



THE RESPONSIVENESS OF STOCK PRICES TO DIVIDEND YIELD: THE CASE OF LISTED NIGERIAN DEPOSIT MONEY BANKS

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Abstract:

This study examines the impact of dividend on stock prices. The study adopts the ex-post facto research design and data were handpicked from the annual report and statement of account of selected banks listed on the Nigerian Stock Exchange for the period. The findings of this study support the opposite view that dividend yields do not have positive and significant impact on stock prices. This implies that stock prices tend to increase when an increase in dividend is announced but tend to decrease when a decrease or omission is announced.

Keywords: dividend, stock price, bank size

1. Introduction

The subject matter of dividend policy remains one of the most controversial issues in corporate finance. For a very long time now, financial economists have engaged in modeling and examining corporate dividend policy as they affect banks stock prices in Nigeria (Amidu, 2007). Black (1976) hinted that, *“the harder we look at the dividend picture, it seems like a puzzle with pieces that don't fit together”*. Since the pioneering work of MM in 1963, there have been vast amount of literature examining dividend policy. Thus, Frankfurter and Wood (2002) concluded in the same vein as Black and Scholes (1974) that the dividend “puzzle”, both as a share value-enhancing feature and as a matter of policy, is one of the most challenging topics of modern financial economics.

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More than half a century of research has not been able to resolve it. Research on dividend policy and earnings have shown not only that a general theory of dividend policy remains elusive, but also that corporate dividend practice varies over time, among firms and across countries. The patterns of corporate dividend policies not only vary over time but also across countries, especially between developed and emerging financial institutions. Supporting this argument is Huda and Farah (2011) pointed out that dividend policy has been issues of interest in financial literature; academics and researchers have developed many theoretical models describing the factors that managers should consider when making dividend policy decisions. Key factors behind the dividend decision have been studied by numerous researchers. Lintner (1956) suggested that dividend payment pattern of a firm is influenced by the current year earnings and previous year dividends. In this case, dividend may be seen as the free cash flows which comprises of cash remaining after all business expenses have been met (Damodaran, 2002). The dividend decision in corporate finance is a decision made by the directors of a company. It relates to the amount and timing of any cash payments made to the company's stockholders.

The decision as stated by Pandey (2005), is an important one for the firm as it may influence the financial structure and stock price of the firm. In addition, the decision may determine the amount of taxations that stockholders pay. The dividend payment ratio is a major aspect of the dividend policy of the firm, which affects the value of the firm to the shareholders (Litzenberger and Ramaswamy, 1982). The classical school of thought holds this view and they believe that dividends are paid to influence their share prices. They also believe that market price of an equity is a representation of the present value of estimated cash dividends that can be generated by the equity (Gordon, 1959). Another classical school of thought, on the other hand, believes that the price of equity is a function of the earnings of the company. They believe that dividend payout is irrelevant to evaluating the worth of equity. What matters, they say is earnings (Miller and Modigliani, 1961).

Mayo (2008: 364-365) observed that retained earnings provide funds to finance the firms on long term growth. It is the most significant source of financing a firm's investment. Dividends are paid in cash, thus the distribution of earnings utilizes the available cash of the company. When the firm increases the retained portion on net earnings, shareholders' current income in the form of dividends decreases, but the use of retained earnings to finance profitable investments is expected to increase future earnings. On the other hand, when dividends increase, shareholders' current income will increase but the firm may be unable to retain earnings and, thus, relinquish possible investment opportunities and future earnings.

The theoretical rationale for corporate dividend policy has been an important topic in corporate finance for a very long time. Three main factors may influence a firm's dividend decision. These are: - Free cash flows, Dividend clientele and Information signaling (Pandey, 2005). Under the free-cash flow theory of dividends, the payment of dividends is very simple: the firm simply pays out, as dividend, any surplus cash after it invests in all available positive net present value projects. Criticism of the theory is that it does not explain the observed dividend policies of real world companies. Most companies pay relatively consistent dividend from one year to the next and managers tend to prefer to pay a steadily increasing dividend rather than paying dividend that fluctuates dramatically from one year to the next. These criticisms have led to the development of other models that seek to explain the dividend decision (Brigham, 1995).

