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## **Determinants of Dividend Policy of Listed Deposit Money Banks in Nigeria**

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### **Abstract**

*The study examines the factors that influence the dividend policy of Nigerian Deposit Money banks using panel data analysis for the period of ten years (2006 to 2015). The population of the study comprise all the 21 Deposit Money Banks in Nigeria as at 31 December, 2015. The sample of the study comprises of all 15 deposit money banks listed at the Nigerian Stock Exchange as at 31st December 2015. The data used for the study was extracted from secondary sources. The data was extracted from the financial reports of the banks within the period of the study. The data was analysed using panel data regression. The study found that board size, leverage, financial crisis and political factor dummy variables had negative impact on the dividend policy while other variables had positive impact. The study concluded that the independent variable have influence on Dividend policy. The study recommended that the management team needs to strive for higher profitability, larger firm size and lower debt levels to satisfy the shareholders' goal of wealth maximization in the form of higher dividends.*

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**Keywords:** Dividend policy, Panel data regression, Deposit Money Banks, leverage, Board Size

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### **1.1 Introduction**

The decision of the firm regarding how much earnings could be paid out as dividend and how much could be retained by the firm is the concern of dividend policy. It determines what proportion of earnings is paid out to shareholders by way of dividends and what proportion is ploughed back in the firm itself for reinvestment purposes. The development of such a policy will be greatly influenced by investment opportunities available to the firm and the value of

dividends as against capital gains to the shareholders. Firms can retain its free cash flow, either investing or accumulating it, or pay it out through a dividend or share repurchase. The level of equity retained in the company is affected by the amount of earnings paid out to shareholders, financial managers need to make this decision with caution as it is one of the critical decisions in financial management. Dividend policy has remained one of the most controversial issues in corporate finance since the introduction of irrelevance of dividend policy theory by Modigliani and Miller (MM) in the 1960s when they believed in the world of efficient market where dividend policy does not affect the shareholder's wealth. Over the years, series of academic research has been carried out on firms' dividend policy and these have led to a number of competing theoretical explanations for dividend policy. Despite the various studies covering outstanding issues on dividend payments and policies as well as their relevance to investors within developed markets and the in the emerging markets consensus are yet to be reached on what factors constitute determinant with a definite magnitude. Moreover, very few studies only examined the influence of external factors on the dividend policy components.

The critical issue here is that other dimensions have emerged in extending the frontier of knowledge on dividend policy. The underlying and propelling force of this study is to unfold the dimension of determinants of dividend policy beyond firm-specific factors and board structure by introducing non-economic variables such as financial crisis and political factor as dummy variables. Based on this, the main objective of the study is to examine factors that influence dividend policy within the period of 2006 to 2015 for all listed deposit money bank in Nigeria. The fundamental questions in this study are: What impact does firms specific factor has on the dividend policy? Does board structure have impact on dividend policy? In line with these research questions the following hypotheses are formulated: Firm-specific factors have no significant impact on the dividend policy of Nigerian deposit money banks and board structure has no impact on the dividend policy. To answer these questions and test the hypotheses the remaining part of the paper is structured thus: reviewed literature on determinants of dividend policy, the methodology adopted for the study, data analysis and discussion and conclusion and recommendations.

## **2.0 Literature Review**

This section is based on the reviewed of related studies on the determinant of dividend policy and the various theories proposed to offer explanation to dividend policy.

### **2.1 Conceptualization of variables**

#### **2.1.1 Dividend Policy**

Dividend policy is the set of guidelines a company uses to decide how much of its earnings it will pay out to shareholders. Some evidence suggests that investors are not concerned with a company's dividend policy since they can sell a portion of their portfolio of equities if they want cash. It is a measurement policy that deals with either to pay dividend or not and when such dividend should be paid. Dividend policy refers to the decision to distribute all or part of the company's profit in the form of dividends to the shareholders or plough a proportion of the company profit back to the business (Al-Malkawi, Rafferty & Pillai, 2010).

#### **2.1.2 Profitability**

Shawn Grimsley (2014) believes that profitability determines whether a firm stays in business. He posited that profitability is the ability of a business to earn a profit. Therefore, a profit is the left-over of business revenue after paying all expenses related to the revenue in a given period.

### 2.1.3 Financial Leverage

Financial leverage (LEV) is the debt ratio calculated as total liabilities divided by total assets. Since firms with more debt should be more cash constrained and have lower ability to pay dividends, the relationship between DPR and LEV is predicted to be negative (Khan *et al*, 2016).

