

## DIVIDEND POLICY AND SHARE PRICES OF COMMERCIAL BANKS IN NIGERIA: A PANEL DATA ANALYSIS

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### Abstract

*The focal point of this study is to ascertain whether the value of a share is directly linked to the dividend policy of the firm. A total of 15 quoted banks were chosen for the period 2000 to 2015. The data estimation is based on cross-sectional Ordinary Least Square regression analysis to find the nexus between share price and the dividend policy measures: dividend yield and dividend payout ratio. The study used share market price as the dependent variable whereas dividend pay-out ratio and dividend yield are the explanatory variables. The study results reveal that noteworthy positive relationship exists between share price and the two key dividend policy measures: dividend yield and dividend payout ratio. Consequently, the study recommends that since the banking sector has a high-payout clientele who value dividend paying shares more than non-dividend paying shares, corporate managers should pursue generous dividend policy that maximizes shareholder's value considering the effect of such strategic decision on the bank's shares.*

*Keywords: dividend policy, dividend yield, share market price, dividend pay-out ratio, shareholders' wealth maximization*

### Introduction

Financial managers of firms make decisions that lead to shareholders' wealth maximization as reflected in share prices. Since dividends constitute a proportion of the aggregate returns expected by the shareholders, investors always watch out for declared profits and how it is appropriated by the company. Dividend policy is a firm's policy regarding the apportionment of earnings to shareholders by way of dividends and retention of earnings for reinvestment in the firm in the interest of shareholders. It is concerned with financial policies as regards paying a cash dividend presently or paying an increased dividend later. More so, it requires striking a balance betwixt the shareholders' desire for current dividends and the firm's needs to finance growth. Moyer (2001) states that "Dividend policy determines the ultimate distribution of the firm's

earnings between retention (that is reinvestment) and cash dividend payments of shareholders". Dividend policy is a function of the nature of the firm, class of shareholders and profitable position. Some of the determinants that frame a firm's dividend policy include; legal restrictions, liquidity position, availability of better investment opportunities, profitability, sources of finance, growth rate of the firm, stability in earnings, tax policy, capital market conditions, financial flexibility, stockholder characteristics, flotation costs and signaling incentives.

Dividend constitute one of the most valuable signaling devices used by well-informed managers to present the company in the best possible light to the financial market characterized by asymmetric information. Consequently, a high dividend payout is believed to engender higher

stock price, by and large. In an efficient capital market, this useful information will be reflected in stock price changes immediately following a public announcement (Aharony & Swary, 1980). Bilgrami (1997) asserts that "dividend policy is therefore one of the noteworthy components of a firm's corporate policy as it has a direct nexus with the value of a firm". Therefore, dividend policy must be appraised in the view of the objective of the firm which is to adopt a policy that will maximize the value of the firm's shareholders (Vanhorn, 1975).

Dividend policy as a source of controversy persists notwithstanding periods of empirical and theoretical research. In the words of Black (1976), "The harder we look at the dividend picture, the more it seems like a puzzle, with pieces that just don't fit together." Baker, Farrelly and Richard (1995) assert that "the effect of dividend policy on a corporation's market value is a subject of long-standing controversy". Even though corporate dividend policies have been subjected to intense theoretical and empirical investigation for over three decades, they remain fundamentally unexplained (Megginson, 1996). According to Afza and Mirza (2010), the theoretical irresolution on the relevance of dividend policy to drive a firm's value makes it among the most controversial studies.

Two competing modern theories exist in literature on the role of dividend policy in determining a firm's value. The financial analysts against dividends believe that dividend policy is immaterial as investors are able to create "homemade" dividends by selling a portion of their portfolio of equities if they need cash. Miller and Modigliani (1961) fall into this category and they contend that share price does not in any way depend on the firm's dividend policy. Alternatively, Gordon (1962), Clendenin (1958), Durand (1957), Walter (1956, 1963) and Lintner (1962) dispute M&M's proposition and affirmed that share prices are highly determined by a firm's dividend policy. They assumed that since investors possess incomplete information regarding a firm's profitability, dividends serve as a signal of anticipated cash

flows. These arguments gave rise to what is known as the 'dividend controversy'. Consequent upon this controversy, several studies have been executed by different scholars to resolve this crucial argument though with varying conclusions. The focus of this study therefore is to further examine empirically the probable effect of dividend policy on share market price of quoted commercial banks in Nigeria.

