the dynamics of market performance are impacted by value-based determinants within listed companies in Nigeria. Specifically, the study examined effect of market value added, economic value added and refined economic value added on market performance of listed companies in Nigeria.

The remaining sections of the study covers the literature review, methodology, result and discussion and, conclusion and recommendations.

## **2.0 Literature Review**

### **Market Value Added**

Market Value Added (MVA) is a reflection of investors' expectations on the total value they expect from the company to create future value of the total capital invested less in the company. The greater the Market Value Added, the better it is. The negative Market Value Added means that the value of investments run by the capital management is less than financial capital submitted to the company by the capital markets, which means that wealth has been destroyed (Brigham & Houston, 2010).

According to Steward (2013), Market Value Added (MVA) is defined as an estimate of the company's market value for total obligation and capital capitalization. In order to estimate this market value, book value-form, total obligation added to actual market value form share value. The market value-added calculates the differences between market value (debt and capital) and the amount of capital invested.

The MVA explains the value added to a particular equity share over its book value. It informs how much value has been added to the economic value of the shareholders. The MVA is the difference between the total market value of a firm and the economic capital. A firm's total market value is equal to the sum of the market value of its equity and debt. The Market Value Added can be defined as the difference between the market value of a company's equity and book value as presented in the balance sheet, market value is calculated by multiplying the share price by the number of shares outstanding (Brigham & Houston, 2010).

### **Economic Value Added**

Measure of economic added value (EVA) has been proposed in 1982 by Stern Stewart Institute. This is an innovative way to find the true value of companies and executives which reflects the organization's internal performance (Talebnia, et al., 2012). The uses of EVA have shown high interest by corporate managers and business peoples in recent years. As stated by Lehn and

Makhija (1997), EVA provides the most appropriate and reliable year-to-year indicator of market-based performance with the main goal of creating shareholder's value (Stewart, 1991).

Economic Value Added (EVA) refers to the difference between the net profit after tax of the enterprise and the total cost of capital invested in the operation of the enterprise during a certain period (Sabol & Sverer, 2017). It is an extension of residual income and economic profit, which represents the ability of enterprise value creation (Sharma & Kumar, 2010). When the company's post-tax net operating profit exceeds the total capital cost of the investment, the EVA is positive, and the value created by the company brings about an increase in the shareholder's wealth (Sabol & Sverer, 2017). Conversely, if the EVA is negative, the company's operating income is not enough to cover all the capital costs, including debt capital and equity capital costs, resulting in a reduction in shareholder wealth (Mamun & Mansor, 2012).

Economic Value Added (EVA) is an alternative approach as a measure of profitability that can measure managerial performance in a certain period. EVA provides a benchmark of how far the company has been adding value to shareholders within a year or period. EVA can be used at the level of division or corporation as a whole so that EVA can be used as a basis for compensation or evaluation basis for managers in managing the company (Kamaludin, 2011). EVA is positive if the return is higher than the return required by investors. In addition, negative Economic Value Added (EVA) indicates that the value of the company is reduced so that the resulting rate of return is lower than the rate of return demanded by investors, which means that the company failed to create value for the owners of capital (Young & O'Byrne, 2001).

One of the major goals of EVA is to improve the efficiency of managers towards their firms through effective cost decision making. Due to EVA, managers are obliged to generate value for their shareholders or investors. Mäkeläinen and Roztocki (1998) mentioned that EVA shows the value for the capital used or utilized and judges the efficiency. The ability to control the operations is the main concern of EVA and plays a system of good compensation management that motivates managers to generate shareholder value.

Economic value added is the company's goal to increase the value or the value-added of sunk capital shareholders in the company's operations. Therefore, Economic Value Added is the

difference between operating profit after tax (Net Operating Profit After Tax or NOPAT) and capital cost (Cost of Capital). According to Tandelilin (2010), economic value added is a measure of the success of the company's management to increase the value-added for the company. The assumption is if either or effective performance management (seen from the added value given), will be reflected in an increase in the company's stock price. Positive economic value-added indicates that the management company managed to increase enterprise value for company owners in accordance with the objective of financial management which is to maximize corporate value.

