Original Research

Moderating Effect of Dividend Policy on the Relationship Between Profitability and Firm Value of Listed Banks in Nigeria

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Abstract

Past studies have presented inconclusive results on the relationship between profitability and firm value, there is a need to take into consideration a moderating variable to strengthen the relationship. This study therefore, introduces dividend policy as moderator to examine its effect on the relationship between profitability and firm value of listed deposit money banks in Nigeria. The study adopted the Ex Facto-research design and the study used ten years, from 2012 to 2021. The study's population consisted of 15 listed banks on the floor of the Nigeria Exchange Group, and 12 were selected as study samples after filtering time frame. Secondary data were collected from audited financial report and accounts of the sample banks and the Nigeria Exchange Group's website. STATA was used to analyze the data, and the results revealed a negative direct link between profitability as assessed by return on assets and return on equity and firm value as measured by market value added. Furthermore, a higher dividend policy ratio strengthens the relationship between profitability and firm value. We add evidence that the dividend policy acts as a pure moderator in the banking industry. However, based on the findings, it is suggested that the regulatory authorities develop post-dividend payment legislation that can effectively contribute to the firm's dividend policy decision. The findings highlight the importance of profitability and dividend policy in maximizing corporate value in the banking industry.

Keywords: Dividend policy, Firm value, Information asymmetry and signaling, Profitability.

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Introduction

Firm value is critical because increased shareholder wealth follows increased Firm value. The higher the stock price, the greater the company's worth. To increase overall business value, investors delegate management to specialists (Tahu & Susilo, 2017). Businesses in and outside of Nigeria strive to increase firm value in order to continue operating in such manner, the board which has the trust of the proprietors' endeavors to strive to accomplish this objective. Effective management of a company's assets, including the formulation of strategic decisions, is essential for the generation of added value by management (Sudiyatno et al., 2021). Moreover, the industry is currently characterized by fierce rivalry among businesses. Since every business is driven by competition to perform even better, the objective can still be reached. The main purpose of a business is to increase the wealth of its owners, or shareholders. The importance of the firm's worth cannot be overstated, as it is a direct reflection of the company's success and may affect how investors see the firm. In other words, firm value is essential because, as stated by (Tahu & Susilo, 2017) increased prosperity for shareholders is directly correlated with a rise in the value of the company.

The ability to turn a profit is a key indicator of a business's health. Profitability is the result of various corporate policies and decisions, as explained by Brigham and Houston (2006) and quoted by (Tahu & Susilo, 2017). In this analysis, profitability is measured in terms of return on assets (ROA), return on equity (ROE), and earnings per share (EPS).

ROA ratio is a metric used to evaluate the efficiency with which companies can generate profits from the available assets. It measures the percentage of income earned from all business operations and investments in all business operations and investments annually after taxes. ROA shows what has happened to the historically acquired resources of a company. It gives an idea of how efficiently management uses assets to generate income. An increased ROA in percentage terms indicates a more efficient use of the company's resources.

Also, ROE gauges a company's success in relation to the investment its owners or shareholders made. Calculating the return on equity involves weighing net income against common stock equity. In general, a higher ROE indicates a better rate of return on the company's investments, whereas a lower ROE indicates a lower rate of return. Before deciding whether or not to invest, a potential investor should examine the ROE of the intended company. The ability to pay dividends and the stock price of a corporation rise in direct proportion to the level of profits.

Furthermore, EPS is a financial ratio in which the net income available to ordinary shareholders is divided by the average amount of shares outstanding over a period of time. The EPS formula indicates how a company can generate net profits for ordinary shareholders. This guide describes in detail the EPS formula.

Tahu and Susilo (2017) and Akhmadi and Januarsi (2021) noted that dividend policy is a moderating factor that affects how profitable a company's value is. This is because many parties, including shareholders, creditors, and other externals are interested in the

information released by the firm, pay close attention to the dividend policy. Dividends have or include information regarding the future prospects of the firm. The firm's success would be judged better with more dividends paid out to shareholders, and ultimately, the best evaluation of the company would be one based on the stock price.

We begin by investigating the connection between ROA, ROE, and EPS and the value of a corporation. Increased profitability is good for a company's long-term success, which in turn benefits the company's shareholders. In addition, companies with high profits tend to be more trusted by investors, which boosts their worth. There has been a favorable correlation between profitability and firm value in prior empirical studies in many industries (Akhmadi and Januarsi, 2021; Chen and Chen, n.d.; Liow, (2010) and Hirdinis (2019) found no significant effect on the relationship between profitability and firm value, in contrast to earlier research by Handoko (2017), which revealed a negative association between the two. In light of contradictory results and the paucity of research that accounts for the moderating influence of dividend policy, it is worthwhile to revisit the relationship between profitability and firm value. To address this gap, our research focuses on the banking sector of the Nigerian capital market and introduces moderating variables.