### **Theoretical Framework**

There are two distinct and opposing theories on dividend policy and its effect on firm value, namely, the dividend supremacy theory and the dividend irrelevance theory. These hypotheses relate to the effects of dividend policy in perfect capital markets, whereas actual securities' markets suffer from several imperfections, the most important of which, from the viewpoint of dividend policy, includes the existence of transactions costs and of differential taxes on income from dividends and capital gains.

### **Dividend Supremacy Theory**

Several studies have proven that most investors prefer regular streams of cash dividends to promise of higher income in the future. The syllogism behind the effect of dividend policy on a firm's share value can be described as the "bird-in-the-hand" argument and the "dividend supremacy" argument. The "bird in the hand" hypothesis states that firms choosing to pay higher current cash dividends will enjoy higher stock prices since shareholders prefer current dividends to future ones. Specifically, most investors would rather receive cash dividends which are much safer than capital gains, which might or might not be realized by the investor at the end of the investment period (Gordon, 1959). Here, "the bird in the hand" refers to dividends while "the bush" refers to capital gains. Kirshman (1969), first of all put forward the "bird in hand" argument, that stocks of firms with liberal dividend policy (paying larger dividends) will definitely command a higher price merely because stock holders prefer present to expected values. The dividend supremacy argument states that an investor who plans to hold his share in perpetuity

expects nothing other than dividends. This implies that there exists a high-payout clientele who value dividend paying shares more than non-dividend paying shares.

The clientele theory alludes that dividend policy affects stock prices. It asserts that each firm attracts a clientele of investors who prefer its dividend payout policies. As such, the shares of firms with liberal dividend policy will usually command a higher value than a firm which follow a policy of high retention. This paves way for future issues of corporate securities. Firms with an established dividend record attract clienteles or shareholder groups which gravitate to that firm due to its historical dividend policy. Hence, such firms with satisfactory history of dividend disbursements are more attractive to potential investors, and in turn tends to drive up the company's stock market price due to increased demand. More so, older and retired investors may prefer a high dividend pay-out while younger investors with longer investment horizon will prefer profits to be ploughed back in the firm rather than paid out as dividends. Furthermore, high-income investors are assumed to want growth stocks which pay no cash dividends and instead have large capital gains which enjoy a preferential income tax. Contrarily, low-income investors tend to buy income stocks which tend to pay good cash dividends.

Solomon (1963) contends that dividends may offer tangible evidence of the firm's finesse to generate cash and consequently, the dividend policy of the firm may affect the share price. Walter (1963) also develops a theoretical model in which he argues that "the choice of dividend policies almost always affect the value of the firm". Similarly, Graham and Dodd (1934) states that "a typical investor would certainly prefer to have his dividend today and let tomorrow take care of itself". In the same vein, Gordon (1962) in expressing the "bird in hand" argument stated more convincingly that unpredictability increases with futurity making the value of a share dependent on the dividend policy. Therefore, the shareholders would willingly pay higher price for those shares that pay the higher

current dividend, all other things held constant. Specifically, the more generous the dividend policy, the higher will be the price of the share. Williams (1939) in his quote, "a cow for her milk, a hen for her eggs and a stock by heck for her dividends" suggests that "dividends were all that mattered".

According to Ross (1977), the cash dividends payment conveys the profitability and financial strength of a company to shareholders. Therefore, when a firm significantly alters its dividend policy, investors assume that the firm is responding to an anticipated change in the firm's profitability which will last long. An increase in payout ratio signals to shareholders a permanent or long term increase in a firm's anticipated earnings. It is thus argued that the announcement of adjustments in dividend policy influences share prices. Dividend increases are concomitant to positive stock price changes while dividend cuts are associated with negative stock price changes.