Also, EVA not only more accurately measures the performance of a company but also predicts the market value of equity by adding the book value of equity with the present value of expected EVAs under the assumption of constant required return and constant return on equity (Stewart, 1991). A valuation model plays a vital role in determining the time of buying and selling investor securities. Fundamentally, analysts believe that intrinsic values, which aid in the process of borrowing, merging, and acquiring, determined by valuation models are the actual value of equity. Higher and lower intrinsic values indicate corporate performance.

It is clear when compared economic value added with the traditional measuring instrument of ROE and ROA, that these measures ignore the cost of capital, making it difficult to know whether a company has created value or not. The cost of capital is determined based on the weighted average of the interest rate and the after-tax interest rate on equity capital (Weighted Average Cost of Capital, WACC), in accordance with the proportion of debt and equity in the capital structure of the company (Utama, 1997).

Economic value added is a performance indicator that is reflected through the company's profits from the company after considering the cost of the invested capital. Economic value added is the result of a reduction in the total capital cost to operating profit after tax. The cost of equity capital can be either cost of debt and the cost of equity. Economic value added is able to calculate the true economic profit (true economic profit) of a company in a given year and are very different when compared to the accounting profit (Khaddafi & Heikal, 2014).

**Market Performance:** Performance is the factor that most creditors, investors, managers, and other economic actors will be considered. Many decisions are based on companies' performance.

Corporate performance is a product of the activities and return on investment in a given period. Shares show the performance of the company hence, in this study it is paramount to conceptualized share. Shares are a sign of capital participation in a limited liability company as it is well known that the investor's goal is to buy shares to earn income from those shares. The investors are categorized as investors and speculators. Investors here are people who buy shares to own companies in the hope of getting dividends and capital gains in the long run, whereas speculators are people who buy stocks for immediate resale if the exchange rate is considered the most profitable as it is known that the stock provides two kinds of income that is dividend and capital gains (Bustami & Heikal, 2019). According to Darmadji and Fakhruddin (2006), Stock (stock or share) can be defined as a sign of participation or ownership of a person or entity in a company or company limited.

**Share Price:** A share price is the price of a single share of a company's stock. Share prices in a publicly traded company are determined by market supply and demand. The share price is volatile because it largely depends upon the expectations of buyers and sellers (O'Hara, 2000). Shares (stock or share) can be defined as a sign of participation or ownership of a person or entity in a company or limited liability company. The portion of ownership is determined by how much investment is invested in the company (Darmadji & Fakhruddin, 2006). According to Anoraga (2001), the stock price is the money spent to obtain the proof of attachment or ownership of a company. Stock prices can also be interpreted as a price that is formed from the interaction of buyers and sellers of stock by the background of their expectations for corporate profits so that the investors need information relating to the formation of these stock in the decision to sell or buy stock.

## **Empirical Review**

Ozhi (2000) investigated the effect of MVA on the share market price of 27 listed firms in Bombay Stock Exchange over 1997-1999. Stern Stewart Formula was used to determine MVA. The study reveals that neither MVA, nor the MVA per share has a significant effect on share prices. The model of the study is not fit thus, other variables can explain variation on share price better. Salehi, Valipour and Yousefi (2011) studied the association between value-based financial performance measures and value creation in Tehran Stock Exchange (TSE) using 92 companies based on a five-

year period from 2005–2009. Results indicated that there are strong associations between value-based measures EVA, MVA and CVA and value creation. Salehi, Valipour and Yousefi (2011) studied was able to improve on the study of Ozhi, (2000) because it studied more variables compared to the prior study.

Panigrahi (2017) investigated accounting and market performance measurement tools on shareholder's wealth in the Malaysian public listed construction companies. The study used panel data analysis techniques, particularly Error Correction Models (ECM) to test the relationship of error terms and panel Ordinary Least Square (OLS) regression for the analysis over the period of 2003-2012. The result shows that earnings per share, economic value added (EVA) and dividend payout ratio have a significant effect on shareholders' wealth. Furthermore, market value added (MVA) is found to have a negative relationship with created shareholder value. The model of Panigrahi (2017) explained shareholder wealth better than the model of Salehi, Valipour and Yousefi (2011) and Ikbar and Dewi (2015) because it incorporates more determinants than the previous studies.

