

# **DIVIDEND POLICY AS STRATEGIC TOOL OF FINANCING IN PUBLIC FIRMS: EVIDENCE FROM NIGERIA**

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## **Abstract**

This is a study on effects of dividend policy on the value of the firms. There are three important decisions a firm must make - investment, financing and dividend decisions. All these decisions are normally made with the aim of achieving the over-riding objectives of firms, which is the maximization of shareholder's wealth.

This study investigated the effect of dividend policy on the value of the firm. It examined relationship between dividend payment and payout ratio, found out the percentage of earnings to be retained or ploughed back into the company and identified the various factors that determine the pricing of shares.

Secondary data obtained from Nigeria Stock Exchange Fact book were used for the study. Data obtained were analyzed regression analysis with the aid of Statistical Package for Social Science (SPSS).

The study finds out among other thing that the changes in the payout ratio of a company significantly determine the changes in the value of the company. It was therefore recommended in the study that the policy of regular dividend payout should not be changed arbitrarily since it has a serious effect on the investor's attitude and the financial standing of the organization. The result

has a clear implication for investing public, government policy makers and the firm's management.

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**Keywords:** Dividend policy; Dividend decision; Payout ratio; company's valuation; investment

## **Introduction**

The topic of dividend policy continues as one of the most challenging and controversial issues in corporate finance and financial economies. Research into dividend policy has, shown not only that a general theory of dividend policy remains elusive, but also that corporate dividend varies over time between firms. For a firm, which encounters financial difficulties, reliance is placed on retained earnings and accordingly results in lower payout ratios.

However, shareholders have keen enthusiastic interest in the outcome of their investments. These outcomes are expressed in terms of earnings and capital gains. These two ingredients are in turn affected by the quality of policies made by the management team of the enterprises. Among the most important decisions that management of an enterprise must take which has direct bearing on firms' continuity, earning potentials, investors satisfaction and share price gain is the decision to withhold or distribute net earnings as retained profit or dividends.

Pandey (1999), stated firmly that "Dividend policy is a decision by the financial manager whether the firm should distribute all profit or retain them or to distribute a portion and retain the balance. Dividend policy is an important aspect of corporate finance and dividends are major cash outlays for many corporations.

Garrison (1999) defined dividend policy as payments made to stockholders from a firm's earnings, whether those earnings were generated in the current period or in the previous period. Dividend could also be referred to as that part of the enterprise earning that is given to shareholders as interest on their investment. Also, it represents the return to investors who put their money at risk in the company. Company pays dividend to reward existing shareholders and encourage others that are prospective shareholders to buy new issues of the common stock at high price.

However, many seem obvious that a firm would always want to give as much as possible to its shareholders by paying dividends. It might seem equally obvious that a firm can always invest the money for its shareholders instead of paying it out. The heart of dividend policy question is

should the firm payout money to its shareholders or should the firm take the money and invest it for shareholders into the enterprise business.

Moreover, it has been discovered that the dividend policy of a firm always have short term or long term effect on the market price of its shares. It shall be found out in the course of this research, the actual relationship between the dividend payout and dividend policy of companies' i.e payout ratio of the firm is a percentage of dividends to earnings.

It is quite difficult to clearly identify the effects of payout on firm's valuation. The valuation of a firm is a reflection of so many factors that the long run effect of payout is quite difficult to separate. Kehinde and Abiola (2001) viewed dividend policy as "the dividend policy of a firm accounts for how a firm divides its income between retained earnings and dividends. It states the policy measure of how much dividend to be declared, in what form should the dividend be declared- either as a cash dividend or as stock dividends. By dividend policy the corporate organization, strike a balance between current income to the shareholders and a future income. Income can be retained and reinvested into available profitable investment opportunities. The retained earnings provide the cheapest source of financing. This research is to examine empirically the dividend policy of all quoted companies (banks) in Nigeria and to present evidence on what determines corporate payout policy this market. In addition, it tends to identify the impact of dividend policy on company valuation and the various approaches to dividend payment to stakeholders as against retaining it for re-investment.

## **Literature review**

### **The Implication of Dividend Theories on Dividend Decision**

The aim of both relevant and irrelevant theories of dividend is to provide mechanism through which decision can be made with primary objectives of maximizing the value of firm's shares in the market and hence the wealth of the owner. This being a major concern of any corporate management presupposes that understanding the theories will greatly influence their dividend decisions.

The relevancy theory of dividend posit some kind of relationship between the market value of shares and dividends policy of firm by stating certain level of pay-out ratios that optimizes the share value, given the relationship between returns "r" and cost of capital "k" which has some implication on corporate management. Also, it suggests that different mix of dividend payments

and earnings retention. Thus, critical analysis and recognition of those facts by management will help in the formulation of a policy that will be beneficial to all.

The corporate management must however, be caution on the irrelevance theory. These because of the model are far from practical reality. The assumption of perfect market, no taxation, no transaction cost, possibility of arbitrage etc, are over simplified and very difficult to be obtained in practice.