Dividend policy (DP) is also being investigated as a possible mediator between firm profitability and value. This analysis implies that dividend policy may increase the profitability and firm value link since dividends are a long-term return that investors must prioritize Akhmadi and Januarsi (2021); Ghalandari (2013); Fairchild et al. (2014) and Thanatawee (2014). If they are confident in the dividend performance in the current year, they can increase their investment to capitalize on growing profitability in the coming years. The dividend policy of a corporation may benefit its value and increase its correlation with profitability. Furthermore, when analyzing the connection between profitability and firm value, researchers such as Nwamaka and Eze (2017) and Morakinyo et al. (2018) did not account for the moderating influence of DP, either as a pure or quasi-moderator. By using a hierarchical approach, (Akhmadi & Januarsi, 2021) determine if DP is a pure or quasi-moderator of the connection between profitability and firm value.

The results from the prior literatures shows that an inconsistent finding have been found in earlier investigations both within and outside the country and some of these studies include Gbalam and Uzochukwu, (2020), Andabai, (2020), Virginus, (n.d.) and Koleosho et al., (2022) look at the moderating effect of DP and share prices of quoted firms in Nigeria without incorporating profitability, Odum et al., (2019) also look at the dividend payout and firm value. This inspired the author to carry out more study on the moderating impact of DP on profitability and firm value in the banking sector for ten years spanning from 2012 to 2021. The banking sector not only manages payment traffic and acts as an intermediary institution, but it also functions as a vehicle for conveying monetary policy because of the interest in investing in banking company shares. Investment decision-makers in the banking sector and individual investors stand to benefit from this study's projected improved generalizability compared to previous studies. The current study takes into account DP as a moderating variable in influencing the link among profitability and firm value because the results of earlier studies are inconsistent with the elements that influence firm value. This is because direct and indirect influences on company value could have contributed to the discrepancy. Therefore, the purpose of this research is to examine how DP affects the profitability and

firm value of publicly traded deposit money banks (DMBs) in Nigeria. Here is how the rest of the paper is structured: Section 2 examine the relevant literature and theoretical framework; Section 3 describe the methodology of the study. The findings are presented in Section 4, while a conclusion and recommendations are presented in Section 5.

Objectives of the Study

The specific objectives of the study are:

i. To assess the effect of return on assets on firm value of listed DMBs in Nigeria.

ii. To evaluate the effect of return on equity on firm value of listed DMBs in Nigeria.

iii. To examine the effect of earnings per share on firm value of listed DMBs in Nigeria.

iv. To determine the moderating effect of dividend policy on relationship between ROA, ROE, EPS and FV of listed DMBs in Nigeria.

Hypotheses of the Study

In accordance with the study's aims, the following hypotheses were developed and tested in null form:

H_1: ROA has no significant effect on FV of listed DMBs in Nigeria.

H_2: ROE has no significant effect on FV of listed DMBs in Nigeria.

H_3: EPS has no significant effect on FV of listed DMBs in Nigeria.

H_4: DP Moderates relationship between ROA, ROE, and EPS and FV of listed DMBs in Nigeria.

Literature Review and Theoretical Framework

This section analyses the conceptual review, theoretical frameworks and empirical studies that have been conducted to determine the impact of dividend policy on profitability and firm value.

