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The Effect of Dividend Policy on Share Price Volatility of Some Selected Companies on the Nigerian Exchange

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Abstract

Share Price volatility has exhibited different patterns in different global exchange markets including the Nigerian exchange. Various attempts have been made to unravel the possible causes of this volatility and how they can be mitigated, but there have been fewer studies in this regard, especially in developing economies like Nigeria. Hence the study examined the effect of dividend policy on share price volatility of selected companies listed on the Nigerian Exchange. The study adopted ex-post facto research design and EGARCH for volatility measure. A sample of 49 companies out of 162 companies listed on the Nigerian Exchange during the study period (2010-2020) was randomly selected for the panel data. The study found that the dividend policy had significant relationship with share price volatility (SPV) with Adjusted $R^2 = 0.116$, $Wald_{(3, 2156)} = 32.89$, $p = 0.000 < 0.05$; Specifically, Dividend Payout Ratio (DPR) has significant effect on SPV (DPR = 0.0036, $t(2156) = 4.7237$, $p < 0.05$); dividend yield (DY), dividend per share (DPS) and financial leverage (LEV) had a negative and no significant effect on SPV (DY = -0.0003, $t(2156) = -2.713$, $p > 0.05$; DPS = -0.0508, t-test = -1.8952, $p > 0.05$; and LEV = -0.2066, t-test = -1.4742, $p > 0.05$ respectively). The study concluded that dividend policy have significant effect on share price volatility. The study recommended that companies should focus more on the payout while investors should go for corporate entities with constant payout ratio.

1. Introduction

The expectation of shareholders for investing in corporate organizations is to ensure that they are able to maximize their returns and hence the reason for investing for a long time horizon. It is expected that as companies run their business activities the end result of any investment decision taken by the business managers must be to increase shareholders wealth (Agila & Jerinabi, 2018). Announcement of corporate actions by companies over the last decade has always been met with various reactions by both current and potential shareholders. These reactions has brought about erosion of shareholders wealth while in some instances we have seen different appreciation of the values of the shareholders. With earnings announcements and where companies have had a positive result, the expectation from a market reaction has been mixed. Earnings, relating to the book values of the shareholders return should drive various reactions. Corporate organizations have

declared below par results with their share price still at very high levels (Adenugba, Ige, & Kesinro, 2016) and the question remains what drive the volatility of the wealth of both current and potential shareholders.

When business managers make decisions about certain projects or investments, the objective at most times is to ensure the expected return exceeds the business hurdle rate of capital (Brealey & Myers, 1996). The satisfaction of the shareholders at most times, therefore, brought about the three major decisions by the financial managers. The first major decision faced by financial managers is investment decisions. Investment decisions focus on the benefits to be derived from the expected projects. The projects must generate discounted cash inflows that will exceed the cost invested or expended on the project (Van Horne, 1989). As such, the projects must have a positive Net Present Value (NPV) before they can be accepted. Once the project has a better NPV, the decision is taken to finance the project. The financing decision is the second decision to be taken by financial managers. The financing decision ensures the project is financed from various financing options that are more beneficial to the organization. The beneficial aspect of financing decisions is all about minimizing the cost of that option of financing. Once the project is financed by the least cost method of finance, the dividend decision sets in to ensure that the shareholders or stockholders that have financed such projects have a better return (Brealey & Myers, 1996).

1.1. Statement of the Problem

There have been various researches on dividend theories with a focus on corporate performance, leverage as well as shareholder's perception with mixed conclusions. Agila and Jerinabi (2018); Balagobei and Selvaratnam (2016); Ehikioya (2015) carried out a research on the relationship between dividend policy and share prices with different conclusions on the discourse. Agila and Jerinabi (2018) concluded that dividend policy has an impact on firm performance and shareholders wealth focusing more on dividend per share and Earnings Per share. Sijol and Basit (2016) were inconclusive on the impact of share prices on the manufacturing industries listed on NASDAQ. Farrukh, Irshad, Shams Khakwani, Ishaque, and Ansari (2017) and Ojeme, Mamidu, and Ojo (2015) also concluded on the dividend relevance theory and its impact on shareholders wealth.