#### **Dividend Irrelevance Theory**

Series of arguments against the dividend supremacy hypothesis gave rise to the dividend irrelevance theory. The critics of dividend relevance hypothesis point to obvious evidence that there have been cases of company stocks with low or zero payouts enjoying high market prices or high payout stocks with depressed market prices. Modigliani and Miller (1961), specified a theoretical model to prove the irrelevance of dividends in share valuation which is in disagreement with Gordon's bird-in-the-hand model. In their opinion, the 'dividend irrelevance theory' suggests that in perfect capital markets, holding investment policy of a firm constant, the firm's choice of dividend policy is irrelevant to investors as it does not affect a company's stock price. According to them, investors are solely interested in the aggregate returns on shares and are indifferent as to whether the returns come about through dividends or capital gains on the shares.

They argue that "the market value of the firm depends on its earning power and the risk of its

assets (investment policy) and that the manner in which it splits its earnings stream between dividends and retained earnings does not affect this value". Again, they argued that dividends could affect value only due to information content of dividends and clientele effect. They explained that without the allotment of dividends, an investor who wants current cash can create a home-made dividend by vending part of his/her shares at the market price to reduplicate the cash as expected. Similarly, investors who earned unneeded dividends can use them to acquire more shares and maintain or increase their ownership in the company. This connotes that investors care less about a company's dividend policy since they can stimulate their own. A firm that pays dividends tends to finance its investment plan externally. Therefore, M&M's dividend irrelevance argument is hinged on the fact that when firms pay dividends, its advantage is countervailed by external financing. Thus, the shareholders are indifferent between earnings retention and dividends payment.

### **Determinants of Share Price Movements**

The stock market is risky due to the regular fluctuation in stock prices. This justifies the rationale why investors and finance managers have been repeatedly faced with the dilemma of accurately forecasting stock prices to earn appropriate returns. Investment in shares provides investors the benefit of liquidity in addition to the opportunity to earn returns higher than the market average. Two noteworthy theories are fundamentally created to clarify the drivers of share prices; they include retained earnings hypothesis and dividend hypothesis. The dividend hypothesis attributes the clarification of share prices to the extent of earnings that are appropriated as dividends. Share prices of firms with tremendous dividend payout would be higher. Specifically, share price will rise as dividend payout increases. Contrastingly, retained earnings hypothesis argues that higher share prices are outcomes of higher retained earnings. Retained earnings being a valuable source of internal

financing for business development impact on share prices by their impact on future earnings.

Several studies have been finalized to identify the drivers of stock price movements in different stock markets. The existing literature strongly advocates that the movement of stock price is engendered by fundamental factors (company specific) such as dividend, book value, earnings; external factors (government regulations, interest rate, foreign exchange rate); market sentiments and technical factors. Some other researchers identified inflation, investor behaviour, liquidity and market behaviour as drivers of stock prices.

Mian, Muhammad, Hailey and Farhan (2010) investigated the role of dividend policy in determining stock prices volatility in Pakistan using selected 73 firms from Karachi Stock Exchange during 2003-2008. By applying random effect and fixed effect models on the panel data, the results revealed that dividend policy has a robust significant nexus with the stock price volatility in Karachi Stock Exchange. Md. Reaz, Rahman, and Md. (2013) examined the drivers of share prices of firms in the monetary sector of Bangladesh quoted on Dhaka Stock Exchange (DSE) during 2005 to 2011. Some variables like net profit after tax, price earnings ratio, net asset value, earnings per share were selected from extant literature as drivers of stock prices. Using regression model, the results of the study show that earnings per share, net asset value, net profit after tax and price earnings ratio have strong relationship with stock prices.

Malhotra and Tandon (2013) examined the drivers of prices of stocks in the National Stock Exchange (NSE) using 95 selected companies from 2007 to 2008, 2011 to 2012. Their result indicate that dividend yield has a significant inverse relationship with the market price of the firms' stocks whilst earning per share, book value, and price-earnings ratio have a significant positive relationship with firms' stock price. Similarly, the initial work on drivers of share prices by Collins (1957) for banks in U.S identified net profit, dividend, book value and operating earnings as the prime movers of

share prices. Nooshin, Ezatollah and Kamran (2012) examined the impact of dividend policy on stock price volatility of 68 firms quoted on Tehran stock exchange between 2001 and 2012. Using cross-sectional OLS regression analysis, the results of the study show that a significant negative relationship exists between share price volatility and two key dividend policy measures: payout ratio and dividend yield.

