Original Research Article

An evaluation of numbers of shares outstanding, ownership structure and firm size on the controlling effect of dividend policy on shareholders wealth volatility of some selected companies listed on the Nigerian Exchange (NGX)

Abstract

Shareholders wealth 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, due to their implications on share valuation as well as the need to reduce market manipulations. Studies have shown that dividend decision has been one of the major puzzles yet unresolved regarding shareholders wealth volatility and there have been fewer studies in this regard, especially in developing economies like Nigeria. This study, therefore, examined the effect of dividend policy on shareholders wealth volatility of selected companies listed on the Nigerian Exchange.

The study adopted *ex-post facto* research design. The population of the study is 162 companies listed in the Nigerian Exchange as at 31 December 2020. A sample of 49 companies were randomly selected. Data for the period (2010 - 2020) were sourced from the NSE, and companies' data on the Bloomberg Terminals and their official websites. Descriptive and inferential (Regression and Correlation) statistics were used to analyze the data. The study found that the dividend policy exerted a significant effect on Shareholders wealth Volatility (*Adj.R^2* = 0.303, $W_{(3, 2156)}$ = 95.82, *p* = 0.000). Firm Size, Numbers of Shares Outstanding and Ownership Structure jointly and significantly controlled the effect of Dividend Policy on Shareholders Wealth Volatility (**Δ***Adj.R^2* = 0.114, $W_{(6, 2156)}$ = 320.41, *p = 0.000*).

`The study concluded that dividend policy affects shareholders' wealth volatility of selected companies listed in Nigeria. The study recommended that the companies should focus more on the payout ratio while investors should go for entities with constant dividend payout ratio. Also, it further recommended that policy owners should enforce adherence to the minimum free float requirements of the Nigerian Exchange.

Keywords: Dividend, Earnings, Leverage, Market capitalization, Nigeria exchange, Numbers of shares outstanding, Ownership structure, Volatility.

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.

Shareholder's wealth relates to the summation of the benefits due to the investors over a period of time. This wealth can be maximized or minimized where information about the company's investments is free or not freely available depending on the quality of such information. The primary objective of the firm is to create value or wealth for the owners of the business and this should maximize their returns over a period of time (Adesina, Uwuigbe, Uwuigbe, Asiriuwa, & Oriabe, 2017; Pandey, 2005). It is expected that improvement in shareholders' wealth will be directly influenced by the performance of the company periodically. The performance of the company is driven by the investment decision taken over a period of time. These investment decisions are a function of the information available for such investments. When managers are evaluating such investments, they do not only consider its accuracy but its availability to the general public (Bhalla, 2013). This will enable the investors to ascertain whether this has already been factored into the price of the financial assets or not (LeRoy, 1989). Hence, the expectations of shareholders over time is the maximization of their returns annually as well as the continued sustainability of the business. Business sustainability centers on the going concern nature of the business.

The dividend decision which ensures the shareholders have a return on their capital invested over the period has been a subject of discussion over the decades and remains a puzzle unresolved. The payment of dividends to the shareholders has always been expected to drive the perception of the shareholders' value of listed companies on the stock exchange market (Black, 1996). There is a general misconception that projects and investment projects are majorly financed by the shareholders over time. The financing decision is not only centered on the equity stakeholders but sometimes financed by the preference capital and debt capitals. These groups of investors have their returns before the dividends are paid to the equity stakeholders. The shares listed on the exchange are for the equity holders as they are the risk bearers. While there is no clear direction on the payment of dividends by the regulators, corporate organizations have adopted various policies to ensure dividend paid reflects the activities within the organization (Agila & Jerinabi, 2018).

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) reviewed the relationship between dividend policy and share prices with different conclusions on the impact of dividend policy on the performance of the entities. 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 shareholder's wealth on the manufacturing industries listed on NASDAQ. Farrukh, Irshad, Khakwani, Ishaque,

and Ansari (2017) and Ojeme, Mamidu, and Ojo (2015) also concluded on the dividend relevance theory and its impact on shareholders wealth.

The Nigerian capital market had experienced different fluctuations over the period as various information are being released by corporate organizations. The various accounting information embedded in the financials of the companies as they are released to the public is subjected to various information which in turn affects the volatility of the share prices (Adesina, Uwuigbe, Uwuigbe, Asiriuwa, & Oriabe, 2017). Such pieces of information include earnings performance, dividend expectations, financial leverage, growth in total assets as well as all other pieces of information that can be depicted from the financials. Other information which includes the volume of outstanding shares of the companies are also factors that are considered by both potential investors and existing shareholders. Most of these pieces of information are expected to cause market reactions based on the status of the information released (Almanaseer, 2019).

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 (NSE, 2020). 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.

To protect shareholders wealth from manipulation by few holders, the Nigerian Exchange introduced the free float requirements that all listed entities must adhere to. The free float is the percentage of a publicly listed companies shares that is available to the public and no level of restriction on it (Oyegunle, 2019). Despite the introduction of the free float regulations for many years, some companies did not comply to this and as such the benefit that could have been attributed to shares availability to the general public could be subject to manipulation by the few holders of the shares. This creates a problem on the numbers of shares available to the public for trading and as such could negatively impact the shareholders wealth (Tolosa & Nicolas, 2018).

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 Ajayi (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 above studies, as well as other studies that have been reviewed on dividend policies and stock price volatilities, focused majorly on the share price as the only dependent variable in ascertaining its effect on shareholder's wealth whereas the definition of shareholder's wealth

encompasses share price of companies. There has been dearth of studies looking at the impact of the dividend on other measures of shareholders' wealth like the changes in the volumes of trades as well as the changes in earnings (EPS) or changes in earnings volatility. The above gave rise to different gaps around the impact of dividends on the shareholders wealth volatility of companies listed on the Nigerian Exchange (NGX). What effect has the various proxies like dividend yield, dividend payout, leverage on the volatility of shareholders' wealth 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.

Objective of the Study

The main objective of this study is to evaluate the effect of dividend policy on shareholder's wealth volatility of some selected companies listed on the Nigerian Exchange (NGX). The specific objectives are to:

1. ascertain the effect of dividend policy on shareholders wealth volatility of some selected companies listed on the NGX;
2. evaluate how the of numbers of shares outstanding, ownership structure and firm size controls the effect of dividend policy on shareholders wealth volatility of some selected companies listed on the NGX.

Research Questions

The following research questions were answered in this study;

1. To what extent does dividend policy effect shareholders wealth volatility of some selected companies listed on the NGX?
2. How does numbers of shares outstanding, ownership structure and firm size control the effect of dividend policy on shareholders wealth volatility of some selected companies listed on the NGX?

Hypotheses

The following hypotheses were tested in the discourse of the study;

H_01:   Dividend policy has no significant effect on shareholders wealth volatility of some selected companies listed on the NGX

H_02:   Numbers of shares outstanding, ownership structure and firm size do not significantly control the effect of dividend policy on shareholders wealth volatility of some selected companies listed on the NGX.

Significance of the Study

Dividend relevance impact has been a major subject of discussion in the previous years and with various research trying to ascertain how it affects the shareholder's wealth from various perspectives. This study followed past studies in this area with an emphasis on dividend policy and shareholder's wealth volatility. Also, the Nigerian economy entered a second recession in five years due to the impact of the COVID-19 pandemic with the stock market experiencing various volatility across the periods. This study would be beneficial to the economy, researchers in the areas of study, students, equity analysts, macro-economic analysts, and the Nigerian Exchange in the following ways:

The researchers in the areas of study would benefit from the study through the understanding of the nature of the Nigeria Capital market in accordance with the impact of various corporate actions announcements on the stock price volatility. Equity analysts would be able to project the impact of the effects of dividend policy on shareholders' wealth volatility over the period. The study will be significant to the financial analysts in projecting the direction of stock prices. Corporate organizations would be able to determine the impact of dividend payments expectation and other corporate actions expectations on the shareholder's wealth. The information efficiency of the market would be determined via the expectation of dividend and earnings payment and the companies would know when to release appropriate information to the market to ensure stakeholder's confidence over the period.