In the last ten years (2010 to 2020), shareholders stock performance has measured by the All-Share Index (ASI) has shown a great level of volatility. In 2008, the ASI was 66,371.20 but this has dropped to 20,838.90 in April 2010. The ASI index got to a low of 19,732.34 as at August 2011 and 20,669.38 as at April 2020 (Nigerian Exchange, 2021). The various changes in ASI is a reflection of the value of the shareholders wealth. While in 2020, the Nigerian Stock Market gained about 50% as measured by the ASI, the problem of the high volatility in the shareholders wealth remains a course of concern especially to portfolio investors and clients investment decisions. Various studies carried out by various researchers have had various conclusions on the relationships between dividend elements and shareholder's wealth. Alajekwu and Ezeabasili (2020) find a mixed result between dividend policy proxy and stock market volatility and as such recommended the non-inclusion of dividend in the valuation of shareholders wealth as well as stock riskiness. Araoye, Aruwaji, and Ajya (2019); Uniamikogbo, Ezennwa, and Bennee (2019) conclusions were also mixed from the variables with the overall conclusion of dividend irrelevance theory on stock price volatility. While Araoye et al. (2019) concluded that dividend per share is the major determinants, the dividend payout ratio showed a negative effect on stock price volatility thereby making the conclusion a mixed result. This was also the case with Osakwe, Ezeabasili, and Chukwunulu (2019) where the overall conclusion did not agree with some of the variables in the study. The dividend yield exerted a negative effect on the market price per share which should be a significant factor in the conclusion of the study though dividend payout had a positive impact. From an investor analysis perspective, the important factor is always the dividend yield rather than the absolute value paid out as dividend. The works of Uniamikogbo et al. (2019); Araoye et al. (2019); Ohiaeri, Akinbowale, and Ogumeru (2019); Agila and Jerinabi (2018); Nwaiwu and Ali (2018); Ehikioya (2015) concluded on the relevance of dividend policy on the wealth of shareholders using different proxies.

The above gave rise to different gaps around the impact of dividends on the stock price volatility of listed entities on the Nigerian Exchange (NGX). What effect has the various proxies like dividend yield, dividend payout, leverage on the volatility of share prices in Nigeria? The impact of the number of shares available to be traded as well as the ownership structure at any given period has not been fully explored to know its effect on the volatility of shareholders' wealth. These gaps necessitated the need for a follow-up study on the effects of dividend policy on the volatility of shareholders' wealth in some selected listed companies on the Nigerian Exchange (NGX), which was the main thrust of this study.

1.2. Objective of the Study

The main objective is to ascertain the effect of dividend policy on share price volatility of some selected entities listed on the NGX.

1.3. Research Questions

To what extent does dividend policy effect share price volatility of some selected companies listed on the NGX?

1.4. Hypotheses

    H₀1: Dividend policy has no significant effect on share price volatility of some selected companies listed on the NGX.

1.5. Justification of the Study

    Various studies have been done over the period looking at the information efficiency of the Nigerian Capital market vis-à-vis dividend announcements and shareholder's wealth. Most of the studies around dividend policy have centered on the impact on stock prices and firm performance. Inconclusive opinions have also been established while most of them tilted towards the dividend relevance theory. Within the Nigerian market, the impact of dividend announcements on shareholders' wealth has been met with mixed reactions. Within 2008 and 2020, corporate entities have released information on dividends in the market with mixed reactions from investors. Some companies have not released positive information but their market prices are not impacted thereby raising queries on the information efficiency of markets. Likewise, some companies' performance has not been released to the public over some time or as specified by the regulators with little or no impact on their share prices as well as shareholders' wealth. While the impact of various dividend policies on the volatility of the shareholder's wealth has been studied by various researchers across the globe, that of the Nigerian market still had some dearth. Araoye et al. (2019); Agila and Jerinabi (2018); Olaoye, Olayinka, Ajibade, and Oluwatosin Akinyemi (2016); Ehikioya (2015) at different times examined the effect of dividend, profitability ratios, and payout ratios on stock price volatility with mixed conclusions. While most of the study tends towards the dividend relevance theory, the activities in the market over the last decade and market reaction stated otherwise. Also, most of the studies that have used event studies focus mainly on the period around the announcement dates.The focus of most studies has always been on profitability nature with lesser analysis on the liquidity nature on the stock price volatility. This study was necessary to throw more light on the effects of dividend policy on shareholders' wealth volatility.

2. Review of Literature

2.1. Conceptual Review

2.1.1. Share Price Volatility

    The market or share price of any entity refers to the value per share of the entity at the end of each trading day. While the market prices change during any trading day, the price at the close of trading on any particular day represents the price at the end of that day (Nigerian Exchange, 2021). From a total value perspective, when the value per share is multiplied by the number of outstanding shares at any particular period, it gives the Market capitalization. The market capitalization of companies listed in the NGX has been on the increase when tracked from 2009 to date. Between 2009 and the end of 2014, total market capitalization has doubled from N7.03 trillion to N18.9 trillion. Specific to the Nigerian Stock Exchange, aggregate market capitalization appreciated by 17.5% as of June 2017 from the 2016 December position. As of June 2018, the total market capitalization of the 278 listed equities on the NGX was N23.99 trillion representing an increase of 76% from the December 2017 value of N13.69 trillion and 26.1% for the corresponding period of June 2017 (Central Bank of Nigeria, 2018). As of 30th December 2020, the Nigerian Capital Market grew by about 50% to close the year at 40,270.72 (Nigerian Exchange, 2021). The market price of shares is determined by the forces of demand and supply at the end of each trading day. Market price per share is the value of the equity shares as quoted on the NGX daily (Olowe, 2017).

