Indonesian Journal of Contemporary Management Research

Journal homepage: <http://ibern.org/index.php/ijcmr>
Vol. 1, No. 1, (2019)

Impact of Dividend Payout Ratio on the Value of Firm: A Study of Companies Listed on the Nigerian Stock Exchange

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Submission Info

Received 10 November 2018
Revised 27 December 2018
Accepted 17 January 2019

Abstract

The purpose of this study was to examine the impact of dividend payout ratio on the value of firm. The study also examined other factors that affect the value of firm while employing companies listed on the Nigerian stock exchange. The factors which were considered to affect the value of the firm in this study include profitability, leverage policy ratio, dividend policy ratio, cash holding and the size of the firm. The study employed Panel Ordinary Least Square Regression Techniques in analyzing the collated data. The sample in this study is drawn from breweries and beverages companies listed on the Nigerian stock exchange between the periods 2007-2016. The results showed that profitability ratio and leverage ratio positively and significantly impact on the value of the firm. This implies that only the variables of Firm Leverage, and Profit after Tax are significant factors that drives firm value in both breweries and beverages companies among listed companies in Nigeria. The study however recommends that corporate managers whose interest is to raise firm value should ensure the maximization of Profit after Tax, and focus on policies that will improve the leverage ratio of the firm.

Keywords

dividend payout ratio
value of firm
profitability ratio
leverage ratio
Nigeria

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1. Introduction

The term 'dividend policy' refers to the practices that management follow in making dividend payout decisions or the size and pattern of cash distributions over time to shareholders (Nissim & Ziv, 2001). The study of dividend policy has captured the attention of finance and accounting scholars since the middle of the last century. They have attempted to solve several issues pertaining to dividends and formulate theories and models to explain corporate dividend behavior.

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Recommended Citation: Odum, A. N., Odum, C. G., Omeziri, R. I., & Egbunike, C. F. (2019). Impact of Dividend Payout Ratio on the Value of Firm: A Study of Companies Listed on the Nigerian Stock Exchange. *Indonesian Journal of Contemporary Management Research*, 1(1), 25–34.

Although, dividend policy has been one of the most controversial issues in finance, but still the dividend puzzle – **“does the dividend payout policy affect the value of the firm?” is still very much unanswered. Many reasons are being adjudged for reasons why** dividend policy might be important and many of the claims about dividend policy are economically illogical. However, with regard to dividend decision firms have only two options; either to pay or to not pay but payment of cash dividends depend on the availability of cash and liquidity of the firm.

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 organization 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 (2015) 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. Moreover, it has been discovered that dividend policy of a firm always have short term or long term effect on the market price of its shares. It is quite difficult to clearly identify the effects of payout on firm's valuation since the valuation of a firm is a reflection of so many factors such that the long run effect of payout is quite difficult to separate.

According to Kehinde & Abiola (2001), by employing 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; hence, retained earnings provide the cheapest source of financing.

Many dividend theories have been propounded to give explanation on how the dividend decisions are being undertaken and whether it has an influence on the value of the firm. There are three different approaches in this regard. On the right, there is a conservative group that believes that an increase in dividend payout increases the value of the firm. On the left, there is a radical group that believes a higher dividend payout reduces the value of the firm. And, at the center, there is a middle of the road party, founded in 1961 by Miller and Modigliani which claims that the payout policy makes no difference (Brealey et al., 2017).

Corporate organizations, beverages and breweries firms inclusive, are faced with the problem of whether to pay a large, small or zero percentage of their earnings as dividends vis -a- vis financing future investments projects. This challenge is borne out of the desire to satisfy the various needs of shareholders. Due to the fact of having to deal with competing interests of various shareholders, the kind of dividend policy adopted could either lead to positive or negative effects on the value of the firm. The managers are therefore unable to forecast with certainty to what extent the policy will affect the value of their firms.

Despite numerous studies (Nissim & Ziv, 2001; Arnott & Asness, 2003; Farsio et al., 2004; Anazonwu et al., 2018) that have been done, the issue on dividend policy remains an unresolved issue in corporate finance and accounting literature. Researchers such as Lie (2005); Zhou & Ruland (2006); Amidu (2007); Howatt et al. (2009), have come up with

different findings about the relationship between dividend payout policy and firm performance. For instance, Okpara (2010) studied asymmetric information and dividend policy in Nigeria. Also, in the context of emerging economies, Nissim & Ziv (2001) paid attention on dividend changes and future profitability among listed companies in Nigeria. From the forgoing, it is evident that not much of these studies have paid attention to the very important issue of dividend policy as it relate with firm value. However, in search of more light on dividend payout policy and firm value, this study will attempt to re-examine this theme from the perspective of the breweries and beverages companies in Nigeria.