Shareholders and stakeholders would be able to ascertain how various corporate action expectations affect the worth of their investments over a period of time and this would assist them in making adequate decisions whether to hold or divest investments. The Nigerian Exchange management would be able to ascertain how stock price volatility can be used to predict the efficiency of the NGX over the period. The NGX would also know what policy changes are to be put in place to drive market transparency around the announcements of corporate performance to avoid any manipulations. The impact of the numbers of shares outstanding from a liquidity perspective on the volatility of stock prices would be ascertained and therefore drive policy reactions.

Review of Literature

Conceptual Review

Shareholders Wealth Volatility

Shareholder's wealth volatility cannot be explained without looking at what shareholder's wealth means and how it is derived over time. One of the purposes of setting up a business is for profitability which in turn creates value for the shareholders. Company finance theory premised its assumptions of creating value for shareholders as the primary objective of the firm, (Olowe 2017). Where value is the main purpose of financing a company, then the maximization of such value will be at the forefront of the risk-takers who are the shareholders of the firm. The value of the business is related to the value of the ordinary shares owned by the equity holders and traded on the floor of the exchange for companies listed (Tolosa & Nicolas, 2018). The company exists for profit-making. The residual profit remaining after the distribution to other stakeholders

belongs to the ordinary shareholders. Brealey and Myers (1996) opined that any undistributed wealth belongs to the equity shareholders.

Shareholders want to maximize their shareholdings every time and this is done through making investment decisions that will yield positive net present value. Brealey and Myers (1996) and Cleary, Atkinson and Drake (2012) believed that for the value of the shareholders to be maximized, it will always come back to the Net Present Value (NPV) of projects embarked upon by the managers. The shareholder's purchase shares because they want to earn good returns over time on their investment and they want that at low risk. Wealth maximization is a long-run view that resulted from the three major decisions of the managers – Investment decisions through positive NPV projects/capital investment, Financing decisions with the least cost financing strategy to maximize return and Dividend policy which is necessary to give back to the investors, (Bhalla, 2013) and (Olowe, 2017). For shareholders' wealth to be maximized, the share price of the company must increase over time through sustained performance and information to the public. The information content of the proposed dividend by the company will go along away in affecting the worth of the shareholder's investment over the period (Aharon & Yagil, 2019).

At the end of each financial year, companies make announcements on the performance of the company during the accounting period. The performance is also accompanied by the statement of financial position as at the end of the period which shows the growth in the total assets or otherwise. The components of the financial statement are also accompanied by corporate actions in terms of earnings performance and dividend payments. The announcement of such information triggers trading in the value of the shares of the company and this can be positive or negative. The information content of the announcement of the corporate action cannot be underestimated as this could maximize or erode shareholders' wealth (Copeland & Weston, 1983). The basis of financial management and announcement of the information to the public is to the ultimate objective, which is to increase the value to the shareholders, is achieved (Aamir & Ali-Shah, 2011). With this objective of maximizing shareholders' wealth, the corporate managers are saddled with three decisions which are the investment decisions, financing decisions and dividend decisions (Agila & Jerinabi, 2018). With the investment and financing decision being embarked upon positively, the managers must finally take the dividend decisions or otherwise (Aamir & Ali-Shah, 2011).

According to Christiana (2016) cited in Alajekwu and Ezeabasili (2020), the risk of stock price changes will lead to stock market volatility and invariable impacts the shareholder's wealth either positively or negatively. This is why Alajekwu and Ezeabasili (2020) see stock price volatility as the erratic fluctuation in the prices of securities traded on the stock exchange market. Shareholders' wealth volatility can further be explained as the "ups and downs" in the prices of securities during a time (Sadiq, Ahmad, & Anjum, 2013). Overall, the shareholder's wealth volatility, this study looked at shareholders wealth from stock price volatility, earnings volatility and volume of shares volatility.

Dividend policy

This study considered the proxies of dividend policy from dividend per share, dividend payout ratio, dividend yield and leverage.

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 and ranking 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).

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, 2010; Ehikioya, 2015; Olowe, 2017)

Dividend Payout Ratio

The payout ratio is the proportion of the profit 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 (1956), 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 Modiglianni (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).

Financial Leverage

Leverage is the level of debt capital used in financing the business rather than injecting fresh equity into the capital structure (Olowe, 2017). It is an investment strategy of using borrowed funds or capital to increase potential returns. It also refers to the amount of debt a firm uses to finance assets. Leverage can be measured in terms of total debt to equity or net debt to equity. The effect of leverage indicates that stock volatility is negatively correlated to stock returns (Ajayi & Nageri, 2016). Leverage is part of the capital structure of the firm which Modigliani and Miller (1958) argue that capital structure has no impact on share value. In pecking order theory, debt financing (leverage) should be the secondary source of finance for a company as most profitable firms prefer to use retained earnings as a first step in financing their investment projects, (Arslan, Hasan, Muhammad, & Muhammad, 2016).

The use of leverage in the financing structure of companies has some determinants. These determinants include large firm size, growth in the firm's total assets, tangibility in the firm's assets to reduce the risk of bankruptcy (Nwanna & Ivie, 2017). The determinants assist in predicting how leverage impacts the performance of the companies and invariable the growth in shareholder's wealth in the long run. Shareholders most time have negative perceptions of the use of leverage in the capital structure as this can increase the bankruptcy cost of the business in the long run if the financial performance is not sustained (Adenugba, Ige, & Kesinro, 2016). The other risk involved in leverage is that when a firm incurs losses, this will cause greater volatility in earnings and as such affects the market price of the shares as firms will have to pay debt holders first before the equity shareholders (Koleosho, Adegbie, & Ajayi-Owoeye, 2020).

Control Variables

This study considered three control variables which are firm size, ownership structire and numbers of shares outstanding

Ownership Structure

Company shares are owned by different investors as the world has turned into a global village. The ownership structure is the composition of a company's shares and this can be held by local and foreign investors. In each of the compositions, ownership can be further structured into local retails and local institutions. With the presence of the custodian business in Nigeria, foreign institutions can hold the shares of the companies in Nigeria based on their valuations. These holdings which are termed foreign portfolio investments from a macroeconomic perspective have a long way in influencing the volatility of stock prices (Chiang & Chan, 2017).

According to the NSE (2018) report on domestic and FPI transactions, the FPI which increased by 149.84% as of 31st December 2014 to N1.539 trillion from N616 billion in 2007 had decreased by 21% to N1.219 trillion as of 31st December 2018. Between 2007 and 2018, the performance of foreign investors in the market had increased by 97.89%. Over 14 years, the percentage of domestic contributions to the Nigerian capital market decreased by approximately 60% from N3.56tn in 2007 to N1.439tn in 2020 while that of foreign participation increased by about 19% from N616bn to N729bn (NSE, 2020).