**2.1.4 Financial crisis:** This refers to global financial crisis of 2007 of which the effect is felt in many countries. This financial crisis started in United State of America and extended to Nigeria and many other countries across the globe. It paralyzed the activities in the capital market and many operators in the Nigerian financial system are yet to recover from the shock. This informs the reason for the inclusion of this variable as a control parameter which influences dividend policy. The variable is captured by a dummy (1) factor and appears to have been tested in the literature on dividend policy. However, this variable stopped featuring in the model in year 2015.

**2.1.5 Political factor:** This covers various shocks that are politically motivated which affect the operations of many companies' particularly deposit money banks in Nigeria. Political factor limits the operation of the commercial banks and make business environment unfriendly to the shareholders. Thus, this variable is represented by dummy (2) and influence dividend policy of deposit money banks.

## 2.1 Empirical Review

Smits (2012) analysed the impact of the recent financial crisis on US firms' dividend pay-out policy, using variables like size, liquidity, investor composition and spread of bid/ask. Overall his findings showed that the financial crisis did not affect dividend pay-out ratios, despite the evidence that dividend pay-out increases during crisis for larger firms with higher percentage of institutional owners. However, there is evidence that both firm size and clientele influence the impact of a crisis on dividend policy: dividends increase during the crisis for larger firms and those with a higher percentage of institutional owners. This might be so, may be due to the fact that the firms might want to communicate to their shareholders that the crisis does not affect the firm (as much) as it does others.

Hauser (2013) investigated whether corporate pay-out policy changed during the financial crisis in the US between 2006 to 2009. The study used a life-cycle model to predict the probability that a firm pays a dividend. The data sample for this research followed that of Fama and French, (2006) and that of DeAngelo, DeAngelo, and Stulz, (2006) for the time period of 2006-2009. The panel logistic regression analysis considers the firm cluster effects and the autoregressive correlation of the firm clusters. The study found that the probability that a firm paid a dividend declined in 2008 and 2009, even after taking the firm's financial condition into account. Furthermore, the analysis also shows that dividend policy did shift during the financial crisis.

Soondur, Maunick and Sewak, (2016) explored the determinants of dividend policy of companies listed on the Stock Exchange of Mauritius. The study used a sample size of 30 companies selected from the Stock Exchange of Mauritius using the regression analysis. The fixed and the random effect model were conducted to determine the effects of earnings per share, net income, retained earnings, cash and debt to equity on the dividend policy of the listed companies operating in the Mauritian Stock Exchange and for this purpose, companies' annual reports for the period 2009-2013 were used. Moreover, two measures of the dividend policy were considered namely the dividend per share and the dividend pay-out ratio. The

study attempted to provide a comparison between the dividends policies of companies listed on the official market with that listed on the DEM. The findings show there is a significant negative relationship between companies' dividend policy and their retained earnings. Furthermore, the results indicated that there was no meaningful connection between the dividend policy and a company's cash and debt to equity ratio.

Yusof and Ismail, (2016) investigated the determinants of the dividend policy of public listed companies in Malaysia. The factors examined in this study include earnings, cash flows, free cash flows, debt level, growth, investment, size, largest shareholders, risk and lagged dividend. Data were obtained from the relevant databases and annual reports of the sampled companies. The study examined a total of 147 listed companies. In analyzing the data, the study used fixed and random effects, pooled least squares model, robust standard errors on fixed effects and random-effects models. The results revealed the five factors (earnings, debt, size, investment and largest shareholder) have a significant influence on dividend policy, with earnings, firm size and investment revealed to have a positive significant effect, while debt and large shareholders have a negative significant effect.

Mui, and Mustapha (2016) examined the determinants of dividend policy among public-listed firms in Malaysia. Secondary data was hand-collected from the annual reports of the listed firms for a period of five years. This study employed multiple regressions to estimate the relationship between the determinants and dividend pay-out decisions. The results indicated that investment opportunity, liquidity and firm size significantly influence the dividend pay-out of Malaysian listed firms.