For example, in Nigeria, the capital market contains 'all sort of imperfections that are regarded as absent by the protagonist of this theory. Consequently, the decision maker must watch his action while formulating dividend policy as it may cushion the value of his firm.

Scholars have over the years argued that it is irrelevant to determine dividend policy of a firm, while others said it is relevant. Those who argued that dividend policy has impact in determining the share price of a firm are referred to as proponent of relevance or preference theory. On the other hand, those who argued that it has no impact are called irrelevance theorist.

### **Legal Consideration**

Companies always take into cognizance the government laws operating which may restrict its ability to pay dividends. The company and Allied Matter Act (CAMA) 1990 in Nigeria restrict payment of Dividend to only cumulative distributable earnings (Akinsulire, 2005).

### **Stability of Dividends**

The stability of dividends means maintaining dividends position in relation to trend line or upward sloping. A policy of constant dividend per share or constant dividend per share plus extra dividend can be adopted by a company. However, a policy of paying out fixed percentage earnings as dividend will result in fluctuating dividends being paid out to shareholders. When earnings are cyclical, such policy would result in instability of dividend payments.

A firm pursuing a stable dividend policy will command a higher fixed percentage of earnings. The stability of dividends resolves uncertainty in the mind investors satisfies current income desires of some investors and legally meet the requirement of certain institution investors to invest in the share (Pandey, 1999).

### **Concept of Capital Structure**

Horne and Wachworiz (1993), defined capital structure as the mix or proportion of a firm's permanent long term financing represented debt, preferred stock and common stock equity. In this section, reference is focused on the mix of long term sources of funds such as debenture, long term debts, preference share capital and equity share capital.

Myers (1999) also distinguished between capital structure and financial securities. By financial structure he meant the allocation of ownership and control, which include division of the risk and return of the enterprises and particularly of its intangible assets between insider in the firm and outside.

Hadock and James (2002), evaluating the financial slack provided by the banking systems to companies report that the decision of financial of asset either through debt or equity is influenced by the market evaluation of the shares confirming the pecking order hypothesis. After analysis the financing decision of 500 non-financial companies, Hadlock and James (2002) conclude the firms choose bank financing because market interprets the loan as a positive step because companies prefer that financing which result into high returns.

Mesqita and Lara (2003), have studies the relationship between capital structure and profitability of the Brazilian firms. They are of the view that there is a difficult decision becomes more difficult when a company is operating in an unstable environment and this problem occur largely in Brazil. They have tried to examine the effects of debt or equity on profitability. Ordinary least square method used to examine the effect of short and long term financing on return on equity. They have concluded that, in the short-run there is possible relationship, while in the long-run there is inverse relationship between debt and profitability. On the other hand, the market also interpreted this as positive sign that company is anticipating for more returns so result goes up because if firm needs resources in short term then it try to take loan and have no intention to raise equity which is greater than debt. But due to high interest in Brazil in long term run, debt becomes more costly as compare to equity.

Ampton (1986) was of the view that it is logical for a firm to borrow up to a reasonable amount if it can earn a higher return on borrowing. This implies that a firm incurs debt to that level where return will be greater than the cost involved in incurring such debt..

Harries and Raviv (1991), also stated that the dynamic use of debt has received little attention in the vast of theoretical literature on capital structure.

## Capital structure theories

The theory of capital structure is closely related to the firm's cost of capital as in Dixon (1986). The debate concerns with whether or not there is an existence of "optimal" capital structure and the effect of capital structure on the cost of capital on one hand and the value of the firm on the other hand has been a major source of controversy among famous scholars and the field of finance. Those who asset the existence of optimal capital structure are found to take to traditional approach. While those who believe cost in optimal capital structure existence, are referred to as supporters of the Modigliani and Miller (MM) hypothesis on capital structure inconsistent with the independent hypothesis and it support the traditional approach.

Other studies that support the traditional view include Wippern (1966). Pandey (1984), and Kehinde and Abiola (2002) wippern's study is designed to test the relationship between leverage and the value of the firm. He measures leverage as the ratio of fixed charges to minimum expected income in other to avoid the conceptual and statistical biases of the debt/equity ratio measurement. A proxy risk variables was admitted to the analysis as an adjustment for basic business risk. Thus, permitting tests of the equity yield/leverage relationship among firms from derives industries. His findings provided support for the view that shareholders wealth is enhanced by the firm's judicious used of fixed cost financing.

## Modigliani and Miller Approach to Capital Structure

The Modigliani-Miller theorem (of Franco Modigliani, Merton Miller) forms the basis for modern thinking on capital structure. The basic theorem states that, under a certain market price process (the classical random walk), in the absence of taxes, bankruptcy costs, agency costs, and asymmetric information, and in an efficient market, the value of a firm is unaffected by how that firm is financed. It does not matter if the firm's capital is raised by issuing stock or selling debt. It does not matter what the firm's dividend policy is. Therefore, the Modigliani—Miller theorem is also often called the capital structure irrelevance principle.