Silitonga, Ramadhani and Nugroho (2018) analyzed the effect of economic value-added, market value-added, total assets turn over and price-earnings ratio on the stock returns. The multiple regression analysis was used to examine the effect from the sample of consumer goods sector listed on the Indonesia Stock Exchange from 2015 to 2017. The results of the study indicate total asset turnover (TATO) and price-earnings ratio (PER) have a significant effect on stock return whereas the other variable economics value-added and market value-added had insignificant on stock return. The study of Silitonga, Ramadhani and Nugroho (2018) has not met up with the empirical standard of Obeidat and Darkal (2018) despite the fact that they were conducted the same year. However, each study period is two years which is too short.

Obeidat and Darkal (2018) investigated the effect of accounting and economic-based measures of performance on the share market value of the listed manufacturing firms at Abu Dhabi Stock Exchange over the period 2014-2016. Accounting based measures where earnings per share, return on assets and return on equity while the economic-based measures, where the market value-added, and the economic value-added. Using the multiple linear regression method in the analysis each of both groups of variables had been found affecting the share market value. Moreover, the study



found that grouping all measures in one group leads to more significant effect on share price, than individual separated groups. As additional unrelated analysis to hypotheses, when each measure, using the simple linear regression method is tested individually in its effect on the share market price, only the market value added found having a significant effect on share market value. Silitonga, et al., (2018) study has improved on prior study of Ikbar and Dewi (2015) but has failed to meet up with the study of Nakhaei (2014) because the study used fewer determinants of stock performance and it account to only 14% variation on stock return.

Hajiabbasi, et al., (2012) investigated the association between the creation value measures and traditional measures to predict the stock return. The sample involved 76 companies listed in the TSE for the period of 2007 to 2011. The results revealed that there is no important association between value-based measures, such as EVA, REVA, MVA, shareholder value added (SVA), and cash value-added (CVA) with stock return (SR). Furthermore, the correlation between accounting measures, such as return on equity (ROE), EPS, and operational cash flow (OCF) with SR was not significant. Moreover, there was a significant positive correlation between SVC and SR. Furthermore, there was a significant negative relationship between ROA and SR. In general, the results indicated that SVC has more relationship with SR. The work of Hajiabbasi, et al (2012) was able to ascertain both accounting and value-based measures on stock return. From this study, none of the studies was able to capture such variable in their model even the study of Nakhaei, et al (2016) that was conducted after four years. Thus, the study was able to set standards empirically however, the study cannot reflect the realities between those determinants and stock performance as a current period.

Nakhaei, et al., (2016) assessed the relative and incremental information content of refined economic value added (REVA) and traditional performance measures, such as net income (NI), net operational profit after tax (NOPAT), and earning per share (EPS). The study involves 395 non-financial companies listed in Bursa Malaysia over the period of 2002–2011. Pearson correlation coefficient and panel data single and multiple regression models were employed to analyze the data. The empirical results indicate that the relative information content of the REVA was not greater than that of NI and NOPAT to explain stock returns. NI and NOPAT were highly correlated with stock return compared to REVA. Additionally, the incremental information content test indicated that REVA makes some additional contribution to information content beyond the NI,

NOPAT, and EPS. Finally, the panel multiple regression models showed that there was a strong relationship between NI, NOPAT, and REVA with the stock return, but there was no meaningful association between EPS and stock returns. Nakhaei, et al (2016) model is better than the model of Moghaddam and Shoghi (2012) and it has improved studies on the relationship between refined economic value-added and stock market performance but however, it was not able to establish this relationship as was done by the study of Hajiabbasi, et al (2012).

## **Signaling Theory**

The signaling theory was initially developed by Michael Spence in 1973 based on observed knowledge gaps between organizations and prospective employees. The theory explains how signals success or failure of management (agent) was delivered to the owner (principal) (Akerlof, 1970). This theory explains a company's incentive to voluntarily report information to capital markets even though there was no requirement of regulatory agencies. The company also shows information for internal purposes. Management reports the information by aims to maintain investor interest in the company. Financial information was aimed to reduce information asymmetry between the company and external parties (Wolk, et al, 2001). Signaling theory emphasizes the information importance for investment decisions by outside companies. Information was an essential element for investors and business-people. Complete, relevant, accurate, and timely information as required by investors in the capital market as an analytical tool to make investment decisions.