Conceptual framework

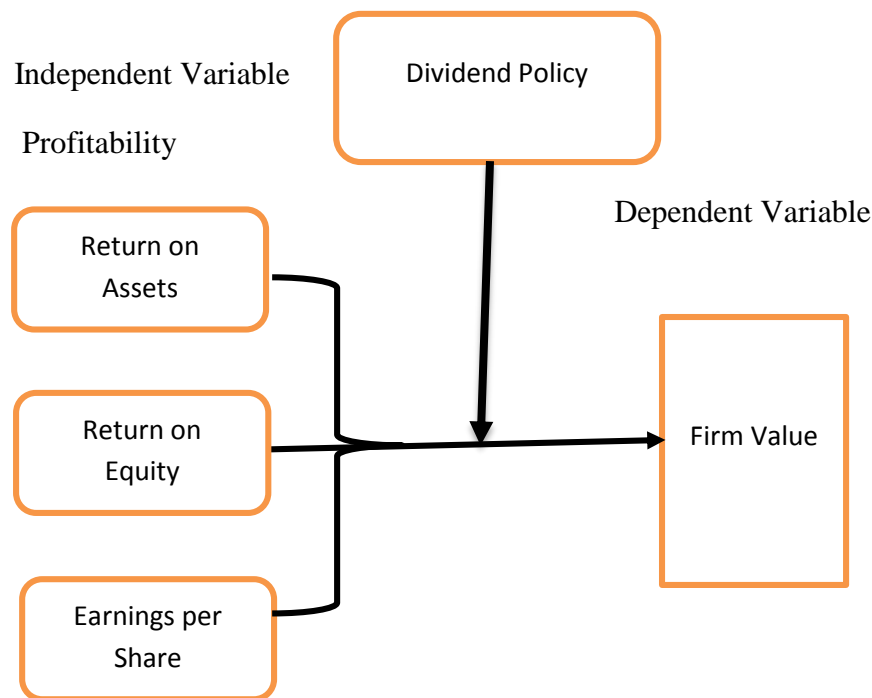Figure 1 presents the study's conceptual framework.

Moderator

Figure 1: *Schematic representation of the conceptual framework*
Source: The conceptual framework of the study was adapted from the work of
Sudiyatno et al., (2020) with some modifications.

Figure 1 shows the independent variable (profitability proxies by ROA, ROE and EPS) and its relationship with the dependent variable (FV). This relationship is moderated by DP to either strengthen or weaken the relationship. This will confirm the role DP plays in the link between profitability and FV.

Concept of Profitability

Profitability, according to Morakinyo et al., (2018) is what decides whether a company remains in operation. He asserted that a company's capacity for profitability is its capacity for making a profit. Therefore, a profit is the amount of company income that remains after all expenditures associated with that revenue have been paid for a particular period. In the view of investors, a firm is worth more if its profits are higher, and investors respond positively to a rise in stock prices by bidding up the price of the company's shares on the market (Yanti & Darmayanti, 2019). This contradicts the findings of Pribadi, (2018) and Nugroho & Abdani, (2017), which found that profits have no bearing on a company's worth. The capitalization strategy was heavily influenced by the prior period's profit margins. Guna & Sampurno, (2018) found empirical evidence that profitability influences the capital structure. Septiani and Suryana, (2018) found no correlation between profitability and capital structure.

Concept of Firm value

The stock price of a firm is a good proxy for the value of the company, which is defined as investors' estimates of the company's prospects for future profitability. There is growing pressure on the firm to address sustainability, social responsibility, and corporate governance concerns, when trying to increase a company's worth, it's crucial to keep shareholders informed and involved. The market value of a company's shares reflects the choices made by management in terms of where and how much money should be invested. When stock prices go up, investors are optimistic about the future of the companies involved (Reschiwati et al., 2020).

Concept of Dividend Policy

According to Pandy, (2005), a dividend is the portion of a company's net earnings that the board of directors recommends be distributed to shareholders. It is typically stated as a fixed percentage of the company's common stock. The dividend policy of a firm is its established set of guidelines for distributing its earnings to its stockholders. Some research suggests that shareholders are less concerned about dividends than they once were because of the ease with which they can liquidate a portion of their equity holdings. It is a measuring policy that addresses the question of whether to pay dividends and when they should be paid. According to Morakinyo et al., (2018), a firm's dividend policy refers to the choice between paying out all or a portion of its profits as dividends to shareholders or investing a portion of those profits back into the company.

Review of related Empirical literature

How effectively a business converts its resources into cash serves as a gauge of its profitability. Investors place a premium on profitability because it is perceived as a proxy for the likelihood of a positive return on investment. Profitability has been found to have a positive effect on firm value (PBV) by a number of researchers, including Manurung and Suhadak, (2014), Arifianto and Chabachid, (2016), Charumathi and Murali, (2016), Data et al., (2017), and Sudiyatno et al., (2021). As a result, the stock values of profitable corporations tend to rise. Profitability has traditionally been a key consideration when making financial decisions, and Chen and Chen (2011) looked into the factors that affect this. The greater a company's profitability, the more profit it generates that may be distributed to shareholders, and the greater its value. As a result, profitability has a majorly favorable effect on the value of a company. According to the pecking order theory, a company's profitability has a large negative effect on its leverage because profitable businesses do not need to rely too heavily on external funding.