Khaled, Mgbame and Aruoriwo (2010) examined the nexus between dividend policy (dividend payout, dividend yield) and stock price volatility using listed companies in the UK for the period 1998 to 2007. The results of the study suggest that a significant negative relationship exists between the dividend yield, payout ratio of a firm and its stock price volatility. This implies higher the payout ratio is associated with less volatile stock price. Hence, payout ratio is a key driver of stock price volatility in UK. Mehr-un-Nisa and Mohammad (2012) examined the empirical nexus between the stock prices, macroeconomic factors and financial fundamentals in Karachi Stock Exchange by employing the dynamic panel Generalized Method of Moments (GMM) technique in analyzing the data of 221 firms between 1995 and 2006. Their study indicates that previous behaviour of stock prices, previous earnings per share and company size are the most noteworthy factors. Additionally, macroeconomic indicators like, GDP growth, financial depth and rate of interest have significant nexus with the stock prices. Share turnover ratio, inflation and market to book value can equally influence the stock price behaviour.

Arslan, Farooq, Syed and Hasan (2015) examined the drivers of share price of firms in oil & gas and cement sector listed on Karachi Stock Exchange using a panel data between 2008 and 2013, the study reveals that book value per share and earnings per share are positive and significant drivers of share price in both sectors while dividend yield is negatively significant in cement sector. One of the most significant indicators considered by investors planning to invest on a share is share price, hence, share price is a

function of dividend policy. Dividend may influence share prices and the return owing to signaling effect (Walter, 1956). Malaolu, Jonathan and Anthony (2013) examined the macroeconomic drivers of stock price changes in Nigeria by analyzing both the long-run and short run dynamic nexus between the stock price movement and the macroeconomic variables for the period 1985 to 2010 using the Engle-Granger two-step cointegration test. Their results indicate that the monetary policy variables (real exchange rate, money supply, real interest rate) including political instability are not the drivers of stock price movements in Nigeria.

Sulaiman and Kazem (2015) specifically reviewed the microeconomic drivers of firms' equity share price. Their results revealed that earning per share, dividend per share, book value per share, price earnings ratio, size of the firm and dividend payout are significant factors impacting the firm's equity share price by the corporate finance scholars. Fatima and Aminul (2014) reviewed extant studies to ascertain whether dividend, earnings per share and retained earnings are drivers of stock price as captured by several studies. Their study reveals that dividend policy (information asymmetry, information contents of dividend, signaling theory, dividend yield and clientele effect) have noteworthy impact on market price of common stock.

### **Empirical Review**

In corporate finance, the dividend policy of a firm involves ascertaining the proportion of surplus to be apportioned to shareholders and how much to be ploughed back for investment (Sanjeeva, 2004). Therefore, dividend policy is necessary for taking investment and financing decision. The dividend announcement is so imperative in some economies that firms are even compelled to pay dividend using external finances (Mookerjee, 1992). Baker and Wurgler (2004) assert that "the decision to pay dividends is driven by prevailing investor demand for dividend payers". Hence, managers give investors what they currently want. Specifically, managers pay dividends only when

investors put a relatively high stock price on firms that pay dividend, and omit dividends when investors prefer non-payers. Therefore, companies that do not pay dividends likely commence dividends when demand is high and omit dividend payments when demand is low.

Numerous empirical studies on the effect of dividend policy on share price of a firm have been carried out by various researchers in both developed and developing countries globally with conflicting results. Duke, Ikenna and Nkamare (2015) conducted a study to investigate the impact of dividend policy on share price valuation using two Nigerian banks. Their results revealed that dividend yield positively affected share price while retention ratio negatively but significantly affected share price. Ehikioya (2015) investigates the possible impact of dividend policy on the value and performance of Nigerian firms by selecting 81 listed firms between 2001 and 2010. Using panel data regression model to analyze the data, the study confirmed the relevance of dividend policy on firm value.