The signaling theory states that good quality companies will intentionally give a signal to the market, thus the market is expected to be able to distinguish between good and bad quality companies (Hartono, 2005). In attracting investors and providers of corporate funds, managers will present financial statements in such a way that will attract investors and it can be seen from the profits generated by the company. High profits will attract investors and fund providers to invest in the company because high profits will certainly produce high returns. But in reality, the profits generated by the company are not always high. Therefore, companies tend to engineer profits to influence the final decisions of investors and creditors; that usually raises asymmetry information. The resulting financial report becomes irrelevant so that the internal party knows the condition of the company better than the external party (Hartono, 2005).

### 3.0 Methodology

This study adopts a longitudinal research design because the study cut across companies listed on the Nigeria stock exchange for ten years period (201-2022). The population of this study is one-hundred and sixty- four (164) listed companies as at December 31<sup>st</sup>, 2022. However, forty-eight were sampled for the study based on purposive sampling technique. The Generalized Method of Moments (GMM), based on a system dynamic panel model, was used for the analysis. The choice of the model is based on the Rule of Thumb by Bond (2001). This states that when the coefficient of the lagged variable in the fixed effect model is lower than that of pooled OLS, it suggests that the difference GMM model is appropriate for the study, but further comparisons need to be conducted between the coefficients of the difference GMM and the system GMM. Accordingly, if the coefficient of the lagged variable in the system GMM is lower than that of the difference GMM, it means that the difference GMM is downward biased and the system GMM is most appropriate (Bond, 2001).

Furthermore, the post diagnostic tests of Sargan and Hansen check the validity of the instrument, whereas the Arellano-Bond result tests for serial autocorrelation in the data set. Having established the techniques for the analysis, the dynamic model is adapted from the study of Obeidat and Darkal (2018). It is represented as:

$$SP_{it} = \beta_0 + \beta_1 SP_{t-1} + \beta_2 MVA_{it} + \beta_3 EVA_{it} + \beta_4 REVA_{it} + \epsilon_{it}$$

Where;

$SP$	=	<i>Stock Performance</i>
$MVA$	=	<i>Market Value Added</i>
$EVA$	=	<i>Economic Value Added</i>
$REVA$	=	<i>Refined Economic Value Added</i>
$SP_{t-1}$	=	<i>Previous Stock Performance</i>
$\beta_0$	=	<i>Constant in the model</i>
$\beta_1 - \beta_4$	=	<i>Explanatory power of each determinants</i>
$\epsilon$	=	<i>error term</i>
$i$	=	<i>Each company represented in the model</i>
$t$	=	<i>Year covered by the study</i>

**Table 1: Variables Measurement**

S/N	VARIABLE STANDARD NAME	VARIABLE NAME IN REGRESSION	DESCRIPTION	EXPECTED EFFECT	CONSTRUCT VALIDITY
1	Stock Performance	SP	A price of a single share of a company's stock at year end		O'Hara (2000); Shamsudin et al (2013)
2	Market Value Added	MVA	Market Value of equity – Book value of equity	+	Khaddafi & Heikal (2014); Safitri (2013)
3	Economic Value Added	EVA	NOPAT - (Invested Capital $\times$ WACC)	+	Khaddafi & Heikal (2014); Awan et al (2015).
4	Refined Economic Value Added	REVA	NOPAT – (WACC $\times$ M. Capital)	+	Nakhaei, et al (2012); Hajiabbasi et al (2012)
5	Previous Stock Performance	SP <sub>t-1</sub>	Previous price of a single share of a company's stock at year end	+	Rahman and Mustafa (2013)

The steps to calculate the economic value added (Khaddafi & Heikal, 2014):

1. Calculating NOPAT (Net Operating After Tax)

$$\text{NOPAT} = \text{EBIT} (1 - \text{Tax Rate}) \dots\dots\dots (1)$$

2. Counting Invested Capital

$$\text{Invested Capital} = \text{Total Debt and Equity} - \text{Short Term Loans Without Interest} \dots\dots\dots (2)$$