Echchabi and Azouzi (2016) investigated the determinants of dividend pay-out among the Tunisian listed companies and particularly to inspect the influence of the Jasmine revolution on firms' dividend policies. The study employed panel data models using pooled data from the companies listed on the Tunisian Stock Exchange from 2003 through 2012. This specific study period has been selected because it includes the Arab uprisings events which started in Tunisia at the end of 2010. The findings indicated that net cash flow and market to book value have significant influence on the dividend pay-out, while the Jasmine revolution had no significant impact on the dividend pay-out among the Tunisian listed companies. Hence, the study provided insight on the possible influence of similar events on the dividend policy and the other factors that may influence its dynamics.

Kuzucu (2016) examined determinants of dividend Policy Turkish Listed Firms using Panel Data Analysis for eight-year (from 2006 to 2013) from the Turkish stock market (Borsa Istanbul). The results show that financial leverage, size, growth rate, age, profitability, ownership structure and P/E ratio are statistically significant. The relationship of leverage, growth rate, profitability and family control with dividends is negative, whereas the relationship of size, age and P/E ratio is positive. Therefore, firms with higher debt ratios / growth rates / higher earnings are likely to retain more of their earnings. The study found that, as a firm matures, the availability of profitable projects reduces and earnings decrease. As the investment opportunities reduce, the need for resources decreases and the firm increases dividend pay-outs to shareholders.

Banerjee (2016), examined determinants of dividend distribution on Information Technology (IT) companies in India. Four top Information Technology (IT) companies in India were analysed over a span of 5 financial years. Three factors namely Leverage, PE Ratio, and Return on Equity are found to be statistically significant, as far as Dividend Distribution

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Decisions were concerned.

M'rabet (2016) examined the relationship between dividend policies and financial performance of selected listed firms in Morocco. Data were sourced through secondary means from the annual reports of the sampled quoted firms and was analyzed using panel data regression model. Two models were developed in an attempt to provide a theoretical explanation on the birds-in-hand dividend relevance theory and the Modigliani and Miller's (MM) dividend irrelevance theory. The findings indicated that Dividend policy is an important factor affecting firm performance. Their relationship was also strong and positive. The study concluded based on the findings of this research that dividend policy is relevant and that managers should devote adequate time in designing a dividend policy that will enhance firm performance and therefore shareholder value. The recommendation was that management of companies should also invest in projects that give positive Net Present Values, thereby generating huge earnings, which can be partly used to pay dividends to their equity shareholders.

Akani, and Sweneme (2016) examined the impact of dividend policy on the profitability of selected quoted manufacturing firms in Nigeria from 1981 to 2014. Time series data were computed from financial statement of the selected quoted manufacturing firms and stock exchange fact book. Return on Investment (ROI) and Net Profit Margin (NPM) were modelled as the dependent variables while Dividend Pay-out Ratio (DPR), Retention Ratio (RR), Dividend Yield (DY) and Earnings per Share (EPS) were proxied as the independent variables. Multiple regressions with the aid of statistical package software known as STATA were used as data analyses techniques. Multi co-linearity, co-linearity, Durbin Watson, F-statistics and regression coefficient were used to determine the dynamic relationship between the variables. Findings revealed that all the independent variables have positive relationship with the dependent variables except dividend yield. The recommendation was that operational efficiency of Nigerian financial market should be deepened and management should strengthen its effort for effective dividend policy that will increase the profitability of the quoted manufacturing firms Nigeria.

Elmi and Muturi, (2016) investigated four theories which are dividend relevance theory, dividend irrelevance theory, free cash flows hypothesis and signalling theory. Descriptive research design was applied in this research study. The population for this study was ten commercial and services firms listed in the Nigerian Stock Exchange as at 31st December 2015. Data for these companies for ten years from 2005 to 2014 was used in the study. Both primary and secondary data were applied in the study. Data was collected from the audited financial statements of the commercial and services firms, Nigerian Stock Exchange and also made use of questionnaire design to extract information from the firms and also using secondary information from Capital Markets Authority. The study applied descriptive statistics and panel data analysis model. The study used panel data analysis and applied the fixed effects model. The study found that profitability was an insignificant factor in determining dividend pay-out. The study recommended that though profitability may not hurt the ability of the firm to pay dividends in the short term, continued poor performance will definitely affect pay-out negatively.

