

EFFECT OF FIRM FINANCIAL DETERMINANTS ON STOCK RETURN OF LISTED HEALTH CARE FIRMS IN NIGERIA

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Abstract

The study ascertained the effect of firm financial determinants of stock return of listed health care firms in Nigeria from 2010-2019. The study adopts ordinary least square for the analysis and the result shows that earnings per share and market value has positive but insignificant effect on stock return of health care firms in Nigeria, asset growth has negative insignificant effect on stock return while return on equity has positive significant effect on stock return of health care firms in Nigeria. This signifies that increase in return on equity will increase stock return. This could be as a result of more investment by potential investors. From the findings, the study concludes that financial indicators had significantly affected stock return of health care firms as evident from the overall model of the study. The study therefore recommends that investors should consider return on equity and other relevant ratios of the companies and movement in these ratios in selecting a resilient portfolio to invest. Also, the management of health care firms should strive to improve the financial performance in order to maximize the returns of their firms.

Keywords: Financial Determinant, Stock Return

1. Introduction

Corporate organisations exist for the sole reason of creating value to stakeholders, especially shareholders. For this reason, firms that are able to create value are rewarded by the market through generation of profit and operating cash flow that finally accrues to shareholder (Stewart, 2004). Pandey (2005) argued that profit making is among the major objectives of a firm. Thus, shareholder's wealth is mainly influenced by growth in sales, improvement in share price and profit margin, capital investment decisions and capital structure decisions.

Expectations of investors in making investment are to acquire investment return commensurate with the specific risks that have been taken into account. Financial indicators of a firm measures how successful the firm is and how it will be utilised as a benchmark for the investors to invest their funds. High performance contributes to an increase in the stock market price since investors will respond positively to such signs.



Stock price represents the value of the firm and therefore, an increase in stock market price will indicate an increase in a firm's value (Sudiyatno, Puspitasari & Kartika, 2012).

An efficient capital market is characterised by one in which security prices adjust rapidly to the arrival of new information. Therefore, the current prices of securities reflect all information about the security. Championed by Fama (1970), the semi strong form of efficient market hypothesis states that stock prices must contain all relevant information including publicly available information. This has important implications for policymakers and the stock-broking industry alike. According to Horrigan (1995), the most significant source that can give discernibility to investors about the company is the financial statement and the ratios that play a significant role in the market over five years or more. Today the prediction of stock returns has been very important from the investor's point of view.

Because investors' goal in the stock investment is to get return, then the investor or prospective investor needs to select the stock to be bought by considering the risk and return factor. To estimate the potential return, the investors make fundamental stock analysis and technical stock analysis. The financial statements are intended to provide their users with relevant information about the entity which is being reported. Such information should be useful to existing and potential investors, creditors and other stakeholders when making a decision regarding the provision of funds (Accounting Pronouncements Committee, 2012). Generally speaking, this decision is based on the premise that financial information is used to estimate profits, cash flows and stock returns. Thus, it is implicitly assumed that accounting assists the projections of future events and evaluations regarding the firm's risk, performance and value (Lewellen, 2010).

Theoretically, it is reasonable to expect good financial performance to affect equity securities market pricing and yields (premium returns). This is because shareholder wealth is maximised through the enhancement of the share prices of the companies targeted by the investors (Opiyo, Ngugi & Rasowo, 2014). Studies have explored links between firm characteristics and stock returns, for example, the capital asset pricing model of Sharpe (1964) explains stock returns as a function of stocks systematic risk using the beta coefficient. Some firm characteristics have been shown to have a strong ability to explain and forecast stock returns. Fama and French (1992) Size and Market-to-Book have been found to be important measures in explaining cross sectional stock returns. Banz (1981) provides empirical evidence to show that on average, small-size firms yield higher stock returns than large-size firms.