Roni, Thaler and Kent (1995) investigated the responses of the market to cash dividend payments initiations and omissions. In consonance with prior literature, the study finds that the intensity of short-run price reactions to dividend omissions outweighs that of dividend initiations. The study reveals that omission announcements are associated with a mean price drop of about 7 percent, whereas dividend initiations are associated with a price increase of over 3 percent. Their study conforms to previous studies on dividend omissions (Healy and Palepu, 1988), and dividend initiations (Asquith and Mullins, 1983). Zahra and Mousa (2014) examined the impact of dividend policy on share price volatility using selected 51 out of 470 companies in Tehran Stock Exchange betwixt 2007 and 2012. Using multivariable panel regression model, the result of the study show that dividend payout ratio has a significant but negative effect on stock price volatility, asset growth rate has a significant and positive effect on stock price volatility whilst earning volatility, company size and leverage do

not significantly affect stock price volatility. Dividend pay-out decision constitutes part of the crucial components of the corporate policy that it affects the value of the firm (Bilgrami, 1997). According to Friend and Puckett (1964), Pettit (1972), Watts (1973); Fama and Babiak (1968), Nishat (1991), demand for shares is positively related to firm's dividend pay-out behaviour and accompanied by higher increase in the share prices.

Some other studies have shown that share values react quickly to dividend announcements like dividend initiations (Asquith and Mullins, 1983), dividend increases and reductions (Aharony and Swary, 1980; Charest, 1978; Eades, Hess, and Kim, 1985; and Pettit, 1972), and omissions (Eades, Hess, and Kim, 1985; Kalay and Loewenstein, 1985; Pettit, 1972; Ghosh and Woolridge, 1988). Miller and Rock (1985) suggested that "dividend announcements provide the missing pieces of information about the firm and allows the market to estimate the firm's current earnings".

Aharony and Swary (1980) documents how stock market investors react to dividend increases, decreases and continuations. They show that dividend increases result, on average, in a statistically significant 0.35 percent positive stock price change (abnormal return) while dividend continuation cause no measurable change in stock price, dividend cuts (or eliminations) are viewed as true disasters-yielding statistically significant average stock price declines of between 1.13 and 1.46 percent on the announcement day and cumulative stock price declines of between 4.62 and 5.39 percent over the two-week period preceding and including the day the dividend cut is announced. Black and Sholes (1974) generated 25 portfolios of common stock in New York Stock Exchange to investigate the impact of dividend policy on share price between 1936 and 1966 by using capital asset pricing model (CAPM) to test the nexus betwixt dividend yield and anticipated return. The findings point to the fact that no significant nexus exists betwixt dividend yield and expected return. Also,

they showed that the assertion that diversity of dividend policies will lead to change in stock prices does not exist. Their findings are in line with 'dividend irrelevance hypothesis'.

Kanwal (2012) establishes that stock dividend have a significant and positive nexus with stock market prices and significantly explains the changes in the stock prices of chemical and pharmaceutical sector of Pakistan while a negative and insignificant nexus exist betwixt retention ratio, return on equity and stock prices. Yasir, Zernigah and Muhammad (2012) examined the nexus betwixt dividend policy and share price volatility in Pakistani stock market. Using cross sectional regression, their study shows that share prices are positively related to dividend yield but negatively related to payout ratio, suggesting that dividend policy affects share price volatility in Pakistan. The study by Sen and Ray (2003) in India revealed that dividend pay-out is by far the only important factor affecting stock prices. Beisland (2014) in his work on the impact of retained earnings on share price determined that a positive nexus subsists betwixt stock price and retained earnings.

According to the survey by Baker, Gail and Edelman (1985), the financial managers indicate that they felt dividend policy does affect share value. The respondents seemed to think that signaling (information content of changes in dividend policy) and clienteles were the chief variables linking dividend to shareholder value. Since the dividend decision of a firm ultimately affects the market value of the company's shares, the optimum dividend policy of a firm therefore seeks to maximize the market value of the firm's shares thereby maximizing shareholders' wealth. Furthermore, Bhattacharya (1979), Miller and Rock (1985), John and Williams (1985) pointed out that dividend payment is considered a signal to future firm's profitability. Hence, firms that initiate or increase dividends experience increases in their share price whereas the reverse is the case for firms that reduce or omit dividends. Similarly, the agency cost explanation for cash

dividends by Easterbrook (1984) predict that share values will decrease in proportion to the severity of the dividend reduction, with omissions generating the largest negative change in equity values.