    The market price volatility sometimes refers to as stock price volatility is the degree of changes in the price of the companies shares due to various information released to the market thereby making it difficult to ascertain what the future price will be. Alajekwu and Ezeabasili (2020) believed that the volatility of the price of shares will vary greatly over time thereby making the future price uncertain to determine. Hence, the lesser the volatility of a given stock price, the greater its attraction to both current and potential investors (Okafor, Mgbame, & Chijoke-Mgbame, 2011).

2.2. Dividend Policy

    Dividend is included as a key decision of the financial managers and represents the outstanding amount shared to the equity holders. According to Brealey and Myers (1996), dividends are often entangled with other financing and investment decisions. Some firms pay low dividends because of the future expectation by management on the firm's value and the need to retain earnings for future growth and expansion. Dividend decision is majorly considered where the company have no pressing st0rategic needs to drive the business growth (Pandey, 2000). This information released by companies on dividend plays and inportant role in the valuation of the companies shares (Brealey & Myers, 1996). Harley and Duro (2017) see dividend as the distribution of past or present earnings in real assets among the various equity holders based on their holding structure. The proxies of dividend policy used in this study are explained below.

2.3. Dividend Per Share

    The announcements of corporate financials in any period are expected to be accompanied by various corporate actions announcements. When the companies decide to pay dividends out to existing shareholders at

a particular date, the announcements will be accompanied by the dividend payment expectation. The unit or rate of dividend in naira amount expected to be paid on individual units of shares held is the dividend per share (Nwaiwu & Ali, 2018). Dividend per share is stated as the total amount of dividend expected to be paid divided by the total number of shares in issue that qualify for dividend (Hirschey & Nofsinger, 2008). Dividend per share is expected to be constant all through the announcements period up to the next dividend period. Dividend is paid per time and not a fraction of the period under consideration (Alajekwu & Ezeabasili, 2020).

2.4. Dividend Yield

The dividend yield is the rate of return to the market on the dividend declared by an organization. The dividend yield is a financial ratio that depicts how much the company pays out in the form of dividend to the existing shareholders (CFA, 2018). When dividend is declared, the investors are majorly concerned about the return the dividend will bring back to them based on the prices at which the stocks were bought. As the prices change daily, the current yield on the dividend paid will change from the date the dividend was declared to the dividend closure date when the share price of the entity is marked down on the floor of the Exchange (Adesola & Okwong, 2009; Ehikioya, 2015; Olowe, 2017).

2.5. Dividend Payout Ratio

The payout ratio is the proportion of the earnings after tax that is paid out as dividend to the existing shareholders as at the closure of the register. Dividend paid out is the fraction of the net income or profit after tax that an entity pays out as dividend to the shareholders (Akintoye, 2006). The profit after tax can be retained completely, paid out to shareholders completely, or split between the retention and dividend at any period based on the organizations' dividend policy. Black (1996) stated that dividend is very important in determining the fundamental value of the company's shares and as such companies should ensure that a part of the profit is paid out to shareholders for the value to be enhanced. Because of the signaling power of dividend as established by Gordon (1959), the payout ratio, as well as the retention ratio, will depict whether the company has the potential to grow the earnings over time. In the dividend valuation model, the amount of dividend is very germane in the business growth potentials of the entity (Brealey & Myers, 1996). The dividend payout was however challenged by Miller and Modigliani (1961) where there they opined that the payment of the dividend does not influence the value of the company's shares in a perfect market scenario but the investment decisions over time. The investment decision is expected to dovetail into corporate performance and the growth in earnings over time and this is what affects the company's shares (De Villiers, Apopo, & Phiri, 2020). The key aspect of the payout ratio has been established by various studies as very important in the determination of the value of a company.

2.6. Financial Leverage

Leverage is the debt obligation of the firms to provide funding to the business rather than asking investors to bring in fresh funds to dilute the capital mix (Olowe, 2017). It is an financing strategy to increase potential returns on the money invested by the equity holders. Leverage can be measured by dividing the total debt by the equity or net debt by the equity. The effect of leverage indicates shows an inverse relationship between stock price volatility and returns on the equity invested (Ajayi & Nageri, 2016). Leverage is part of the capital structure of the firm which Miller and Modigliani (1961) argue that capital structure has no impact on share value. In pecking order theory, leverage is considered secondary source of finance as most viable entity prefer to use retained earnings to finance investment opportunities before any other option is considered, Arsalan, Raza, Aslam, and Mubeen (2016) Shareholders most time have negative perceptions of the use of leverage in the capital structure (Adenugba et al., 2016).