## Propositions

The theorem was originally proven under the assumption of no taxes. It is made up of two propositions which can also be extended to a situation *with* taxes. Consider two firms which

are identical except for their financial structures. The first (Firm U) is unlevered: that is, it is financed partly by equity only. The other (Firm L) is levered: it is financed partly by equity, and partly by debt. The Modigliani-Miller theorem states that the value of the two firms is the same.

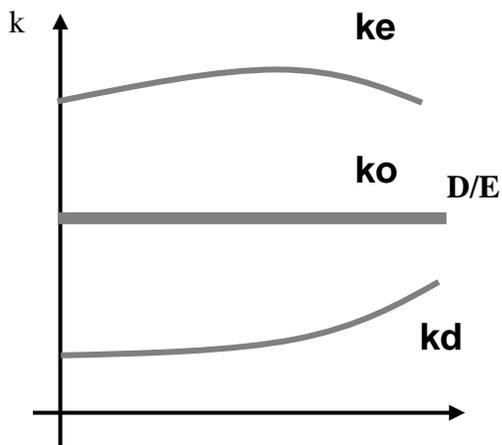
### Without taxes

**Proposition I:**  $V_u = V_L$  where  $V_u$  is the value of an unlevered firm = price of buying a firm composed only of equity, and  $V_L$  is the value of a levered firm = price of buying a firm that is composed of some mix of debt and equity. Another word for levered is geared, which has the same meaning.

To see why this should be true, suppose an investor is considering buying one of the two firms U or L. instead of purchasing the shares of the levered firm L, he could purchase the shares of firm U and borrow the same amount of money B that firm L does. Therefore, the price of L must be the same as the price of U minus the money borrowed B, which is the value of L's debt.

This discussion also clarifies the role of some of the theorem's assumptions. We have implicitly assumed that the investor's cost of borrowing money is the same as that of the firm, which need not be efficient markets, or if the investor has a different risk profile to the firm.

### Proposition II:



Proposition II with risky debt. As leverage (D/E) increase, the WACC ( $k_0$ ) stays constant.

$$k_e = k_0 + (k_0 - k_d)$$

$$\frac{D}{E}$$

- $k_e$  is the required rate of return on equity, or cost of equity.

- $k_0$  is the company unlevered cost of capital (ie assume no leverage).
- $k_d$  is the required rate of return on borrowings, or cost of debt.
- $D/E$  is the debt-to-equity ratio.

A higher debt-to-equity ratio leads to a higher required return on equity, because of the higher risk involved for equity-holders in a company with debt. The formula is derived from the theory of weighted average cost of capital (WACC).

These propositions are true assuming the following assumptions:

- No taxes exist,
- No transaction costs exist, and
- Individuals and corporations borrow at the same rates.

These results might seem irrelevant (after all, none of the conditions are met in the real world), but the theories is still taught and studies because it tells something very important. That is, capital structure matters precisely because one or more of these assumptions is violated. It tells where to look for determinants of optimal capital structure and how those factors might affect optimal capital structure.

### **With taxes**

#### **Proposition I:**

$$V_L = V_U + T_c D$$

Where

- $V_L$  is the value of a levered firm.
- $V_U$  is the value of an unlevered firm.
- $T_c D$  is the tax rate ( $T_c$ ) x the value of debt ( $D$ )
- The term  $T_c D$  assumes debt is perpetual

This means that there are advantages for firms to be levered, since corporations can deduct interest payments. Therefore leverage lowers tax payments. Dividend payments are non-deductible.

#### **Proposition II:**

$$r_E = r_0 + \frac{D}{E} (r_0 - r_D) (1 - T_c)$$

where

- $r_E$  is the required rate of return on equity, or cost of levered equity = unlevered equity + financing premium.
- $r_0$  is the company cost of equity capital with no leverage (unlevered cost of equity, or return on assets with  $D/E = 0$ ).
- $r_D$  is the required rate of return on borrowings, or cost of debt.
- $D/E$  is the debt-to-equity ratio.
- $T_c$  is the tax rate.

The same relationship as earlier described stating that the cost of equity rises with leverage, because the risk to equity rises, still holds. The formula however has implications for the difference with the WACC. Their second attempt on capital structure included taxes has identified that as the level of gearing increases by replacing equity with cheap debt the level of the WACC drops and an optimal capital structure does indeed exist at a point where debt is 100%. The following assumptions are made in the propositions with taxes:

- Corporations are taxed at the rate  $T_c$  on earnings after interest,
- On transaction costs exist, and
- Individuals and corporations borrow at the same rate

Miller and Modigliani published a number of follow-up papers discussing some of these issues. The theorem was first proposed by F. Modigliani and M. Miller in 1958.

