Capital Structure, Dividend Policy and Firm Value of Listed Non-Financial Companies in Nigeria.

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ABSTRACT

A balance is required for optimal capital structure and dividend policy becomes crucial, as an imbalance could result in increased debt burdens, higher interest payments, and reduced overall profitability. Additionally, such misalignment might erode investor confidence, causing fluctuations in stock prices and, in extreme cases, leading to a decline in market capitalization. Given the foregoing, this study examined the effect of capital structure and dividend policy and firm value of listed non-financial firms in Nigeria. To achieve these objectives, ex post research design was employed and the study utilized seventy (70) selected listed non-financial firms that had consistently published their audited annual financial reports from 2011 to 2022. The study analyzed the data using panel multiple regression technique with the help of statistical tools (E-view 10). The result of the study revealed that debt-to-equity ratio has negative and insignificant effect on firm value of listed non-financial firms. On the other hand, the study found that dividend per share has a significant effect on firm value. Thus, the study recommended that financial management decisions related to capital structure of non- financial companies should take into account the trade-off between potential benefits and risks associated with debt financing. Also, financial managers are advised to integrate thoughtful dividend management seamlessly into their broader corporate finance strategy. This proactive and adaptive approach ensures that companies remain competitive, responsive to changing circumstances, and capable of optimizing their overall value in the market.

Keywords: Debt-to-Equity Ratio, Dividend per Share, Price-to-book value and firm Value

INTRODUCTION

It is widely acknowledged that management's primary objective is to maximize shareholder wealth, with firm value serving as one of the factors in determining how to do so. The assets that a company owns are represented by firm value. It is significant since it reveals the owners' level of prosperity. According to Bhabra (2017), the wealth of the shareholders is maximized in a company with a high firm value, by showing the level of prosperity of the shareholders and that of investors. Hence, it's an indicator used to evaluate a company's success. Husain *et al*., (2020) opined that firm value is also a pointer used by investors as a benchmark for assessing a company before investing. The higher the stock price, the higher the company's value, and vice versa. With a lower company's stock price, the company's value will also be lower, therefore, the company's performance will be considered less valuable. It is seen that firm value is the investors' perception of a company's success level, and this is usually associated with the stock price, (Rosada & Idayati 2017). Firm value is typically indicated by market-to-book value (MTBV). Accordingly,

when this value is high this means that the principle of going concern is operational which translates into shareholders' wealth. Going forward, firm value may be measured from two perspectives: from the point of view of accounting measures of profitability: such as return on assets (ROA), return on equity (ROE), and Tobin's Q, and Price- to- book value from the stock market perspective, by using the share prices from the Stock Exchange market. However, this study adopts price-to-book value (PBV) as a measure of firm value because of its popularity and wide acceptability.

Capital structure and dividend policy are regarded as the nerve center of any business globally, as it impacts showed whether the organization succeeds or fails. They are basic functional areas of management, and they are crucial to raising company's firm value, as it eventually boosts productivity, profitability, growth, and overall success for both the business in question and the national economy at large (Olowookere *et al.*, 2021). Non-financial businesses have contributed to the country's prosperity and growth since they were crucial in Nigeria's financial development by giving everyone in the country an opportunity to seek employment. Some people use it as a source of employment to get out of poverty by engaging in job-related activities (Chandra 2012). Considering all of these contributions, the industry still had to overcome numerous technical and economic challenges, which caused their firm values to fall short of the standard set by the Nigerian Exchange Group (NGX). In this study, capital structure and dividend policy will be looked at as measures of variables for the study. Capital structure is the ratio of the value of debt to the value of its equity capital, which is reflected in the company's financial statements at the end of the year. Capital structure can be measured by using the Debt to Equity Ratio. Parmasivan and Subramanian (2019) expressed capital structure as the relationship between the various long-term sources of financing, such as equity capital, preference share capital, and debt capital. It also increases the ability of the company to find new wealth and value creation thereby creating investment opportunities (Maama & Mkhize, 2020). On the other hand, dividend policy refers to the portion of a company's profit after tax to be paid to residual shareholders as dividends during a particular year, as the purpose of dividend should be to maximize shareholders' wealth. Banerjee (2012) describes dividend policy as the major decision area of financial management and asserts that the ultimate choice would depend on the effect of the decision on maximizing the value of the firms. The motivation for this study stems from the fact that many non-financial companies in Nigeria today are struggling due to mis-management of capital structure as well as ineffective dividend policy, which have recently resulted in their delisting from the Nigerian Exchange Group. In this regard, the Nigerian Exchange Group fact book (2021) confirms this by a resolution approved at their annual general meeting, where it is stated that while some organizations left the Nigerian Exchange Group (NGX) voluntarily, others were compelled to do so by statute. Examples of delisted firms that were either delisted voluntarily or as a result of regulatory action owing to unsatisfactory financial management procedures include Mobil Oil Plc., Re-Insurance Plc., Dangote Flour Mills Plc., and Anino International Plc. (Nigeria Exchange Group Fact book 2021). These attributes have rendered their continued performance and existence in danger, which diminishes the firm's value.