Firm Size

When corporate organizations publish their periodic financial statements, one key focus by the investors is the growth of the firm from period to period. The firm size and asset growth differ from entity to entity and it is measured by the ability of the entity to possess different economies of scale to achieve operational efficiency (Sritharan, 2015). With the growth in corporate profitability, it is expected that the size of the firm also improve. Firm performance and firm size are positively related as established from the profit made and the share of the market size over time (Oyelade, 2019). This can also relate to the market capitalization of the company as listed on the exchange. Market capitalization refers to the total market value of a company's outstanding shares on the NGX. It is calculated as the number of outstanding shares multiplied by the market price per share of the company (NGX, 2018; Koleosho, Adegbie, & Ajayi-Owoeye, 2020). 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 4.7% from the December 2017 figures and 26.1% for the corresponding period of June 2017 (CBN, 2018).

Theoretical Framework

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

Dividend Relevance Theory

The theory was propounded by Graham and Dodd (1934) where they contribted that dividend will always influence the value of the firm. This theory is also called the Rightist Theory and advocated for a regular dividend payout ratio to influence the value of the firm (Brealey & Myers, 1996). The major supporters of this theory are Walter (1956) and Gordon (1959). Walter (1956) as cited by Brealey and Myers (1996); Akintoye (2006); 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; 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, Aruwaji, & Ajayi, 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).

Dividend Irrelevance Theory

This was propounded by Miller and Modigliani's in 1961. They stated that dividend payment or not not have an no impact in the determination of the entity's 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). There argument centered around the firm

earnings and investment decisions as one of the major factor that affects the value of the company and as such the split of profit after tax into dividend portion and retained earnings is unnecessary and does not change the firm's valuation (Black, 1996; Bhalla, 2013; CFA, 2018).

The dividend irrelevance theory has some of the folowing assumptions. The first is that there exist a perfect market with potential and existing investors having perfect knowledge of the ruling proces, (Olowe, 2017). The second assumption centered around the transaction costs when investing in the shares of the company as they opined that this is free including brokerage fees. Furthermore, the third assumption stated that there is no tax differentials on profits (distributable and undistributable) as well as dividends and capital gains (Araoye, Aruwaji, & Ajayi, 2019). The other assumptions are; investors are rational and will always consider growth in wealth rather than loss of their wealth. This increase in wealth can be in any form and not necessarily through dividend payments, (Brealey & Myers, 1996). Lastly, they argued that the market value of the dividend paying and non-paying firm will always be the same. The theory was condemned by various scholars on the grounds that market cannot always be perfect as well as tax and transaction costs will always be applicable on transactions executed by clients on the exchange market (Alajekwu & Ezeabasili, 2020).

Efficient Market Hypothesis

Fama (1965) postulated that stock prices should reflect all publicly made available information in an active and efficient market. In an efficient market where information is freely available, nobody is expected to outperform the market as the information is being released to the market (Ajao & Osayuwu, 2012). Financial markets are thus efficient if prices of traded assets and securities are unbiased and reflect all available information to the public. This information is processed by the analyst, individuals and sophisticated investors at the same time and as such the potential of supernormal gains from the market would have been eradicated (Ewah, Esang, & Bassey, 2009; Kofarbai & Zubairu, 2016). Fama (1965) as part of his theory stated that the market can be weak form, semi-strong form and strong form efficient based on the nature of the available information and timing of such information. In all the forms of an efficient market, no one is expected to outperform the market in the long run. Hence as the price moves farther from the intrinsic value, it moves back towards the intrinsic values with the same proportion (Alajberg, Bubaš, & Šonje, 2012). The efficient market hypothesis segregated into the weak, semi-strong and strong form efficiency describes to a greater extent the extent of the relationship among market stock prices behaviour. Information released to the market at intervals should have an impact on the determination of the fundamental values of the assets in an efficient market.

Empirical Review

Dividend Policy and Stock Price Volatility

There have been considerable studies on the impact of dividend payment on the shareholder's 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. The analysis of the data showed that both cash dividends and stock dividends have a

positive impact on stock price volatility. 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.

Singh and Tandon (2019) concluded that the focus of shareholders is not on the dividend payment but the dividend yield on the stock. In line with this, their study on the effect of dividend policy on stock price revealed that dividend payment has a significant effect on the stock price of companies in Indian. The analysis was for fifty companies listed on the exchange and data was collected for the period between 2008 and 2017. Panel data regression analysis was used to conclude the impact of dividend payment on stock prices in the Indian market. Araoye, Aruwaji, and Ajayi (2019) carried out an empirical analysis of the effect of dividend policy on stock price volatility within the Nigerian Stock Exchange. Data from actively trading stock for ten years between 2005 and 2014 were obtained and analyzed through Random effects regression analysis and Wald test ratio. The study concluded that dividend per share is a major determinant of share price volatility on the Nigerian Stock Exchange

Amahalu, Abiahu, Obi and Nweze (2018) analyzed the effect of accounting information market share price of selected firms on the Nigerian Stock Exchange between 2010 and 2016. Coefficient of correlation and simple linear regression analysis were used to analyze the data collected. The result of the analysis revealed that dividend per share has a significant relationship with the market price per share of the companies selected. The study recommended that disclosure of accounting information should be enhanced to boost its impact on shareholders' wealth over the period. Olaoye, Olayinka, Ajibade, & Akinyemi (2016) analyzed the effect of profitability on stock price volatility of listed manufacturing companies on the NGX. Five similar and related companies in terms of firm size, geographical location, legal status, ownership and age were selected and data were collected for a period of ten years from 2005 to 2014. Panel data was used and the data were analyzed using the OLS regression method. The study concluded that dividend per share has a significant positive relationship with stock price volatility within the period of study.

Uniamikogbo, Ezennwa, and Bennee (2019) carried out a study on 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. 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 role of accounting information on stock price volatility was also examined by Osundina, Jayeoba, and Olayinka (2016) with the impact of dividend per share on stock price volatility as one of the hypotheses. Data selected was from 2005 to 2014 for ten years 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.

Dinh and Nguyen (2016) looked at the impacts of cash dividend policy on stock price volatility of ninety-five companies listed on the Vietnam stock exchange. Panel data was used to analyze the fixed effect model and the random effect model of the data collected within the period. The result of the model revealed that there is a significant negative relationship between dividend per share and stock price volatility.

Egbeonu, Paul-Ekwere and Ubani (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.

To look at the importance of accounting variables in predicting the volatility of stock prices in the Bangladesh Stock Exchange (BSE), Das, Bhattacharjee, and Kumari (2020) analyzed whether there exists a significant positive relationship between dividend per share and stock prices. A period of five years from 2015 to 2019 was used and samples were collected from 39 cement companies on the BSE. Panel data regression analysis was used through the fixed effect and random effects models to investigate the relationship between accounting information and stock price volatility. The study concluded that dividend per share is value relevant variable in predicting stock price volatility among the selected companies.

Alajekwu and Ezeabasili (2020) examined the effect of dividend policy on stock market volatility in the Nigerian Stock Market. Data were collected over eleven years from 2006 to 2016 across sixty companies. Panel data regression analysis technique was adopted and a fixed-effect model was used in the analysis. The conclusion of the study was mixed between the financial sector and non-financial sector of the listed companies. For non-financial firms, the dividend payout ratio has a significant positive effect on the stock market volatility. The financial firms' dividend payout ratio has an insignificant positive effect on the stock price volatility within the sample period. The study concluded that financial firms should ignore dividend policy in the valuation of their firms as it has no significant effect on their price movement. The conclusion of this study thus supported the M&M dividend irrelevance hypothesis.