Khan, Naeem, Rizwan, and Salman, (2016), investigated the factors that determine the dividend pay-out ratio and to examine the relationship between these factors and dividend pay-out ratio. The results indicated that there is a negative relationship between profitability and dividend pay-out ratio. There is a negative relationship between leverage and dividend

pay-out ratio. Firm Size and P/E ratio does not have any impact on the dividend pay-out ratio. Thomas (2013) examined the effect of board characteristic on dividend policy for Standard & Poor (S&P) 500 firms between the period of 2008 and 2011. The board characteristic comprises of board size, percentage of insider directors, percentage of women directors, ownership structure and directors tenure are measure against dividend policy. The study used ordinary least square (OLS) and fixed effect test to analyse the cross sectional data and test the robustness of the model. Findings showed that board size has positive significant relationship with dividend policy while board independence show negative significant relationship with dividend policy. Board independence was revealed to reduce monitoring cost of the agents. The study also revealed that the percentage of share held by the directors is inconclusive. However the result of the fixed effect test shows that all the independent variables except the board size were not significant.

Pandey and Ashvini (2016) analysed the determinants of dividend policy (DP) of Fast Moving Consumer Goods sector in India. FMCG companies included in CNX FMCG the sectorial index for National Stock Exchange of India are fifteen and twelve companies have been taken for the study. The period of study considered was ten years from 2003 to 2012. Various factors affecting DP such as dividend pay-out ratio (DPR), debt equity ratio (DER), earnings (ERN), corporate tax (CT), earnings per share (EPS) and firm size (FS) were considered for analysis. The study revealed that DPR, DER, ERN, CT had significant impact on EPS and were also good predictors of dividend pay-out in FMCG sector. Ordinary Least Square models were used to estimate the impact of DER, DPR, ERN, FS, and EPS and on the DP. The DP of overall FMCG sector is strongly influenced by DPR, DER, EPS, and CT, which reveals that the DP of FMCG sector is significantly influenced by the selected financial variables during the period of the study. The overall regression analysis shows that the determinants of DP are significantly and positively influenced by the DPR, DER and EPS.

Mahdzan, Zainudin and Shahri (2016) examined the determinants of the dividend policies of public listed firms in Malaysia for the period 2005 to 2009. A panel regression estimation model was used to identify the determinants of dividend policy within Malaysian firms. These determinants were then examined across eight different industries – Technology, Industrial, Consumer Noncyclical, Basic Material, Communication, Consumer Cyclical, Diversified and Energy – to investigate possible divergences in the determinants of dividend pay-outs in the context of an emerging market. The study found that firm size, leverage position, and profitability are significantly and inversely related to the dividend policy of firms in Malaysia. However, the industry-specific determinants of dividend policy displayed a number of variances that could plausibly be used as an indication of the selection of stocks in specific industries by potential investors. The results indicate that agency cost is positively related to dividend policy for the Basic Material industry. In addition, size and leverage play an important role in determining dividend pay-out for firms in the Technology and Consumer Noncyclical industries. For the Industrial sector, the size and profitability significantly affect the dividend policy of firms. However, the results failed to display any significant results for the Energy and Consumer Cyclical industries.

Based on the above reviewed literatures, only the study of Thomas, (2013) examined the effect of board characteristic on dividend policy, some studies examined the factors that determine the dividend pay-out ratio, some examined the impact of dividend policy on the profitability while some examined the relationship between dividend policies and financial performance and some studies examined the impact of the recent financial crisis on firm's

dividend pay-out. However, some of the studies [for instance Yusof and Ismail (2016) Pandey and Ashvini (2016) Khan, *et al*, (2016) Kuzucu (2016) Echchabi and Azouzi (2016) Mui, *et al* (2016), Mahdzan, *et al* (2016)] were carried out in foreign countries. In view of this, the study tends to fill this gap by examining the Determinants of dividend policy of Listed Companies in the Nigerian Stock Exchange.

## **2.2 Theoretical Framework**

### **2.2.1 Theory of Dividend Policy**

The theory of dividend policy comprises of irrelevant dividend policy developed by (Miller and Modigliani 1961). They argued that dividend policy is independent of shareholder wealth. Relevant dividend policy suggested that dividend policy significantly influence shareholders wealth. On the strength of relevant dividend policy, different arguments emerged such as information content of dividend policy which contends that dividend policy signals the performance of the firm (Van Horn 2002), birds in the hand argument noted by Linter (1962) and Gordon (1963), posit that dividend is more certain than future capital gain. Agency cost of dividend policy emphasis on the conflict of interest between the principal and the agent but suggests reduction of free cash flows in the hands of the agent through payment of cash dividend (Rozeff, 1982; Somoye, 2011). Clientele effect noted that portfolio choice is influenced by investor's decision between dividend and capital gain (Miller & Modigliani 1961; Bishop, Harvey, Robert & Garry, 2000; Ross, Westerfield & Jaffe, 2002). Hence, this theory underpins this study because it examines the various factors that determine the dividend policy.