Under the dividend clientele, a particular pattern of dividend payments may suit one type of stockholders more than another. A retiree may prefer to invest in a firm that provides a consistently high dividend yield, whereas, a person with a huge income from employment may prefer to avoid dividends due to their high marginal tax rate on income. If Clientele exists for a particular pattern of dividend payment, a firm may be able to maximize its stock price and minimize its cost of capital by catering to a particular clientele. This model may help to explain the relatively consistent dividend policies followed by most listed companies (Okafor, 1983). According to the clientele effect theory of dividend policy, investors who would like to receive some cash from their investment always have the option of selling a portion of their holding. This argument is even more cogent in recent times with the advent of very low-cost discount stockholders. Thus, it remains possible that there are taxation based clientele for certain types of dividend policies (Pandey, 2005).

Information content or signaling says that investors regard dividend changes as signals of management earning potentials. The model was developed by Ezra (1983). It suggests that dividend announcements convey information to investors regarding the firm's value prospects (Ezra, 1983). He said many earlier studies had shown that stock prices tend to increase when an increase in dividend is announced but tend to decrease when a decrease or omission is announced. Therefore, Ezra pointed out that, this is likely due to when investors have complete information about the firm, they will look for other information that may provide a clue as to the firm's future prospects and also managers have more information than investors about the firm and such information may inform their dividend decision. It could be seen, therefore, that when managers lack confidence in the firm's ability to generate cash flows in the future, they may keep dividends constant or possibly even reduce the amount of dividends payout.

Conversely, managers that have access to information that indicates very good future prospects for the firm are more likely to increase dividends (Ezra, 1963).

The goal of corporate entities is to maximize the value of shareholders' investment in the firm. Managers pursue this goal through their investment, financing and dividend decisions. Investment decisions involve the selection of positive net present value projects. Financing decisions involve the selection of a capital structure that would minimize the cost of capital of the firm while dividend decisions of the firm determine the reward which investors and potential investors of the firm receive from their investment in the firm. Apart from the investment and financing decisions, managers need to decide, on regular basis, whether to pay out of the earning to shareholders, reducing the agency problem (Jensen and Meckling, 1976). However, the question remains whether paying out of earnings would essentially create value for the shareholders or not. A dividend payment provides cash flow to the shareholders but reduces firm's recourses for investment; this dilemma is a myth in the finance literature.

A great deal of theoretical and empirical research on dividend policy effects has been done over the last several decades. Theoretically, cash dividend from earnings means giving reward to the shareholders, that is, something they already own in the company; but this will be offset by the decline in stock value. In an ideal world (without tax and any restrictions), therefore dividend payments would have no impact on the shareholders' value. In the real world, however a change in the dividend policy is often followed by a change in the market value of stocks. The economic argument for investor's preference for dividend income was offered by Graham and Dodd (1934). Subsequently, Walter (1963) and Gordon (1959 and 1962) forwarded the dividend relevancy idea, which has been formalized into a theory, postulating that current stock price would reflect the present value of all expected dividend payments in the future.

Another researcher made efforts to further understand the dividend controversy. Average investors, subject to their personal tax rates, would prefer to have less cash dividend if it is taxable: size of optimal dividend inversely related to personal income tax rates (Pye, 1972). The theoretical literature on dividend effects has been well developed. Researchers largely accepted that dividend *per-se* has no impact on the shareholders' value in an ideal economy. However, in a real world, dividend announcement is important to the shareholders because of its tax effect and information content.

Given the above problems and the controversies surrounding the impact of dividend policy on stock prices of Nigeria banks, this study empirically examine on the impact of dividend policy on stock prices of Nigeria banks using dividend yield as a measure of dividend policy.

2. Model and Model Specification

This study adopts the *ex-post facto* research design. Data are handpicked from the annual report and statement of account of selected banks listed on the Nigerian Stock Exchange for the period. Price data was taken from the Daily Official List and other annual publications of the Nigerian Stock Exchange over earlier specified five-year period. The most basic test involved regressing the dependent variable, stock price against the independent variables. This will provide a crude test of the relationship between stock prices and dividend policy. The objective of this analysis is to estimate or predict the mean or average value of the dependent variable on the basis of the known or fixed values of the explanatory variables (Gujarati and Porter, 2009). The general form for a multiple regression analysis is as follows:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 \dots b_nX_n + e \dots \dots \dots (1)$$

where

- Y = dependent variable
- a = equation constant
- b₁ ... b_n = coefficients of explanatory variables
- X₁ ... X_n = independent or explanatory variables
- e = error term