Tahu and Susilo, (2017) investigated the impact of liquidity, leverage, and profitability on company value, using dividend policy as a moderating variable. The study's population consists of all manufacturing enterprises listed on the BEI. Saturated sampling was adopted, and the number of samples is a sample of 30 consecutive dividends from manufacturing businesses gathered from the Indonesian Stock Exchange and ICMD. Analytical approaches and moderated multiple regression analysis were utilized in hypothesis testing investigations using the application tool SPSS (Statistical Product and Service Solutions). Profitability has a considerable positive effect on FV, according to the

findings, and DP does not significantly reduce the effect of profitability on FV. The previous study looked at Indonesian companies, but the present study looks at Nigerian enterprises.

Nwamaka and Eze, (2017) look at potential dividend policy implications for business value. The research looks at 10 listed firms between 1995 and 2015. With MPS as the dependent variable and EPS and Dividend Per Share as the independent variables, multiple regression analysis is the methodology used for primary and secondary data analyses. R2 is used as the coefficient of determination to assess the information gathered from the 10 firms under study and the Nigerian stock exchange. The research proves that dividends are an effective signal and that dividend policy has a substantial effect on the value of public limited corporations.

The impact of the dividend payout ratio on company value was studied by Odum et al., (2019). Companies trading on the Nigerian Exchange Group (NXG) were used to examine the effects of other factors on business value. This research looked at the relationship between the firm's value and its profitability and dividend policy ratio. The researchers employed panel ordinal least squares regression methods to examine the data. Breweries and beverage companies listed on the NXG between 2007 and 2016 made up the study's sample. Based on the results, it can be concluded that the profitability ratio significantly affects the value of a company. This demonstrates that in the case of publicly traded Nigerian breweries and beverage companies, only profit after tax is a key driver of company value. However, the research implies that corporate managers who wish to raise firm value should prioritize methods that boost the company's leverage ratio and maximize profit after taxes. It is possible to introduce moderating variables into the current study, which focuses on deposit money institutions rather than breweries and beverage industries. The research has also fallen behind schedule by a few years.

Ugwu et al. (2020) evaluate the dividend policy and financial results of companies listed on the NGX consumer products exchange using a multiple regression model. For the years 2015–2019, data from ten publicly traded consumer product companies was collected at random. We employed dividend pay-out ratio (DPR) and DPS to describe dividend policy in the study and ROE to measure company effectiveness. The findings revealed that dividend policy proxies had a positive connection with return on equity. DPS and company performance had a statistically significant positive association, but not DPR or profits per share.

Hossin and Ahmed, (2020) studied the relationship between DP and stock price (SP) volatility in Bangladesh's financial sector from 2009 to 2017. Ten different companies' worth of data was analyzed using a mixed-methods experimental strategy with fixed and random effects models. One of the factors is the DPR, which separates dividends paid in cash from those paid in shares of stock. The effects of cash dividends and stock dividends on SP volatility were investigated, and the results showed that dividends of both sorts have a positive effect on volatility. The research also revealed that investors in Bangladesh would rather receive dividends in the form of stocks than cash. Stock dividends increase in value over time, increasing the potential future profit for shareholders. The DPS and market price per share were studied by Koleosho et al., (2022) to determine if there is a significant relationship between the two from an information

efficiency aspect. The model used was fixed effects to evaluate pooled data for 57 companies that was collected between 2008 and 2019. According to the results of the research, this is crucial data for forecasting stock price movements. Therefore, it was suggested that timely dividend payments and information dissemination enhance the long-term viability of shareholders' wealth.

Akhmadi and Januarsi, (2021) investigated the causes of the paradoxical disconnection between company worth and profits. In particular, it examines whether dividend policy affects the connection between business value and profitability by identifying the nature of the moderating variables. From 2010 to 2019, they used a KEHATI-recorded index of companies that had demonstrated their commitment to sustainable and responsible investment (SRI). Using a hierarchical moderating analysis, the regression results show that there is a positive and direct association between profitability and company value. The correlation between profits and a company's worth is bolstered by a higher DPR. While this investigation focuses on listed deposit money banks in Nigeria, they employ listed companies in Indonesia that engage in sustainable and responsible investment.