### **Economic consequences**

While it is difficult to determine the exact extent to which the Modigliani-Miller theorem has impacted the capital markets, the argument can be made that it has been used to promote and expand the use of leverage.

When misinterpreted in practice, the theorem can be used to justify near limitless financial leverage while not properly accounting for the increased risk, especially bankruptcy risk that excessive leverage ratios bring. Since the value of the theorem primarily lies in understanding the violation of the assumptions in practice, rather than the result itself, its application should be focused on understanding the implications that the relaxation of those assumptions bring.

### **Criticisms**

The formula's use of EBIT / Cost of Capital to calculate a company's value is extremely limiting. It also uses the weighted average cost of capital formula, which calculates the value based on  $E + D$ , where  $E$  = the value of equity and  $D$  = the value of debt. Modigliani and Miller are

equating two different formulas to arrive at a number which maximizes a firm's value. It is inappropriate to say that a firm's value is maximized when these two different formulas cross each other because of their striking differences. The formula essentially says a firm's value is maximized when a company has earnings \* the discount rate multiple = book value. Modigliani and Miller equate  $E + D = EBIT / \text{Cost of Capital}$ . This seems to over-simplify the firm's valuation.

### **Durrand View on The Effect of Capital Structure on Firm's Value and Cost of Capital**

Durrand (1967) identifies two extreme views on the effect of capital structure on firm's value and cost viz.

#### **The Net Income Approach**

This theory stated that the use of debt will positively affect the value of the firm indefinitely, that is, the overall cost capital of weighted cost of capital can be increased or reduced through changes in the financial mix or capital structure of the firm. This hypothesis assumes that the cost of debt is less than the cost of equity and that corporate income tax does exist (Pandey, 1995). This hypothesis simply calls for one hundred percent debt finance.

#### **The Net Operating Income Approach**

This theory stated that the weighted average cost of capital (WACC) and the total value of the firm is independent of on each other. It implies that no matter how excessive the firm's use of debt in financing its business common (ordinary) share price will not be affected. It is described as the independent hypothesis by Arthur David (1986), According to Pandey's (1995) the theory is based on the following assumptions.

- I. That the market uses an overall capitalization rate to capitalizes the net operating income depending on the business risk. If business risk is assumed to remain unchanged, cost of capital is constant.
- II. The use of less costly increases the risk of shareholder.
- III. The debt capitalization rate is constant.
- IV. Corporate income tax does not exist the theory concluded that all capital structure is optimal, regardless of the composition of debt and equity used.

#### **Traditional Approach**

This approach is also known as international approach. It is a compromise between the net income approach and the net operating approach. This was why the author argues that the cost of capital declines with leverage up to a point.

The approach assumes that there is an optimal capital structure. And this is a point where the weighted. Average cost of capital (WACC) is at minimum. This is the optimal level of gearing and at this point the shareholders wealth is maximized.

### **Assumptions of Traditional Approach**

The cost of equity is assumed to rise at an increasing rate with average. As the level of gearing increases, the cost of debt remains constant up to certain level of gearing, this significant level the cost of debt will increase.

The weighted average cost of capital (WACC) does not remain constant out rather. Finally as the proportion of debt increases in the firm finance mix.

### **Recent Theories on Optimal Capital Structure**

The debate on optimal capital structure has shifted from whether it exists or not, determining the optimal for any particular company as well as understanding the underlying influences.

An understanding of the factors at work is provided by those recent theories.

**The Bargaining Based Theory:** This theory of capital structure was presented by Hart and Moore (1999) and Bolton and Scharf stein (1991). This theory stated the firms' capital structure influences potential future negotiations between the firm and its investors, and the anticipations of such negotiations, in turn, influence financial decisions. It is also stated that the choice of financial contract is determined as a trade-off between the discourage ex-cost renegotiations (strategic default) on one hand and on the other hand, the wish to him inefficient liquidation when the firm is cash constrained (liquidity default).

**The Organizational Theory:** This theory focuses on internal financing because it believes external financing on matter its sources, signals, to the market to internal sources are inadequate. Rooted in the belief the companies also do pursue the objectives of conserving and when possible, enhancing their power to distribute cash and of maximizing corporate wealth (defined as that over which management has effective control), the theory argues that when a company issues debt to replace equity, a decrease in corporate wealth occurs. Although as debt increase, corporate wealth decreases, this is regarded as good news for shareholder's since it

does not necessarily result in a change in their wealth. Indeed new debt issues enable a company to avail it if of the associated tax advantages of debt financing.

The organization theory further confirms why most profitable companies typically borrow the least. High earnings result in greater retention and less reliance on external financing and consequently, a lower debt ratio. The theory also explains the aggressive use of debt or leverage in leveraged buyouts.

(LBOs), take over and restructuring as high ratio more or less compels mature companies to undertake only positive new capital projects or acquisitions. This is because debt financing confers a contractual bond on the company forcing it to distribute cash to investors. This theory has however been criticized for holding corporate wealth as synonymous with shareholder wealth maximization.