In this study, firm value is proxy by Tobin's Q which is scarcely employed in issues relating to performance among academic researchers in Nigeria. The scope of this study covers a period of 10 years (2007–2016). The study focused on breweries and beverages companies listed on the Nigerian Stock Exchange as such samples have been rarely studied in reviewed literatures.

It is important to note that the study provides an avenue for an in depth understanding of the subject matter which will be beneficial to financial managers, board of directors and other decision makers in formulating optimal policies for their respective breweries and beverages companies and by extension other listed companies in Nigeria. The study will equally serve as a tool for assisting investors in making their investment decisions as well as aiding to expose the various factors that may influence firm value. The study further serves as research materials for future investors and also adds to the existing body of knowledge.

2. Methods

The ex-post research design is employed for the secondary data in this study. The data are referred to as secondary since they were collected from annual reports and accounts of the sampled companies and annual publications of Nigeria Stock Exchange (NSE). A sample of 11 beverages and breweries companies quoted on the NSE was purposively selected for the analysis covering ten (10) years summary of 2007–2016. We chose Ordinary Least Square for this study because it will help to determine both magnitude and direction of the independent variables and their respective impact on the dependent variable.

The population of this study consists of the eleven (11) breweries and beverages companies listed on the Nigerian Stock Exchange as at December 31, 2016. It should be noted that each company in the population must have finished its obligation in delivering annual report for the year ended 2007 to 2016. Most studies use the Yamane (1967) formula and computer-assisted random sampling techniques in selecting their final sample size. However, in this study we will use all the companies listed on the stock exchange market as at 2016 and sampled eleven (11) of them selected from both breweries and beverages industries. In this study, the random sampling technique was adopted since we did not use all the companies in the population. The nature of this study necessitated the use of secondary data. The data for the selected quoted companies were sourced from Machame Ratios data base.

This study will employ a panel data which will consider the cross-sectional and time-series characteristics of the sample data. In essence, the panel data analysis accommodates 'time as well as the heterogeneity' effects of the quoted companies. However, for ease of comparison, the simple panel ordinary least square (OLS) regression model would be adopted in this study. An econometric technique would be adopted in this study. The estimation results would be evaluated based on individual statistical significance test (t-Test) and overall statistical significance test (F-Test). The goodness of fit of the model would be tested using the coefficient of determination (R-Squared). In this study, we hope to conduct descriptive statistics and correlation analysis to properly describe the nature of our data. In conducting all our data analysis, we will employ EViews 8.0 software package.

The most common proxy for finance average q is the market-to-book ratio, which is an estimate of finance Tobin's Q. One source of measurement error is thus the difference between the firm manager's valuation of firm assets (the numerator of average Q) and their market value (the numerator of Tobin's Q). The numerator of the market-to-book ratio, an estimate of the market value of assets, is usually computed by adding to the book value of assets the market value of common equity and subtracting the book value of common equity and balance-sheet deferred taxes. A second source of measurement error is therefore that the market value of the firm's liabilities, especially debt, need not equal their book value. The denominator of the market-to-book ratio is the book value of assets; thus, a third source of measurement error is the difference between the book and replacement values of assets.

Although this measure is not the direct equivalent of Tobin's Q, it has become common practice in the finance literature to calculate the ratio by comparing the market value of a company's equity and liabilities with its corresponding book values since the replacement values of a company's assets is hard to estimate.

$$\text{Tobin's } Q = \frac{\text{Equity Market Value} + \text{Liabilities Market Value}}{\text{Equity Book Value} + \text{Liabilities Book Value}}$$

It is also common practice to assume equivalence of the liabilities market and book value, yielding:

$$\text{Tobin's } Q = \frac{\text{Equity Market Value} + \text{Liabilities Book Value}}{\text{Equity Book Value} + \text{Liabilities Book Value}} \approx \frac{\text{Equity Market Value}}{\text{Equity Book Value}}$$

For stock listed companies, the market value of equity is often quoted in financial databases. It can be calculated for a specific point in time by:

$$(\text{number of shares}) \times (\text{share price})$$

Another use for Q is to determine the valuation of the whole market in ratio to the aggregate corporate assets. The formula for this is:

$$Q = \frac{\text{Value of Stock Market}}{\text{Corporate Net Worth}}$$

To test the hypotheses of this study, firm value evaluation is postulated as a function of dividend payout ratio, leverage, cash holding, profit after tax and firm size. The choice of Panel Ordinary Least Square (POLS) for the research work is guided by the fact that its computational procedures is simple and the estimate obtained from the procedure have optimal properties which include Linearly, Unbiasedness, Least Variance and Mean Square Error Estimation. Eviews software will be used to aid the regression analysis. In carrying out this research work and the evaluation of financial statement in investment decision, the research develops a compact form of the general model as follow:

$$Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + \varepsilon_i$$

Where:

- Y = Dependent variables of quoted breweries and beverages companies.
- X = Independent variable of quoted breweries and beverages companies.
- b_0 = Intercept for X variables of quoted companies.
- b_1 = Coefficient for independent variables of quoted companies; donating the nature of relationship between variables X (or parameters).
- ε_i = The error team.