3. Calculating WACC (Weighted Average Cost of Capital)

$$\text{WACC} = [ (D \times r_d) (1 - \text{Tax}) + (E \times r_e) ] \dots\dots\dots (3.1)$$

Notation:

$$\text{Capital levels } D = \frac{\text{Total Debt}}{\text{Total Debt and Equity}} \times 100 \% \dots\dots\dots (3.1.1)$$

$$\text{Cost of Debt } (r_d) = \frac{\text{Interest Expense}}{\text{Total Debt}} \times 100 \% \dots\dots\dots (3.1.2)$$

$$\text{Level of Capital \& Equity } (E) = \frac{\text{Total Equity}}{\text{Total Debt and Equity}} \times 100 \% \dots\dots\dots (3.1.3)$$

$$\text{Cost of Equity } (r_e) = \frac{\text{Net profit after tax}}{\text{Total Debt and Equity}} \times 100 \% \dots\dots\dots (3.1.4)$$

$$\text{Level of Tax (Tax)} = \frac{\text{Total tax expense}}{\text{Net profit before tax}} \times 100 \% \dots\dots\dots (3.1.5)$$

Net profit before tax

4. Calculating Capital Charges

$$\text{Charges Capital} = \text{WACC} \times \text{Invested Capital} \dots\dots\dots (4)$$

5. Calculating the Economic Value-Added

$$\text{EVA} = \text{NOPAT} - \text{Capital Charges} \dots\dots\dots (5.1a)$$

$$\text{or EVA} = \text{NOPAT} - (\text{Invested Capital} \times \text{WACC}) \dots\dots\dots (5.1b)$$

- EVA relative formulated as follows:

$$\text{EVA relative (re)} = \frac{\text{EVA}}{\text{total Assets}} \times 100 \% \dots\dots\dots ( 5.2 )$$

## 4.0 Result and Discussion

**Table 2: Descriptive statistics by categories of: Sector (Mean, Min, Max)**

sector	sp	mva	eva	reva
<b>AGRIC</b>	16.5	7785166611	3549963207	3499838793
min	.2	62715426	62935279	44463418
max	76.2	31162884844	30705363271	29736168797
+				
<b>CONG</b>	8.27	12248290037	4684983305	5189752744
min	.44	58152150	18752520	9801265
max	67	6159667430	71191917445	78872728016
+				
<b>CONS</b>	107	6327013	20236184824	5704812
min	.12	30694000	8643417	6096203
max	1480	117262000000	528018856612	32888114000000
+				
<b>CONST</b>	33.9	39842881390	5141086497	4292143767
min	.29	4073656	6540494	5694103
max	100	174320258732	77140691454	48563626614
+				
<b>FINSER</b>	4.6	51689671132	48773112	55950946539
min	.2	3253850	2849760	20792046
max	53.3	64801700000	9501690000000	926410000000
+				
<b>HEACARE</b>	5.89	3894739705	11822731832	8098283050
min	.5	38949000	347597	11589147
max	68	25327024200	313221927247	191041886161
+				
<b>ICT</b>	2.64	2669105008	1808430899	3055541598
min	.2	35222124	17250	5228
max	16.8	8653555000	39993406076	76801173722
+				
<b>INDGOODS</b>	16	19605944848	11751756361	33783362364
min	.54	2220000	3176934	21068572
max	115	3986554200	679353946265	268745000000
+				
<b>NATRES</b>	4.22	575251926710	4390837802	117152140048
min	.2	26783140	2864793	15807207
max	12.4	3104690000000	91454885774	2018840000000
+				
<b>OILGAS</b>	57.6	17341949182	10299210496	10688053446
min	.2	111561250	31040540	31041877
max	299	81593853200	72587173036	68022901810
+				
<b>SERV</b>	2.12	14678685660	6315078132	6193363310
min	.2	275562600	23535578	6293608
max	10.2	81180307600	50633051474	50633644556
+				
<b>Total</b>	24.7	848442000	416720750975	920773832
min	.12	2220000	17250	5228
max	1480	117262000000	9501690000000	32888114000000

Source: Stata Output, 2023

The result is based on sectoral analysis because this gives a clear understanding of accounting and market value-based determinants. It will enable various users of accounting information to understand the behaviour of these variables in the underlisted sector of the Nigerian Exchange Group (NGX) however, the interpretation of the result is based on the summary output from the above result. Accordingly, the result shows that the performance of the companies varies according to their share prices. From the overall summary of the share prices, the result shows that listed companies had a maximum share price of ₦ 1480 which corresponds to the maximum share price of the consumer sector, while the minimum is ₦.12 which corresponds to the minimum share price of the same sector. The implication of the result is that consumer companies had the highest and lowest traded share prices on the Nigerian Exchange Group.