**The Static Trade-Off Theory:** It postulated that the tax deductibility of interest payments includes a company to borrow up to margin where the present value of interest tax shields is just offset by the value loss due to agency costs from issuing risky debts as well as the cost of possible liquidation or-organization. In other words, the theory attempts to balance the corporate tax advantages of debt financing against the cost advantage of bankruptcy as well as incorporating personal tax non-debt shields.

Baker and Farrelly (1988) attempted to empirically validate theoretical dividend model but the results are far from being conclusive or in some cases even contradictory. Numerous rationales have been offered as explanations for these divergent results; the model and empirical method of analysis applied (Watts, 1973; and Morgan, 1982), the frequency of sample observation (Walts, 1976a; and Laub, 1976), and the period of the sample (Walts, 1973) are specified as possible causes of the inconsistencies. The purpose of this analysis is to examine the empirical studies of corporate dividend policy and determine whether the choice of method of analysis, frequency of sampling observation, or sample period influences the results of the tests of dividend policy.

Marsh and Merton (1986) develop a rational expectations model of dividend policy as management's response to permanent earnings. In equilibrium, dividend levels are determined using future earnings expectations.

Miller and Modigliani (2000) argue that, in a perfect world, the value of the firm is unaffected by its dividend decision, so there should not be any wealth effect upon the announcement of a change in dividend payout policy. It is well known that stock prices generally

move in thy direction of the dividend change. The signaling arguments developed by Bhattacharya John and Williams and Miller and Rock present the basis for arguments of asymmetric information between managers and shareholders. Given this environment, management has the incentive to signal positive firm - specific private information to shareholders. Negative information would be withheld until financial constraints force the release of such information.

Jensen's (1999) Free Cash Flow/over investment hypothesis (FCF) provides and alternative explanation for the positive relationship between the direction of the dividend change and the stock price reaction. Jensen (1999) argues that managers tend to hoard cash to invest in negative NPV projects for their own utility maximization. The agency costs that result from this over investment decrease the value of the firm. Like the signaling hypothesis, the FCF argument suggests there should be a positive relationship to the direction of the dividend policy change and the stock price reaction. However, the FCF argument differentiates itself with respect to the level of growth opportunities faced by the firm. If a firm initiated a cash dividend, FCF arguments postulate there are few r funds available for costly over investment. Likewise, the dividend omissions, the strongest form of a decrease would reduce the value of the firm because there are more funds available for over investment. The FCF hypothesis predicts larger stock price reactions for firms with few growth opportunities as opposed to firms with many growth opportunities.

Ross (2000) shows that increase in the rate of idiosyncratic information flow may increase the residual variance of stock returns, rather than their mean value, which is a measure of the wealth effect. Without allowing for possible increases in residual variance, i.e, the variance effect, one may misinterpret the apparent stock price reaction as a wealth effect. As a result, a positive wealth effect may be ascribed when there is really no true wealth effect, but rather a strong variance effect. Sanders and Robins (2005) following Collins and Dent (1998), develop both a conditional test statistic, which allows for heteroskedastic abnormal returns across events, and on unconditional test statistics, which allows for both heteroskedasticity and changes in residual variance upon announcement. This allows for the separation of the wealth and variance effects.

### **Re-Statement of research hypothesis**

The hypotheses tested in this study are stated below:

**Ho:** Payout ratio has no significant influence on the value of the firm.

**H<sub>1</sub>:** Payout ratio has significant influence on the value of the firm.

**H<sub>0</sub>:** Dividend policy of a firm is determined by its long-term pay out ratio.

**H<sub>1</sub>:** Dividend policy of a firm is not determined by its long-term pay-out ratio.

### **Sources of data**

The data used were gathered from secondary sources. Secondary data are reliable, easy to understand and are of descriptive models. These secondary data for this essay topic includes; Journal of Central Bank of Nigeria (CBN), Economic and Financial Review (EFR) and the Nigerian Stock Exchange Fact book (NSEF).

The variable on which data was collected includes; Dividend per share, profit after tax, payout ratio and Earnings per share. The earnings per share is used as a proxy for value of the firm while profit after tax capture the firm's dividend policy. The variables identified would be integrated into models to test the impact of dividend policy on the value of the firm. The data covered periods of 1988 to 2008.

### **Model specification**

This involves expressing the relationship in mathematical form. Specifically, it is concerned with formulating the models with in the economic phenomena will be empirically determined.