Most of the studies are more concerned about policy making; that is why they concentrated more on the macroeconomic variables determinants of stock return. However, increase in firm specific financial variables tends to show performance of the companies most especially increase in the share prices which have a serious effect on the investment decision by potential investors. Other literatures were unable to capture the specific



variables that this study used, which are EPS, Asset growth, Return on equity and Market value. These studies among others are Narayan and Reddy (2018), Obala and Olweny (2018), Ngunjiri (2016), Issah and Ngmenipuo (2015), Wijesundera, Weerasinghe, Krishna, Gunawardena and Peiris (2015), Nurah and Ghassan (2016), Taani and Banykhaled (2011), and Dadrasmoghadam and Akbari (2015). It is based on this that the study examined effect of firm financial determinants and stock return. Based on the objective of the study, the hypotheses centered on earnings per share, asset growth, return on equity and market value has no significant effect on share returns of listed Health care firms in Nigeria.

The remaining part of the study is structured thus: section two covers the literature review; section three covers the methodology used in the study while result and discussion was carried out in section four and section five gives the conclusion and recommendations.

2. Literature Review

Firm Financial Determinants

A ratio expresses a mathematical relationship between two quantities (Babalola & Abiola, 2013). Financial ratios are used to compare various figures from financial statements in order to gain information about company's overall performance. Ratio analysis is defined as systematic use of ratios to interpret the financial statements so that the strengths and weaknesses of a firm as well as its historical performance and current financial position can be determined (Sahu & Charan, 2013). Information required for ratio analysis is derived from financial statements and some ratios often link accounts from different financial statements such as balance sheet and income statement. Financial ratios can be interpreted as hints, indicators or red flags concerning notable associations between variables used to assess the company's performance. Shareholder value creation ultimately requires positive results in all these areas which will bring about favorable cash flow patterns exceeding the company's cost of capital (Helfert, 2001).

Financial ratio analysis can be used in two different but equally useful ways. It can be used to explore current state of the company in comparison to its past performance, in other words, it tracks financial performance over time. Comparing current performance to past performance is very useful as it enables a market participant to identify issues that need fixing. Moreover, a manager can discover potential problems that can be avoided. By making trend-analysis which compares a specific ratio over years, it is possible to evaluate how a company is performing over time and whether it has improved its financial health or not. In trend-analysis a ratio serves as a red flag for worrying problems or a benchmark for performance measurement. Firm performance can also be measured by making comparative analysis. A ratio can be compared with industry average to find out whether a firm is lagging in performance or doing well. Financial ratio analysis can be used both by internal and external parties. External users can be creditors, security analysts, potential investors, competitors and others. Internal users such as managers use ratio analysis to

monitor company's performance and to assess its strengths and weaknesses (Kharatyan, Nunes & Lopes, i2015).

Stock Return

Stock return is the return of the results obtained from an investment. Stock return is divided into return realization and expected return. Return realization is a return that has occurred and is calculated based on historical data. Return realization is important because it is used as one measure of performance of the company. Historical returns are also useful as a basis for determining the expected return in the future. Return expectations of a return can be expected in the future investors (Jogianto, 2000). Unlike the return realization that nature has occurred, its expected return has not occurred. Stock return can be obtained from the form of dividends and capital gain/loss. Capital gain/loss is the difference more or less than stocks. Dividends are used to measure the performance of stocks based on dividend distribution, the greater the dividend the stock more attractive to investors (Shabib-ulhasan, Farooq & Muddassir, 2015). The higher the stock price indicates that the stock is more attractive to investors because the higher the stock price will result in a greater capital gain. Return realization used in this study is the capital gain/loss is often also called the actual return. According to Jogianto (2000), the magnitude accrual can return to the formula as follows:

 $R_{it} = (\underline{P_t - P_{t-1}}) \quad i X \ 100\% \ \dots \ 1$ P_{t-1}

 R_{iti} = The level of profit share i in period t;

P_{it} = The closing price of stock i in iperiod it (period closing/last);

 P_{t-1} = The closing price of stock i in the previous period.

Price-level indicates the level of current market price relative to various accounting numbers. These measures indicate whether a stock is selling cheap or dear. Factors representing cheapness in price include contemporary market price relative to earnings per share, cash flow-per-share, dividends-per-share, book value-per-share, and sales-per share (Osisanwo & Atanda, 2012). Price level also encompass 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).