2.7. Theoretical Framework

The works of various researchers on corporate dividend policy have led to various conclusions over time. Two theories were reviewed in this discourse which are Dividend Relevance Theory and Dividend Irrelevance Theory.

2.8. Dividend Relevance Theory

The theory was propounded by Graham and Dodd (1934) where they opined that a given amount of dividend has four times the impact on stock prices as for the same amount of retained earnings. This theory is also called the Rightist Theory and believes that companies should pay out a higher dividend as this will increase the value of the company shares by multiple folds (Brealey & Myers, 1996). The proponents believed that the stock market is continuously in favour of liberal dividends payment as against the nigardly ones and hence want the corporations to continuously pay dividends to the stockholders. The major supporters of this theory are Walter (1956) and Gordon (1959). Walter (1956) as cited by Brealey and Myers (1996); Akintoye (2006); Olowe (2017) opined that dividend payment decisions by organizations are a function of the profitability of investment opportunities available to the firm. They stated that the maximization of shareholder's returns depends on the choice between the firm's internal rate of return and the cost of capital of the firm. Walter (1956) model is based on the following assumptions:

The entity is financed strictly by equity only and all investors do not want any level of risk; The investment opportunities will be financed mainly by retained earnings in the business and as such, there is no external financing or the raising of new funds; The internal rate of return, earnings per share, dividend per share and cost of capital are constant throughout the period; All earnings are either paid out as dividend to the shareholders or retained for internal reinvestment and; The entity has a perpetual or lasting earnings stream (Araoye et al., 2019).

Gordon (1959) main argument centered on the fact that the payment of dividends to the shareholders is to increase the stock price on the floor of the exchange (Hirschey & Nofsinger, 2008). Lintner (1956) gave some propositions to emphasize the need for a constant dividend payout which are:

- Long-run target dividend payout ratio by firms. This is expected by mature firms who have stable earnings and invariable a higher percentage of the profit made is paid out to the investors. Growth firm's on the other hand will have low payouts in other to ensure the stability of the business (Akintoye, 2006).

- Another assumption is that the Manager focuses more on the changes to the dividend levels rather than the absolute levels in previous years and as such will payout a higher dividend in the current year than the previous years. This should boost the firm value based on the rush for the shares in expectation of the dividend payment.

2.9. Dividend Irrelevance Theory

The major proponent of the dividend irrelevant theory is Miller and Modigliani (1961) hypothesis. They opined that the payment of dividends or not does not have an impact on the firm value. They argued that if the company has a given investment decision over time, the dividend payout ratio does not affect shareholders' wealth (Alajekwu & Ezeabasili, 2020). They argued that the major factor affecting the value of the firm is the firm's earnings or its investment policies and as such the split of earnings between dividend and retained earnings is not necessary and will not alter the firm's stock value (Bhalla, 2013; Black, 1996; CFA, 2018). The irrelevance of dividend policy is premised on the following assumptions;

- A perfect capital market with balanced investors and perfect certainty of the ruling market prices (Olowe, 2017). According to Miller and Modigliani (1961), in a perfect market, there is no buyer or seller in the market with large enough transactions to impact the ruling price. Hence all buyers and sellers have equal and costless access to information about factors that affect the ruling price as well as all other relevant characteristics of the shares.

- Second, brokerage fees, transaction costs are not incurred when investors buy and sell securities on the exchange and as such will not impact the value of the shares.

- Also, tax differentials are not applicable either between distributed and undistributed profits or between dividends and capital gains (Araoye et al., 2019). This assumption implies that the same tax rate applies to dividends and capital gains (Agila & Jerinabi, 2018).

- On the rational behaviour assumptions, Miller and Modigliani (1961) explained that investors will always prefer to have more wealth rather than a reduction in their wealth. Hence, they are indifferent as to whether their increase in wealth will take the form of cash payments or an increase in the market value of their shares (Brealey & Myers, 1996).

- Another assumption is that there is a perfect certainty by the investors on future investment plans and the future profits position of the firms.

- There would be no difference between a dividend-paying firm and a non-dividend-paying firm from a market value perspective as long as they are within the same risk class.

The irrelevance of dividend theories was heavily criticized by various scholars based on the assumptions of a perfect market, tax effects and transaction costs. The argument against the theory is that trading of shares on the exchange will always come with transaction costs, tax effect as well as bankruptcy costs (Alajekwu & Ezeabasili, 2020). While Miller and Modigliani (1961) responded accordingly on the issue of tax shield and bankruptcy costs, the theory of dividend remained a puzzle around the globe and Nigeria.