This study consists of two equations specified as follows:

$$\text{EPS} = F(\Delta \text{POR}) \dots \dots \dots 1a$$

$$\text{PAT} = F(\Delta \text{POR}) \dots \dots \dots 2a$$

Where

$$\text{EPS} = \text{Earnings per share}$$

$$\text{PAT} = \text{Profit after tax}$$

The study uses the ordinary least square of simple regression method to estimate the parameters of the model. Thus, the relationship between the variables under consideration can be written as:

$$\text{EPS} = \alpha_0 + \alpha_1 \Delta \text{POR} + U_t \dots \dots \dots 1b$$

Where

$$\text{EPS} = \text{Earnings per share}$$

$\Delta$  POR = Change in pay-out ratio

$\beta_0$  = Constant term

$\beta_1$  = Coefficient of POR

$U_t$  = Error term

Also,  $PAT = \beta_0 + \beta_1 \Delta POR + U_t \dots \dots \dots 2b$

Where

PAT = Profit after tax

$\Delta$ POR = Change in pay-out ratio

$\beta_0$  = Constant term

$\beta_1$  = Coefficient of POR

$U_t$  = Error term

**Apriori Expectation**

For model I, we expect a positive relationship between  $\Delta$  pay-out ratio and earnings per share. The higher the pay-out ratio of the firm, the lower the retained earnings, and the greater the earning per share to shareholders. Thus,  $\beta_1 > 0$ .

In model II, we also expect  $\beta_1$  to be positive, that is,  $\beta_1 > 0$ . An increase in pay-out ratio as a result of higher profits would causes the dividend accumulated individual shareholders to increase.

**Analytical Techniques**

This study adopts the ordinary least square method of simple regression model was employed in order to effectively analyze the impact of dividend policy on the value of the firm. For these models, earnings per share and profit after tax would serve as dependent variables for model 1 and 2 respectively while change in pay-out would serve as explanatory for the two models.

The criteria for analysis of data are as follows:

**Economic Criteria:** This is a major criterion in an econometric study and its aim is to be certain whether the prior assumption holds. On theoretical ground we expect the following that

$\delta EPS > 0$ -----Positive

$\delta$ POR

$\delta$ PAT  $> 0$ ----- Positive

$\delta$ POR

Meaning that the parameters POR is expected to have positive sign for the estimate to be reliable.

### Statistical Criteria:

The test would be used to find out whether the explanatory variables (POR) are variables to explain what happens to the dependent variables. Here the coefficient of determination would be used to see the influence of the explanatory variable on the dependent variable (EPS; PAT).

The test of the significance of coefficient would be carried out with the distribution rule of the thumbs test. Also the test for the overall significance is obtained with the computation of the F-Statistic which is carries out in economic study such as to ascertain the coefficient of determination validity and of the parameters estimated whether they relevant or not. This implies the null hypothesis:

$$H_0 = \beta_0 = \beta_1 = \beta_2 = \beta_3 = 0$$

If null hypothesis ( $H_0$ ) is accepted our parameters are not significantly different from zero. And if the alternative hypothesis is accepted, that is ( $H_1$ ), then our estimates are significantly different from zero. Then our independent variables have influence on the dependent variables.

The result of the computed data is compared to that under the  $n - k$  degree of freedom for  $t$ -distribution and degree of freedom for  $F$ - Statistics where:

$N$  = Number of samples/years

$K$  = Number of parameters

If  $t_c > t_t$  = reject the null hypothesis and accept the alternative hypothesis;

If  $t_c < t_t$  = accept null hypothesis and reject alternative hypothesis.

If  $F_c > F_t$  = reject null hypothesis i.e. Our parameter are significant.

### Data presentation and analysis

The data for the analysis are as presented on table 1.

**Table 1:** Earning per share, Dividend payout, and profit after tax (1988 -2008)

**First Bank of Nigeria plc**

<b>YEARS</b>	<b>DSP (k)</b>	<b>ESP (k)</b>	<b>PAT</b>	<b>POR</b>
1988	13.50	44.60	74	0.3027
1989	15.00	64.24	106	0.2335
1990	2.50	50	205	0.0500
1991	2.50	50	205	0.0500
1992	40	207	335	0.1932
1994	70	315	741	0.2222
1995	50	157	756	0.3185
1996	70	174	1009	0.4023
1997	56	166	1202	0.3373
1998	1.00	180	2027	0.0056
1999	1.00	307	3360	0.0033
2000	125	346	4739	0.3613
2001	130	312	5066	0.4167
2002	130	235	4776	0.5532
2003	150	434	11010	0.3456
2004	155	399	11483	0.3885
2005	106	335	13234	0.3164
2006	100	294	17383	0.3401
2007	100	178	20636	0.5618
2008	100	267	36540	0.3745