However, there are major problems facing this sector to achieve its stated objectives and goals. The weak regulatory environment and overall political instability have been a barrier to the growth and development of non-financial companies in Nigeria. This singular activity has eroded investors' confidence and generally led to weak economic growth and a decline in the overall performance of the sector thereby, leading to a fall in firm value of those companies. Hence, prior studies have analyzed on the subject matter, including, Aroh *et al,* (2021), Ngwoke (2021), Luh, and Luh (2019), and Oktay and Sinan (2018), which were carried in Nigeria and out outside Nigeria. Their finding showed that the sector is not meeting the necessary expectations. If this situation is not resolved, it will significantly impact negatively on the economy of a nation. Besides, all these studies did not realize how non-financial companies' capital structure, dividend policy influence their firm value, calling for new research to be carried out in Nigeria and ascertaining the impact of capital structure and dividend policy and the firm value of listed non-financial companies in Nigeria. From the foregoing and identified gap, the study set to examine the capital structure, dividend

policy and firm value of listed non-financial companies in Nigeria to fill the existing research gap. Thus, the basic hypothesis underlying this study is stated in null form and will be tested in this study.

H_{01}: Debt to Equity Ratio has no significant relationship with the Price-to-book value of listed non-financial companies in Nigeria.

H_{02}: Dividend Per Share does not significantly affect the Price-to-book value of listed non-financial companies in Nigeria.

LITERATURE REVIEW

Conceptual framework

Capital Structure

The total value of the company's capital raised is known as the capital structure. The overall cost of capital is influenced by its combination or mix. Salawu R.O (2009), Opined that capital structure refers to as a means of comparing external funds against internal funds. Debt/Equity (ratio). Under a normal circumstances capital structure, debt and equity are combined. According to its financial situation and ability to raise capital, the company determines the ratio of stock and debt to total capital. Because it has an impact on shareholders' wealth or earnings per share, the capital structure decision is crucial. Every firm must make a critical decision about capital structure, and both the advantages and disadvantages of this choice will have an impact on how successful the business will be in the future. The modern theory of capital structure was established by Modigliani and Miller (1958). Retained earnings, or internal financing, is what organizations are intended to choose above outside capital. Additionally, businesses may choose debt over equity when their internal resources are insufficient. Because there are two types of equity, internal and external, one at the top of the food chain and the other at the bottom, there is no clearly defined ideal leverage. As a result, there are numerous conditional theories of capital structure, but little is known about their application in the real world. One of the important choices that every firm must make when obtaining cash is the capital structure. Poor choices would have adverse effects, due to negligent conduct, many financially sound businesses suffered losses.