Firm Financial Determinants and Stock Return

Narayan and Reddy (2018) examined the impact of traditional (ROA, ROE, ROIC) and modern performance measures (EVA) on stock returns and investigate if there exists any relationship between the said variables in this dynamic world. The data consist of 408 companies listed in the Nifty 500 Index for the period 2002 to 2017 and further sorted to 18 sectors in India. The data relating to EVA, ROA, ROE, ROIC was obtained from



Bloomberg Terminal and stock prices for the companies were extracted from CMIE Prowess database. The study implemented Panel Data Analysis (REM and FEM Model) and Correlation Analysis to get the results. The results indicated a low negative relationship of EVA, ROA, ROE and ROIC with Stock Returns, with the evidence of significant relationship only in case of ROE. REM suggested that the impact of modern performance measures have been more on Stock Returns than traditional measures.

Obala and Olweny (2018) determined the relationship between financial performance and stock returns. Data was obtained from 10 listed banks in the Nairobi Securities Exchange for the period between the year 2011 and 2015. Parameters investigated against stock returns include profitability (ROA), leverage (Debt to Equity Ratio), liquidity (Current Ratio) and firm's growth (Asset growth ratio). The multiple Regression analysis demonstrated that Profitability (ROA), Liquidity (Current ratio) and Firm's Growth (Asset growth ratio) hold a moderate but positive influence on stock returns. However, the relationship between Leverage (Debt to equity ratio) and stock returns was found to be negative and insignificant.

Ngunjiri (2016) examined the relationship between financial performance and stock returns for 67 firms listed at the Nairobi Securities Exchange (NSE) from 2011 to 2015. The study used a descriptive research design and the study employed Ordinary Least Square (OLS) Regression method to estimate the market model parameters (to be used in determining residual effect). The study also adopted multivariate correlation analysis to establish the correlation between financial performance and stock return. The correlation results found a significant positive correlation between financial performance, share price levels and stock returns but found an insignificant positive correlation between dividend payout ratio and stock returns of the listed firms. The results of the regression coefficients found an insignificant positive relationship between financial performance, share price levels and dividend payout (DPR) and stock returns of firms listed at the NSE. The study concluded that there is a direct relationship between financial performance and stock returns hence an increase in financial performance of the listed firms increases stock returns of firms listed at the NSE. The study also concluded that shares prices and dividend payout have a direct impact on stock returns hence an increase in shares prices and dividend payout increases stock returns of listed firms.

Issah (2015) conducted a study on the relationship between profitability ratios and market share prices of publicly traded banking financial institutions in Ghana for the period 2009 to 2013. He concluded that ROA, ROE and ROI have significant linear relationship with market share price with ROE contributing more than ROA.

Wijesundera, Weerasinghe, Krishna, Gunawardena and Peiris (2015) assessed correlation between financial ratios and the predictability of stock returns for companies listed on the Colombo Stock Exchange. The study applies ordinary least squares (OLS) techniques to estimate the predictive regressions in form of simple and multiple models of panel data



sets. For the current study, 60 listed companies were selected and 10 years of data has been analysed from 2004 to 2013. The results highlighted that ROE, EPS and MV/BV have a significant positive relationship with the stock return which is followed by a simple equation to predict the future stock returns.

Nurah and Ghassan (2016) examined the relationship between financial indicators such as profitability and leverage measures and stock return in Amman Stock Exchange, Jordan. The results showed that (GPM), (ROA), (ROE), and (EPS) affect stock return significantly while NPM and leverage measures (DR, DER and ICR) do not have a significant relationship with stock return.

Anwaar (2016) conducted a study to determine the effect of firm performance on stock returns, evidence from the firms listed on FTSE-100 Index, London Stock Exchange over the period 2005 to i2014. According to the results, net profit margin and return on assets have significant positive effect on stock returns while earnings per share has significant negative effect on stock returns.

Taani and Banykhaled (2011) discovered that there is a positive and significant relationship in between market value, debt ratio, operating cash flows and return on equity with earnings per share following a study on the effect of ratios, firm size and cash flow from operating activities on EPS. However, a relationship between firm size and EPS was not observed.