The impact of corporate governance on the link between dividend policy, capital structure, and firm value was investigated by Mubaraq et al., (2021). Purposive sampling was used to collect secondary data from 64 manufacturing businesses listed on the Indonesian Stock Exchange between 2014 and 2018. Inferential analysis utilizing Warp PLS Software is employed here. A favorable correlation between dividend policy and firm valuation was discovered in this analysis. In order to determine whether or not profitability acts as a moderating element, Sudiyatno et al., (2021) look into the effects of company growth and capital structure on firm value. In this analysis, growth and capital structure are the independent variables, and profitability is the moderating one. During the study period of 2016–2018, the sample consisted of companies listed on the IDX that operate in the manufacturing sector. Multiple regression was used to analyses panel data, which is a blend of cross-sectional and time-series data. The results show that a company's profitability positively affects its market value. While the present study focuses on Nigeria, the previous one looked specifically at Indonesia.

Koleosho et al., (2022) investigate the link between dividend policy and stock price volatility for a sample of companies listed on the NGX. The volatility was measured using the EGARCH model and Ex-Post facto research design was also adopted. Data for this panel came from 49 out of a total of 162 businesses that were traded on the NXG between 2010 and 2020. The study indicated a highly significant link between DP and SPV. The regression result show that DP have insignificant negative effects on SPV. The study confirmed that dividend policy significantly affected the volatility of stock prices. Investors should look for publicly traded companies with a high and stable payout ratio and companies that place a premium on dividend payments. In contrast to the first study, the second one accounted for a moderating influence.

Information Asymmetry and Signaling Theory

Myers and Majluf, (1984) proposed the idea that there is an information asymmetry between insiders (managers) and outsiders (investors, creditors, etc.), with insiders having a more complete picture of the company's health. Therefore, potential investors from the

outside do not have the same understanding of the company's possibilities and hazards. "Signaling theory" Brigham and Houston, (2006); Reschiwati et al., (2020) describes an organization's actions that are meant to express to shareholders how senior management thinks about the company's future prospects. The signal hypothesis asserts that workers below the managerial level also hold key information about an organization's viability and future. Financials and projections for the future are available to shareholders. Managers who employ debt to fund operations do so in the expectation that the firm's stock price will rise as a result of the market's reaction to their signal that business is strong. The manager will inform the public, specifically the investors, of this information. Managers see a higher debt ratio as an indicator of long-term confidence since it indicates the company is financially stable. The value of the company is expected to rise as a result of investors recognizing these indications and bidding up the price of the stock. Profitability and firm value were examined using the theory by Sudiyatno et al., (2021), who discovered a strong positive link that was consistent with the hypothesis.

Methodology

This study used an Ex-Post Facto research design. Ex-Post Facto aims to identify the factors linked with specific occurrences, situations, events, or behaviors by studying past events or existing data for likely causal factors. That is, data were obtained after the event or phenomenon under examination had occurred, hence the term Ex-Post facto. Thus, an ex post facto or causal-comparative research design was used to describe the profitability and FV: the moderating effect of DP of listed deposit money banks in Nigeria using existing data from the financial statements of the quoted banks that the researcher could not manipulate or alter. In addition to the ex-post facto research approach, the study used a correlational research design with both descriptive and inferential statistics using panel regression analysis.

The population for this study consists of all the listed DMBs reported in the NGX from 2012 to December 31, 2021. The population consisted of all fourteen (14) listed DMBs companies in Nigeria, with twelve (12) chosen as the sample size and census sampling technique. Each of the twelve deposit money institutions was purposefully chosen on the availability and completeness of the data collection for the investigated period (2012–2021). In addition, recently listed banks were omitted due to insufficient data. As a result, only 12 banks had enough information to be chosen as a sample for this study. The sample selection includes solely audited annual reports from 12 banks from 2012 through 2021, which is the current sample size for this study.

Table 1. Population and Sample Banks

S/N	Bank`s	Population	Sample	Year of Listing on NSE	Year of Incorporation
1	Access Bank Nig. Plc	√	√	1998	1989
2	Eco Bank Transitional Incorporative	√		2006	1985
3	First Bank Holding	√	√	1971	1969

S/N	Bank`s	Population	Sample	Year of Listing on NSE	Year of Incorporation
4	First City Monument Bank Nig. Plc	√	√	2004	1982
5	Fidelity Bank Nig. Plc	√	√	1999	1987
6	Guaranty Trust Bank Nig. Plc	√	√	1996	1990
7	Jaiz Bank Nig. Plc	√		2016	2003
8	Stanbic IBTC Bank Nigeria Limited	√	√	2005	1999
9	Sterling Bank Nig. Plc	√	√	1992	1969
10	Union Bank of Nig. Plc	√	√	1971	1968
11	United Bank for Africa Nig. Plc	√	√	1971	1967
12	Unity Bank Nig. Plc	√	√	2005	1987
13	Wema Bank Nig. Plc	√	√	1991	1945
14	Zenith Bank Nig. Plc	√	√	2004	1990

Jaiz Bank Plc was dropped because it was incorporated in 2003 and listed on the NGX in 2016, which means that the bank doesn't have enough years to be considered when looking at the study under review. Also, at Ecobank Transnational Incorporated, the researchers were unable to gather the complete data for the period of ten from 2012 to 2021 for the study under review.