Naz and Siddiqui (2020) investigated the effect of dividend policy on share price volatility in the Pakistani market and used dividend payout ratio as one of the proxies for dividend policy. Multiple regression analysis was used to analyze the data collected from ten companies over ten years from 2010 to 2019. The findings of the study revealed that payout ratio is significantly and positively related to stock price volatility. Hence the higher the payout ratio, the higher the volatility of the stock. The study further noted that there should be adequate disclosure of dividend payout to guide the public on various investment decisions to be taken.

Hossin and Ahmed (2020) expanded the impact of dividend policy on shareholders' wealth in the Bangladesh market to the impact of the payout ratio on stock price volatility. The fixed effect and random effect were differently used to analyze the data collected over the period. Dividend

payout was ascertained to have a negative impact on share prices over the period when examined on the food and allied, ceramics and cement industry in the capital market in Bangladesh.

Araoye, Aruwaji, and Ajayi (2019) continue the effect of dividend policy on stock price volatility by extending to the relationship between dividend payout and changes in the stock price of companies listed in Nigeria. With the use of random regression effects on the data obtained from the companies listed in Nigeria over ten years from 2005 to 2014, they concluded that dividend payout negatively affects the volatility of stock prices as well as the earnings after tax. Hence an inverse relationship between payout ratio and share price volatility. This relationship is also exhibited in the earnings after tax and share price volatility,

Jahfer and Mulafara (2016) examined the effect of dividend policy on share price volatility within the Colombo stock market for 5 years from 2009 to 2013 using the multiple regression model to analyse the data collected. The study revealed that dividend payout ratio has an insignificant but positive relationship with stock price movement for the period under review. The findings in this study imply that there is an inverse relationship between dividend payout and stock price volatility. Hence, a high rate of payout will lead to lower volatility in stock prices. The conclusion of the study is the dividend payout is the major determinant of the stock price volatility and not the yield on the stock over the period. Egbeonu, Paul-Ekwere and Ubani (2016) in their study of dividend policy and share price volatility within the Nigerian market using a co-integration analysis approach examined the causality between dividend payout ratio and share value of quoted firms on the NGX as of 31st December 2015. Data collected from the companies' financials were analysed using multiple regression analysis, Granger causality test, Engle-Granger co-integration techniques, and ARCH/GARCH models. The study conclusion on the dividend payout ratio is that it has a positive insignificant and inverse relationship with the share price volatility in the market. The conclusion of the study favours companies that pay a higher and consistent dividend over the companies that declares huge earnings without payment of dividend to shareholders.

Hooi, Albaity, and Ibrahimy (2015) empirically examined the relationship between dividend policy and share price volatility in the Malaysian market for a period of eleven years from 2003 to 2013. A total of 319 companies were randomly selected from the 798 companies listed on the Kuala Lumpur Stock Exchange as of 31st March 2014. The study concluded that dividend payout is statistically negatively related to share price volatility in Malaysia.

Naz and Siddiqui (2020) examined the effect of dividend yield on stock price volatility in the Karachi Stock Exchange. The focus of the study was majorly the impact of dividend policy on stock price volatility using dividend yield as one of the proxies to measure the dividend policy. Data were collected over ten years from 2010 to 2019 and analysed using fixed and random effects on the panel data collected. The study found a positive relationship between dividend yield and stock price volatility within the period of study. The study further concluded that dividend yield is more preferable to the payout ratio to the investors and it is an important determinant in shareholder's wealth volatility.

Camilleri, Grima, and Grima (2019) carried out an analysis on how Mediterranean Bank's stocks are affected by the effect of dividend policy on stock price volatility. Sixteen years of data were collected from 2001 to 2016 and analysed using regression analysis. The conclusion of the study

was mixed as they considered a longer period that crossed across the financial crisis between 2008 and 2009. When the whole period was considered, dividend yield showed a positive relationship with the stock price volatility and much more important than the dividend payout ratio. However, because of the higher earnings volatility within the financial crisis period from 2008 to 2009, the analysis behaved differently and was traced to the impact of bull and bears that monitored stock prices.

Nguyen, Bui, and Do (2019) looked at the relationship between dividend policy and share price volatility on 141 listed non-financial entities listed in the Vietnam capital market between 2011 and 2016. The five years data were analysed using regression analysis and the fixed effect model after adjusting for any presence of multicollinearity, endogeneity, and causality among the variables. The study found a negative impact between dividend yield and stock price volatility and the impact is statistically significant. Dividend payout was also observed to have a statistically negative effect on stock price volatility.

Zainudin, Mahdzan, and Yet (2018) empirically analyzed the effect of dividend policy on the volatility of stock prices on the Industrial products firms in Malaysia for ten years from 2003 to 2012. The study employed Baskin (1989) framework to analyse the volatility of the stock prices and used regression models to analyse the data collected. The phase analysis of the impacts revealed a negative significant relationship between dividend yield and stock price volatility.

Gautam (2017) further extended the study on the impact of firm-specific variables on stock price volatility to include the moderating effect of financial leverage. The study which focused on commercial banks in Nepal reviewed twenty commercial banks from 2009 to 2016. Correlation and multiple regression analysis were adopted to drive home the effects. The study revealed that a positive relationship existed between leverage and stock return as well as share price volatility. Hence, the higher the leverage ratio, the higher the stock returns as well as the share price volatility. The impact assessment measured by the regression analysis revealed that leverage ratio had a positive effect on the stock return as well as the share price volatility within the sample period. The effect on changes in EPS and RoE were not considered as other measures of shareholder's wealth.

Iqbal, Raza, Farrukh, and Mubeen (2016) empirically examine the impact of different leverage measures on share prices within the Pakistan stock exchange. The variables used for leverage are debt ratio, debt-to-equity ratio and degree of financial leverage while using size as the control variable. Data were obtained from seventeen listed companies in Pakistan for eleven years from 2005 to 2015. The fixed effects and the random effects of the OLS were adopted to analyse the data. The study concluded that both debt ratio and degree of financial leverage have a negative impact on share prices while the debt-to-equity ratio does not have a significant effect on the entities' share prices.

Numbers of Shares Outstanding, Ownership Structure and Firm size on Shareholders Wealth Volatility

Phan and Tran (2019) asked a question on whether ownership structure moderates the effect of dividend policy on stock price volatility within an emerging market. Two emerging markets were used and data were collected over eight years from 2008 to 2015. The ownership structure was

analyzed into state and foreign ownership with state ownership expanded to include local enterprises. The study concluded that both foreign and local state ownership has no impact on stock price volatility after the financial crisis as this was the case before the financial meltdown between 2008 and 2009. The study ascertained that ownership structure has not moderated the relationship between dividend policy and stock price risk within the emerging markets. Hence, the holding of local companies' shares by foreign portfolio investors may not lead to volatility or fluctuation in the stock prices.

Ironkwe and Emefe (2019) examined the role of corporate ownership structure on the performance of firms in the Nigerian market. The focus was on the relationship between ownership concentration and return on equity and data were collected from 2008 to 2017. The ordinary least square model and the error correction model (ECM) were adopted to test the resultant effects and the empirical analysis revealed that there is an insignificant positive relationship between ownership structure and returns on equity within the sample period.