Dadrasmoghadam and Akbari (2015) examined the relationship between financial ratios and stock prices in the food groups, sugar, agricultural machinery and equipment and related services to companies listed on the Stock Exchange from 1999 to i2009. Financial variables including liquidity ratios (current ratio), the activity of (asset turnover), the profitability (rate of return on assets and return on equity), financial leverage (debt) and equity prices is agriculture-related industries. The results of the financial ratio, stock prices depend on Agriculture indicates that the debt ratio, current ratio and return on assets ratio have a significant effect on stock prices. On the other hand, the profitability ratio (rate of return on equity) positively and significantly related to stock exchange agriculture of industry. Finally, the significant negative relationship with stock market activity in the stock industries of agriculture.

Shabib-ul-hasan, Farooq and Muddassir (2015) examined which financial variable explains stock returns better than the others. In the study, four financial variables debt to equity, book to market value of equity, firm size and sale to price are used. The study includes 26 companies from pharmaceutical and chemical sector in Pakistan and listed on the Karachi Stock Exchange. The regression technique is used to see the relationship between stock returns and financial variables. The study found that the best indicator for stock returns in Pakistani stock market is book to market value of equity for the studied period 2000-2009.

Kharatyan, Nunes and Lopes (2015) investigated factors that affect return on equity of a sample of 90 non-financial companies of NASDAQ-100 index. The ordinary least squares method was used for the analysis. The extended DuPont model's components are considered as the primary factors affecting ROE. In addition, other ratios/indicators such as price to earnings, price to book and current are also incorporated. Consequently, the study uses eight ratios/indicators that are believed to have impact on ROE. According to the findings, the most relevant ratios that determine ROE are tax burden, interest burden, operating margin, asset turnover and financial leverage.

Takamatsu and Fávero (2019) evaluate the influence of the informational environment on the relevance of accounting information on stock return from 2004 to 2013. The sample consisted of publicly traded companies from 20 countries classified as emerging by Standard & Poors. It was observed that the financial variable has influence on stock return, except for the price-to-book variable and the asset change variable. The inclusion of variables related to the accounting informational environment offered evidence that the more-opaque the accounting environment in the country, the lesser the ability of the profits to portray the variations of stock returns. The variable that captured the adoption of international standards was consistent with expectations, i.e. the adoption of international standards would increase the quality of accounting information, showing a positive signal. Moreover, the variable aggressiveness of the earnings was statistically significant and negative, consistent with the literature.

3. Methodology

The study adopts ex-post facto research design which shows the effect of financial determinants on stock return from 2010-2019. Secondary data were used and specifically, data were sourced from the health care annual report. They comprised Fidson Healthcare Plc; Glaxo Smithkline Consumer Nig. Plc.; May & Baker Nigeria Plc.; Morison Industries Plc.; Neimeth International Pharmaceuticals Plc.; Pharma-Deko Plc.; Union Diagnostic & Clinical Services Plc., and, Ekocorp Plc. The study conducted pre and post estimation test of descriptive statistics, correlation matrix, variance inflation factor which aid the study to assess the multicollinearity between the independent variables. The study used panel multiple regression and ordinary least square was used for the analysis. The linear regression equation for the study is specified as:

 $SR_{it} = \alpha + \beta_1 EPS_{it} + \beta_2 AG_{it} + \beta_3 ROE_{it} + \beta_4 MV_{it} + \mu_{it}.$

Where: SR = Stock Return; EPS = Earnings per share; AG = Asset growth; ROE = Returnon equity; MV = Market value; t = time frame; $\alpha = Constant Term$; β_{1} - β_{4} = Beta Coefficient; $\mu = error term$



Variables Measurement

Table 1: Variable measurement

Variable Name	Symbol	Description
Stock Return	SR	A price of a single share of a company's stock at year end
Earnings per share	EPS	Net Income After Tax/Total Outstanding Shares; Or annual eps
Asset growth	AG	Annual percentage change in total assets
Return on Equity	ROE	Net Income / Shareholders' equity
Market Value	MV	Market Value of equity – Book value of equity

4. Result

 Table 2: Descriptive Statistics

Variable	Observation	Mean	Std. Dev.	Minimum	Maximum
st	80	7.0411	12.4784	0.17	68
Eps	80	17.1507	27.9420	0.05	199
Âg	80	3.2500	1.6600	-59093	1.0600
Roe	80	0.5543	1.4605	0.0050	9.5857
Mv	80	1.4900	2.7100	3386447	9.8700
с <i>С</i>	. 10 0		. 2020		

Source: Generated from Company's annual report, 2020

From the summary of the variables used in the study, stock return has a maximum return in the market of 68.00000 and 0.17as the minimum return within the period of this study. The mean of stock return of health care firms in Nigeria is 7.041125 while the standard deviation as a deviation from the mean is 12.47848. In like manner, the maximum yield attributable to earnings of the shareholders of health care firms in Nigeria is 19.90000 while it has a lowest increase by 0.050000. The mean is 1.715075 while the deviation from the mean is 27.94202.