Model Specification

The following equations were adapted from the work of Gbalam & Uzochukwu, (2020) and Akhmadi and Januarsi, (2021) and test the hypotheses:

$$FV_{it} = \beta 0 + \beta_1 ROA_{it} + \beta_2 ROE_{it} + \beta_3 EPS_{it} + \beta_4 DIV_{it} + \varepsilon_{it} \ldots\ldots\ldots (1)$$

$$FV_{it} = \beta 0 + \beta_1 ROA_{it} + \beta_2 ROE_{it} + \beta_3 EPS_{it} + \beta_4 DIV_{it} + \beta_5 ROA_{it} * DIV_{it} + \beta_6 ROE_{it} * DIV_{it} + \beta_7 EPS_{it} * DIV_{it} + \varepsilon_{it} \ldots\ldots\ldots\ldots (2)$$

Where:

FV = Firm value; ROA = Return on asset, ROE= Return on equity, EPS = Earnings per share, DIV = Dividend policy; *it* is for firm *i* in year *t* and *ε* is the error-term; β_0, β_1, β_2, β_3, β_4 = the coefficients of the variables.

Table 2. Variable Measurement and Sources

Variable	Symbol	Type	Measurement	Source
Firm Value (proxy by Market Value Added)	FV= MVA	Dependent	Measured as Market capitalization less liabilities divided by total assets.	Udiyana et al., (2022).
Return on assets	ROA	Independent	Measured as Net profit after tax divided by total assets.	Akhmadi and Januarsi, (2021) and Andriani et al., (2023).
Return on equity	ROE	Independent	Measured as Net profit after tax divided by total equity.	Tahu and Susilo, (2017), Yahaya et al., (2021) and Sudiyatno et al., (2021)
Earnings per share	EPS	Independent	Measured as Net profit after tax divided by number of ordinary shares.	Consler et al., (2011) and Andriani et al., (2023).
Dividend policy	DP	Moderator	Measured as cash dividend divided by profit after tax.	Virginus, (2020)

Results and Discussion

This section presents the descriptive statistics and summary of the regression result model used in the study.

Descriptive Statistics

The descriptive statistics of the model of the study is given in table 3.

Table 3. Descriptive Statistics

Variables	Obs	Min	Max	Mean	Std. Dev.
MVA	120	-0.50	1.50	0.004	0.231
ROA	120	-0.59	0.59	0.247	0.192
ROE	120	-0.89	1.79	0.775	1.623
EPS	120	-1.28	0.99	0.363	0.313
DP	120	0.000	141	1.802	1.340

Table 3 displays the variables' mean, maximum, minimum, and standard deviation values. The dependent variable is market value added (MVA), while the independent variables are return on assets (ROA), return on equity (ROE), earnings per share (EPS),

and dividend policy (DP) as a moderator. As indicated in Table 3, the data is therefore balanced for 120 observations.

Market value added averages 0.004, with a standard deviation from the central mean of 0.231 and values as low as -0.5 and as high as 1.5. The average ROA is 0. 247.The standard deviation from the central mean was 0.192, with the lowest and highest readings being -0.59 and 0.59, respectively. The average return on equity is 0.775, with a standard deviation of 1.623 from the mean and minimum and maximum means of -0.89 and 1.79, respectively. The average earnings per share are 0.363, with a standard deviation of 0.313 from the mean and a range of -1.28 to 0.99. The moderator variable dividend policy, meanwhile, averages 1.802, with a standard deviation of 1.340 from the mean and minimum and maximum figures of 0.000 and 141.

Table 4. Correlation Matrix

	MVA	ROA	ROE	EPS	DP
MVA	1.00				
ROA	-0.376 (0.000)	1.00			
ROE	-0.020 (0.745)	-0.027 (0.774)	1.00		
EPS	-0.030 (0.000)	0.271 (0.002)	0.024 (0.797)	1.00	
DP	0.018 (0.845)	0.163 (0.076)	0.001 (0.917)	0.161 (0.0917)	1.00

In the case of MVA from table 4 show that ROA, ROE and ESP have negative correlation, while DP has positive correlation. The correlation between the profitability proxies (ROA, ROE, ESP and DP) were very weak, weak and moderate. Thus, it proves to have collinearity free.