Ogbeide and Evbayiro-Osagie (2019) approach the study of stock price volatility from the perspective of corporate governance of companies listed on the Nigerian stock exchange. The study which examined the impact of corporate governance mechanisms on share price volatility in Nigeria obtained data from twenty listed firms for six years from 2010 to 2015. The study used correlation and the GARCH model to examine the effect of the independent variables which include ownership concentration with the stock price volatility. The study concluded that ownership concentration has a positive but insignificant effect on stock price volatility within the sample period. Hence the concentration of ownership on the publicly listed companies would likely increase the volatility of stock prices002E

Nguyen, Nguyen, Ngo, and Nguyen (2019) used labour productivity and foreign ownership structure in examining its impact on a firm's performance within the Vietnam stock exchange. Eight years data were obtained with 3,961 observations across the various sample size. The firm's performance was represented by Tobin's Q while foreign ownership used the aggregate numbers of shares held by foreign investors in the listed companies. Multiple regression analysis was employed and the study concluded that foreign ownership structure assists in firm's performance. It recommended that potential investors should select stocks with foreign ownership structure as this will maximize their returns.

Jinadu, Uwuigbe, Uwuigbe, Asiriuwa. Eriabie, Ajetunmobi, and Ilogho (2018) examined the impact of ownership structure on the performance of multinational banks in Nigeria between 2010 and 2014. Panel least square regression method, as well as correlational research design, were used to annalized the data collected from the annual reports of the banks. The study used ownership concentration, foreign ownership and domestic ownerships as the independent variables and used returns on assets and equities as the dependent variables to measure corporate performance. Findings from the study revealed a significant negative relationship between ownership concentration and the performance of the multinational banks (MNBs) in Nigeria as well as that of domestic ownership and corporate performance in Nigeria MNBs. The study also found an insignificant positive impact of foreign ownership on corporate performance within the sample size and sample period.

In a related study on deposit money banks in Nigeria, Yahaya and Lawal (2018) found a significant positive effect between ownership structure and financial performance. To reach this conclusion, the study empirically looked at concentrated, managerial and foreign ownership on the returns on asset and equity and obtained data from fifteen different banks listed on the NGX between 2008 and 2016. The study adopted the Generalised Moment Method (GMM) to conclude that institutional ownership has a significant positive effect on financial performance.

Li, Nguyen, Pham, and Wei, (2011) focused on thirty-one emerging markets to measure the effects of larger foreign ownership on stock market returns. The study used panel regression analysis to analyse the effects and empirical results revealed that large foreign ownership has a negative relationship with the stock price volatility among the emerging markets reviewed including Nigeria. The study re-emphasized the stabilization effects on stock price volatility as established in previous studies.

Gbalam and Uzochukwu (2020) examined the moderating effect of dividend policy on share prices of quoted companies in Nigeria. Data were obtained from twelve consumer goods companies over twelve years from 2007 to 2018. The correlation and fixed effect regression technique was adopted to analyse the effect between the variables. The study concluded that firm size moderated dividend yield and as such showed a significant negative relationship with the share price. The study also found out that firm size moderated positively the payout ratio and as such dividend payout by large firms will improve the share price of the entities.

Antunes, Meireles, Sanfelici, and Garcia (2020) carried out an empirical research to examine the effects of firm size on risk and return in the Brazilian stock market. The study adopted a sectoral analysis for monthly data collected between 2000 and 2004. Sixty firms across the various sectors on the Brazillian stock exchange were sampled and ordinary least square analysis was used to examine the extent of the effects. The major objective is to analyze the impact of sector size measured by their market capitalization on the sectorial returns The conclusion of the study revealed that the sectorial market size does not have an effect on the sectorial returns to the market and this does not affect stock return as well as the volatility of the return.

Sutrisno (2020) extended the work done in Indonesia on the determinants of stock price volatility to include the effects of firm size on the volatility of stock price within the Jakarta Islamic Index Companies. Data were collected from sixteen companies across a period of five years from 2014 to 2018 and analysed using panel regression methods. The result of the analysis of the fixed and random effects of the variables revealed that firm size negatively affects stock price volatility. Hence the smaller the size of the firm the higher the volatility of stock price over the period.

Ahmad, Alrjoub, and Alrabba (2018) using multiple regression analysis concluded that firm size measures by the market capitalization of the companies had a negative correlation with the price volatility of the companies listed on the Amman Stock Exchange. Furthermore, it concluded from the regression analysis that firm size has a positive significant effect on stock price volatility. The study concluded that the result of the positive effects implies that larger firms have lower share price risk and price volatility than smaller firms. This study used data gathered from 228 firms listed on the exchange and relates to seven years from 2010 to 2016.

Ayuba, Balago, and Dagwom (2018) examined the effects of firm level attributes on the returns of corporate stock of the top twenty-five stocks on the NGX between 2007 and 2016. Panel regression analysis was employed to analyse the data collected over ten years. The study measured firm size through the market capitalization of the listed companies sampled. The test result revealed a negative but insignificant effect of firm size on stock returns within the top twenty-five stocks on the NGX. The result however showed a positive correlation between firm size and price-earnings ratio of the listed firms.

Al Qudah and Yusuf (2015) in the study of the relationship between dividend policy and stock price volatility among Jordanian firms obtained data for ten years from 2001 to 2011. Among the independent variable is the size of the firm used as a moderating variable and measured by the market capitalization of the listed entities. The study adopted regression and correlation analysis to understand the effects of the independent variables on the stock price volatility. The result of the correlation analysis revealed that firm size has a negative relationship with the volatility of stock price within the sample period whereas it is positively related to other variables like the dividend yield, earnings volatility and payout ratio.

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 variables (SWV) 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.

Mathematical Model

$$SWV_{it} = \alpha + \beta_1 dps_{it} + \beta_2 dpr_{it} + \beta_3 dy_{it} + \beta_4 lev_{it} + \varepsilon_{it} \dots\dots\dots\dots\dots\dots (1)$$

$$SWV_{it} = \alpha + \beta_1 dps_{it} + \beta_2 dpr_{it} + \beta_3 dy_{it} + \beta_4 lev_{it} + \beta_5 NOS_{it} + \beta_6 LOS_{it} + \beta_7 FOS_{it} + \beta_8 fz_{it} + \varepsilon_{it}. ..(2)$$

Where

$Y = Shareholder's\ wealth\ volatility\ (SWV);$

$X = Dividend\ Policy$

$x_1 = Dividend\ Per\ share\ (DPS)$

$x_2 = Dividend\ Payout\ Ratio\ (DPR)$

$x_3 = Dividend\ Yield\ (DY)$

$x_4 = Financial\ Leverage\ (LeV)$

$z_1 = Number\ of\ Outstanding\ Shares\ (NoS)$

$z_2 = Ownership\ Structure\ (OS)$ which is sub divided into Local Ownership Structure (LOS) and Foreign Ownership Structure (FOS)

$z_3 = firm\ size\ (FZ)$

Data Analysis and Presentation of Results

Dividend Policy and Shareholders Wealth Volatility
The study consists of quarterly data for the period 2010-2020 for forty-nine (49) listed firms in Nigeria. The descriptive presented in Table 1 is the mean, maximum, minimum and standard deviations, and the numbers of observations for each of the dependent and independent variables.

Table 1   Descriptive Statistics of Dividend Policy and Shareholders Wealth Volatility

Variables	Mean	Maximum	Minimum	Std. Dev.	Obs.
SWV	13.745	18.207	0.000	2.383	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
FZ	3.612	6.063	0.000	1.294	2156
LOS	6.642	13.226	0.000	0.995	2156

FOS	8.435	14.507	0.000	0.970	2156
NOS	2.746	4.023	0.000	0.874	2156

Source: Researcher`s computation (2021)

Notes: Table 1 shows the mean, maximum, minimum and standard deviation of the variables. The dependent variable is Shareholders Wealth Volatility (SWV). The explanatory variables are DPS, DPR, DY, LEV. The moderating variables are Local Ownership Structure (LOS), Foreign Ownership Structure (FOS), Firm Size (FZ), and Numbers of Shares Outstanding (NOS). All the values were calculated from the 2156 firm-quarterly observations for forty-nine firms. The estimation process was facilitated using EVIEWS 10.

