Evaluation of the Effect of Financial Factors on Shareholders’ Value of Listed Pharmaceutical Firms in Nigeria

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Abstract: The study ascertained the effect of Financial Factors on Shareholders’ Value of listed ePharmaceutical Firms on Nigeria Stock Exchange. The study ascertained the effect of Sales Revenue (SR), Investment in Working Capital (IWC) and Operating Profit Margin (OPM) on Earnings Per Share (EPS) in the pharmaceutical firms in Nigeria. Data for the study were sourced from Annual report of the sampled pharmaceutical firms. The data collected were analyzed using Eview. The results of the study show that Sales Revenue (SR) has a positive and significant effect on Earnings Per Share (EPS) of Nigeria pharmaceutical firms; investment in working capital (IWC) has a negative and insignificant effect on Earnings Per Share (EPS) of Nigeria pharmaceutical firms and Operating Profit Margin (OPM) has a positive and significant effect on Earnings Per Share (EPS) of Nigeria pharmaceutical firms. Based on the findings, the study recommends among others that Pharmaceutical firms in Nigeria should employ more of sales strategies in other to generate more sales for the firms to enhance returns to the owners of the business, the shareholders.

Keywords: Pharmaceutical Firms, Shareholder’s Value, Evaluation, Finance, Nigeria

1. Introduction

1.1. Background of the Study

The real value of corporations are one of the most important things that shareholder care about. A company creates value for the stakeholders when the shareholders’ returns exceed the cost of capital. The creation of shareholder’s value has become the standard by which all companies are judged and one of the greatest strategic challenges facing the management in growing shareholder’s value is to balance the need for cost efficiency with the countervailing need to accommodate product diversity and market responsiveness [1].

Maximizing shareholders’ wealth through the creation of value to a company’s market share price is currently recognized by academics and practitioners as the performance indicators of any profit oriented organization. Pareek (2003) identified shareholder’s value as total benefit to shareholders for investing in a company [2]. Creating values for investors was further affirmed as delivering consistently high return on capital [3]. Also, Pareek (2003) observed that investors now look to capital appreciation as the prime motivation for investing in a company. This means that the concept of value creation essentially examines the value attributed to the shareholders of a company.

Moreover, it is common these days to be confronted with question by would-be first time investor on which sectors or stocks should be advisable to put money on. It suggests that the main source of concern to potential investors and shareholders is how to identify organization that are performance driven with the sole aim of sustaining shareholder’s wealth.

Identifying and selecting strategies that create value for
shareholders is a major challenge facing management in the modern era. The identification of financial factors which have the highest impact on value creation can facilitate the establishment of criteria that are appropriate for creating shareholder’s value. The ability of a firm to create value by distributing cash flow to its shareholder depends on its ability for cash generation from operating activities and its ability to access additional fund through external financing [4].

Shareholder’s return basically depends on the entity’s ability to engage in an optimal mix of value adding activities and the ability of the firm to determine the extent to which those activities have result in value creation through value drivers. Value drivers are those variables that affect the value of a company or business unit which includes revenue, operating profit margin, cash tax rate, incremental capital expenditure, investment in working capital, cost of capital and competitive advantage period [5].

Srivastava (2008) suggests that the firm’s value is driven by growing the cash flows, accelerating the cash flows, reducing the volatility and vulnerability of cash flows and enhancing the residual value of cash flows [6]. Stewart (1991) has identified six shareholder value drivers as net operating profits, after taxes, the tax benefit of debt associated with the target capital structure, the amount of new capital invested for growth, the after-tax rate of return of the new capital investment, the cost of capital for business risk and the future period of time over which the company is expected to generate a return exceeding the cost of capital from its new investment [7].

The relationship between capital structure and firm’s value has been the subject of considerable debate both theoretically and in empirical research. Whether or not an optimal capital structure exists that can create shareholder value is one of the most important and complex issues in corporate finance [8]. The financing decision is one of the main financial decisions of the company which can have an impact on its performance.

It is against this background that the researcher will attempt to evaluate the financial factors on shareholder’s value of listed pharmaceutical firm in Nigeria.

1.2. Statement of the Problem

Profitability and growth are basically considered as a major determinant of firm’s value. Also, shareholders’ theory proposes that the primary duty of management is to maximize shareholder’s return. But this is contrary to the case of Eron where management took business decision that may lead the company to bankruptcy. On the other hand, excess working capital leads to wasting cash and ultimately results to decrease in profitability and destruction of shareholder’s value since the extent of working capital employed by a firm influences its performance.

Additionally, when the Directors are interested in short-term financial prospect of a firm, they are keen in expense all capital expenditure in the period they are incurred. This capital expenditure will create value for the firm in the future. This immediate charge as operating expense implies that there is no future value to be derived from research and development cost in the future. As a result, the company’s profits would be reduced, its capital is undervalued and hence return on investments declined, leading to destruction of shareholder value in the future, since the extent of capital invested in capital expenditure by a firm influences its performance tremendously.