In this particular equation, the constant b₁...b_n determines the slope or gradient of that line and the constant term “a” determines the point at which the line crosses the Y-axis, otherwise known as the Y-intercept (Gujarati and Porter, 2009). In line with equation, this study is modeled as shown in equation (ii) in line with the work of (Baskin, 1989).

$$SP_t = \beta_0 + \beta_1DY_t + \beta_2BS_t + \varepsilon_t \text{-----} (2)$$

where *t* denotes time, and

- SP = Stock Prices
- DY = Dividend yield
- BS = Bank Size
- β₀ = Intercept
- β₁-β₂ = coefficients

Stock prices refer to market price of the common stock as determined at the dealing session. Stock prices will be measured by summing up all the stock prices for each month for a year by the stock price in a year. (Nishat and Irfan, 2003)

$$\text{Stock Price} = \frac{\text{Stock } P_1 + sp_2 + sp_3 + \dots + sp_{12}}{12}$$

Dividend yield is the ratio of cash dividend per share to the current market price per share. Dividend yield is used to calculate the earnings on investment (shares) considering only the returns in the form of total dividends declared by the company during the year (Nishat and Irfan, 2003).

$$\text{Dividend Yield} = \frac{\text{Dividend per Share}}{\text{Market per Share}}$$

This study use bank size as a control variable. The variable was log of total assets and it will measure the assets of each bank or the financial institutions for the years under review (Nishat and Irfan, 2003).

3. Result

Table 1: Descriptive Statistic

	SP	DYIELD	BKSIZE
Mean	11.29757	0.112908	11.55165
Median	7.841670	0.033090	11.64760
Maximum	40.97330	4.895930	12.29160
Minimum	1.067500	0.000000	8.792250
Std. Dev.	9.599502	0.518952	0.545497
Skewness	1.402820	8.628408	-2.596524
Kurtosis	4.406541	79.41196	13.62996
Jarque-Bera	38.16866	23779.27	542.3597
Probability	0.000000	0.000000	0.000000
Observations	93	93	93

Source: E-view Results

Note: SP = Stock Price; Dyield = Dividend Yield; Bksize = Bank Size

As indicated from tables 1, the mean value of stock prices 20 Nigerian commercial banks from 2006 to 2010 was N11.30k, while, the medium was N7.84k. As revealed from table 1, First Bank Nigeria Plc recorded the highest annual stock prices within the period of this study. The stock price of First Bank Nigeria Plc in 2006 was N40.97k while

Unity Bank Plc had the lowest annual stock price of N1.07k which was observed in 2010. Overall, the stock prices of Nigerian commercial banks within the period of this study showed consistent increase over the period of the study. As revealed from table 1, there was a positive skewness of stock prices (1.41) indicating that the degree of departure from symmetry of a distribution was positive, also Kurtosis value $4.41 > 3$ which is the normal value revealed that the degrees of peakedness of stock prices within the period of this study were normally distributed as it tends to hover around the mean.

As indicated from tables 1, the mean value of dividend yield of the 20 Nigerian commercial banks from 2006 to 2010 was N0.11k, while, the medium was N0.03k. The maximum dividend yield of N4.89 within the period of this study was recorded by Wema Bank Nigerian Plc in 2010. Overall, the dividend yield of Nigerian commercial banks within the period of this study showed consistent increase over the period of the study. As revealed from table 1, there was a positive skewness of dividend yield (8.63) indicating that the degree of departure from symmetry of a distribution was positive, also Kurtosis value of $79.41 > 3$ which is the normal value revealed that the degrees of peakedness of dividend yield within the period of this study were normally distributed as it tends to hover around the mean.

Lastly it was revealed from table 1 that the mean value of bank size ratio of the 20 Nigerian commercial banks from 2006 to 2010 was N11.55k, while, the medium was N11.65k. The bank with the highest bank size ratio of N12.29k within the period of this study was recorded by First Bank Nigerian Plc in 2010, while the least bank size ratio was recorded by Union Bank Nigerian Plc in 2007 (8.79k). Overall the bank size ratio of Nigerian commercial banks within the period of this study was not consistent increase over the period of the study. As revealed from table 1, there was a negative skewness of bank size ratio (1.43) indicating that the degree of departure from symmetry of a distribution was negative, also Kurtosis value of $13.63 > 3$ which is the normal value revealed that the degrees of peakedness of bank size ratio within the period of this study were normally distributed as it tends to hover around the mean.