Debt to Equity Ratio:

The ratio indicates how a business is funded by both owner capital and debt. According to Hirdinis. (2019), the debt-to-equity ratio is a measure used in financial statement analysis to indicate how much collateral is accessible to creditors. This ratio combines all debts, including current debt, with all equity, taking into consideration the entire amount contributed by both the company's owner and outside contributors. An excessively high debt-to-equity ratio puts the business at risk since it makes it possible for it to get into an extreme leverage situation where it becomes deeply indebted and becomes challenging to pay off the loan. For creditors, the business with a higher debt ratio will be less profitable because it carries a higher risk of potential business failures. Additionally, higher owner funding means a higher security limit for the borrower in the event of asset loss or depreciation. This can be stated numerically expressed as

Debt Ratio = Total debt / Equity

Dividend Policy

This refers to the portion of a company's profit after tax to be paid to residual shareholders as dividends during a particular year, as the purpose of dividend policy should be to maximize shareholders' wealth. Banerjee (2012) describes dividend policy as the major decision area of financial management and asserts

that the ultimate choice would depend on the effect of the decision on maximizing the value of the companies. Finance managers are always concerned about the effect of long-term decisions on the market value of the firm. He or she always ensures striking a balance between the dividend payout ratio and retained earnings. The proportion of profit distributed as dividends is called the dividend payout ratio, whereas, the retaining portion is known as the retention ratio. Nwamaka (2017) argued that the optimal dividend policy is to maximize the company's stock price to maximize the value of the company. Dividend policy impact is determined by the shareholders' value. The optimum dividend policy is the one that maximizes the market value of the firm's shares. Hence, if shareholders are not indifferent to the firm's dividend policy, the financial manager must determine the optimum dividend payout. Dividends are generally paid in cash. But a firm may issue bonus shares. Bonus shares are shares issued to existing shareholders without any charge.

Dividend per share:

This is the total dividend amount allocated to each outstanding share of a company. It is a portion of earnings that a business distributes to shareholders in proportion to the number of shares owned; this might take the shape of dividends in the form of cash or shares. An investor can determine how much money they would receive from the company by calculating the dividend per share, (DPS). Brigham & Houston (2012) highlighted how the information signaling content theory could influence a company's stock price through distributions of dividends because the declaration of the payment of dividends involves crucial information about the company's future. The amount of money a company pays to its shareholders for each shares of its stock is called dividend per share (DPS), and it is a critical measures of a company's financial health and performance. This can be mathematically expressed as DPS = Total Dividend Paid/ No of Shares outstanding

Firm Value

The result of management effort in alongside net cash flow from investment choices, business growth, and investments in capital is firm value. Firm value is an important issue for investors to understand since it reflects how the market views the company's success or failure. Good business performance has a relationship with high firm values. The market worth of an organization is based on its share price, and the value of a company is an important measure of its financial health. The firm's value determines every financial investment and dividend decision. According to Mwaniki and Omagwa (2017), companies with strong financial performance are believed to have a substantial amount of assets and attract investors. Profitability is an essential component of a company's financial report and a key indication of share price. The ratio of the stock price to the company's book value (also known as price book value) is one of the most often utilized ratios in financial decision-making. A company's book value is calculated by dividing its asset value by the total number of shares it has issued. In other words, the stock price is influenced by a wide range of variables and different moods, whereas the share book value represents the fair value of the issuer's stock. Because the person purchasing the shares is doing so with the intention of making a long-term investment, the stock price on the stock exchange always reflects the company's estimated future performance or book value.

Price to Book Value

The book value is used to reflect the stock market value per share of a company so that price-to-book value can be theoretically used to determine the value of shares. Price to book value, measures how well a company is able to create value in relation to the amount of capital invested. High PBVs are a reflection of the high stock price in relation to the stock's book value. A company's stock price will increase in direct proportion to how well it is able to create value for its owners. Increased profits brought on by the company's performance give shareholders confidence. Shareholders gain optimism from the company's

success in the form of increased profits. Additionally, it is the ratio by which investors, fund managers, and investment advisors assess the difference between a company's book value (shareholders' equity) and market value (market capitalization). According to Reilly and Brown (2012), the ratio encapsulates the investor's perspective on the business, management, profitability, liquidity, and prospects. Since book value may be used to measure any number of organizations, the price-to-book value ratio is a reasonable statistic. This ratio compares businesses with the same standard of accounting and can be used to all business forms (Reilly & Brown, 2012). However, investors, fund managers, and investment advisors pay close attention to the Price-Book Value Ratio these days in Nigeria because shares that are trading below their book value are typically thought to be undervalued, while those that are trading above it are thought to be overvalued. This can be mathematically expressed as