Baskin (1989) alludes that "dividend payout and dividend yield negatively impacts on share price volatility". He further noted that high dividend payout can be interpreted as stability of a firm and reduce the fluctuation in share price of the firm. Kalay and Handjinicolaou (1984) indicate that dividend increases cause both stock and bond prices to increase, suggesting that dividend payments do not represent attempts to expropriate bondholder wealth but are instead firm value-maximizing steps by corporate managers. Other studies by Power and MacDonald (1995), Nishat (1992) and Naamon (1989), investigated the effect of retained earnings and cash dividends on common stock prices in Jordan. Their results show a high significant and positive nexus betwixt earnings retention, cash dividends and stock prices. However, the effect of cash dividend on stock prices outweighs the effect of retained earnings.

Marsh and Power (1999) examined the long run nexus betwixt dividends and stock prices using selected 56 large firms listed on the London Stock Exchange for the period 1968 - 1996. Their results suggest that a significant effect of dividend on stock prices exists. Mustafa and Guzhan (2006) examined the effects of cash dividend payments on stock returns and trading volumes in the stock market. They also investigated whether any difference exists in the investment behavior of investors as regards dividend payout ratio and size in the Istanbul Stock Exchange (ISE) during the period 1995 to 2003. The study revealed that stock prices starts increasing few sessions before cash dividend payments, and decreases in the sessions following the payment whereas trading volume shows a considerable upward shift before the payment date and stability after.

Sajid, Muhammad, Nasir, Muhammad and Muhammad (2012) investigated the impact of dividend policy on shareholders' wealth using 75

companies listed on Karachi Stock Exchange between 2005 and 2010 using stepwise regression and multiple regression. Market price per share served as the dependent variable whilst dividend per share, lagged price earnings ratio, retained earnings and lagged market value of equity are the explanatory variables. The results show amongst others that a significant influence of dividend policy on shareholders' wealth exists. Imad (2013) examined the influence of dividend policy on the share price volatility of Jordanian industrial firms using 77 selected firms listed on Amman Stock Exchange between 2000 and 2011. A cross-sectional time series multiple least square regression method, correlation analysis and descriptive analysis were employed and the results showed a significant negative effect of the two components of the dividend policy (dividend yield, dividend payout) on the share price volatility. This implies that stock price volatility falls as the Jordanian industrial firms increase their dividend yield and/or dividend payout. Hence, dividend policy has an impact on the share price volatility.

Wasfi AlTroudi and Maysa'aMilhem (2013) examined the empirical nexus betwixt retained earnings, cash dividends and stock prices in Jordanian stock market, after controlling for financial leverage and earnings per share. All the quoted industrial firms on the Amman Stock Exchange formed the study sample during the period from 2005-2010. The unbalanced panel data (cross-sectional and time series) were used to examine the nexus betwixt cash retained earnings, dividends and the stock prices. Their results show a positive and significant nexus betwixt retained earnings, earnings per share, cash dividends and stock price whilst stock price is positively but insignificantly associated with financial leverage. Syedul and Nusrat (2015) re-examined the nexus betwixt stock price, dividend and retained earnings using 29 listed banks of Chittagong Stock Exchange, in the post-crash period. Cross-sectional data from secondary sources were analyzed using linear regression method and revealed that both dividend and retained earnings of selected banks have strong

influence over the stock price, although there was moderate explanatory power of those variables.

Tariq, Mina, Muhammad, Alishba, and Muhammad (2014) examined the relative importance of stock dividends and retained earnings regarding stock price valuation in Karachi Stock Exchange by analyzing data from 66 nonfinancial companies for the period 2007 - 2010. Their results revealed that dividends are more important variable than the retained earning regarding the explanatory power of stock prices in Karachi Stock Exchange. Abbas (2015) examined the reaction of stock prices to dividend announcement in the Damascus Securities Exchange. An event window of forty days surrounding the announcement day is considered using an event study methodology. From the study, the downward drift of the cumulative average abnormal returns six days post-announcement suggests that prices do not adjust instantaneously to dividend information, rather, the stock prices gradually responds to the dividends announcement within post-event window.