## **3.0 Methodology**

This section discussed the method and procedures used to examine the determinants of dividend policy. Correlational research design was used for the study because it describes the statistical association between two or more variables. The population of the study comprised all the deposit money banks in Nigeria as at 31 December, 2015. The sample of the study was arrived at through census sampling technique. Thus, the sample of the study comprised of all 15 deposit money banks listed at the Nigerian Stock Exchange as at 31st December 2015. The study covers the period of ten years from 2006 to 2015; this is because the researchers were able to access data available for this period.

### **3.1 Source of Data and Method of Analysis**

The data used for the study was extracted from secondary source. The data was extracted from the audited financial reports of the banks within the period of the study. These financial reports were obtained from Nigerian Stock Exchange Fact Books. The use of secondary source of data is due to the fact that information on the variables used for conducting the research can only be found in the financial statement of the banks. This source of data also has the advantage of being relatively more reliable since the financial statements have been audited by an independent audit firm. Panel data regression analysis would be used in the study via STATA Statistical Package Software version 14.

### **3.2 Model specification**

The panel data regression model is used in this study and the model specification for this study will incorporates variables that influence dividend policy. The model specification will draw a relationship between Firms specific factors, board structure and dividend policy. The model is specified below:

The regression model (adapted from the study of (Thomas, 2013) for this research study is specified below:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \varepsilon \dots\dots\dots 1$$

$$DP = \alpha + \beta_1 BSZ + \beta_2 BID + \beta_3 LEV + \beta_4 ROE + \beta_5 FSZ + \beta_6 FC + \beta_7 PF + \varepsilon \dots\dots\dots 2$$

Where Y = dependent variable,  $\beta$  = coefficient, X = independent variable and  $\varepsilon$  is the error term, DP = Dividend Policy, BID=Board Independence, LEV=Leverage, BSZ=Board Size, ROE=Return on Asset, FSZ=Firm Size, FC=Financial Crisis (Dummy variable 1), PF=Political Factors (Dummy variable 2).

### 3.3 Measurement of Variables

**Table 3.1: Study Variables**

No.	Variables	Variable Types	Measurement	Authors	A Priori
1.	Dividend policy (DP)	Dependent variable stands for financial policy	Gross dividend divided by number of shareholders ranking for dividend	Ullah, Fida and Khan,( 2012)	
2.	Firm size	Independence variables	Log of total asset	Khan, Naeem, Rizwan, and Salman, (2016)	positive
3.	Profitability	Independent variable	ROE: profit after tax divide by equity.	Khan, Naeem, Rizwan, and Salman, (2016)	positive
4.	Financial Leverage	Independent variable	Total debt divide by total assets	Khan, Naeem, Rizwan, and Salman, (2016)	Negative
5.	Board size	Independent variable	Board size is the total number of directors present in the board	Thomas (2013)	positive
6.	Board independence	Independent Variable	Ratio of external directors or non-executive directors present in the board	Thomas (2013)	Positive
7.	Financial crisis	Control variable connotes non-economic parameter	Financial crisis represented by dummy (1)	Smith (2012)	Negative
8.	Political factor	Control variable connotes non-economic parameter	Political factor represented by dummy (2)		Negative

**Source: Researcher Compilation (2017)**

### 3.4 Model Estimation Techniques

The panel data econometric techniques to be adopted in this study would be balanced panel data regression techniques. The use of panel data regression is based on the fundamental justification that the data to be used is subject to time and cross sectional attributes and this will enable the study of innovation and performance of firms over time and as well as across the sampled quoted companies, panel regression provides better results since it increases sample size and reduce problem of degree of freedom; and the use of panel regression avoid the problem of multicollinearity, aggregation bias and endogeneity problems (Greene, 2002). Also, in order to improve the reliability and validity of the result, the following tests of robustness was conducted; Multicollinearity test, to check whether there is a high correlation among the independent variables which may mislead the result of the study; Variance Inflation Factors (VIF) and Tolerance Values (TV), to test whether multicollinearity exists in the variables and Heteroscedasticity, to check if the variability of error terms is constant or not. The presence of heteroscedasticity signifies that the variation of the residuals or error



term is not constant which could affect the inferences in respect of beta coefficient, coefficient of determination R-Square ( $R^2$ ) and F-statistic of the study.