The specific model for the regression analysis therefore becomes:

$$Q = b_0 + b_1PATM + b_2CASHH + b_3TLBTA + b_4DVPAY + b_5FSIZE + \varepsilon_i$$

Where:

- Q = Proxy for Firm Value.
- PATM = Profit after Tax.
- CASHH = Cash Holdings.
- TLBTA = Leverage Ratio.
- DVPAY = Dividend Payout Ratio.
- FSIZE = Firm Size.

3. Results and Discussion

This study investigates the impact of dividend payout ratio on firm value among quoted companies in Nigeria. To this end, we conduct descriptive statistics, correlation matrix, normality test, fixed and random effect unbalanced panel data regression and the hausman test was also conducted to select between fixed and random effect models.

Table 1 Descriptive Statistics

Variables	Mean	Std. Dev	Jarque-Bera (P-Value)
Q	3.595	6.994	0.000
PATM	11.106	14.152	0.000
CASHH	7150.434	6979.048	0.001
DVPAY	55.355	42.100	0.000
TLBTA	59.009	15.298	0.129
FSIZE	4.611	0.523	0.024

Table 1 show the mean (average), standard deviation (degree of dispersion) and Jarque Bera (JB) normality test for each of the study variable The result provided some insight into the nature of the selected companies that were adopted in the study.

First, the small standard deviation of the variable of size of both breweries and **beverages companies' in Nigeria shows that the sampled companies are** dominated with either large or small companies. Also the small standard deviation of dividend payout ratio of the sampled firms showed a wide fluctuation in both high and low dividend payout ratio among the companies of interest. The summary statistics showed that the average payout in both breweries and beverage companies during the period under study is fifty five naira which was actually paid out by Cadbury Plc, Dangote Sugar, Flour Mills of Nigeria, Guinness Nigeria Plc, National Salt, Nestle Nigeria Plc, Nigeria Breweries Plc, Pz Cussons and Uniliver Nigeria Plc.

This is an indication that most of the sampled firms in the study adopted company policy that was good enough to pay the mean dividend during the period under study. The descriptive statistics table also show that the level of cash holdings among the sampled companies is high with a mean value of seven million one hundred and fifty thousand four hundred and thirty four naira only. The standard deviation of cash holdings among the listed companies stood at 6979.048 which imply that neither high nor low cash holdings dominated the firms in the sample.

The same table above shows skewness/kurtosis test for normality of the variables. The Table 1 revealed that all the variables of interest are normally distributed at both 1% and 5% level of significance except for the variable of leverage (tlbta) as seen in their p-values. However this is not too much of a concern since forecasting error due to outlier in the data is not of concern in the study (Gujarati & Porter, 2009).

In examining the associational relationship among the variables, pearson correlation coefficient (correlation matrix) was employed and the result is presented in **Table 2. In the said table, the correlation between firm value measured as Tobin's Q and** the individual explanatory variables is presented. The result shows that profit after tax (0.09) and leverage (0.104) are both positively associated with firm value while cash holding (-0.089), dividend payout ratio (-0.068) and firm size (-0.051) all have a negative association with the dependent variable of firm value. The correlation matrix also revealed that no two explanatory variables are perfectly correlated. This indicates that there is the absence of multicollinearity problem in the model. Multicollinearity between explanatory variables may result to wrong signs or implausible magnitude and bias of the standard errors of the coefficient in the estimated model.

Table 2 Pearson Correlation Matrix

	Q	PATM	CASHH	DVPAY	TLBTA	FSIZE
Q	1.0000					
PATM	0.9029	1.0000				
CASHH	-0.0890	0.0105	1.0000			
DVPAY	-0.0682	0.0519	-0.0129	1.0000		
TLBTA	0.1040	-0.1445	-0.0458	-0.1270	1.0000	
FSIZE	-0.0514	-0.0049	0.6152	0.2689	0.0778	1.0000

However, to examine the cause-effect relationship between the dependent variable (Q) and the independent variables (PATM, CASHH, DVPAY, TLBTA, FSIZE) and to test our formulated hypotheses we employed Regression Analysis since the data had time series (2007 to 2016) and panel properties (11 quoted companies). The panel data regression results obtained are presented and discussed (Table 3).