### **Methodology**

This study obtained secondary data for the purpose of empirical evaluation of the nexus between share market price and the explanatory variables. All the quoted commercial banks as at 2015 which include Access bank, Diamond bank, Ecobank, First bank, FCMB, Fidelity bank, GTB, Skye bank, Stanbic IBTC bank, Sterling bank, UBA, Union bank, Unity bank, Wema Bank, Zenith bank formed the study sample. The data were obtained from the sample companies' published annual reports over a sixteen year period running from 2010 to 2015. The choice of this period is strictly based on data availability. The econometric model of Panel regression analysis using Panel Least Squares (PLS) method was employed to measure the nexus between the explanatory variables (DPR, DIY) and the dependent variable (SMP). The Augmented Dickey Fuller Unit Root Test on the series enables us to determine their stationarity. Ensuring the stationarity of the variables included in the model makes prediction of future values possible.

### **Model Specification**



Dividend policy ratios measure how much a company distributes as dividends relative to its earnings and market value of its shares. These ratios provide insights into the dividend policy of a company. They compare the dividends to the earnings to measure how much of its earnings a company is paying out in dividends. They also compare the dividends to share prices to see how much cash flow the investors get for their investments in the company's shares. In literature, dividend pay-out ratio and dividend yield are the two most common measures of dividend policy ratios. Therefore, our model proxied share market price (SMP) as the dependent variable while dividend pay-out ratio (DPR) and dividend yield (DIY) represent the independent variables. This study adopted the model of Khaled, Mgbame and Aruoriwo (2010). Guided by the research objective, the functional relationship between the dependent variable and the independent variables is represented as thus:

$$SMP_t = f(DPR, DIY) \text{-----} (1)$$

For estimation purposes, equation 1 is re-written econometrically as follows;

$$SMP_t = \beta_0 + \beta_1 DPR_t + \beta_2 DIY_t + U_t \text{-----} (2)$$

Where;

SMP= Share Market Price

DPR = Dividend Payout Ratio

DIY=Dividend Yield

$\beta_0$ = Constant;

$\beta_1, \beta_2$ = Parameters to be estimated in the model;

$U$ = Error term.

$t$ = time

### Conceptual Definition of Variables and A priori Expectation

**Share Market Price:** Share market price used here is simply the closing price of stock (at the end of the year) for the periods under review.

**Dividend Payout Ratio:** This ratio measures the percentage of earnings of a firm apportioned to shareholders as dividends.

$$\text{Dividend Payout Ratio} = \frac{\text{Dividend Per Share}}{\text{Earnings Per Share}} \times 100$$

**Dividend Yield Ratio:** This ratio measures the return that an investor can make from dividends alone. It indicates how much a firm pays out in dividends each year relative to its share price. It is expressed as a percentage and indicates attractiveness of investing in a company's stocks. Dividend yield is considered as ROI for income investors uninterested in capital gains or long-term earnings. Investors widely use this ratio in trend analysis and consider their past dividend yield ratios to decide whether invest in the company is worthwhile or not. Dividend yield is most important for the investors seeking long term investments and a consistent return every year.

$$\text{Dividend Yield} = \frac{\text{Annual Dividend Per Share}}{\text{Stock Price}} \times 100$$

The a-priori signs come from economic theory. The a-priori expectation provides expected signs of the coefficient of the parameters under review based on empirical evidence and theoretical assertions. From the specified model, the expected signs and relationship for the coefficients in the model is  $\beta_1, \beta_2 > 0$ . This implies that the dividend policy measures would be positively related to share market prices. Expressly, increases in dividend payout and dividend yield of the banks will be associated with an increase in the banks' stock price.

### Data Analysis and Interpretation

#### Data Analysis

#### Panel Unit Root Test for Stationarity

Trend properties are most often associated with time series data. According to Engle and Granger (1985); Dickey and Fuller (1981), there is plausibility of obtaining a spurious regression whenever the series that generate the results are non-stationary. This necessitates our investigation of the time series properties of the data by conducting unit root test for stationarity using

Augmented Dickey Fuller (ADF) unit root test. The panel unit root test, viz., Fisher-ADF was employed to test the unit root properties of the variables.