The asset growth of the company has increased over the ten years period with a maximum and minimum value of 1.06E+10 and -59093.00. In the same way, the mean of asset growth is 325370135. The firms have return on equity on shareholders with a maximum of 9.585793 and the minimum of 0.005062 while the mean is 0.554318. The maximum market value of health care is 98657614243 and minimum of 3386447.

Table 3: Correlation Matrix

	SR	EPS	AG	ROE	MV			
SR	1.000000							
EPS	0.224994	1.000000						
AG	-0.086428	-0.061037	1.000000					
ROE	0.515814	-0.032944	-0.022649	1.000000				
MV	0.395364	0.098595	-0.061815	0.290377	1.000000			
G 4	1 10 11	2020						

Source: Authors' Computation, 2020

The relationship between the variables shows that firm financial determinants used in the study has both positive and negative relationships with stock return. Earnings per share, return on equity and market value have positive correlation with stock return while asset growth has negative correlation with stock return. However, the correlation is within the threshold that there is no correlation problem with the variables.

Variables Coefficient P-Value VIF t-statistics EPS 0.028870 1.056319 0.2946 1.0172 0.9295 AG -3.84E-11 -0.088766 1.0069 ROE 1.649771 3.098542 0.0028 1.0967 MV 4.46E-11 1.560964 0.1232 1.1091 С 0.0000 4.977605 4.965783 \mathbf{R}^2 0.817850 **F**-statistics 27.75621 **F-significance** 0.000000 Hausman P-Value 0.0005

Table 4: Summary of Regression Result

Source: Authors' Computation, 2020

From the p-value of Hausman specification, fixed effect model is most appropriate because it is less than 5% level of significance; hence, it is used to explain the effect of financial determinants on stock return. It has been discovered that the tolerance level relevant to all variables appears to be below 10, testifying that no collinearity assumption is well confirmed. Besides, on calculating the VIF values, the figures reveal that they prove to fall below the threshold of 10 with regard to all variables. These results allow us to confirm the absence of multi collinearity problem concerning multiple regression models.

The result shows that earnings per share has positive but insignificant effect on stock return of health care firms in Nigeria while asset growth has negative insignificant effect on stock return. Also, return on equity has positive significant effect on stock return of health care firms in Nigeria. This signifies that increase in return on equity by one will increase stock return by 0.0028. This could be as a result of more investment by potential investors. Further, the result signifies a positive but insignificant effect of market value on stock return because it has a p-value greater than 5% level of confidence. The finding of the study is supported by the findings of Narayan and Reddy (2018), Obala and Olweny (2018), Ngunjiri (2016), Issah and Ngmenipuo (2015), Taani and Banykhaled (2011), and, Dadrasmoghadam and Akbari (2015).

The study ascertained that financial determinants used explained 81% variation on stock return while the remaining variation is explained by other variables not included in the model. In the same light, the model is fit with f-statistics less than 5% level of confidence.

5. Conclusions and Recommendations

The study ascertained the effect of firm financial determinants of stock return of listed health care firms in Nigeria shows that earnings per share and market value has positive but insignificant effect on stock return of health care firms in Nigeria, asset growth has negative insignificant effect on stock return while return on equity has positive significant effect on stock return of health care firms in Nigeria. This signifies that increase in return on equity will increase stock return. This could be as a result of more investment by potential investors. The study concludes that financial indicators of companies are very vital to affect changes on stock return over a period of time. The study therefore recommends that investors should consider these ratios of the companies and movement in these ratios in selecting a resilient portfolio to invest. Also, the management of health care firms should strive to improve the financial performance in order to maximize the returns of their firms.

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