**Source:** Nigerian Stock Exchange Fact book

DPS represents Dividend per share

EPS represents Earnings per share

PAT represents Profit after tax

POR represents Pay-out ratio

**Table 2: Union Bank of Nigeria plc**

<b>YEARS</b>	<b>DPS (k)</b>	<b>EPS (k)</b>	<b>PAT</b>	<b>POR</b>
1988	4.00	22	70359	0.1818
1989	5.00	30	94866	0.1667
1990	5.00	31	97699	0.1613
1991	2.12	3	7938	0.7067
1992	6.25	26	83530	0.2404
1994	8	33	420	0.2424
1995	13	46	575	0.2826
1996	32	89	1142	0.3596
1997	35	101	1297	0.3465
1998	70	149	1924	0.4698
1999	0.35	0.75	1924	0.4667
2000	0.53	1.27	3249	0.4173
2001	0.75	2.24	5767	0.3348
2002	1.25	2.24	5866	0.5580
2003	1.35	3.08	8262	0.4383
2004	1.35	3.09	8262	0.4369
2005	1.40	2.49	8933	0.5622
2006	1.40	2.19	10074	0.6393
2007	1.73	1.00	10868	0.5780
2008	1.73	1.00	13770	0.5780

**Source:** Nigerian Stock Exchange, Lagos

DPS represents Dividend per share

EPS represents Earnings per share

PAT represents Profit after tax

POR represents Pay-out ratio

### **Empirical Result and Interpretation**

The empirical result shows:

Model 1

$$\text{EPS} = a_0 + a_1 \text{POR} + e$$

$$\text{EPS} = 174.876 + 138.200 \text{POR}$$

$$t = (3.649) (8.120)$$

$$\text{SE} = (47.919) (123.383)$$

$$R = 0.779 \quad F = 41.255$$

$$R^2 = 0.932 \quad \text{DW} = 2.380$$

5% level of significance

The above model attempts to find out the relationship between earnings per share and dividend policy proxy by pay-out. The objective was to determine the influence dividend policy on wealth of share holders in Nigeria. From the empirical results, the co-efficient of correlation show that the dependent variable (EPS) and the independent variable (POR) related which is a very high relationship. This means that pay-out used as independent variable has a very high level of linear relationship of 77%.

The coefficient of determination with R squared shows that 93% of the trend in earnings per share in banks understudies is determined by dividend policy adopted as used in the regression proxy by pay-out ratio. While other unexplained variables account for 07% of earning per share. From this, one can infer that the independent variables exert a greater influence on the earnings per share of the banks as regard dividend policy.

The adjustment R square recorded 89.1 %, this indicates that our model is a good abstraction, which can fit into a larger population.

Based on the results obtained, the standard error and t-ratio indicates that the results are statistically significant. The t-statistics stood at 8.120; the decision rule requires if t falls in the acceptance region i.e. If  $t_{0.025} < t < 8.120$ . In this case, the estimate t - ratio (8.12Q) did not fall within the acceptable region and therefore we reject the null hypothesis and accept the alternative hypothesis that there is a significant influence of dividend policy on the value of the firm (proxied by earnings per share).

The F- statistic (ANOVA) of the model indicates' that the model has closeness of fit which means that the model is statistically significant at 5% level of significance. The F-Statistic = 41.255 is greater than the F tab = 4.08. Therefore, with respect to theoretical expectation, the coefficient of degree of earnings per share conformed to the apriori expectation. The estimated parameter (aI) is statistically significant at 5% level of significance. Similarly, the null hypothesis is rejected while the alternative hypothesis is accepted. This implies that there is a significant relationship between pay-out ratio and earnings per share.

The Durbin - Watson by observation is 2.380 is high and because it is greater than the upper critical value of (1.69) and that D.W value must be in the neighborhood of 2.0, hence we conclude that there is no serial correlation in the variables. Also, for the independent variable and sample size of forty, an absence of serial correlation is affirmed.

## Model 2

$$PAT = b_0 + b_1 POR + e$$

$$PAT = 25011.990 + 30708.782$$

$$T = (2.719) (6.297)$$

$$SE = (9197.352) (23681.812)$$

$$R = 0.206 \quad F = 31.681$$

$$R^2 = 0.804 \quad D.W = 0.733$$

5% level of significance.

Where profit after tax (PAT) is dependent variable and payout ratio (POR) is independent variable.

The results that payout ratio has a positive relationship with profit after tax which also agree with the apriori expectation that a trend in payout ratio would lead to an increase in profit after tax for the banks. For instance, Pandey (1999), observed that there is a significant relationship between dividend and the independent variables such as Return or dividend per share, earning per share, Risk, Leverage etc. The greater the cash position of a company, the greater the ability to pay dividend.

The coefficient of correlation 0.206 is high which suggests that the level of relationship between the dependent and independent variable is 20.6%. This confirmed by the coefficient of R-squared which is high at 80.4%. This means that 80.4% variation in payout ratio. From the conclusion, we agree that dividend policy proxied by payout ratio has significant influence on profit after tax of value of the firm in Nigeria.

The F - statistics is 31.681. This value shows that the independent variable is statistically significant in explaining profit after tax at 5% level of significance. This showed that the trends in independent variables that is. Payout ratio is strong and major determinant of profit after tax in banks. Also, this value (31.681) is greater than F tab (4.08), mean that we reject null hypothesis and accept alternative hypothesis ( $F_{cal} > F_{table}$ ).