Diagnostic Test

Before the study run the final regression, diagnostic analysis was conducted to maintain the lack of bias in the parameters as argued by Wooldridge, (2011).

Table 5. Variance Inflation Factor (VIF)

Variables	VIF	1/VIF
ROA	1.10	0.911
EPS	1.10	0.60
DP	1.04	0.628
ROE	1.00	0.676
Mean Value	1.06	

This has been confirmed from output of variance inflation facto (VIF) in table 3 displayed the correlation matrix table. The VIF result in table 5 provides evidence of collinearity free among the predictors of the study. This is true because, the highest VIF value is 1.10 among the variables of the study. The highest VIF confirmed absence of collinearity since it is less than 5. The explanatory variables are said to have collinearity free. The study assumes no multi-collinearity on the independent variables (Gujurati, 2004).

Robust OLS Result

The study presents the full OLS regression result in table below:

Table 6. GLS Regression Result for Model 1

Variables	Coef.	Std. Err	t-values	Sig.
Con	0.1808	0.452	-2.45	0.000
ROA	-0.3671	0.065	-0.87	0.000
ROE	0.0004	0.018	2.01	0.714
EPS	-0.2461	0.007	-4.29	0.000
DP	0.0020	0.137	3.49	0.133
R^2	0.251			
Adj.R^2	0.225			
Wald chi^2 (4)	40.36			
F-Sig.	0.000			

Table 7. GLS Regression Result for Model 2

Variables	Coef.	Std. Err	t-values	Sig.
Con.	0.223	0.991	-3.71	0.000
ROA	-0.488	0.001	-0.07	0.671
ROE	0.017	0.061	-4.04	0.671
EPS	-0.186	0.061	1.50	0.004
DP	-0.329	0.014	5.39	0.009
ROADP	1.258	0.181		0.010
ROEDP	-0.164			0.661
EPSDP	-0.276			0.097
R^2	0.31			
Adj.R^2	0.27			
Wald chi^2(7)	54.74			
Prob.Wald chi^2	0.000			

The GLS regression is presented in tables 6 and 7 for the establishment of a link between the dependent and independent variables from the results thus, the models of the study are:

MV=0.1808-0.367ROA+0.0004ROE-0.2461EPS+0.0020DP

$$MV = -0.223 - 0.488ROA + 0.017ROEBI - 0.186EPS - 0.329DP + 1.258ROADP - 0.0164ROEDP - 0.276EPSDP$$

Model 1 depicts the constant (β_0) value of 0.1808. This means that, in the absence of return on assets, return on equity, earning per share, and dividend policy. The market value added of share price is 0. 1808. From the GLS regression results in model 1, the return on assets has a negative relationship with market value added at 1 percent level of significance. This implies that for every one increase in the proportion to net income to total assets, the listed DMBs is seen to reduce market share price by 0.367 as seen in the parameter of the model β_1 therefore, the study can conclude that there is relationship since the p-value associated with the coefficient is significant. The hypothesis in respect of return on assets and market value earlier that assumed return on assets has no significance on market value added is not supported.

Though the regression result revealed a negative and significant link in the MVA model 1, there is a need to compare the result with that of the moderating result to find out if the moderator plays its role by strengthening or changing the direction of the said relationship in line with the argument put forward by information asymmetry and signaling theory that dividend policy would improve market value and investors would be persuaded to respond positively towards maximizing return on investment. However, the moderating role of DP does affect the link since the significant value (0.010) associated with the interactive coefficient (1.258) which is significant at 1 percent level of significance, the result is in line with Mubaraq et al., (2021); Akhmadi and Januarsi, (2021) and Koleosho et al., (2022) and contrary to (Tahu and Susilo, (2017). The result suggests that the moderator would affect the relationship between return on assets and market value positively. This justifies rejecting the null hypothesis in respect of the moderator which says dividend policy does not moderate the relationship between return on assets and the market value of listed DMBs in Nigeria.

From the model, ROE has positive relationship with share price measure (MVA). However, the relationship is not significant at all level of significance. Even though, an increase in ROE is seen to increase share price by the value of 0.0004 in the parameter of the model β_2 therefore, this study cannot conclude this relationship. The hypothesis in respect of this relationship that said ROE would not improve share price is supported.