Also, market value added (MVA) is a reflection of investors' expectations on the total value they expect from the company to create future value for the total capital invested in the company. The firm's market value added, is the value an investment creates for its shareholders over the total capital they have invested. The greater the market value added, the better it is. The negative market value added means that the value of investments run by the capital management team is less than the financial capital submitted to the company by the capital markets, which means that wealth has been destroyed. Based on this, the overall result shows that listed companies in Nigeria had a minimum market value added of ₦2,220,000 and a maximum of ₦117,262,000,000. On average, it has ₦8,484,420,000. The result implies that listed companies on the Nigerian Exchange Group saw an increase in their initial investment.

Furthermore, economic value added (EVA) is an estimate of a firm's economic profit, or the value created in excess of the required return to the company's shareholders. Economic value added is the net profit less the capital charge for raising the firm's capital. The idea is that value is created when the return on the firm's economic capital employed exceeds the cost of that capital. Positive economic value-added indicates that the management company managed to increase enterprise value for company owners in accordance with the objective of financial management, which is to maximize corporate value. The result summarized result on the economic value-added shows a minimum value of ₦17,250, while the maximum is ₦9,501,690,000,000. The implication of the result is that listed companies in Nigeria were able to increase shareholder wealth by having net operating profit exceed the cost of capital.

Refined Economic Value Added (REVA) is useful as a performance indicator that focuses on value creation, makes companies pay more attention to capital structure, and can be used to identify activities or projects that provide higher returns than the cost of capital. In REVA, the cost of capital is calculated based on the market value of capital, unlike in EVA, whose cost of capital is based on the book value of equity. The summarized result shows that refined economic value added has a minimum refined economic value added of ₦5,228, while the maximum is ₦32,888,114,000,000.

**Table 3: Correlation Result**

Variables	(1) sp	(2) mva	(3) eva	(4) reva
(1) sp	1.000			
(2) mva	0.061	1.000		
(3) eva	-0.017	-0.003	1.000	
(4) reva	0.083	0.012	0.118	1.000

**Source: Stata Output, 2023**

The result shows that market value added has a positive relationship with market performance to the extent of 6.1%, while economic value added has a negative relationship with market performance to the extent of 1.7% (0.017). However, refined economic value added has a positive relationship with market performance to the extent of 8.3% (0.083).

**Table 4 Hansen Test for Autocorrelation / Serial Correlation Tests**

Value-Based Model	Z value	P. Value
Arellano-Bond test AR(1)	-2.67	0.008
Arellano-Bond test AR(2)	-0.41	0.683
	<b>Chi2</b>	<b>P. Value</b>
Sargan test	39.25	0.151
Hansen test	23.44	0.075

**Source: Stata Output, 2023**

The Arellano-Bond result tests for serial autocorrelation in the data set. The result shows that the null hypothesis of the residual of the lag variable is not correlated since the observed p-value for



the Arellano-Bond test for AR(2) of 0.683 is greater than the 0.05 (5%) level of significance. Furthermore, the post-diagnostic tests of Sargan and Hansen check the validity of the instrument. The study concludes that the instrument of the model is valid since the p-values of the Sargan and Hansen tests is greater than 95% confidence levels (5% significance level).

**Table 5: Choice of the Model**

MODELS	LAGGED VARIABLE	POOLED OLS	FIXED EFFECT	FIRST DIFFERENCE
Value-Based	LSP Coefficient	.0006751	.0002519	.0002483

**Source: Stata Output, 2023**

The coefficient of the lagged variable (.0002519) in the fixed effect model is lower than that of pooled OLS (.0006751), which suggests difference GMM, but comparing the first difference GMM coefficient (.0002483) to that of the fixed effect model, the study concludes that system GMM is most appropriate for this study since the coefficient of the lagged variable in the first difference GMM is lower than that of the fixed effect models. In this case, according to the Rule of Thumb by Bond (2001), difference GMM is downward biased and system GMM is most appropriate.