Interpretation

From Table 1, **SWV** has the mean value of 13.745 and standard deviation of 2.383. The mean value of 13.745, suggest that on the average the shareholders wealth volatility of the selected firms on the Nigerian Exchange is very high. The standard deviation of 2.383 connotes that there is a dispersion of the shareholders wealth volatility from the mean. Thus, the standard deviation value is far from the mean, suggesting that the shareholders wealth volatility is susceptible to change over time.

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. The minimum value of -0.317 and maximum value of 6.952 indicate that the selected firms on the Nigerian Exchange have different levels of financial leverage. This further implies that while some of the sampled firms have negative financial leverage, others have high financial leverage.

FZ: The mean value of 3.612 and standard deviation of 1.294. The mean value of 361.2%, suggests that on average the firm size of the selected firms on the Nigerian Stock Exchange is very high. The standard deviation of 129.4% connotes that there is a dispersion of the firm size

from the mean to around 129 percent. Thus, the standard deviation value is far from the mean, suggesting that the firm size is susceptible to change over time.

LOS: The mean value of 6.642 and standard deviation of 0.995. The mean value of 6.642, suggest that on the average the local ownership structure of the selected firms on the Nigerian Stock Exchange is very high. The standard deviation of 0.995 connotes that there is a dispersion of the local ownership structure from the mean to around 0.995. Thus, the standard deviation value is very far from the mean, suggesting that the local ownership structure is susceptible to change over time.

FOS: The mean value of 8.435 and standard deviation of 0.970. The mean value of 8.435, suggest that on the average foreign ownership structure of the selected firms on the Nigerian Stock Exchange is very high. The standard deviation of 0.970 connotes that there is a dispersion of the ownership structure from the mean to around 0.970 per cent. Thus, the standard deviation value is very far from the mean, suggesting that foreign ownership structure is susceptible to change over time.

NOS: The mean value of 2.746 and standard deviation of 0.874. The mean value of 274.6%, suggests that on average the numbers of shares outstanding of the selected firms on the Nigerian Exchange is very high. The standard deviation of 87.4% connotes that there is a dispersion of the numbers of shares outstanding from the mean to around 87 percent. Thus, the standard deviation value is far from the mean, suggesting that the number of shares outstanding is susceptible to change over time. The minimum value of 0.000 and maximum value of 4.023 indicate that the selected firms on the Nigerian Exchange have different levels of numbers of shares outstanding.

Inferential Statistics

Table 2: Correlation Matrix of Dividend Policy and Shareholders Wealth Volatility

Variables	SWV	DY	DPR	DPS	LEV	FZ	LOS	FOS	NOS	VIF
SWV	1.0000									N/A
DY	-0.0046	1.0000								1.01
DPR	**-0.1027**	-0.0006	1.0000							1.07
DPS	-0.0323	-0.0201	**0.1882**	1.0000						1.23
LEV	**0.0699**	0.0319	**-0.0994**	0.0130	1.0000					3.77
FZ	0.0250	0.0146	**0.1188**	**0.2163**	**0.1054**	1.0000				1.91
LOS	**0.0712**	0.0131	**-0.0933**	0.0308	**0.7614**	**0.0803**	1.0000			3.14
FOS	**0.0614**	0.0327	**-0.0541**	0.0481	**0.8433**	**0.1775**	**0.8010**	1.0000		4.89
NOS	-0.0222	**0.0813**	**0.0811**	**-0.1135**	**0.1745**	**0.6240**	**0.0968**	**0.2777**	1.0000	2.05

Source: Researcher`s computation (2021)

From the results, leverage, firm size, local ownership structure and foreign ownership structure have positive association with the shareholders wealth volatility of the selected firms listed on the Nigerian Exchange with correlation values of 0.0699, 0.0250, 0.0712, and 0.0614, respectively. This implies that increases in leverage, firm size, local ownership structure and foreign ownership structure will lead to increase in shareholders wealth volatility of the selected firms. Conversely, dividend yield, dividend payout ratio, dividend per share, and number of shares outstanding have negative association with shareholders wealth volatility with correlation values of -0.0046, -0.1027, -0.0323, and -0.0222 respectively, thus increases in dividend yield, dividend payout ratio, dividend per share, and number of shares outstanding will lead to fall in shareholders wealth volatility of the selected firms. In addition, dividend payout ratio, leverage, local and foreign ownership structure have significant relationship with the shareholders wealth volatility of the selected firms while dividend yield, dividend per share, firm size and numbers of shares outstanding have insignificant relationship with the shareholders wealth volatility of the selected firms listed on the Nigerian Exchange. This implies that while dividend payout ratio, leverage, local and foreign ownership structure are significant factors influencing changes in the shareholders wealth volatility of the selected firms, dividend yield, dividend per share, firm size and numbers of shares outstanding are not significant factors that influence changes in the shareholders wealth volatility of the selected firms listed on the Nigerian Exchange.

REGRESSION RESULT

Table 3 Dividend Policy and Shareholders Wealth Volatility
Dependent Variable: SWV

Variables	Coefficient	Drisc/Kraay Standard error	t-test	Prob.
Constant	13.5339***	0.3459	39.1238	0.0000
LEV	0.3348**	0.1325	2.5277	0.0293
DY	0.0020	0.0014	1.4981	0.1414
DPR	0.0006***	0.0001	4.0302	0.0000
DPS	0.0030	0.0057	0.5317	0.5977
Adjusted R^2	0.303			
Wald-Test	95.82 (0.000)			
Hausman Test	4.23 (0.375)			
Bresuch-Pagan RE Test	15316.17 (0.000)			
Heteroscedasticity Test	2806.88 (0.000)			
Serial Correlation Test	211.93 (0.000)			
Pesaran CSI	7.77 (0.000)			
Observations	2156			

Source: Researcher`s computation (2021)

Notes: Table 3 reports the Static Panel regression results of the effect of dividend policy and shareholders wealth volatility of selected listed firms in Nigeria. The dependent variable is Shareholders Wealth Volatility (SWV), while the explanatory variables are dividend per share

(DPS), Dividend Payout Ratio (DPR) Dividend Yield (DY), and Financial Leverage (LEV). * Significant at 10%, ** Significant at 5%, *** Significant at 1%.

Model 7:

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

$$SWV_{it} = 13.5339 + 0.0020 DY_{it} + 0.0006 DPR_{it} + 0.0030 DPS_{it} + 0.3348 LEV_{it} + \mu_{it}$$

T-test   39.1238   1.4981   4.0302   0.5317   2.5277

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

In addition, there is evidence that dividend payout ratio and financial leverage have significant relationship with shareholders wealth volatility of the selected listed firms in Nigeria (DPR = 0.0006, t-test = 4.0302, $p < 0.05$ and LEV = 0.3348, t-test= 2.5277, $p < 0.05$). This implies that dividend payout ratio and financial leverage are significant factors influencing changes in shareholders wealth volatility of the selected listed firms in Nigeria.

In sharp contrast, there is evidence that dividend yield and dividend per share have no significant relationship with shareholder wealth volatility of the selected listed firms in Nigeria (DY = 0.0020, t-test = 1.4981, $p > 0.05$; and DPS = 0.0030, t-test = 0.5317, $p > 0.05$). This implies that dividend yield and dividend per share are not significant factors influencing changes in shareholders wealth volatility of the selected listed firms in Nigeria.