3. Empirical Review

3.1. Dividend policy and Share Price Volatility

Ugwu, Onyeka, and Okwa (2020) used multiple regression analysis to examine the effect of dividend policy and corporate financial performance within companies listed on the consumer goods sector of the Nigerian Exchange (NGX). Data were collected randomly from ten companies listed in the consumer goods sectors for the period between 2015 and 2019. Dividend payout ratio (DPR) and dividend per share (DPS) were used to represent dividend policy while return on equity (ROE) measured corporate financial performance in the study. The result revealed that the proxies for dividend policy are positively related to ROE. Only DPS showed a positive effect on corporate performance while DPR and EPS showed a statistically insignificant effect.

Hossin and Ahmed (2020) examined the impact of dividend policy on stock price volatility within the Bangladesh capital market between 2009 and 2017. An experimental analysis approach was adopted using the fixed and random effects on the data collected from the 10 companies. One of the variables used is the dividend

payout ratio differentiating between cash and stock dividend. Both types of dividends were examined against the stock price volatility. The analysis of the data showed that both cash dividends and stock dividends have a positive impact on stock price volatility. The study further concluded that investors in the Bangladesh market prefer stock dividends to cash dividends. The stock dividend will appreciate over time the investors are expected to have more gain when the shares are sold later in the future.

In a related study, Koleosho, Adegbie, and Ajayi-Owoeye (2020) examined whether there exists a significant relationship between dividend per share and market price per share from an informational efficiency perspective. Fifty-seven companies' data were collected for the period between 2008 to 2019 and the fixed-effects model was used to analyze the pooled data. The study concluded that dividend is an important factor in predicting the movement in stock prices. Hence, it was recommended that dividend payments should be paid and information announced timely to enhance the sustainability of shareholders' wealth.

Ohiaeri et al. (2019) examined the impact of dividend policy on the share price of quoted companies on the Nigerian Exchange (NGX) between 2009 and 2017. One of the proxies used in the analysis was dividend per share and data were collected across ten Nigerian companies within the period. Using secondary data, Hausman's test was used through the multiple panel least square estimation and it was concluded that dividend per share exerted a positive impact on the market price per share within the period under review.

In a related study, Uniamikogbo et al. (2019) empirically analyzed the influence of accounting information on stock price volatility in Nigeria using twenty-two companies listed on the NGX. Data were analyzed through the ordinary least square (OLS) regression method and the study concluded that dividend per share had a negative and significant effect on stock price volatility in Nigeria. This study negates the conclusion Bhattarai (2016); Egbeonu, Paul-Ekwere, and Ubani (2016); Balagobei and Selvaratnam (2016) and Asadi (2013). It is also not in consonance with the conclusion of Osundina, Jayeoba, and Olayinka (2016) and Olaoye et al. (2016). The role of accounting information on stock price volatility was examined by Osundina et al. (2016) with the impact of dividend per share on stock price volatility as one of the hypotheses. Data selected was from 2005 to 2014 from selected listed manufacturing companies in Nigeria. The fixed-effect model was used to analyze the data and they concluded that dividend per share has a positive effect on stock price volatility.

Aribaba, Ahmodu, Ogbeide, and Olaleye (2017) in their study of dividend policy and share price changes within the Nigerian Capital Market examined the effect of dividend per share on stock price changes between 2008 to 2014 using data collected from 15 companies quoted on the NGX. Using regression analysis on the adopted estimated generalized least square method, the study concluded that dividend per share has a negative effect on the stock price changes and the effect is statistically insignificant over the period. Hence, dividend is important and as such investors will prefer dividend payment for cash rather than capital gain in the future. The study emphasizes the bird-in-hand theory as well as the signaling theory. There is a time gap in this study. Also, only the stock price changes effect was considered in the study.

Egbeonu et al. (2016) did a co-integration analysis of dividend policy and share price volatility of companies listed in the Nigerian capital market as of 31 December 2015. Fifty companies were used with a focus on the year 2015 to ascertain the impact of dividend policy on share price volatility. The result of the granger causality test revealed that investors are only interested in stocks with stable and consistent dividend policy and are less interested in companies with low dividend payout. The result of the analysis showed that dividend per share exerted a positive relationship with the stock price volatility and as such dividend payment is very important in determining the volatility of the stock price. The study concludes that investors can make more profits during the period of volatility due to the announcement effect of dividends. While the study emphasizes the ability to make more profit during volatility, the effect of the dividend policy on other measures of shareholders' wealth was not considered. Also, the moderating effects of the number of shares outstanding, ownership structure, and firm size were not considered in the study.

4. Methodology

The *ex-post facto* research design was adopted. Descriptive and inferential statistics were adopted in analyzing the result of the data collected over the sampled period. The population of the study was 162 companies listed on the NGX as of 31 December 2020. Random sampling techniques was adopted in the selection of 49 samples from the population of the companies listed on the growth, main and premium boards of the Nigerian Exchange (NGX). Data were collected for the dependent and independent variables from January 2010 to December 2020. To measure of stock price volatility the GARCH (generalized autoregressive conditional heteroskedasticity) approach was used.