Table 2: Regression Result

Dependent Variable: SP				
Method: Least Squares				
Included observations: 93				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
DYIELD	-3.365192	1.575960	-2.135328	0.0355
BKSIZE	3.620401	1.520690	2.380762	0.0194
C	-24.38751	17.80417	-1.369764	0.1742
R-squared	0.359063	Mean dependent var		11.29757
Adjusted R-squared	0.337458	S.D. dependent var		9.599502
S.E. of regression	7.813677	Akaike info criterion		6.991687
Sum squared resid	5433.766	Schwarz criterion		7.100616
Log likelihood	-321.1134	F-statistic		16.61970
Durbin-Watson stat	1.649165	Prob(F-statistic)		0.000000

Source: E-view Results

Note: SP = Stock Price; Dyield = Dividend Yield; Bksize = Bank Size.

As revealed from table 2 dividend yield had negative and significant impact on commercial banks' stock prices in Nigeria (coefficient of Dyield = -3.365; p-value = 0.035). Also, the for the control variables, bank size had positive and significant impact on stock prices of Nigerian commercial banks (coefficient of Bksize = 3.620; p-value 0.019). The coefficient of determination which measures the goodness fit of the model as revealed by R-square (R^2) indicates that 35.9% of the variations observed in the dependent variable were explained by variations in the independent variable. This was adjusted by the Adjusted R-Square to 33.7%, indicating that there are other variables apart from the independent variables that might also an impact on Nigeria stock prices.

4. Conclusion

A great deal of theoretical and empirical research on dividend policy effects has been done over the last several decades. Theoretically, cash dividend from earnings means giving reward to the shareholders, that is, something they already own in the company; but this will be offset by the decline in stock value. In an ideal world, therefore dividend payments would have no impact on the shareholders' value. In the real world, however a change in the dividend policy is often followed by a change in the market value of stocks. The economic argument for investor's preference for dividend income was offered by Graham and Dodd (1934); Walter (1963) and Gordon (1959 and 1962).

Another researcher made efforts to further understand the dividend and earnings controversy on stock prices reveals that on the average investors, subject to

their personal tax rates, would prefer to have less cash dividend if it is taxable: size of optimal dividend inversely related to personal income tax rates (Pye, 1972). The theoretical literature on dividend and earnings effect effects has been well developed. Researchers largely accepted that dividend *per-se* has no impact on the shareholders' value in an ideal economy. However, in a real world, dividend announcement is important to the shareholders because of its tax effect and information content.

Dividend yield is the ratio of cash dividend per share to the current market price per share and is used to calculate the earnings on investment (shares) considering only the returns in the form of total dividends declared by the company during the year. Despite extensive empirical testing of the above dividend hypotheses over the years, the conclusions are surprisingly varied, and a wide consensus on the corporate payout rationale is still lacking. On one hand, Nissim and Ziv (2001) found that using a particular model of earnings expectations, current dividend changes are positively correlated to future earnings changes hence the stock prices. On the other hand, other studies by DeAnglo et. al. (2003) and Benartzi et al (1997) has found negative correlation between dividend changes and stock prices. The findings of this study support the opposite view that dividend yields do not have positive and significant impact on stock prices. This is consistent with the works of Grullon, et al (2002) and DeAngelo, et al (2003). It is argued that dividend announcements convey information to investors regarding the firm's value prospects (Ezra, 1963). Thus, stock prices tend to increase when an increase in dividend is announced but tend to decrease when a decrease or omission is announced.

As a result of the findings of this study, this study recommends that as argued that dividend announcements convey information to investors regarding the firm's value prospects (Ezra, 1963). Thus, stock prices tend to increase when an increase in dividend is announced but tend to decrease when a decrease or omission is announced. Therefore, this study recommends investors should be provided with complete information about the dividend polices of the firm. This will increase investor level of confidence which lacking in Nigeria.

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