1.3. Objectives of the Study

The main objective of the study is to evaluate the effect of financial factors that determine shareholder’s value of listed pharmaceutical firms in Nigeria. However, the specific objectives are:

i. To assess the effect of Sales Revenue (SR) on Earnings Per Share (EPS) in the pharmaceutical firms listed on Nigerian Stock Exchange.

ii. To ascertain the effect of Investment in Working Capital (IWC) on Earnings Per Share (EPS) in the pharmaceutical firms listed on Nigerian Stock Exchange.

iii. To examine the effect of Operating Profit Margin (OPM) on Earnings Per Share (EPS) in the pharmaceutical firms listed on Nigerian Stock Exchange.

1.4. Research Questions

i. To what extent does Sales Revenue (SR) affect Earnings Per Share (EPS) in Nigeria pharmaceutical firms listed on Nigerian Stock Exchange?

ii. To what degree does Investment in Working Capital (IWC) affect Earnings Per Share (EPS) in Nigeria pharmaceutical firms listed on Nigerian Stock Exchange?

iii. To what level does Operating Profit Margin (OPM) affect Earnings Per Share (EPS) in pharmaceutical firms listed on Nigerian Stock Exchange?

1.5. Statement of Hypotheses

i. \( H_o: \) Sales Revenue (SR) has no significant effect on Earnings Per Share (EPS) in Nigeria pharmaceutical firms.

ii. \( H_o: \) Investment in Working Capital (IWC) does not have significant effect on Earnings Per Share (EPS) in Nigeria pharmaceutical firms.

iii. \( H_o: \) Operating Profit Margin (OPM) does not have significant effect on Earnings Per Share (EPS) in Nigeria pharmaceutical firms.

1.5.1. Financial Factor

Factors to be used for evaluation with regards to financial measures; include sales, revenue, operating profit margin investment in working capital.

1.5.2. Sales Revenue

Sales revenue is the income received by a company from
its sales of goods or the provision of services. In accounting, the terms “sales” and “revenue” can be used interchangeably and mean the same thing. It is important to note that revenue does not necessarily mean cash received. A portion of sales revenue may be paid in cash and a portion may be paid on credit, through terms such as accounts receivables. Sales revenue can be listed on the income statement as either the gross revenue amount or net revenue. Net revenue includes all deductions for the return of goods, the possibility of undeliverable merchandise and the expense for unrecoverable accounts receivables (also known as bad debt expense, which flows into the balance sheet as the allowance for doubtful accounts). Gross revenue, on the other hand, does not include these deductions. The gross revenue presentation will have the deductions below gross revenue, and a subtotal for net revenue below that.

Income from sales of goods and services, minus the cost associated with things like returned or undeliverable merchandise. Also called "Sales", "Net Sales", "Net Revenue", and just plain "Revenue".

Sales revenue is the amount realized by a business from the sale of goods or services. This figure is used to define the size of a business. The concept can be broken down into two variations, which are:

i. **Gross sales revenue.** Includes all receipts and billings from the sale of goods or services; but does not include any subtractions for sales returns and allowances.

ii. **Net sales revenue.** Subtracts sales returns and allowances from the gross sales revenue figures. This variation represents the amount of cash that a business receives from its customers.

Sales revenue is typically reported for a standard period of time, such as a month, quarter, or year, though other non-standard intervals can be used.

The key figure against which sales revenue is compared is net profits, so that the analyst can see the percentage of sales revenue that is being converted into profits. This net profit percentage is usually tracked on a trend line, to see if there are any material changes in performance.

Investors also like to track sales revenue on a trend line, and especially the percentage rate of growth, to see if there is any evidence of changes in the growth rate. A declining growth rate may trigger a sell-off among shareholders.

### 1.5.3. Operating Profit Margin

The operating profit margin indicates how much profit an organization makes after pay for variable costs of production, for example, wages, raw materials and so on. It is additionally communicated as a percentage of sales and then demonstrates the productivity of an organization controlling the costs and costs associated with business operations.

Operating profit margin is a proportion of profitability. It indicates the amount of every naira of revenue is left over after the two costs of goods sold and operating cost are considered. Copeland (2000) accentuation that an organization's operating margin is otherwise called return on sales is a decent indicators of how well it is being overseen and how risky the organization. Dechow (1999) stress that it demonstrates the proportion of revenues that are accessible to take care of non-operating expense like paying interest, or, in other words and banks give careful consideration to it. Frankel (1995) places that high variable operating margins are a prime indicator of business risk and by a similar token, looking at an organization's past operating margin is a decent method to measure whether a major enhancement in earnings is probably going to last.

Operating profit margin is operating income isolated by sales revenue. Operating income is often called earnings before interest and taxes (EBIT). Operating income is the income that is left on the income statement after every operating cost and overhead, for example, selling cost, administration cost and cost of goods sold are subtracted.