The second stage presents and discusses the regression analysis results based on pooled panel data regression. The estimates of the model parameters were measured by the intercepts and the coefficients which were evaluated through the strength of the independent variables (DPS, DPR, DY, LeV) on the dependent variable (SPV) as well as the use of adjusted R^2. After the analysis, the level of significance of the individual variables, jointly/isolated or specific, effects were determined using both the t-statistics and the F-statistics at a 5% level of significance.

Diagnostic tests were carried out accordingly to know the best suitable estimation technique for each model under this study. Under inferential statitics, the variance inflation factor for each of the explanatory variables

was estimated to test for multicollinearity and this factor implied that the explanatory variables included in all the specified and estimated models were not correlated with one another. For regression analysis, the following diagnostic tests were carried out: Hausman test, the Bresuch-Pagan test for random effect test and the heteroskedasticity, the Testparm FE test for fixed effect test, the Wooldridge test for autocorrelation, and the Pesaran's test of cross-sectional independence.

The Adjusted R^2 measured the proportion of the changes in dividend policy and share price volatility of some listed companies on the NGX. The null hypothesis was rejected when probability value of a model was less than 0.05 or insignificant at 5% and alternate hypothesis was accepted; otherwise, if probability value was more than 0.05, the null hypothesis was not rejected and the alternate hypothesis was rejected.

4.1. Mathematical Model

$$spv_{it} = \alpha + \beta_1 dps_{it} + \beta_2 dpr_{it} + \beta_3 dy_{it} + \beta_4 lev_{it} + \varepsilon_{it} \tag{1}$$

Where
Spv = Share Price Volatility.
 x_1 = $Dividend\ Per\ share\ (DPS)$.
 x_2 = $Dividend\ Payout\ Ratio\ (DPR)$.
 x_3 = $Dividend\ Yield\ (DY)$.
 x_4 = $Financial\ Leverage\ (LeV)$.

Table 1. Descriptive statistics of dividend policy and shareholders wealth volatility.

Variables	Mean	Maximum	Minimum	Std. Dev.	Obs.
SPV	2.623	7.161	0.000	0.645	2156
DY	6.157	460.292	-96.962	22.891	2156
DPR	29.865	561.136	-172.359	44.860	2156
DPS	2.081	70.844	-5.005	6.412	2156
LEV	0.520	6.952	-0.317	0.757	2156

Table 1 - mean, maximum, minimum and standard deviation of the variables. Share Price Volatility (SPV) is the dependent variable. The independent variables are the dividend per share (DPS), Dividend Payout Ratio (DPR) Dividend Yield (DY), Financial Leverage (LEV).

4.2. Interpretation

The SPV has a mean value of 2.623 and a standard deviation of 0.645. The mean value of 262.3%, suggests that on average the share price volatility of the selected firms on the Nigerian Exchange (NGX) is very high. The standard deviation of 64.5% means that there is a dispersion of the share price volatility from the mean to around 65 percent.

DY: The mean value of 6.157 and standard deviation of 22.891. The mean value of 615.7%, suggests that on average the dividend yield of the selected firms on the Nigerian Stock Exchange is very high. The standard deviation of 2289.1% connotes that there is a dispersion of the dividend yield from the mean to around 2289 percent. Thus, the standard deviation value is very far from the mean, suggesting that the dividend yield is susceptible to change over time.

DPR: The mean value of 29.865 and standard deviation of 44.860. The mean value of 2986.5%, suggests that on average the dividend payout ratio of the selected firms on the Nigerian Exchange is very high. The standard deviation of 4486% connotes that there is a dispersion of the dividend payout ratio from the mean to around 4486 percent. Thus, the standard deviation value is very far from the mean, suggesting that the dividend payout ratio is susceptible to change over time.

DPS: The mean value of 2.081 and standard deviation of 6.412. The mean value of 208.1%, suggests that on average the dividend per share of the selected firms on the Nigerian Exchange is very high. The standard deviation of 641.2% connotes that there is a dispersion of the dividend per share from the mean to around 641 percent. Thus, the standard deviation value is very far from the mean, suggesting that the dividend per share is susceptible to change over time.

LEV: The mean value of 0.520 and standard deviation of 0.757. The mean value of 52.0%, suggests that on average the financial leverage of the selected firms on the Nigerian Exchange is very high. The standard deviation of 75.7% connotes that there is a dispersion of the financial leverage from the mean to around 76 percent. Thus, the standard deviation value is far from the mean, suggesting that the financial leverage is susceptible to change over time.

4.3. Inferential Statistics

Table 2 shows the correlation coefficient of Share Price Volatility (SPV), Dividend per share (DPS), DPR, Dividend Yield (DY) and Financial Leverage (LEV). Starting with the test for multicollinearity, the variance inflation factor (VIF) for each of the explanatory variables is less than 10. The VIF are 1.01, 1.07, 1.23 and 3.77

for dividend yield, dividend payout ratio, dividend per share and financial leverage respectively. This implies that the explanatory variables included in all the specified and estimated models are not correlated with one another.