PBV= Market value of shares/ Book Value of Shares

Firm Size

The total value of a company's assets can be expressed in terms of its firm size. Due to their rapid sales growth and lower information asymmetry than small businesses, large enterprises may easily finance their investments. Because large businesses have a smaller chance of insolvency, they use more debt the bigger they are. It is therefore believed that the size of the company influences the capital structure of a company, and this is supported by research by (Marfuah & Nurlela: 2019). This is due to the fact that using debt for large businesses is less expensive than using debt for small businesses, which encourages businesses to utilize more debt. Large businesses have a low chance of bankruptcy. It can be claimed that a company's size directly affects its worth because large organizations prefer to draw investors because they influence their firm value. The profits of the business are determined by the size of the firm. Whether or not the corporation is categorized as a major company depends on the assets it has. The entire assets of Logarithm are used to calculate firm size. Businesses with substantial assets will make the most of the resources at their disposal to achieve maximum commercial profits, and organizations with little assets will naturally also do the same (Brealey *et al*., 2011).

Empirical Review

Philip and Okolie (2023), examine the association between dividend policy and earnings management of listed commercial banks in Nigeria 2013 to 2022. The study adopted an ex-post-facto research design and stratified random sampling technique to select all commercial banks quoted on the Nigerian Exchange Group. The collected data were analyzed using multivariate regression analysis. Dividend yield (DY) has positive statistical and significant effect on accrual earnings management (AEM) of commercial banks in Nigeria at 1% level but has negative statistical significant effect on real earnings management (REM) of Nigeria commercial banks at 5% level. It then recommended that the banks' management should work to ensure that they pay dividend that is relatively large enough to cover market price of the share. The study was conducted without mentioning the number of listed commercial banks in Nigeria, and also, the recommendation and conclusion could not be generalized as it is only focused on a sector of Nigeria economy.

Aroh *et al,* (2021), empirically examined dividend policy as a determinant of the firm value of listed companies in Nigeria by employing panel data of ten (10) years, from 2010 to 2019, The study used panel data and all 106 listed companies in Nigeria Exchange Group as population, and the sample size used was 90 listed firms. To achieve this objective, we employed one notable measure of firm value (market-to-book ratio) and selected specific proxies of dividend policy which have been employed in related prior literature. To this end, we hypothesized that dividend policy measures which include; dividend yield, dividend per share, and dividend payout ratio are no significant determinants of firm value across listed non-financial firms during the period under investigation in Nigeria. Robust least square regression analysis was

employed to test the formulated hypotheses. Results obtained from the descriptive statistics revealed that dividend payout is an insignificant determinant of the market-to-book value. It is recommended that management should concert policies and efforts which will reduce profits shared with investors and redirect those funds as retained earnings to grow the company. The robust least squares test was not made explicit, and the study was underpinned by signaling theory. Other theories will be more relevant to the study than signaling.

Ngwoke (2021), examined the effect of dividend policy on the financial performance of manufacturing firms in Nigeria. The study had a population of 31 manufacturing firms in the consumer and industrial goods segment quoted on the Nigerian Stock Exchange. A judgmental sampling technique was employed to arrive at our sample size of five (5) firms, which included Cadbury Nigeria PLC, Nigerian Breweries PLC, Dangote Cement PLC, CAP PLC, and PZ Cussons Nigeria PLC. Secondary panel data were pooled from the audited financial statements of these companies for the period of 2015–2018. Regression analysis was carried out on the data with the aid of the E-views package. The result of the data analysis showed that dividends per share and dividend payout ratio exert a positive but insignificant effect on return on assets. The study, therefore, concluded that dividend policy has no significant effect on the financial performance of manufacturing firms in Nigeria. The study suggested that the dividend payout ratio should be drastically reduced to ensure that a major part of the earnings of the company is not paid out as dividends but rather plowed back into the firm to be reinvested or as part of the cash reserves. The sample size used was too small to be used to generalize the findings and recommendations of the study.