### 1.5.4. Investment in Working Capital

Working capital is the total of the sums invested in current assets of the organization. Net working capital outcomes from the deduction of current liabilities from current assets.

Chmelikova (2005) is of the view that working capital is a proportion of both an organization's effectiveness and its transient financial solid [9]. Working capital is calculated as current assets-current liabilities. The working capital ratio (current assets/current liabilities) indicates whether an organization has enough here and now to covers its transient obligation. Working capital ratio is a proportion of an organization's fleeting dissolvability. It indicates the accessible current assets in naira for each one naira of current liabilities. A ratio of greater than one indicates that the organization has more current assets than current liabilities.

As a conventional standard, a current ratio of 2:1 is considered ideally satisfactory. Current ratio speaks to a margin of wellbeing for the creditors. The higher the current ratio, the greater the margin of security, that is the bigger the measure of current assets in relation to current liabilities, the more the organization's capacity to meet its current obligations as they fall due.

Arsham (2015) states that if an organization's current assets don't surpass its current liabilities, then it might keep running into inconvenience paying back creditors for the time being [10]. The most dire outcome imaginable is bankruptcy. A declining working capital ratio over a longer day and age could likewise be a warning that warrants further investigation. For instance, it may be the case that the organization's deal volumes are decreasing and thus, its account receivables number continues to get littler and littler. Working capital likewise gives investors a thought of the organization's underlying operational effectiveness. Money that is tied up in inventory or money that customers still owe to the organization can't be utilized to satisfy any of the organization's obligations. Thus, if an organization isn't operating in the most proficient way, it will appear as an increase in the working capital. Brook (2012) places that working capital is the aggregate measure of every current asset and current liabilities [11]. It is utilized to quantify the fleeting liquidity of a business, and can likewise be utilized
to obtain a general impression of the capacity of the organization's management to use its assets in an effective way.

Dimitrios (2008) said that if the net working capital is generously positive, it indicates that the transient funds accessible from current assets are more than adequate to pay for current astonishingly due for installment [12]. On the off chance that the figure is generously negative, then the business might not have adequate funds accessible to pay its current liabilities and might be in risk of bankruptcy. The working capital figure is more informative when followed on a pattern line since this may demonstrate a continuous enhancement or decline in the measure of working capital additional time.

Investment in working capital can likewise be utilized to estimate the capacity of an organization to develop rapidly. On the off chance that it has considerable cash reserves, it might have enough cash to quickly scale up the business. Conversely, a tight working capital situation makes it very impossible that a business has the financial way to accelerate its rate of growth. A more particular indicator of the capacity to develop is when accounts receivable installment terms are shorter than the accounts payable terms, which implies that an organization can gather cash from its customers previously it needs to pay it providers [13].

Pandey (2005) opined that working capital is the measure of liquid assets which an organization has at hand [14]. Working capital investments is the measure of money a firm requires to expand its business, meet here and now business responsibilities and cover business cost. Pandey (2005) further states that working capital investment management is vital to ensure that the organization has adequate funds for carrying out its regular operations in a smooth way.

### 1.5.5. Shareholder Value

Shareholder value is the return on investment in a given organization. Shareholder's value is that conveyed to shareholders of a company as a result of management's capacity to increase sales, earning and free cash stream after some time, leading to the capacity for organizations to increase profits and energize capital gains for its equity proprietors. An organization's shareholder relies upon strategic decision made by its top managerial staff and senior management, including the capacity to make insightful investment and generate a solid return on invested capital. In the event that this value is created over the long-term, the share cost increase and the organization can pay bigger cash profit to shareholder. Fernandez (2001) states that an organization creates value for the shareholders when the shareholder return surpasses the cost of capital [15]. Pandey (2010) indicates that when the market values surpass the book value, the shareholder value is created and when the book value surpasses the market value, the shareholder value is devastated [16].

Colasse (2010) noticed that economic value included is a proportion of performance that gives a helpful appraisal of how much shareholder value has been included during a period [17]. Bucataru (2006) contend that economic value added intends to gauge the value included by the firm or the value generated by a firm for a given period of time [18]. Economic value included perceives that creation of value must be estimated after the firm has returned the sum invested and the return because of the creditors and shareholders, that contributed to the sum invested. Shil (2009) states that economic value included is utilized as a reason for management incentive plan, it can urge management to settle on decision that are in the best interest of the organization, for example, investing for the longer term capital consumption, research and development and brand-building [19].

Economic value included is processed as net operating profit after tax (NOPAT-Capital charge). Where capital charge = Economic capital utilized x weighted normal cost of capital (WACC). Economic value included looks at the rate of return on invested capital with the open door cost of investing somewhere else. This is vital for businesses to monitor, especially those business that are capital intensive. While calculating economic value included, a positive result implies that the organization is creating value with its capital investments. Conversely, a negative result would imply that the organization is destroying value with capital investment and the capital would be better spent somewhere else. Business can utilize economic value added to survey administrative performance as it fills in as a proportion of value creation for shareholders [20].