Table 2. Correlation matrix of dividend policy and share price volatility.

Variables	SPV	DY	DPR	DPS	LEV	VIF
SPV	1.0000					N/A
DY	-0.0173	1.0000				1.01
DPR	-0.0277	-0.0006	1.0000			1.07
DPS	0.0320	-0.0201	0.1882	1.0000		1.23
LEV	0.0007	0.0319	-0.0994	0.0130	1.0000	3.77

Table 2 shows the correlation coefficient of the variables. The dependent variable is Share Price Volatility (SPV). The explanatory variables are the DPS, Dividend Payout Ratio (DPR) Dividend Yield (DY), Financial Leverage (LEV).

From the results, dividend per share and financial leverage have positive association with the share price volatility of the selected firms listed on the Nigerian Exchange with correlation values of 0.0320 and 0.0007 respectively. This implies that increases in dividend per share and financial leverage will lead to increase in share price volatility of the selected firms. Conversely, dividend yield and dividend per share have negative association with share price volatility with correlation values of -0.0173 and -0.0277, respectively, thus increases in dividend yield and dividend per share will lead to fall in share price volatility of the selected firms. In addition, dividend yield, dividend payout ratio and dividend per share have insignificant relationship with the share price volatility of the selected firms listed on the Nigerian Exchange. This implies that dividend yield, dividend payout ratio, dividend per share and financial leverage, are not significant factors that influence changes in the share price volatility of the selected firms listed on the Nigerian Exchange.

5. Regression Result

From the results in Table 3 there is evidence that dividend payout ratio has positive relationship with share price volatility, while dividend yield, dividend per share and financial leverage have negative relationship with share price volatility of the selected listed firms in Nigeria.

Table 3. Dividend policy and share price volatility.

Dependent Variable: SPV

Variables	Coefficient	Drisc/Kraay Standard error	t-test	Prob.
Constant	11.9649***	1.0388	11.5182	0.0000
LEV	-0.2066	0.1402	-1.4742	0.1477
DY	-0.0003	0.0012	-0.2713	0.7875
DPR	0.0036***	0.0008	4.7237	0.0000
DPS	-0.0508*	0.0268	-1.8952	0.0648
Adjusted R²	0.116			
Wald-Test	32.89 (0.000)			
Hausman Test	2.65 (0.709)			
Breusch-Pagan RE Test	33512.02 (0.000)			
Heteroscedasticity Test	1707 41 (0.000)			
Serial Correlation Test	1075.76 (0.000)			
Pesaran CSI	8.44 (0.000)			
Observations	2156			

Notes: The dependent variable is Share Price Volatility (SPV), while the explanatory variables are dividend per share (DPS), Dividend Payout Ratio (DPR) Dividend Yield (DY), Financial Leverage (LEV) * Significant at 10%, *** Significant at 1%.

Table 3 reports the Static Panel regression results of the effect of dividend policy on share price volatility of selected listed firms in Nigeria.

Model: $SPV_{it} = \beta_0 + \beta_1 DY_{it} + \beta_2 DPR_{it} + \beta_3 DPS_{it} + \beta_4 LEV_{it} + \mu_{it}$

$SPV_{it} = 11.9649 - 0.0003 DY_{it} + 0.0036 DPR_{it} - 0.0508 DPS_{it} - 0.2066 LEV_{it} + \mu_{it}$

T-test   11.5182   -0.2713   4.7237   -1.8952   -1.4742

In addition, there is evidence that dividend payout ratio has significant effect on share price volatility of the selected listed firms in Nigeria (DPR = 0.0036, t-test= 4.7237, $p < 0.05$). This implies that dividend payout ratio is a significant factor influencing changes in share price volatility of the selected listed firms in Nigeria.

In sharp contrast, there is evidence that dividend yield, dividend per share and financial leverage have no significant effect on share price of the selected listed firms in Nigeria (DY = -0.0003, t-test = -2.713, $p > 0.05$; DPS = -0.0508, t-test = -1.8952, $p > 0.05$; and LEV = -0.2066, t-test = -1.4742, $p > 0.05$). This implies that dividend yield, dividend per share and financial leverage are not significant factors influencing changes in share

price volatility of the selected listed firms in Nigeria. Concerning the magnitudes of the estimated parameters, 1 unit increase in dividend payout ratio will lead to 0.0036 increases in the share price volatility of the selected listed firms in Nigeria, while 1 unit increase in dividend yield, dividend per share and financial leverage will lead to 0.0003, 0.0508 and 0.2066 decrease in the share price volatility of the selected listed firms in Nigeria respectively.