Table 3 Panel Regression Results

	Expected Sign	Q (OLS Pooled)	Q (Fixed Effect)	Q (Random Effect)
PATM	+	0.464 (22.88) {0.000}***	0.540 (31.73) {0.00}***	0.526 (31.01) {0.00}***
CASHH	-	-0.00 (-2.00) {0.49}**	-0.000 (-3.87) {0.000}	-0.000 (-3.30) {0.001}***
TLBTA	+	0.102 (5.22) {0.000}***	0.100 (4.64) {0.000}	-0.378 (-0.39) {0.698}
DVPAY	+	-0.017 (-2.22) {0.030}**	-0.001 (-0.31) {0.756}	-0.005 (-0.87) {0.387}
FSIZE	+	0.407 (0.51) {0.610}	-1.229 (-0.85) {0.397}	-0.378 (-0.39) {0.698}

Notes:

1) Parentheses () are t-statistic while bracket { } are p-values

2) *** and ** are 1% and 5% level of significance respectively

In the Table 3, we presented the two panel data estimation techniques (fixed effect and panel data estimator). The results revealed differences in their coefficients magnitude and signs. In selecting from the two panel models the Hausman test was conducted and the result shows that the alternative hypothesis should be rejected, that is: H_0 (adopt random effect model and reject fixed effect model). Following the Table 3, it should be noted that fixed effect panel regression model provided the following result.

Profit after Tax (PATM) of the sampled firm in the study appears to have a positive significant influence on firm value at 1% level of significance. This implies that profit after Tax (PATM) of both breweries and beverages companies in Nigeria during the period of study impacted positively and significantly on the value of the various companies listed in the study such that a naira increase in Profit after Tax will significantly raise the value of the company by 0.54 units. This result agrees with the study of Gill et al. (2010); Adelegan (2009); Kania & Bacon (2005); Fama & Babiak (1968)

but does not support hypothesis one which states that profitability do not have any significant influence on the value of the firm. Therefore we reject H_0 and accept H_1 .

The variable of cash holding (CASHH) from the studied companies appeared to have a negative relationship with firm value which is significant at 1%. This reveals that as the ratio of cash holdings of the sampled firms increases the value of the firms tends to fall. This result supports the findings of Kalcheva & Lins (2007). Furthermore, the apriori expectation is properly signed but negates the null hypothesis of no significant relationship between cash holdings and firm value among Nigerian listed companies. Furthermore, the above result also reveal that dividend pay ratio of listed beverages and breweries companies in Nigeria has a negative influence on firm value but is seen to be insignificant. The corresponding coefficient of DVPAY (-0.001) and P-Value of 0.76 indicates there is no significant relationship between dividend pay ratio and firm value among selected sample firms of the study. This result supports Ahmed & Javid (2009); Dogan & Topal (2014) and also conforms to hypothesis which suggest that dividend payout ratio has no significant impact on the value of the firm.

The variable of leverage (TLBTA) showed a significant positive relationship with firm value. This agrees with apriori sign and shows that high levered companies have positive firm value. In other words, the higher the leverage ratio of the company the greater the value of the firm. This agrees with the study of Ho (2003); D'Souza & Saxena (1999); Collins et al. (1996); Pruitt & Gitman (1991); Rozeff (1982); Lloyd et al. (1985), but negates the findings of Sadeghian et al. (2012). Therefore, the hypothesis of no significant relationship between leverage and firm value is rejected.

Finally, the result shows that there is no significant relationship between firm size and firm value of listed beverages and breweries companies in Nigeria. This is evident from the t-statistics value of (-0.85) and a probability value of (P-Value -0.397). This result negates the findings of Ho (2003). Furthermore, the result reveals that a one unit increase in total assets of the company will lead to 1.22 unit fall in the value of the company. This is in contradiction to the findings of Al - Twaijry (2007). However, this should not be taken seriously because the value of the probability (P-Value) shows that the impact is insignificant. Hence the null hypothesis is accepted.

4. Conclusion

This study investigated the influence of dividend payout ratio policy on firm value among breweries and beverages companies in Nigeria. The selected eleven companies in this study were drawn from the list of all quoted breweries and beverages companies in Nigeria that disclose useful data for our variables of interest for the period 2007 and 2016 in their annual financial report. In studying the influence of dividend payout policy on firm value in Nigeria using our sampled companies; it was revealed that only the variables of cash holdings (CASHH), leverage ratio (TLBTA), and profit after tax (PATM) showed significant impact on firm value for both breweries and beverages companies during the period under review in Nigeria.

Based on the empirical findings, the authors however recommend that corporate managers whose interest is to raise the value of the firm should ensure policies that will

maximize profit after tax, and leverage ratio. This will create a positive atmosphere for future investors and the willingness to invest will increase.

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