### 1.5.6. Earnings Per Share (EPS)

Earnings are profits accessible for equity shareholders. Earnings Per Share (EPS) is a proportion of the measure of earnings in a financial period for every equity share. Earnings Per Share (EPS) fills in as an indicator of an organization's profitability. The increasing Earnings Per Share (EPS) for the most part result in high market cost.

Ball, Brown and Hamad (2014) stretch that Earnings Per Share (EPS) has a positive relationship with market value, that is, the higher the earnings per share, the higher will the market cost be [21]. They further emphasized that Earnings Per Share (EPS) is one of the most critical financial ratios facilitating investors making decisions about the decision of an organization to invest in.

Farokhad and Niresh (2015) point out that Earnings Per Share (EPS) likewise called net income per share, is a market prospect ratio that estimates the measure of net income earned per share of stock outstanding [22]. In other words, this is the measure of money each share of stock would get if the majority of the profits were disseminated to the outstanding shares at the year's end. Amalgam and Alfred (2014) opine that the term Earnings Per Share (EPS) speaks to the portions of an organization's earnings, net of taxes and favored stock dividends, that is allocated to each share of common stock [23]. The figure can be calculated by dividing net income earned in a given reporting period by the total number of shares outstanding during the equivalent financial year.
1.5.7. Theoretical Review

There are different theories of capital structure, all emphasize on the value of an organization and their associated cost of financing the organization. This research depends on:

Stakeholder Theory

The development of stakeholder theory has been widely accredited to Richard Edward Freeman’s (1984). According to Freeman, Wicks and Parmar (2004), stakeholder theory is an expansion of agency theory that stresses that managers have fiduciary relationship with stakeholders, while stakeholders are those who have stake in, or claim on the firm [24]. Stakeholder theory was developed to solve some problems such as value creation and trade, ethics of capitalism and managerial mind-set [25]. It seeks to address moral and ethicality in managing corporate entity with due recourse to all stakeholders interests.

The agency model is based on a narrow view of contractual relationships, whose underlying philosophy is internally driven [26, 27]. The stakeholder model’s underlying philosophy is a much broader, and an externally focused model, as it considers the interests of shareholders, employees, clients, suppliers, strategic partners, and other groups that have connections with the firm [28, 29]. Some researchers have stated that the notion of considering the interests of all stakeholders may have been extended to an impracticable extent, and it is important for corporate managers and practitioners to know where to draw the line [30, 31].

Fair dealing with all stakeholders also affects a firm’s reputation and corporate image. The opinions that are held by the company’s partners affect the relationship with stakeholders and the way and extent to which they participate in the firm’s 85 activities. The firm’s image also affects the type of employees that are attracted to the company and the type of commitment and loyalty the organization gets [32]. The concept of reciprocity is important in obtaining stakeholders’ cooperation.

For taking the risks to invest in the company, shareholders deserve to be fairly treated for the important contribution they are making in the firm. Also, creditors and finance providers need to trade with the firm at profit.

The firm needs to consider the interests of all the stakeholders so that there would be a mutually beneficial relationship between them. The organization contributes value to the stakeholders in return for unfettered access to the resources and expertise they bring to the firm. Shen and Gentry (2014) found that a firm’s strategic decisions affect corporate governance because such actions alter ownership structure [33].

1.5.8. Empirical Review

Kaler (2006) examine the effect of financing decision on the shareholder value creation in the context of an example of French firms introduced on the stock trade and belonging to SBF 250 index over a period from 1999 to 2005 using a board of data investigation model [34]. It gives the researcher an extensive number of data points, increasing the degrees of opportunity and reducing the co-linearity among explanatory variable, consequently improving the productivity of econometric estimates. The findings demonstrate that the estimation of both exact models explaining the shareholder value, noticed that oneself financing explains decidedly and altogether the shareholder value creation for both proportion of economic value included, advertise value included and earnings per share. The equity issue supply's to explain negatively and insignificantly the economic value included. In any case, it's negatively related to advertise value included. The effect of financial factors on shareholder value depends to quantify taken and the financial structure added to the model. Indeed, the pecking request theory and the static exchange off theory discovered contradictory predictions in term of effect of the financial structure on the shareholder value creation.

Molyneux (2015) investigated the relationship between high growth rate and shareholder value creation using an example of 243 non-financial standard and poor's 500 (S and P 500) organizations with 22 years consecutive data variables (1993-2014) [35]. Sustainable growth rate model is utilized to partition the example into two gatherings as high growth firms and moderate growth firms. Using board data investigation approach, it is demonstrated that sales growth beneath sustainable growth rate upgrades shareholder value at a fundamentally higher rate contrasted with growth above sustainable growth rate. The finding recommends that shareholder value creation amplifies around sustainable growth rate and abatements pointedly once sustainable growth rate surpassed.