Concerning the magnitudes of the estimated parameters 1 unit increase in dividend yield, dividend payout ratio, dividend per share, and financial leverage will lead to 0.0020, 0.0006, 0.0030, and 0.3348 increases in the shareholders wealth volatility of the selected listed firms in Nigeria, respectively.

The Adjusted R^2 which measure the proportion of the changes in the shareholders wealth volatility as a result of changes in dividend yield, dividend payout ratio, dividend per share and financial leverage explains about 30 per cent changes in the shareholders wealth volatility of the selected listed in Nigeria, while the remaining 70 per cent were other factors explaining changes in the shareholders wealth volatility of the selected listed in Nigeria but where not captured in the model.

Decision Rule
The Wald-test Statistic of 95.82 with a probability value of 0.000 is significant at 1 per cent level, this implies that the null that there is no significant effect of dividend policy on shareholders wealth volatility of some selected companies listed on the NSE was rejected and the alternative hypothesis that there is significant effect of dividend policy on shareholders wealth volatility of some selected companies listed on the NSE was accepted.

Table 4. Numbers of Shares Outstanding, Ownership Structure and Firm Size on Dividend Policy and Shareholders Wealth Volatility
Dependent Variable: SWV

Variables	Coefficient	Robust Standard error	t-test	Prob.
Constant	10.8310***	2.9999	3.6105	0.0003
LEV	0.0537***	0.0143	3.7627	0.0000

DY	0.0019	0.0018	1.0754	0.2822
DPR	0.0005	0.0015	0.3144	0.7532
DPS	0.0110***	0.0020	5.4110	0.0000
LOS	0.1288	0.1719	0.7491	0.4538
FOS	0.2087	0.4858	0.4296	0.6675
FZ	0.2771**	0.1118	2.4781	0.0417
NOS	-0.2469	0.2934	-0.8415	0.4000
Adjusted R^2	0.417			
Wald-Test	320.41 (0.000)			
Hausman Test	3.69 (0.884)			
Bresuch-Pagan RE Test	15516.54 (0.000)			
Heteroscedasticity Test	2069.43 (0.000)			
Serial Correlation Test	161.58 (0.000)			
Pesaran CSI	-1.58 (0.115)			
Observations	2156			

Source: Researcher`s computation (2021)

Notes: Table 4 reports the Static Panel regression results of the moderating effect of numbers of shares outstanding, ownership structure and firm size on dividend policy and shareholders wealth volatility of selected listed firms in Nigeria. The dependent variable is Shareholders Wealth Volatility (SWV), while the explanatory variables are DPS, DPR, DY, and LEV. The control variables are Local Ownership Structure (LOS), Foreign Ownership Structure (FOS),Firm Size (FZ), and Numbers of Shares Outstanding (NOS) * Significant at 10%, ** Significant at 5%, *** Significant at 1%.

Model 2:
$$SWV_{it} = \beta_0 + \beta_1 DY_{it} + \beta_2 DPR_{it} + \beta_3 DPS_{it} + \beta_4 LEV_{it} + \beta_5 LOS_{it} + \beta_6 FOS_{it} + \beta_7 FZ_{it} + \beta_8 NOS_{it} + \mu_{it}$$

$$SWV_{it} = 10.8310 + 0.0019 DY_{it} + 0.0005 DPR_{it} + 0.0110 DPS_{it} + 0.0537 LEV_{it} + 0.1228 LOS_{it} + 0.2087 FOS_{it} + 0.2771 FZ_{it} - 0.2469 NOS_{it} + \mu_{it}$$

T-test   3.6105   1.0754   0.3144   5.4110   3.7627   0.7491
0.4296   2.4781   -0.8415

From the results in Table 4, there is evidence that dividend yield, dividend payout ratio, dividend per share, financial leverage, local ownership structure, foreign ownership structure, and firm size have positive relationship with shareholders wealth volatility of the selected listed firms in Nigeria while number of shares outstanding has negative relationship with shareholders wealth volatility of the selected listed firms in Nigeria.

In addition, there is evidence that dividend per share, financial leverage, and firm size have significant effect with shareholders wealth volatility of the selected listed firms in Nigeria (DPS = 0.0110, t-test = 5.4110, $p < 0.05$; LEV = 0.0537, t-test = 3.7627, $p < 0.05$; and FZ = 0.2771, t-test = 2.4781, $p < 0.05$). This implies that dividend per share, financial leverage, and firm size are significant factors influencing changes in shareholders wealth volatility of the selected listed firms in Nigeria.

In sharp contrast, there is evidence that dividend yield, dividend payout ratio, financial leverage, local ownership structure, foreign ownership structure, and number of shares outstanding have no significant effect with shareholders wealth volatility of the selected listed firms in Nigeria (DY = 0.0019, t-test = 1.0754, p > 0.05; DPR = 0.0005, t-test = 0.3144, p > 0.05; LOS = 0.1288, t-test = 0.7491, p > 0.05; FOS = 0.2087, t-test = 0.4296, p > 0.05; and NOS = -0.2469, t-test = -0.8415, p > 0.05). This implies that dividend yield, dividend payout ratio, financial leverage, local ownership structure, foreign ownership structure, and number of shares outstanding are not significant factors influencing changes in shareholders wealth volatility of the selected listed firms in Nigeria.

Concerning the magnitudes of the estimated parameters 1 unit increase in dividend yield, dividend payout ratio, dividend per share, financial leverage, local ownership structure, foreign ownership structure, and number of shares outstanding will lead to 0.0019, 0.0005, 0.0110, 0.0537, 0.1288, 0.2087, and 0.2771 increases in the shareholders wealth volatility of the selected listed firms in Nigeria, respectively while 1 unit increase in number of shares outstanding will lead 0.2469 decreases in the shareholders wealth volatility of the selected listed firms in Nigeria, respectively.

The Adjusted R^2 which measure the proportion of the changes in the volume of shares volatility as a result of changes in dividend yield, dividend payout ratio, dividend per share, financial leverage, local ownership structure, foreign ownership structure, firm size, and number of shares outstanding explains about 42 per cent changes in the shareholders wealth volatility of the selected listed in Nigeria, while the remaining 58 per cent were other factors explaining changes in the shareholders wealth volatility of the selected listed in Nigeria but were not captured in the model.

Decision Rule

The Wald-test Statistic of 320.41 with a probability value of 0.000 is significant at 1 per cent level, this implies that the null that there is no significant controlling effect of numbers of shares outstanding, ownership structure and firm size on dividend policy and shareholders wealth volatility of some selected companies listed on the NSE was rejected and the alternative hypothesis that there is significant controlling effect of numbers of shares outstanding, ownership structure and firm size on dividend policy and shareholders wealth volatility of some selected companies listed on the NSE was accepted.