Jean and Edouard (2021), anchored the correlation between the firm value and dividend policy among the firms quoted on the Rwanda Stock Exchange. An ex post facto factor research design was used. The population of the listed firms on the Rwanda stock exchange was 35, from which a sample of 8 firms was selected for the financial period from 2015 to 2019. It is built on four theories, such as the agency theory, the bird-in-hand theory, and the signaling theory of dividends. A panel regression model and descriptive statistics were utilized to sort out the correlation between the variables. The study concludes that firm profitability, financial leverage, and shareholders' funds are positively correlated with the dividend policy at a significant level of 5%. It further suggested that firm management should consider increasing the firm's sales and reducing its annual expenditure. The study sampled selected was very small to generalize the results and recommendations to all sectors

Luh, and Luh (2019), examined and analyzed the effect of capital structure and firm growth on firm value with profitability as a mediator. The study used a quantitative descriptive research design. The population of this study is 42 sub-sector companies of food and beverage registered in the Indonesia stock exchange for 2015–2017 during the period under review, out of which a sample of 14 food and beverage sub-sector companies that have a complete financial statement was used, and the methodology used is path analysis with the aid of the SPSS program. The findings of the study showed that capital structure and firm growth have a positive influence on profitability and firm value. The study recommended that companies in the Food and Beverage sub-sector of manufacturing listed on IDX pay more attention to capital structure, company growth, and profitability. The study was conducted outside of Africa. The moderating variables were entirely different, and the recommendation may not be suitable for Nigeria's environment.

Hirdinis (2019), researched the effect of capital structure and firm size on firm value, moderated by profitability in Jakarta, Indonesia. The population in this study are the companies that are in the mining sector, amounting to 47 companies that have gone public and the sample of seven (7) mining companies listed on IDX was selected. This research uses the non-participant observation method with the path analysis technique. The method of data analysis used is multiple linear regression with a data analysis tool using SPSS 22. Based on the analysis results, it was concluded that capital structure has a significant positive effect on firm value while firm size has a significant negative effect on firm value. The study recommended

that the management of companies in Jakarta, Indonesia should ensure adequate capital structure in an establishment, to increase their firm value. The study was also conducted outside African countries; the moderating variables might not apply to the Nigerian environment. In addition, the sample size was too small to generalize the findings and recommendations.

Oktay and Sinan (2018), investigated the effect of capital structure on the value of a firm in a study of Turkey's non-metal mineral products index in Istanbul Turkey. It examined the relationship between GDP, inflation, and the capital structure of firms from a macro view. Panel data research design was used. The population of the study is 24, out of which eight (8) main companies of Turkey Non-Metal Mineral Products Index are carrying out their operations in the cement industry. To represent firm value, growth, and, profitability, we use stock price, sales, and EBITDA margin, respectively. It retrieved its data from Rasyonet quarterly from 2000 to 2018. From the findings- the regression analysis shows that leverage generally does not have any significant relationship with examined variables. The study recommended that the management of Turkey's non-metal mineral products should try to uphold an adequate capital structure to assist in comparing the leverage of Turkish firms globally. The study did not consider the moderating effect of inflation on variables.

Desta *et al*., (2018), examine the effect of Financial Management practices on the profitability of Small-scale enterprises in Hawassa City Administration Ethiopia. Questionnaires were used to collect primary data while secondary data were collected from various documents. The population of the study is 2316 out of which a survey of 116 Small-Scale enterprises was employed. Descriptive, correlation, and regression analysis were used to analyze the data. Results revealed that good financial management practice is the backbone of a Small-Scale enterprise's profitability, success, and expansion. It then suggested that the management should design a supportive policy to aid small-scale enterprises as far as variables are concerned. The study was conducted in Ethiopia, and questionnaires were used to gather information from the respondents, the results, findings, and recommendations may not apply to Nigeria, as a result of differences in moderating factors.