From our results (See Appendix A, B and C), all the study variables (SMP, DIY and DPR) are stationary at level indicating that all the variables are integrated of order zero  $I(0)$ . Therefore, the null hypothesis ( $H_0$ ) that the panel data has unit root is rejected while the alternate hypothesis that the panel data has no unit root is not rejected. More so, there is no need for panel cointegration test since the condition for cointegration is that all

the variables must be non-stationary at levels. Consequently, this paved way for regression analysis.

### Results and Discussion

Using pooled regression, we assume that all the banks are homogenous in nature. Hence, we did not distinguish between the various commercial banks used in the study. Specifically, by combining the fifteen (15) banks by way of pooling, we deny the heterogeneity or individuality that may exist among the fifteen (15) banks. The regression result is presented in Table 2 below

**Table 2: Panel Least Square (PLS) Regression**

Dependent Variable: SMP				
Method: Panel Least Squares				
Date: 10/03/17 Time: 19:44				
Sample (adjusted): 2001 2015				
Periods included: 15				
Cross-sections included: 15				
Total panel (balanced) observations: 225				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-6.759446	1.587549	-4.257787	0.0000
DPR	85.44754	9.050146	9.441566	0.0000
DIY	0.223621	0.036621	6.106363	0.0000
ECM(-1)	0.584852	0.056444	10.36155	0.0000
R-squared	0.535758	Mean dependent var	9.305022	
Adjusted R-squared	0.529456	S.D. dependent var	9.237226	
S.E. of regression	6.336388	Akaike info criterion	6.548113	
Sum squared resid	8873.110	Schwarz criterion	6.608844	
Log likelihood	-732.6627	Hannan-Quinn criter.	6.572624	
F-statistic	85.01484	Durbin-Watson stat	2.156419	
Prob(F-statistic)	0.000000			

From the results above, a positive and significant nexus exists betwixt dividend payout ratio (DPR) and share market price (SMP), dividend yield (DIY) and share market price (SMP) connoting that dividend policy indeed has a positive effect on share market price of listed Nigerian commercial banks at 5% degree of significance.

More so, the adjusted  $R^2$  is about 53 percent. This implies that about 53 per cent of the total variation in the dependent variable (SMP) is explained by

the independent variables (DPR and DIY). The remaining 47 percent is as a result of some factors not included in the model but captured by the error term. The coefficient of dividend pay-out ratio (DPR) and dividend yield (DIY) both indicate a positive relationship with share market price (SMP). This implies that as dividend yield and dividend pay-out ratio increases, share market price appreciates as well. Also, the p-value being 0.000000 which is less than 0.05 show that the

linear model involving share market price, dividend payout ratio and dividend yield is highly significant. Furthermore, the Durbin Watson test value of 2.156419 indicates the absence of serial auto correlation in the model.

### Summary, Conclusion and Recommendations

The focus of this study is to empirically examine the nexus betwixt corporate dividend policy and share market prices of commercial banks quoted on the Nigerian Stock Exchange between 2000 and 2015. A period of 16 years is assumed to be long enough to reveal the nexus betwixt the study variables. The data used for this study were obtained from the annual reports of the selected banks. The results show that a positive and significant nexus exists betwixt dividend policy measures (dividend yield, dividend payout ratio) and share market price of the listed Nigerian commercial banks during the period under study. This implies that the banking sector has a high-payout clientele who value dividend paying shares more than non-dividend paying shares. As such, the shares of the banks with liberal dividend policy will usually command a higher value. This is because firms with satisfactory history of dividend disbursement are more attractive to potential investors and in turn tends to drive up the market price of the company stock due to increase in demand. This will in turn pave way for future issues of corporate securities.

The finding of this study is in line with the works of Gordon (1962), Clendenin (1958), Durand (1957), Lintner (1962) and Walter (1963) that share prices are highly determined by the dividend policy of the firm. Hence, this work is in support of the dividend supremacy hypothesis and the bird in the hand theory. Based on the findings of this study that dividend policy is relevant and exerts a positive relationship with share price of commercial banks in Nigeria, we therefore recommend that since the banking sector has a high-payout clientele who value dividend paying shares more than non-dividend paying shares, corporate managers should pursue profit maximization for their banks so as to sustain a liberal and generous dividend

policy which will maximize shareholder's value and ultimately increase the value of the firm. Hence, external financing should be sourced only when there are available genuine and profitable investment opportunities.

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