#### **4.0 Data Presentation and Discussion of Findings**

##### **4.1 Correlation Coefficients, Multicollinearity and Heteroskedasticity**

Pearson correlation coefficients are used to study the extent of association among the variables for the period between 2006 and 2015. The interpretation of the Pearson correlation would follow Guilford rule of thumb which is  $< 0.2$  is a negligible correlation,  $0.2$  to  $0.4$  is low correlation,  $0.4$  to  $0.7$  is a moderate correlation,  $0.7$  to  $0.9$  is a high correlation,  $> 0.9$  is a very high correlation. The result shows that the correlation between the independent variables and dependent variable used in the model is generally small. The largest correlation coefficients exist between the size and dividend per share (45.45%). The result shows that dividend per share is positively correlated to financial crisis, firm size, profitability and board size. However the board independence, political factor and leverage are correlated to dividend policy (see Appendix, table 1 for the Result).

Also, the correlation matrices does not reveals that two explanatory variable (firm size and political factor) are perfectly correlated. This means there is absence of multicollinearity problem in our model. This was confirmed by Variance Inflation Factors (VIF) and Tolerance Values (TV). (See Appendix, Table 3)

A Breusch–Pagan test was used to detect the heteroskedasticity but the result found that there is no heteroskedasticity since the P-value is 0.00 which is less than 5%.

##### **4.2 Regression result and Interpretation**

Regression analysis was carried out using three models under the panel approach which include the pooled regression model, fixed effect model and random effect model on both the explained and explanatory variable. The pooled regression does not distinguish among the fifteen selected banks and it denies the heterogeneity or individuality that exist among the banks. This is considered not to be desirable. One way to take into account the individuality of each company is to let the intercept vary for each company but still assume that the slope coefficients are constant across firms (Smith, 2012). The term “Fixed Effect “is due to the fact that although the intercept may differ across sample organizations (that is, the fifteen banks), each organization intercept does not vary over time, that is, it is time invariant. This is the major assumption under the Fixed Effect Model. That is, while the intercept are cross-sectional variant, they are time invariant while the random effect model have common mean for the intercept. After the analysis a Hausman test was carried out to determine if the model is appropriate. The test is with a null hypothesis that Random Effect Model is appropriate and the alternate hypothesis is that Fixed Effect Model is appropriate. Since the p-value  $< 5\%$ , we can reject the null hypotheses which states that Firm-specific factors have no significant impact on the dividend policy of Nigerian Deposit Money Banks and board structure has no impact on the dividend policy and accept the alternate hypotheses; Firm-specific factors have significant impact on the dividend policy of Nigerian deposit money banks and board structure has impact on the dividend policy. Hence, the result of random effect model is presented is appropriate for this study: The result of Hausman test is shown in the Appendix, table 7.

**Table 4.1 Regression Model Result**

dps	Coef.	Std. Err.	t	P>t
bind	.0853502	.3221613	0.26	0.791
fc	-.020449	.0502836	-0.41	0.685
pf	-.309697	.069351	-4.47	0.000
lev	-.0159327	.2262476	-0.07	0.944
fmsz	.3352193	.1141546	2.94	0.004
roe	.0031103	.0534914	0.06	0.954
bs	-.0003639	.012513	-0.03	0.977
cons	-1.40376	.7875061	-1.78	0.077
R-square	0.3471			
Prob.	0.0045			

**Source: Output from STATA 2017**

The R-square shows the level at which the explanatory variables explained the dependent variable. The Table 4.1 reveals that the overall R-square is 34.71% this means that the independent variables (Board independent, Board size, profitability, leverage, firm size, financial crisis and political factor) influence the dividend policy of deposit money banks about 35%. Also the probability value is significant at 5% indicating that the model is fit. This serves as a substantial evidence to conclude that the selected variables have jointly impacted on the dividend policy of Deposit Money Banks. Also the table shows that only firm size and political dummy variable is significant at 5% while other variables are not significant.

#### 4.3 Discussion of Results

The result shows that firm size has a negative impact on the dividend policy. This conforms to the finding of Yusof and Ismail, (2016) and the bigger the size of firm the bigger the dividend pay-out ratio verse versa. This means that the size of firm determines the dividend policy of the firm.