The Durbin Waston test is 0.733 is greater than the lower critical value (0.69) means that there is absence of serial correlation in the model.

### **Summary of findings**

The hypothesis formulated in the study is tested. From the regression result carried out on model 1, F tab 31.681 is greater than 4.08, therefore we reject  $H_0$  and accept  $H_1$  that pay-out ratio has no significant influence on the value of the firm changes in the payout ratio of a company does not significantly determine the changes in value of the company (proxies by earning per share) .

For model 2, the F statistics is 31.681 is greater that F tab (4.08), therefore we reject the  $H_0$  and accept  $H_1$  that dividend policy of a firm is determined by its long-term payout ratio.

The negative relationship between Earnings per share (EPS) and Pay-Out Ratio (POR) this implies that a decrease in Pay-Out Ratio (POR) does not induce a decrease in Earnings per share (EPS), and The positive relationship between Profit After Tax (P AT) and Pay-Out Ratio (POR) implies that an increase in Pay-Out Ratio (POR) induces an increase in Profit After Tax (PAT).

### **Conclusion and recommendation**

This research work was carried out on "Dividend policy and the value of the firm: An Empirical Analysis" using five publicly quoted Nigerian banks as the scope of study. The research work believes that dividend payout is a better way of stimulating investment decision among banks, which invariably influence investment decision in the country as a whole.

The preference of dividend income by shareholders rather than that of capital gain of their investment guide this assertion because most shareholders believe that earning dividend income on their investment is a sign of growth in the bank they have invested in. This is another reason why most shareholders feel very uncomfortable when their companies retain all their profit after tax for investment purposes.

It is also established that similarities exist in the mode of dividend policy of most Nigerian banks. The dividend per share paid out of the earnings per share of these banks fluctuated over the years as indicated in the analysis table. At some instances, it will rise significantly and at other times it will fall sharply which indicates that both economic conditions and government regulations affects dividend policy of these banks.

It was guided that dividend policies adopted by the directors of various banks have serious consequences on the financial needs and growth of the companies. Therefore, if banks directors are given the free hand by the shareholders and government in the formulation of dividend, policy and the running of the affairs of these banks, a good economic objective can be achieved.

This research work also admits that a company that adopts 100% dividend payout without retaining any proportion of its profit after tax either for investment purpose or capitalization may find itself in harsh financial needs when economic conditions takes a depressive dimension.

The banks also believe that a faulty dividend policy if adopted would have adverse implication on the financial needs and growth of the company therefore the following general precepts were adopted by most banks.

- I. Most of the banks do not maintain stable dividend payout ratio since their earnings (later tax profit) is not stable.
- II. Virtually all the banks in study maintain a percentage of their earning as retention ratio.
- III. Banks only payout dividend when profit is recorded.
- IV. Most banks on 100% basis did not adopt suggestions made by some theorist on dividend policy.

In reference to the above discoveries, it is important to state that most banks actually make provisions and avoid the dangers, which a faulty dividend policy could lead their business into. One of the difficulties faced by financial managers or board of directors is the establishment of a good dividend policy. If management is well informed and equipped, they should make a very sound dividend policy which in turn would lead the company into rapid growth and attract investors, would also assist the bank in joining the league of well developed bank because with good dividend policy, the bank can gain access to capital generation either internally or externally, for the development and expansion of the business.

Conclusively, dividend policy decision is not a 'decision of the board of directors alone. The shareholders should be given recognition in a policy like this because they are directly affected by the policy.

If shareholders cooperate with the board of directors and other factors considered too, I consider that a fair decision concerning dividend policy could be reached which would help in ensuring the growth and development of the banks and ultimately affects the fortunes of, the Nigerian Economy in positive way.

### **Recommendations**

The following recommendations are hereby forwarded to the relevant quarters, banks, students, researchers' prospective and rational investors or shareholders. Dividend decision of corporate organization like banks separates the company's net earnings between dividend payout to shareholders and retained earnings. Board of Directors in making this decision must seek optimally in these separations.

This is because shareholders seek to maximize their wealth programmes, which companies have to make investment programmes especially where they are still in their growth stage.

Due to the several factors affecting dividend policy such as legal constraints, funding needs, control issue, debt obligation, investment opportunity, inflation, shareholders expectations etc good planning must be put in place. A balance must be strike by management between long-term financing and wealth maximization decision in an optimum manner.

A dividend policy, which is consistent with high dividend payout, is a clear signal of growth opportunities of the particular industry and as such shareholders can re-invest the funds in the industries and this provides opportunities for expansion in the future. This is not an implication

that low dividend paying banks are not doing well and high dividend payment are not indication of high performances at all times, it can be paid out of past years reserves.

If however, the above recommendations are followed exactly, the use of government restrictive policy is made for whatever reasons; appropriate government agencies should be assigned to monitor its implementation. This is necessary because no company would voluntarily comply.

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