Though, the result revealed positive but insignificant link in the ROE model 1, there is need to compare the result with that of the moderating result so as to find if the moderator really plays its role by strengthening or changing the said relationship in line with the argument put forward by information asymmetry and signaling theory. However, the moderating role of DP does not affect the link since the significant value (0.661) associated with the interactive coefficient (-0.164) is not significant at all levels of significance and the result is in line with Tahu and Susilo, (2017) and contrary to Akhmadi & Januarsi, (2021). The hypothesis stated in respect of the dividend policy has no significant effect on the link between ROE and market value is supported.

In related development, EPS has negative statistically significant relationship with MVA. This seen from the parameter β_3 with the p-value of 0.000. This indicates that an increase in EPS by one will reduce market value by 0.246 with econometric assumption

of other thing remain constant. Hence, the hypothesis that proposed that EPS has no relationship with market value is not supported.

Though, the result revealed negative and significant relationship in the MVA model 1, there is need to compare the result with that of the moderating result so as to find if the moderator really plays its role by strengthening changing the said relationship in line with the argument put forward by information asymmetry and signaling theory. Also, the moderating role of DP does affect the link since the significant value (0.090) at 10 percent level associated with the interactive coefficient (0.276). the result is in line with (Mubaraq et al., (2021); Akhmadi & Januarsi, (2021) and Koleosho et al., (2022) and contrary to Tahu & Susilo, (2017). The earlier hypothesis stated with regards to the effect of dividend policy on the link between EPS and market value is not supported.

Robustness Test

Before the study run the final regression, some robustness tests were carried out. The Hausman were conducted to choose between random and fixed effect models with a p-value of 0.91 and 0.09 for models 1 and 2 respectively. This provides sufficient evidence to reject the null hypotheses which said that the fixed effect model is appropriate. Furthermore, the random effect could be tested by applying Bruesh Pagan LM test. The null hypothesis assumes that there are no random effects. If the null hypothesis is rejected, then the random group effect model is more appropriate than the pooled OLS model. The large values show that the null hypothesis is rejected in favor of the random group effect model. The X^2 of ROA are 22.94 and 13.54 with a p-value of 0.001and 0.000 for models 1 and 2 respectively. This indicates that random effects are more appropriate. To justify the appropriateness of the two model's heteroscedasticity test 3 was conducted with a p-values of 0.000 for the aforementioned models. This implies that the test was significant which directed the choice of Generalized Least square (GLS). Thus, the study runs the GLS model based on the recommendation of Gujurati, (2004) and finally, the full OLS model is hereby presented and discussed in the table 6 and 7 respectively.

Conclusion and Recommendation

This study investigated the moderating effect of DP on profitability and FV among DMBs in Nigeria. The selected twelve banks in this study were drawn from the list of all quoted banks in Nigeria that disclose useful data for our variables of interest for ten years ranging from 2012 to 2021 in their annual financial report. In studying the moderating influence of DP on profitability and FV in Nigeria using our sampled companies, it was revealed that only the variables ROA and EPS showed negative significant effect on firm value. On the other hand, it was also revealed that only the variable ROA showed a positive significant effect on the relationship with firm value through dividend policy. As a pure moderator, DP has been shown to favorably regulate the relationship between profitability and firm value. However, the authors suggest that based on their empirical findings, the Central Bank of Nigeria and the Security and Exchange Commission should come up with post-dividend payment regulation that can basically contributes to firm DP decisions. The results shed light on how profitability and DP are crucial elements for maximizing company value in the banking industry.

The study has some important policy implications for investors, bank management, and policymakers. First, our research shows that the financial institution's DP regulation has a significant impact on firms' ability to create value, suggesting that future regulations and capital market policies pertaining to DP should be issued with more caution. Secondly, investors and shareholders in the financial services sector may find the combination of DP and profitability to be a promising determinant and indicator for evaluating the performance of banking businesses. Finally, we argue that our discovery is critical for corporate decision-makers when they establish a rule on the dividend policy, as this might become a viable approach to increasing the firms value.

Future studies can look at the moderating effect of dividend policy on the relationship between profitability and firm value of other sector rather than deposit money banks, i.e. insurance companies, micro finance banks, consumer goods firms, conglomerate companies, agricultural companies, health companies, real estate companies, services companies, oil and gas companies, information and communication technologies companies, industrial goods companies and natural resources companies.

Furthermore, future researchers can also add other variables of profitability to the one identify in this research. i. e. Net profit margin etc. And also can use other measurement of dividend policy.

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