From the result, it shows that profitability has a negative impact on the dividend policy. This conforms to the finding of Yusof and Ismail, (2016). This implies that the increase in company profits leads to a decrease in the payment of higher dividend to shareholders.

The study revealed that board independence has a negative impact on the dividend policy. This does not conform to the finding of Thomas (2013) as he claim that board independence reduced cost of monitoring agent.

The study found a negative relationship between the board size and the dividend policy. This was in contrary to the findings of Gill and Obradovich (2012) who affirmed positive relationship between board size and dividend policy.

The result shows that leverage has insignificant impact on the dividend policy. The companies with higher degree of debt in its capital structure disclose larger risk and as a result higher interest expenses with the debt service and consequently lower dividend pay-out.

The study found negative impact of financial crisis and political factors on the dividend policy of Nigerian deposits money banks. The coefficient associated with the dummy

variables present negative signal and proposing that the financial crisis and political factor have impact on dividend. This conforms to the finding of Hauser (2013). The argument was that the decrease on dividend pay-out is because of the financial crisis effects.

## 5.0 Conclusion and Recommendations

The study examined the factors that influence the dividend policy of Nigerian Deposit Money banks using panel data analysis for the period 2006 to 2015. Correlational research design was used for the study because it describes the statistical association between two or more variables. The population the study comprise all the deposit money banks as at 31 December, 2015. The sample of the study comprises of all 15 deposit money banks listed at the Nigerian Stock Exchange as at 31st December 2015. The data used for the study is extracted from secondary source. The data was extracted from the audited financial reports of the banks within the period of the study. The data was analysed by using panel data regression. The study concluded that the independent variables (Board independent, Board size, profitability, leverage, firm size, financial crisis and political factor) influence the dividend policy of deposit money banks. Also the study found that only firm size and political factor dummy variable is significant at 5% while other variables are not. More so, board size, leverage, and financial crisis factor dummy variables have negative impact on the dividend policy while other variables have positive impact.

In view of this, the study therefore makes the following recommendations:

- i. The board of directors should formulate and revise dividend policy by taking into consideration the factors that have been evidenced to exercise significant influence on dividend payment. Board of directors should consider increasing the dividend payment to shareholders, by given attention to the factors of Board independent, Board size, profitability, leverage, firm size, financial crisis and political factor. This is important, as the dividend policy is a crucial factor in retaining existing investors as well as attracting new investors.
- ii. In addition, as high dividend payments attract investors, the management team needs to strive for higher profitability, larger firm size and lower debt levels to satisfy the shareholders' goal of wealth maximization in the form of higher dividends.
- iii. Also the board size of the Nigerian deposit Money banks should consist of expertise that will contribute towards the growth of the firms and reduce the monitoring cost of the agent.

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## Appendix

**Table 1**

dps	bind	fc	pf	lev	fsize	roe	bs
dps	1.0000						
bind	-0.1414	1.0000					
fc	0.0306	-0.2293	1.0000				
pf	-0.1720	0.0841	-0.2293	1.0000			
lev	-0.0792	-0.2192	-0.0868	0.0462	1.0000		
fsize	0.4545	-0.2147	-0.0512	0.4325	0.0169	1.0000	
roe	0.0612	-0.0690	0.1832	-0.1089	-0.1341	-0.0110	1.0000
bs	0.0010	-0.2833	0.0592	0.1038	-0.2049	0.3050	-0.0429
bs	1.0000						

**Table 2**

. reg dps bind fc pf lev fmsz roe bs

Source	SS	df	MS	Number of obs	=	148
F(7, 140)	=	14.08				
Model	13.1169262	7	1.8738466	Prob > F	=	0.0000
Residual	18.6369443	140	.13312103	R-squared	=	0.4131
Adj R-squared	=	0.3837				
Total	31.7538705	147	.216012724	Root MSE	=	.36486

dps	Coef.	Std. Err.	t	P>t	[95% Conf. Interval]
bind	-.2257634	.3507683	-0.64	0.521	-.9192512 .4677244
fc	-.044375	.0643165	-0.69	0.491	-.1715322 .0827821
pf	-.4593383	.0755497	-6.08	0.000	-.6087042 -.3099724
lev	-.383414	.2156311	-1.78	0.078	-.8097283 .0429002
fmsz	.7883621	.0861889	9.15	0.000	.617962 .9587622
roe	-.0009581	.0655296	-0.01	0.988	-.1305136 .1285974
bs	-.0341737	.0123785	-2.76	0.007	-.0586466 -.0097008
cons	-2.95587	.6431229	-4.60	0.000	-4.227359 -1.684382