Egbeonu *et al,* (2016), investigated the effect of dividend policy on the value of firms as reflected in shareholder wealth maximization, with a sample size of 12 quoted manufacturing firms in the Nigeria stock exchange (NSE) was selected from various sectors in the economy from the population of 54. The data employed in the study was computed as a weighted average of a five-year summary extracted from the audited financial reports of firms selected at random from the Nigeria stock exchange. In performing the analysis, multiple OLS regression, granger causality test, were all employed with the aid of econometric statistical packages version 8. The result of the study revealed that dividend per share is significant and inversely related to the share value of the firm while earning per share is both positive and significant to the share value of firms. It is therefore suggested that finance managers should play an important role in the debt-equity mix in the balance sheet to magnify the earning per share as will be reflected in the wealth of shareholders. The study was carried out five years ago, and the results and recommendations might not be relevant to the economic activities of nowadays.

Theoretical Framework

Pecking Order Theory

The pecking order theory was developed by Myers and Mailuf (1984), and it suggests that firms have a particular preference order for capital used to finance their businesses. Due to the information asymmetries between the firm and potential investors, the firm will prefer retained earnings to debt, short-term debt over long-term debt, and debt over equity. Myers and Majluf (1984) argued that if firms issue no new security but only use their retained earnings to support the investment opportunities, the information asymmetric can

be resolved. That implies that issuing equity becomes more expensive as asymmetric information between insiders and outsiders increases. Firms whose information asymmetry is large should issue debt to avoid selling underpriced securities.

Modern Portfolio Theory

Harry Markowitz (1952) developed and invented the Modern Portfolio Theory, which serves as the foundation for this study. By carefully selecting the quantities of various assets, the idea was defined as an attempt to maximize portfolio expected return for a given degree of portfolio risk, or alternatively minimize risk for a given level of expected return. The theory's major goal is to strike a balance between increasing returns and reducing risk, and it offers an effective instrument to support an actively managed portfolio. The idea also promotes asset diversification to protect against market risk in addition to particular risks in an individual company setting. The theory is underpinned by the Modern Portfolio theory because it explains the relationship between capital structure and dividend policy management practice and firm value. Thus, by explaining that there is a need to measure and incorporate the risk of an organization into capital structure and dividend policy management, especially for those investors who invested heavily in portfolio management such as stocks, bonds, and mutual funds, and also ensure that maximum return is achieved on investors' interest. The mix of these assets constitutes the portfolio allocation and how the portfolio is allocated determines its performance.

METHODOLOGY

This study adopts the longitudinal research design, and panel regression analysis. The population of the study comprises all the Hundred Seven (107) listed non-financial companies in the Nigerian Exchange Group as of December 31, 2022. The sample size comprises seventy (70) listed non-financial companies in Nigeria using a judgmental sampling technique, for a period of twelve (12) years (2011-2022) selected to present a clearer picture of the problem in a determinable period. The baseline of 2011 was chosen, because it marked the end of the end of global recession experienced in the 2009-2010.

Model specification

The multiple regression model used in this study is specified below;

$$PBV = \beta_0 + \beta_1 \ DER + \beta_2 \ DPS + FS + \epsilon_{it} \text{————————————eq. (i)}$$

Where:

PBV = Price to Book Value.

β_0 = The autonomous parameter estimates (constant Term)

$\beta_1 - \beta_2$ Parameter of Coefficient of debt to equity and dividend per share, and firm size

DER = Debt to Equity Ratio

DPS = Dividend per Share

FS = Firm Size

ϵ_{it} = Stochastic Error term.

Apriori Expectation

The current research study expects that the coefficients'priori are all positive, implying that debt to equity and dividend per share would significantly boost the firm value of listed non-financial companies in Nigeria. i.e. $\beta_1 - \beta_2 > 0$.

Table 3.2: Study Variables and their Measurement.