Table 5 . Comparison of the Changes in the Models

Variables	Main Objective				Controlling Objective				%age Change
	Coefficient	Drisc/Kraay Standard error	t-test	Prob.	Coefficient	Robust Standard error	t-test	Prob.	Coefficient
Constant	13.5339***	0.3459	39.124	0	10.8310***	2.9999	3.6105	0.0003	-20%
LEV	0.3348**	0.1325	2.5277	0.029	0.0537***	0.0143	3.7627	0	-84%
DY	0.002	0.0014	1.4981	0.141	0.0019	0.0018	1.0754	0.2822	-5%
DPR	0.0006***	0.0001	4.0302	0	0.0005	0.0015	0.3144	0.7532	-17%
DPS	0.003	0.0057	0.5317	0.598	0.0110***	0.002	5.411	0	267%
LOS					0.1288	0.1719	0.7491	0.4538	
FOS					0.2087	0.4858	0.4296	0.6675	
FZ					0.2771**	0.1118	2.4781	0.0417	
NOS					-0.2469	0.2934	-0.8415	0.4	
Adjusted R^2	0.303				0.417				38%
Wald-Test	95.82 (0.000)				320.41 (0.000)				234%
Hausman Test	4.23 (0.375)				3.69 (0.884)				-13%
Bresuch-Pagan RE Test	15316.17 (0.000)				15516.54 (0.000)				1%
Heteroscedasticity Test	2806.88 (0.000)				2069.43 (0.000)				-26%
Serial Correlation Test	211.93 (0.000)				161.58 (0.000)				-24%
Pesaran CSI	7.77 (0.000)				-1.58 (0.115)				-120%
Observations	2156				2156				0%

When the variables were compared with the main variables, the result showed that leverage, DY and DPR decreased by 84%, 5% and 17% respectively while DPS increased by 267%. Also, without the controlling effect, DPR and LEV are the significant factors influencing the changes in shareholders wealth. However, with the controlling variables introduced, DPS is the significant factor influencing the changes alongside the LEV ratio. The adjusted R^2 improved by 38% from 31% to 42% thereby improving the explanatory variables used in the study

Discussion of Findings

The study assesses the effects of dividend policy on shareholders wealth volatility of forty-nine (49) quoted companies delisted on the Nigerian Stock Exchange for the period 2010-2020. Two hypotheses were examined and their results are summarized below. The first hypothesis of the study is to ascertain the effect of dividend policy on shareholders wealth volatility of some selected companies listed on the NSE. The estimated regression for the first model shows that there is evidence that dividend payout ratio and financial leverage have a significant positive effect with shareholders' wealth volatility, while dividend yield and dividend per share does have a significant effect with share price volatility of the selected listed firms in Nigeria. Also, the null hypothesis that dividend policy has no significant effect on shareholders wealth volatility of some selected companies listed on the Nigerian Exchange (NGX) was rejected and the alternative hypothesis that dividend policy has significant effect on shareholders wealth volatility of some selected companies listed on the NGX was accepted.

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. The study further concluded that investors in the Bangladesh market prefer stock dividends to cash dividends. Also, the study agrees in part to the work of Koleosho, Adegbie, and Ajayi-Owoeye (2020). The conclusion of this study also conforms to the studies of Araoye, Aruwaji, and Ajayi (2019), Amahalu, Abiahu, Obi and Nweze (2018) and Jayeoba, and Olayinka (2016) and Olaoye, Olayinka, Ajibade, & Akinyemi (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) and Dividend yield (DY) had no significant effect on shareholders' wealth volatility within the period of review. The studies of Araoye, Aruwaji, and Ajayi (2019), Amahalu, Abiahu, Obi and Nweze (2018) and Jayeoba, and Olayinka (2016) and Olaoye, Olayinka, Ajibade, & Akinyemi (2016) however showed a positive relationship between DPS and stock price volatility.

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, Ezeabasili, and Chukwunulu (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 second hypothesis of the study is to evaluate the controlling effect of numbers of shares outstanding, ownership structure and firm size on dividend policy and shareholders wealth volatility of some selected companies listed on the NGX. The estimated model for the fourth model shows that there is evidence that dividend per share, dividend yield, dividend payout ratio, leverage, ownership structure (both foreign and local), and firm size have positive effect with shareholders wealth volatility, while number of shares outstanding has negative relationship with shareholders wealth volatility of the selected listed firms in Nigeria. Also, the null hypothesis that Numbers of shares outstanding, ownership structure and firm size do not significantly control the effect of dividend policy on shareholders wealth volatility of some selected companies listed on the NGX was rejected and the alternative hypothesis that Numbers of shares outstanding, ownership structure and firm size significantly control the effect of dividend policy on shareholders wealth volatility of some selected companies listed on the NGX was accepted.

The result of the study is in consonant with the findings reported by Yahaya and Lawal (2018) when they found a significant positive effect between ownership structure and financial performance. To reach this conclusion, the study empirically looked at concentrated, managerial and foreign ownership on the returns on asset and equity and obtained data from fifteen different banks listed on the NSE between 2008 and 2016. The study adopted the Generalised Moment Method (GMM) to conclude that institutional ownership has a significant positive effect on financial performance. The findings of this study also conformed to that of Chiang and Chan

(2017) when they examined the impact of foreign ownership on the firm's stock return volatility between the period of 1994 to 2014 within the Taiwan capital market. The conclusion of this study negates the findings of Sutrisno (2020) within the Indonesian market when they examined the determinants of stock price volatility within the Jakarta Islamic Index Companies from 2014 to 2018. Also, it does not align with the conclusion of Phan and Tran (2019) when they concluded that both foreign and local state ownership has no impact on stock price volatility.

This result negates the findings of previous studies. For instance, the study conducted by Gbalam and Uzochukwu (2020) on the moderating effect of dividend policy on share prices of quoted companies in Nigeria shows that firm size moderated dividend yield and as such showed a significant negative relationship with the share price. The study also found out that firm size moderated positively the payout ratio and as such dividend payout by large firms will improve the share price of the entities. Also, Antunes, Meireles, Sanfelici, and Garcia (2020) carried out an empirical research to examine the effects of firm size on risk and return in the Brazilian stock market. The conclusion of the study revealed that the sectorial market size does not have an effect on the sectorial returns to the market and this does not affect stock return as well as the volatility of the return. In addition, Sutrisno (2020) extended the work done in Indonesia on the determinants of stock price volatility to include the effects of firm size on the volatility of stock price within the Jakarta Islamic Index Companies. Data were collected from sixteen companies across a period of five years from 2014 to 2018 and analysed using panel regression methods. The result of the analysis of the fixed and random effects of the variables revealed that firm size negatively affects stock price volatility.

Conclusion and Recommendation

The purpose of this study is to examine the relationship between dividend policy and shareholders' wealth volatility of some selected companies listed on the Nigerian Exchange between January 2010 and December 2020. The study ascertained that there is a causal relationship between dividend policy and shareholders' wealth 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 shareholders wealth 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.

Overall, the study found out that dividend payout ratio and financial leverage influence the volatility of shareholder's wealth 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. The positive effect of the financial leverage on the shareholders' wealth volatility implies that the debt profile of the companies will cause volatility in the joint measures of the shareholders' wealth. Conversely, DY and DPS do not influence the joint measures of the shareholder's wealth. 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. Hence, actual dividend paid DPS and DY do not cause volatility in share prices of companies listed on the NGX between 2010 and 2020.

Firm size, ownership structure (Local & Foreign) and numbers of shares outstanding have a significant controlling effect on dividend policy and shareholders wealth volatility. Specifically, when the controlling variables were introduced, dividend per share, financial leverage, and firm size significantly influenced changes in shareholders' wealth volatility while dividend yield,

dividend payout ratio, financial leverage, local ownership structure, foreign ownership structure, and number of shares outstanding showed the reverse.

The study recommended that

i. Dividend policy has been found out to have a significant relationship with the volatility of shareholders' wealth on listed companies in Nigeria. 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.

ii. The investors should also hold more units of the high dividend-paying stocks and benefit more from the high dividend yield at the point of the announcements of the dividend. The investors should hold more shares of the companies with low outstanding numbers of shares as this would rally the share price upward. Current or existing investors should ensure they hold stocks of companies with constant dividend payout ratios to maximize their returns at the point of exit.

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