The Adjusted R^2 which measure the proportion of the changes in the share price volatility as a result of changes in dividend yield, dividend payout ratio, dividend per share and financial leverage explains about 12 percent changes in the share price volatility of the selected listed in Nigeria, while the remaining 88 percent were other factors explaining changes in the share price volatility of the selected listed firms in Nigeria but were not captured in the model.

6. Decision

At a level of significance of 0.01, the Wald-test Statistic is 32.89 while the p-value of the Wald-test is 0.000 which is lower than the adopted significance level of 0.01. The study therefore rejected the null hypothesis which means that dividend policy has significant effect on share price volatility of selected companies listed on the Nigerian Exchange (NGX).

7. Discussion of Findings

The findings of the study shows that there is evidence that dividend payout ratio has positive relationship with share price volatility, while dividend yield, dividend per share and financial leverage have negative relationship with share price volatility of the selected listed firms in Nigeria and thus in line with our *a-priori* expectation.

This evidence has empirical linkage with previous studies. For instance, the result aligns with the findings reported by Hossin and Ahmed (2020) that examined the impact of dividend policy on stock price volatility within the Bangladesh capital market between 2009 and 2017. The analysis of the data showed that both cash dividends and stock dividends have a positive impact on stock price volatility. Also, the study agrees in part to the work of Koleosho et al. (2020) when they examined whether there exists a significant relationship between dividend per share and market price per share from an informational efficiency perspective. Fifty-seven companies' data were collected for the period between 2008 to 2019 and the fixed-effects model was used to analyze the pooled data. The study concluded that dividend is an important factor in predicting the movement in stock prices. The conclusion of this study also conforms to the studies of Araoye et al. (2019) and Olaoye et al. (2016). The contrast with the above findings is around the variables of measurement. While the overall conclusion was that dividend was relevant from the dividend payout point of view, the dividend per share (DPS), Dividend yield (DY) and financial leverage exerted a negative relationship with the stock price volatility within the period of review. The studies of Araoye et al. (2019) and Olaoye et al. (2016) however showed a positive relationship between DPS and stock price volatility. The negative conclusion around the DPS and DY confirms the findings of Uniamikogbo et al. (2019). Aribaba et al. (2017) also supported the negative DPS of our findings which concluded that dividend per share has a negative effect on the stock price changes and the effect is statistically insignificant over the period.

From a dividend payout perspective, the conclusions of the study confirm that of Alajekwu and Ezeabasili (2020) when they analyzed the effect of dividend policy on stock market volatility in the Nigerian Stock Market between 2006 and 2016. They confirmed that for non-financial firms, the dividend payout ratio has a significant positive effect on the stock market volatility. Furthermore, it conforms to the study of Osakwe et al. (2019) and Uwuigbe, Jafaru, and Ajayi (2012). This conclusion however negates the findings of Hossin and Ahmed (2020) when they analyzed the impact of dividend payout ratio on stock price volatility within the Bangladesh market using the fixed effect and random effect to analyse the data. The conclusion did not also support that of Araoye et al. (2019) when they concluded that dividend payout negatively affects the volatility of stock prices.

8. Conclusion and Recommendation

The study ascertained that there is a causal relationship between dividend policy and share price volatility of the companies listed on the NGX over the period of the study. This is evident from the significant relationship between dividend payout ratio and share price volatility of the selected listed companies on the NGX. Hence the higher the payout ratio, the higher the volatility expected from the daily share prices. On the contrary, dividend per share, dividend yield and financial leverage have no significant relationship with share price volatility of the selected listed firms in Nigeria. Hence, actual dividend paid (DPS), DY and LEV do not cause volatility in share prices of companies listed on the NGX between 2010 and 2020.

Overall, the study found out that dividend payout ratio influences share price volatility of the selected listed companies on the NGX. Hence, as companies' payout more of their earnings as dividend, the shareholders' wealth will fluctuate positively which will attract new investors to buy the shares for the first time. Conversely, Leverage, DY and DPS do not influence the joint measures of the share price volatility. Hence the major factor affecting the joint effect of the shareholders' wealth is the dividend payout ratio in comparison to the earnings declared over the period.

With dividend payout having significant influence on share price volatility, potential and existing investors should go for listed entities with a high dividend payout ratio compared to the earnings generated by the company. Investors can go for leverage financing to invest in entities with high dividend payouts. The leverage effect will not affect the volatility of the share price as found out from this study (Leverage is negatively correlated with share price volatility but not significant). The payment of dividends will increase the volatility of the share price and will generate higher cashflows to offset the debt exposures.

The research experienced a limiting factor around the unavailability of data for some companies spanning over ten years. This restricted the ability of the study to include all the population in the review and as such restricted the sample to forty-nine (49) companies listed on the NSE as of 31 December 2020. However, this study achieved the objective of the study.

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