Variable Acronym	Variable Name	Variable Type	Measurement	Source
PBV	Price-to-book value	Dependent	Stock market value Divided by Book value of Shares	(Reilly & Brown, 2012).
CS	Capital Structure	Independent.	Compare external funds against internal funds. Debt/Equity (ratio)	Sabo, *et.al,* (2015).
DP	Dividend Policy	Independent	Proportion of profit distributed to the shareholders of a company. Measured by Dividend Per Share (DPS)= Annual Dividend per Share Divided by No of ordinary shares in Issue	Banerjee (2012)
FS	Firm Size	Control	Natural logarithm of total Assets	Marfuah and Nurlela, (2019)

Source: Researcher's Compilation (2024)

RESULT AND DISCUSSION

Descriptive Statistics

To gain an initial understanding of the dataset utilized in this study, the study conducted an initial analysis using descriptive statistics. This preliminary examination provided valuable insights into the data's inherent patterns, which are subsequently presented in Table 2 as summary statistics.

Table 2: Descriptive Analysis Result

	PBV	DER	DPS	FS
Mean	0.235289	0.537358	0.268554	7.145994
Median	0.163000	0.630000	0.181553	7.026656
Maximum	0.979408	3.350000	2.343428	9.637000
Minimum	-0.133967	-1.620000	-0.586820	2.837000
Std. Dev.	0.242380	0.401586	0.294225	0.839044
Skewness	1.187249	-0.516296	1.876105	0.101525
Kurtosis	3.564105	9.407330	10.01791	3.427538
Jarque-Bera	208.4758	1474.204	2216.553	7.840617
Probability	0.000000	0.000000	0.000000	0.019835
Sum	197.6432	451.3808	225.5852	6002.635

Sum Sq. Dev.	49.28981	135.3064	72.63076	590.6517
Observations	840	840	840	840

Source: E-View 10 Output (2024)

Table 2 revealed the summary of descriptive statistics of the variables included in the model. The result shows that the mean of price to book value (PBV) is 0.235289, the standard deviation is 0.242380, the lowest value is -0.133967, and the highest value is 0.979408. Given that the range between the minimum and maximum is not so broad, it shows a stable firm value, as the standard deviation demonstrated that the data are not widely distributed from the mean value. Debt to equity ratio is another attribute metric, as shown in table 2 above, with a mean value of 0.53, a standard deviation of 0.40, and a minimum and maximum value of -1.62 and 3.35, respectively. Because the standard deviation is not statistically different from the mean and the range between the minimum and maximum values is limited, the debt-to-equity ratio appears to have improved marginally throughout the research period. The data also shows that for the time period, the average dividend per share (DPS) was 0.26, with a standard deviation of 0.29 and lowest and highest values of -0.58 and 2.34, respectively. This suggests that the value of dividend per share grew dramatically over the research period. Moreover, the average level of firm size is 7.14, with a standard deviation of 0.83. The minimum and maximum values for firm size are 2.83 and 9.63, respectively.

The analysis was also fortified by the value of the skewness and kurtosis of all the variables involved in the model. All the distributions are both negatively and positivity skewed. Variables with value of kurtosis less than three are called platykurtic (fat or short-tailed) none of the variable qualified for this during the study period. On the other hand, variables whose kurtosis value is greater than three are called leptokurtic (slim or long tailed) and all the variables qualified for this during the study period under study. Jarque-Bera test shows that the residuals are not normally distributed as indicated by the probability values less than 5% in the case of PBV, DER, DPS and FS. In essence, the descriptive statistics revealed that PBV, DER, DPS and FS data sets are not normally distributed. This is so because the probability values of the variables are less than 5%.

Correlation Analysis

Table 3 presents correlation values between dependent and independent variables and the correlation among the independent variables themselves. These values are generated from Pearson Correlation output. The table contains correlation matrix showing the Pearson correlation coefficients between the dependent and independent variables and among the independent variables of the study. Table 3 shows the correlation between the dependent variable, PBV and the independent variables of DER, DPS and FS among the independent variables themselves on the other hand. Generally, a high correlation is expected between dependent and independent variables while a low correlation is expected among independent variables. According to Gujarati (2004), a correlation coefficient between two independent variables of 0.80 is considered excessive, and thus certain measures are required to correct that anomaly in the data.

Decision Rule: Correlation is between two variables which must be -1 and +1.