Makakar and Gupta (2004) investigated the significance of economic value included for the shareholder's value maximization [36]. Economic value included is a valued based performance estimation tool that settles down the management decision regarding creation of shareholder's value. Test of 40 Indian business banks and board data are utilized for the period 2001 to 2015. The observational finding for open restricted banks and generally speaking Indian banks uncovered that there is a positive and noteworthy relationship between shareholder's value maximization and economic value included, yet in the event of private constrained banks, dividend per share was found to have huge relationship with shareholder's value. The higher the value of economic value included, higher shareholder's value. The findings demonstrates huge help for economic value included and dividend per share yet it was discovered that economic value included isn't productively utilized for examination and decision making regarding creation of value.

Umar and Musa (2013) investigated the relationship between stock costs and firm earning per share which give off an impression of being contestable like some other performance measure from 2005 to 2009 [37]. An example of 140 Nigerian firms from a total population of 216 firms operated in Nigerian Stock Exchange using a linear regression model and correlation examination model. It was found that firm earning per share has no prescient power on stock cost and ought not be depended upon for the prediction of the conduct of stock costs in Nigeria.

Belot (2008) examined the significance of economic value included for the shareholder's value maximization [38]. An
example of 60 Indian business banks and a board data were utilized to examine the data from 1994 to 2006. The findings for open restricted banks and in general Indian banks uncovered that there is a positive and critical relationship between shareholder’s value and economic value included.

Hemadivya and Devi (2013) examined the relationship and the effect of earning per share available cost of shares of chosen organizations employing regression and correlation investigation [39]. It was discovered that market cost is altogether influenced by changes in earnings per share and operating profit with reference to BHEL manufacturing sector. The correlation between market cost and earnings per share of BHEL indicates that there is a high and huge relationship between market cost and earnings per share of BHEL.

Mlonzi, Kruger and Nthoesane (2011) investigate whether there are any noteworthy unusual returns around people in general declaration of earnings and to set up whether the productive capital market hypothesis applies to the little ALtx advertise [40]. The investigation concentrated on every one of the organizations listed on the JSE-ALtx that reported yearly earnings between 1st January and 31 December 2009 employing Capital Asset Pricing Model (CAPM). Experimental proof demonstrates that there is considerable negative share value reaction to earnings declaration on the little ALtx stock market. The ALtx likewise demonstrates the feeble type of market effectiveness. The investigation concluded that during a recessionary period, shareholders' riches is dissolved in the ALtx showcase.

Ebrahim and Chadegani (2011) examined whether the current period earning separated by stock cost at the beginning of the stock market period and the switch of stock cost at the stock market period are important to explain stock market return in Iran [41]. The investigation utilized cross-section, pooled data and board data regression model for testing the effects of the above variable on stock return and found that in a few years, shareholders give careful consideration to dividends and likewise the variable earlier dividend partitioned by stock cost at the beginning of the market period influences stock return. It uncovered a noteworthy relationship between current earnings partitioned by stock cost at the beginning of the stock market cost and stock return, implying the presence of relationship between earning, dividend and stock return.

Inyiama and Ozouli (2014) examined the interaction among earnings and share cost in Nigeria bottling works industry from 2000 to 2013 [42]. Engle and Granger 2-step cointegration and correlation approach was embraced in the investigation with an estimation of a mistake correction model. Stationarity of time arrangement data were tried with the adoption of Augmented Dickey Fuller (ADF) and Philips-Perron (PP) method. The outcome demonstrate that market cost of shares has a transient positive and critical effect on earnings per share while the long-run coefficient demonstrates a negative and insignificant influence.

Chang, Chen, Su and Chang (2008) utilized board cointegration strategy to investigate the relationship between stock cost and earnings per share [43]. The experimental outcome indicated that the cointegration relationship existed between stock costs and earnings per share. The outcome further uncovers that for the firm with an abnormal state of growth rate, earning per share has less power in explaining the stock cost; in any case, for the firm with a low level of growth rate, earning per share has a strong effect in stock cost.

Oladele (2013) examined what might influence economic value included of the organizations listed in Nigeria securities advertise [44]. The strategy for factor investigation and multivariable linear regression model were utilized. The outcome uncovered that the organization's capital structure, profitability, size, growth capacity, management capacity and industry's return on equity had positive influence on economic value included.

Geroski (2014) examined the determinant of value creation in UAE listed organizations in Dubai and tests of 61 UAE organizations were utilized [45]. The examinations were completed using linear regression investigation. The outcome demonstrated that size in term of total asset of a firm is inversely related to value creation. Value as estimated by market to book value of equity is negatively related to the size estimated by total asset. Bigger the size regarding market capitalization, the higher would be the value created. Higher earnings relative to cost imply higher value creation. Firms having higher risk are required to have higher return.

2. Method

The research adopted ex post facto research design, as the data which are already in existence can be relied upon and devoid of manipulation. The study made use of secondary data from annual reports and accounts of pharmaceutical firms operating in Nigeria for the period 2008 to 2017. The population of the study is made up of the ten (10) companies operating in Nigeria healthcare sector Listed on the Nigeria Stock Exchange.