**Table 6: Value Based Determinant of Market Performance**  
System Dynamic Panel-Data Estimation

VARIABLES	(1) MODEL1 OVERALL	(2) MODEL1 AGRIC	(3) MODEL1 CONG	(4) MODEL1 CONST	(5) MODEL1 CONS	(6) MODEL1 FINSER	(7) MODEL1 HEACR	(8) MODEL1 ICT	(9) MODEL1 INDGOODS	(10) MODEL1 NATRES	(11) MODEL1 OILGAS	(12) MODEL1 SERV
L.sp	0.4528*** (0.0003)	.4929*** (0.0002)	.7912** (0.0010)	3.8503*** (0.0242)	.4889*** (0.0002)	1.030*** (0.146)	0.806*** (0.141)	0.880*** (0.128)	0.939*** (0.0834)	0.263*** (0.0814)	0.306*** (0.0457)	0.0894*** (0.0198)
Mva	0.0000*** (0.0000)	0*** (0)	0 (0)	-0*** (0)	0*** (0)	0*** (0)	7.0611*** (0)	-0 (5.7311)	-0 (0)	-0 (0)	0 (0)	0*** (0)
Eva	0.0000** (0.0000)	-0 (0)	0 (0)	0 (0)	-0 (0)	0*** (0)	0 (0)	0 (0)	0*** (0)	-1.0810 (1.0810)	-0 (0)	0 (1.1610)
Reva	0.0120*** (0.00338)	0.0125** (0.00599)	-0.00410 (0.0130)	0.0239 (0.0158)	-0.00213 (0.00522)	0.0475** (0.0229)	0.0186 (0.0124)	0.00744 (0.0103)	0.0286*** (0.00942)	0.00568*** (0.00131)	0.960*** (0.256)	1.435** (0.545)
Constant	16.0231*** (1.9477)	2.641* (1.547)	1.386** (0.676)	9.896*** (2.913)	29.25*** (9.043)	1.601*** (0.310)	1.278*** (0.389)	1.743*** (0.473)	8.174*** (1.740)	4.114*** (0.997)	21.57*** (4.405)	1.442*** (0.195)
Observations	1,130	50	50	60	150	310	60	70	100	40	80	160
Number of id	113	5	5	15	20	31	6	7	10	4	8	16

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Source: Stata Output, 2023**

The study adopts sectoral analysis for the combined model to give a clear and comprehensive understanding of the accounting and value-based determinants in all the listed sectors; however, the test of hypotheses is based on the overall model. Dynamic panel model is adopted by the study since changes in company's performance will affect the current market performance. It is expected that investors' behavior will change along with their previous performance. In all the sectors, previous performance has a significant positive effect on market performance. From the overall model, increase in the previous performance will increase current performance by 0.4528 coefficient. In the agricultural sector, increase previous performance will increase current performance by .4929. This is significant at less than 1% significance level.

### **Market Value Added and Market Performance**

Market value added is a representation of value created by the actions and investments of a company's management. A high market value added is evidence that the value of management's actions and investments is greater than the value of the capital contributed by shareholders, whereas a low market value added means just the opposite. Positive market value added indicates that the company's management has succeeded in maximizing the company's shareholder wealth, but negative market value added shows poor performance from company management. The management of the company is not successful in maximizing shareholder wealth.

The study found that market value added has a positive and significant effect on the market performance of listed companies in Nigeria. This signifies that an increase in the market value added of the listed companies will increase their market performance. This is due to the fact that investors always increase their investment where there is added value to their total capital invested. Thus, the greater the market value added, the better it is, and this will affect market performance positively; otherwise, it will affect market performance negatively. Based on the findings, the study rejects the hypothesis that market value added has no significant effect on the market performance of listed companies in Nigeria. Ozhi (2000), Salehi et al. (2011), Safitri (2013), Obeidat and Darkal (2018), Ikbar and Dewi (2015), and Shabib-ul-Hasan, et al. (2015) all found similar results. However, it is not consistent with the findings of Nugroho et al. (2019), Panigrahi (2017), Silitonga et al. (2018), and Andhika and Yunita (2016).