**Table 3**

. vif

Variable	VIF	1/VIF
fmsz	1.41	0.709841
bind	1.35	0.741451
pf	1.34	0.744719
bs	1.29	0.776004
lev	1.21	0.828690
fc	1.15	0.869921
roe	1.07	0.933935
Mean VIF	1.26	

**Table 4**

. hettest  
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity  
Ho: Constant variance  
Variables: fitted values of dps

---

chi2(1) = 39.13  
Prob > chi2 = 0.0000

---

xtreg dps bind fc pf lev fmsz roe bs, fe  
Fixed-effects (within) regression      Number of obs = 148  
Group variable: id                      Number of groups = 15  
R-sq:                                      Obs per group:  
within = 0.1479                          min = 9  
between = 0.6030                        avg = 9.9  
overall = 0.3471                         max = 10  
F(7,126) = 3.12

**Table 5**

corr(u\_i, Xb) = 0.4254                      Prob > F = 0.0045

---

dps	Coef.	Std. Err.	t	P>t	[95% Conf. Interval]	
bind	.0853502	.3221613	0.26	0.791	-.5521975	.722898
fc	-.020449	.0502836	-0.41	0.685	-.1199587	.0790608
pf	-.309697	.069351	-4.47	0.000	-.4469407	-.1724533
lev	-.0159327	.2262476	-0.07	0.944	-.4636701	.4318048
fmsz	.3352193	.1141546	2.94	0.004	.1093106	.5611279
roe	.0031103	.0534914	0.06	0.954	-.1027476	.1089681
bs	-.0003639	.012513	-0.03	0.977	-.0251268	.0243991
cons	-1.40376	.7875061	-1.78	0.077	-2.962211	.1546918

---

sigma\_u .30591886  
sigma\_e .28176834  
rho .54102489 (fraction of variance due to u\_i)

F test that all u\_i=0: F(14, 126) = 7.77                      Prob > F = 0.0000

**Table 6**

. est store fe  
xtreg dps bind fc pf lev fmsz roe bs, re  
Random-effects GLS regression                      Number of obs = 148  
Group variable: id                      Number of groups = 15  
R-sq:                                      Obs per group:  
within = 0.1391                          min = 9  
between = 0.6499                        avg = 9.9  
overall = 0.3930                         max = 10

Wald chi2(7) = 39.92  
corr(u\_i, X) = 0 (assumed)                      Prob > chi2 = 0.0000

---

dps	Coef.	Std. Err.	z	P>z	[95% Conf.Interval]	
bind	-.0115646	.3249869	0.04	0.972	-.6485272	.625398
fc	-.0264367	.0528443	0.50	0.617	-.1300096	.0771362
pf	-.3749758	.0678352	5.53	0.000	-.5079304	.2420211

lev	-.0746123	.2151147	0.35	0.729	-.4962293	.3470048
fmsz	.5216084	.0997972	5.23	0.000	.3260095	.7172073
roe	-.0051219	.0553005	0.09	0.926	-.1135089	.1032651
bs	-.009878	.0122939	0.80	0.422	-.0339736	.0142176
cons	-2.198103	.7043101	3.12	0.002	-3.57852	.8176803

sigma\_u .17459786  
sigma\_e .28176834  
rho .2774392 (fraction of variance due to u\_i)  
. st store re

**Table 7**

hausman fe re

Coefficients ----

	(b) fe	(B) re	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
bind	.0853502	-.0115646	.0969148	.
fc	-.020449	-.0264367	.0059877	.
pf	-.309697	-.3749758	.0652788	.0144203
lev	-.0159327	-.0746123	.0586796	.0700976
fmsz	.3352193	.5216084	-.1863891	.0554238
roe	.0031103	-.0051219	.0082322	.
bs	-.0003639	-.009878	.0095141	.0023316

b = consistent under Ho and Ha; obtained from xtreg

B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

$$\chi^2(7) = (b-B)'[(V_b-V_B)^{-1}](b-B)$$

$$= 65.67$$

$$\text{Prob}>\chi^2 = 0.0000$$

(V\_b-V\_B is not positive definite)