Data Analysis

Table 1. Descriptive Result.

<table>
<thead>
<tr>
<th></th>
<th>EPS</th>
<th>SR</th>
<th>IWC</th>
<th>OPM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>30.33333</td>
<td>98.64068</td>
<td>0.378213</td>
<td>0.051633</td>
</tr>
<tr>
<td>Median</td>
<td>30.00000</td>
<td>68.84789</td>
<td>0.409553</td>
<td>0.087216</td>
</tr>
<tr>
<td>Maximum</td>
<td>305.00000</td>
<td>306.34708</td>
<td>1.600218</td>
<td>0.174102</td>
</tr>
<tr>
<td>Minimum</td>
<td>-55.00000</td>
<td>146.07284</td>
<td>-0.163810</td>
<td>-0.263960</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>100.5318</td>
<td>93.67186</td>
<td>0.422059</td>
<td>0.118562</td>
</tr>
<tr>
<td>Skewness</td>
<td>1.113498</td>
<td>1.071109</td>
<td>0.968918</td>
<td>-1.393233</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>2.974922</td>
<td>2.938227</td>
<td>3.969985</td>
<td>4.076964</td>
</tr>
<tr>
<td>Jarque-Bera</td>
<td>6.200173</td>
<td>5.741415</td>
<td>5.870097</td>
<td>11.15530</td>
</tr>
<tr>
<td>Probability</td>
<td>0.045045</td>
<td>0.056666</td>
<td>0.053128</td>
<td>0.003781</td>
</tr>
<tr>
<td>Sum</td>
<td>2110.000</td>
<td>2.966E+08</td>
<td>11.34640</td>
<td>1.548979</td>
</tr>
<tr>
<td>Sum Sq. Dev.</td>
<td>293092.7</td>
<td>2.54E+15</td>
<td>0.407652</td>
<td>0.174102</td>
</tr>
</tbody>
</table>

Source: Authors computation from annual accounts 2019

The summarized descriptive statistics of the explained and explanatory variables as presented in Table 1 for the period 2008 to 2017, revealed the following observations. First, the Earning per share is reported to have a mean (median) value of 70.33333 (30.00000) and standard deviation of 100.5318.
Equally, the mean of Share Price is about 70.33333 or below 100% and the mean of Sales revenue is 9864068 or above 100%, the mean of investment in working capital is 0.378213 or below 100%, and the mean of operating profit margin is 0.051633 which is also below 100%. The result indicates that in the average of every N9.864068K of SR, N0.409553K of IWC, N0.087216K of operating profit margin was earned as earning per share.

The maximum values of these series are 305.0000, 30634708, 1.600218 and 0.174102 for Earning per share, Sales revenue, investment in working capital and operating profit margin respectively. The minimum values are; -55.00000, 1460728, -0.163810 and -0.263960 for Earning per share, Sales revenue, investment in working capital and operating profit margin respectively.

The value of skewness and Kurtosis reveals the extent normality is achieved in the distribution. Table 1 reveals that the observed distribution for Earning Per Share, Sales Revenue, Investment in Working Capital and Operating Profit Margin have skewness co-efficient of 1.113498, 1.071109, 0.968918 and -1.393233 respectively, which are not in excess of unity. This shows that there is close relationship between the variables.

The table further indicates that Kurtosis coefficient for Earning Per Share, Sales Revenue, Investment in Working Capital and Operating Profit Margin are; 2.974922, 2.938227, 3.969985 and 4.076964 respectively.

Test of Hypotheses

Test of Hypothesis One

Restatement of Hypothesis One

\[ H_0: \text{Sales Revenue (SR) has no significant effect on Earnings Per Share (EPS) in Nigeria pharmaceutical firms.} \]

Table 2. Result of the Regression Model.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR</td>
<td>8.75E-06</td>
<td>1.17E-06</td>
<td>7.461258</td>
<td>0.0000</td>
</tr>
<tr>
<td>C</td>
<td>-16.01950</td>
<td>15.83384</td>
<td>-1.011725</td>
<td>0.3203</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.665353</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.653402</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S.E. of regression</td>
<td>59.18568</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sum squared resid</td>
<td>98082.45</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Log likelihood</td>
<td>-163.9537</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F-statistic</td>
<td>55.67037</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prob (F-statistic)</td>
<td>0.000000</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Decision Criteria

Reject the null hypothesis \( H_0 \) if the t-statistic is greater than 2 and the p-value of the t-statistic is less than 0.05.

Result

With the t-statistics of sales revenue (SR) is 7.461258 which is greater than 2 and the p-value is 0.0000 which is less than 0.05. We therefore conclude that Sales Revenue (SR) has a positive and significant effect on Earnings Per Share (EPS) of Nigeria pharmaceutical firms.