## **Economic Value Added and Market Performance**

Economic value added is an estimate of a firm's economic profit, or the value created in excess of the required return to the company's shareholders. Economic value-added is the measurement of a company's value added by reducing the burden of the cost of capital arising from the investments that have been made. Economic value added is a measure that reveals the financial performance of a business based on its residual income. It aims to define the value a company generates with the help of the invested funds and improve the generated returns for shareholders.

Economic value-added signals the economic profit of the company. The excess of economic value-added shows that economic capital employed exceeds the cost of capital. Positive economic value-added indicates that the management of the company managed to increase enterprise value for owners in accordance with the objective of financial management, which is to maximize corporate value. In this study, it is shown that any increase in one naira of economic value added will increase the market performance of listed companies in Nigeria. This is because economic value added has a positive and significant effect on market performance. This finding aligns with the finding of Amyulianthy and Ritonga (2016), Panigrahi (2017), Ikbar and Dewi (2015), Imanzadeh, et al (2013), Awan, et al (2015), Maitah, et al (2015), Panigrahi, et al (2015), Babatunde and Evuebie (2017) who has similar conclusion but not in line with the finding of Wong (2005), Nugroho, et al (2019), Alipour and Ebrahim (2015), Akgun, et al (2018), Khan, et al (2014), Silitonga, et al (2018), Sekyere (2016), Andhika and Yunita (2016). The cause of the disparity between the findings of the studies could be a result of a methodological approach based on time frame, a difference in the sector of the studies, or a technique of analysis.

## **Refined Economic Value Added and Market Performance**

This performance measurement holds that increasing value also means increasing long-term investment returns for shareholders. Companies that are able to create positive REVA value can create added value for investors or shareholders, so investors will be interested in investing their capital and causing share prices to rise.

Refined economic value added has a positive and significant effect on the market performance of listed companies in Nigeria. This means that any increase in refined economic value will increase market performance. Thus, positive refined economic value-added signals that the company's

market cost of capital is less than the capital charges. Companies with positive, refined economic value added will attract more investors because it signals wealth has been created from the shareholders' investment. Based on this finding, the study rejects the hypothesis that refined economic value added has no significant effect on the market performance of listed companies in Nigeria. The finding is consistent with the finding from the study of Nakhaei (2014), Hall (2015), Moghaddam and Shoghi (2012), Nakhaei (2014), Nakhaei, et al (2016), Nugroho (2018) however, it is not consistent with the finding of Gouyandeh (2007), Hajiabbasi, et al (2012). The cause of disparity in the findings could be as a result of methodological approach such as difference in the time frame, difference in the sector of the studies and technique of analysis.

## **5.0 Conclusion and Recommendations**

In conclusion, the findings of this study strongly support the notion that Market Value Added (MVA), Economic Value Added (EVA), and Refined Economic Value Added (REVA) play significant roles in influencing market performance. Through rigorous analysis, it has been demonstrated that companies generating higher levels of MVA, EVA, and REVA tend to exhibit stronger market performance metrics. These value-based determinants not only contribute positively to shareholder wealth but also signal the company's ability to create sustainable value in the market. Therefore, investors, financial analysts, and policymakers should consider incorporating these metrics into their evaluations and decision-making processes to better understand and predict market outcomes. Overall, the study underscores the importance of value creation strategies in driving market success and competitiveness. The study recommends the following:

- i. Companies should focus on value creation strategies that prioritize the generation of MVA, EVA, and REVA. By aligning corporate objectives with these value-based metrics, companies can enhance their market performance, attract investors, and foster long-term growth and profitability.
- ii. Also, investors are encouraged to adopt long-term investment strategies that prioritize companies with strong MVA, EVA, and REVA performance. Such companies are more likely to deliver sustainable returns and withstand market fluctuations over time, enhancing the resilience of investment portfolios.

- iii. Finally, investors should consider the value-based determinants of a company's performance and competitive advantage. This involves assessing the company's ability to generate income higher than the cost of capital, which is a fundamental aspect of value creation and sustainable growth.

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