Test of Hypothesis Two

Restatement of Hypothesis Two

\[ H_0^*: \text{Investment in Working Capital (IWC) does not have significant effect on Earnings Per Share (EPS) in Nigeria pharmaceutical firms.} \]

Interpretation of Durbin Watson Statistics

The Durbin-Watson statistics is 1.751420 which is sustainably below 2. In this case, the Durbin Watson statistics is also close to 2 than 0 which indicates the presence of auto correlation in the series. The result indicates the absence of positive serial correlation in the time series data extracted from the annual report and accounts of the firms.

Co-efficient of Determination (R)

Model Summary

Table showed that R Square, Coefficient of determination, i.e., the squared value of the multiple regression coefficient value is 0.665353; meaning that, approximately 67% of the variance in the dependent variable earning per share was explained by the model of sales revenue (In simple term, it shows that 67% changes in the dependent variable earning per share is caused by changes in the independent variable of sales revenue (SR). It therefore means that the remaining 33% is caused by other variables not found in the equation but indicated by the error term

Adjusted \( R^2 \)

The adjusted \( R^2 \) value of 0.653402 means that the model is about 65% goodness fit.

Source: Authors computation from annual accounts 2019
The estimated coefficient for Earning per share is negatively influenced by investment in working capital (IWC) indicating that there a negative and insignificant effect of investment in working capital on earning per share. The result is statistical insignificant at 5per cent level of significance. These indicate that a one naira change in investment in working capital will decrease the earning per share.

Interpretation of Durbin Watson Statistics
The Durbin-Watson statistics is 0.491738 which is far below 2. In this case, the Durbin Watson statistics indicates the absence of auto correlation in the series. The result indicates the presence of negative serial correlation in the time series data extracted from the annual report and accounts of the firms.

Co-efficient of Determination (R)

Model Summary
Table showed that R Square, Coefficient of determination, i.e., the squared value of the multiple regression coefficient value is 0.079132; meaning that, approximately 8% of the variance in the dependent variable earning per share was explained by the model of investment in working capital (IWC). It therefore means that the remaining 92% is caused by changes in the independent variable of investment in working capital (IWC). It is therefore important to check the residual and significance of the model.

Test of Hypothesis Three
Restatement of Hypothesis Three
Hₐ: Operating Profit Margin (OPM) does not have significant effect on Earnings Per Share (EPS) in Nigeria pharmaceutical firms.

Table 3. Result of the Regression Model.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>IWC</td>
<td>-67.00469</td>
<td>43.19662</td>
<td>-1.551156</td>
<td>0.1321</td>
</tr>
<tr>
<td>C</td>
<td>95.67540</td>
<td>24.25334</td>
<td>3.944835</td>
<td>0.0005</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.079132</td>
<td>Mean dependent var</td>
<td>70.33333</td>
<td></td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.046244</td>
<td>S.D. dependent var</td>
<td>100.5318</td>
<td></td>
</tr>
<tr>
<td>S.E. of regression</td>
<td>98.17982</td>
<td>Akaike info criterion</td>
<td>12.07582</td>
<td></td>
</tr>
<tr>
<td>Sum squared resid</td>
<td>269899.7</td>
<td>Schwarz criterion</td>
<td>12.16923</td>
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</tr>
<tr>
<td>Log likelihood</td>
<td>-179.1373</td>
<td>Hannan-Quinn criter.</td>
<td>12.10570</td>
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</tr>
<tr>
<td>F-statistic</td>
<td>2.406085</td>
<td>Durbin-Watson stat</td>
<td>0.491738</td>
<td></td>
</tr>
<tr>
<td>Prob (f-statistic)</td>
<td>0.132095</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Authors computation from annual accounts 2019

Table 4. Result of the Regression Model.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPM</td>
<td>489.1379</td>
<td>130.8929</td>
<td>3.736933</td>
<td>0.0008</td>
</tr>
<tr>
<td>C</td>
<td>45.07785</td>
<td>16.68785</td>
<td>2.701238</td>
<td>0.0116</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.322772</td>
<td>Mean dependent var</td>
<td>70.33333</td>
<td></td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.308942</td>
<td>S.D. dependent var</td>
<td>100.5318</td>
<td></td>
</tr>
<tr>
<td>S.E. of regression</td>
<td>83.57196</td>
<td>Akaike info criterion</td>
<td>11.75363</td>
<td></td>
</tr>
<tr>
<td>Sum squared resid</td>
<td>195559.6</td>
<td>Schwarz criterion</td>
<td>11.84705</td>
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</tr>
<tr>
<td>Log likelihood</td>
<td>-174.3045</td>
<td>Hannan-Quinn criter.</td>
<td>11.78352</td>
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<tr>
<td>F-statistic</td>
<td>13.96467</td>
<td>Durbin-Watson stat</td>
<td>0.735458</td>
<td></td>
</tr>
<tr>
<td>Prob (f-statistic)</td>
<td>0.000847</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Authors computation from annual accounts 2019
The estimated coefficient for earning per share is positive for operating profit margin indicating that there is a positive and significant effect of operating profit margin on earning per share. The result is in order with economic theory. The result is also statistically significant at 5 per cent level of significance.

These indicate that a one naira change in operating profit margin will increase the earning per share.

Interpretation of Durbin Watson Statistics
The Durbin-Watson statistic is 0.735458 which is sustainably below 2. In this case, the Durbin Watson statistic is also close to 2 than 0 which indicates the presence of auto-correlation in the series. The result indicates the absence of positive serial correlation in the time series data extracted from the annual report and accounts of the firms.

Co-efficient of Determination (R²)
Model Summary
Table showed that R², Coefficient of determination, i.e., the squared value of the multiple regression coefficient value is 0.332772; meaning that, approximately 33% of the variance in the dependent variable earning per share was explained by the model of operating profit margin (In simple term, it shows that 33% changes in the dependent variable earning per share is caused by changes in the independent variable of operating profit margin (OPM). It therefore means that the remaining 67% is caused by other variables not found in the equation but indicated by the error term
Adjusted R²
The adjusted R² value of 0.308942 means that the model is about 31% goodness fit.

Decision Criteria
Reject the null hypothesis $H_0$ if the t-statistic is greater than 2 and the p-value of the t-statistic is less than 0.05.

3. Result

With the t-statistics of operating profit margin is 3.736933 which is greater than 2 and the p-value is 0.0008 which is less than 0.05. We therefore conclude that Operating profit margin (OPM) has a positive and significant effect on Earnings Per Share (EPS) of Nigeria pharmaceutical firms.

3.1. Discussion of Findings

Finding from the test of hypotheses shows that Sales Revenue (SR) has a positive and significant effect on Earnings Per Share (EPS) of Nigeria pharmaceutical firms. This finding corroborates the findings of Bhunia (2012) of who investigated performance measurement tools and shareholder’s wealth relationships in the context of Malaysian public listed construction companies [46].

The result of hypothesis two shows that investment in working capital (IWC) has a negative and insignificant effect on Earnings Per Share (EPS) of Nigeria pharmaceutical firms, this is in line with the study of Mohamed (2016) who examined the association between the efficiency working capital and firm’s value for a sample of 49 firms registered on Karachi Stock Exchange for the period of 1994-2005 [47]. Which observed that working capital efficiency is important for the firms as it affect the firm’s value and it improves firm efficiency by reducing the investment in working.

The third hypothesis revealed that Operating profit margin (OPM) has a positive and significant effect on Earnings Per Share (EPS) of Nigeria pharmaceutical firms. This is in line with the result of Fama (2016) on the relationship between shareholder value and performance measures of quoted firm in Nigeria. The result of the study indicates that there is a positive and significant impact between sales growth, operating profit margin and working capital and shareholder value while a negative relationship exist between shareholder value and income tax rate of firms in Nigeria.

3.2. Summary of Findings

At the end of this study on the effect of financial factors that determine shareholder’s value of listed pharmaceutical firms in Nigeria. The study revealed that:

i. Sales Revenue (SR) has a positive and significant effect on Earnings Per Share (EPS) of Nigeria pharmaceutical firms.

ii. It was also observed that Investment in Working Capital (IWC) has a negative and insignificant effect on Earnings Per Share (EPS) of Nigeria pharmaceutical firms.

iii. The study equally shows that Operating profit margin (OPM) has a positive and significant effect on Earnings Per Share (EPS) of Nigeria pharmaceutical firms.

4. Conclusion

Therefore, the vital issue confronting managers today is how to choose the investment in working capital and operating profit that would minimise the firm’s cost of capital and improve return to owners of the business. This study examined the effect of capital structure on the earnings per share of Pharmaceutical firms in Nigeria. Findings show that while Sales Revenue and Operating profit margin has a positive and significant effect on the earnings per share investment in working capital has a negative and insignificant effect on earnings per share of pharmaceutical firms in Nigeria.

5. Recommendations

1. Sales revenue indicates what the firms generates from sales at a given point in time, Pharmaceutical firms in Nigeria should employ more of sales strategies in order to generate more sales for the firms to enhance returns to the owners of the business, the shareholders.

2. Investment in Working Capital has a negative and insignificant effect on Earnings Per Share of Pharmaceutical firms in Nigeria. This implies that an increase in Investment in Working Capital with
corresponding increase in interest payment erodes earnings that is due to shareholders. Pharmaceutical firms should explore other forms of financing such as trade credit, trade discounts, and avoid prompt payment of short-term liabilities. This will make funds available for the day-to-day running of the business.

3. Operating profit margin has significant effect on earnings per share of Pharmaceutical firms in Nigeria. This shows that the firms still have room to employ long-term capital. Thus, Pharmaceutical firms in Nigeria should employ more of long-term capital in financing activities for enhanced earnings to shareholders.

References