Table 3: Correlation Analysis Result

Covariance Analysis: Ordinary		
Date: 02/06/24 Time: 04:18		
Sample: 2011 2022		
Included observations: 840		
Correlation		

Probability	PBV	DER	DPS	FS
PBV	1.000000			
	——			
DER	0.023312	1.000000		
	0.4998	——		
DPS	0.064246	-0.084099	1.000000	
	0.0627	0.0148	——	
FS	-0.122335	-0.052030	-0.105609	1.000000
	0.0004	0.1319	0.0022	——

Source: E-View 10 Output (2024)

From the table, it can be seen that all the correlation coefficients among the independent variables are below 0.80. This point to the absence of possible multicollinearity among the independent variables and the correlation between the variables shows that there is a mix of both positive and negative correlation among the dependent and independent variables. There exist positive insignificant association between price to book value and debt to equity ratio, and dividend per share respectively indicating that the higher the firm value the lower the debt-to-equity ratio of the selected firms under study. Furthermore, it is notable from the analysis that other association between and within the variables of studies are weak, thus, signifies absence of possible multicollinearity.

Multicollinearity Test (VIF)

Collinearity diagnostics tests were performed using the variance inflation factor (VIF) to further confirm the absence of multicollinearity problem between independent mutations. The results of the collinearity diagnostic test are presented in Table 4.3 below:

Decision Rule: A Centered VIF of less than 10 is an indication of an absence of Multicollinearity, while a centered VIF of more than 10 is a sign of Multicollinearity.

Table 4: Multicollinearity Test (VIF)

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	984.42642	15.02648	NA
DER	84.838493	9.26539	1.881049
DPS	172.26945	8.99326	1.946372
FS	321.05398	8.76748	1.966165

Source: E-View 10 Output (2024)

*Decision rule: Centered VIF less than 10 indicates the absence of multi-collinearity, while VIF Uncentered over 10 is a sign of multi-collinearity. Table 4 above shows the absence of multicollinearity between independent variables, as all independent variables (DER, DPS and FS) have value less than 10.

Heteroskedasticity Test

A heteroskedasticity test was performed as a diagnostic check to verify the robustness of the estimates.

Heterogeneous variance occurs when the standard error of the variable being monitored is not constant over time. Heteroscedasticity violates linear regression modelling assumptions and can affect the validity of analytical results. On the other hand, heteroscedasticity does not cause any bias in the coefficient estimates, but it reduces the precision, and less precise coefficients are more likely to be estimated. The estimates are far from the correct population values that have been removed. While heteroskedasticity is assumed to be absent in the test's null hypothesis, it is assumed to be present in the alternative hypothesis. In the event that the P value is less than 5% level of significance, the null hypothesis must be rejected.

Hypothesis

H_0: The Error Variances are all Equal (Homo skedastic)

H_1: The Error Variances are not Equal (Heteroskedasticity)

Table 5: Heteroskedasticity Test

Panel Cross-section Heteroskedasticity LR Test			
Null hypothesis: Residuals are homoscedastic			
Equation: UNTITLED			
Specification: PBV DER DPS FS C			
	Value	df	Probability
Likelihood ratio	561.0934	70	0.1437
LR test summary:			
	Value	df	
Restricted LogL	6.751444	836	
Unrestricted LogL	287.2981	836	

Source: E-View 10 Output (2024)

Table 5 indicated the results of the panel cross-section Heteroskedasticity regression test. The decision rule for the panel cross-section Heteroskedasticity test is stated thus:

The null hypothesis of the test states that there is no Heteroskedasticity, while the alternate hypothesis states that there is Heteroskedasticity. The null hypothesis is not to be accepted if the P value is greater than 5% level of significance. From the result in table 5 above with a ratio value of 561.0934 and a corresponding probability value of 0.1437 which is greater than 5%, the study therefore posits that, there is no reason to reject the null hypothesis. Consequently, based on the diagnostic probability 0.1437 the null hypothesis is not rejected, thus there is homoskedasticity, indicating that residuals are homoskedastic and as such the samples give a true reflection of the population.

Hausman Test

The Hausmann specification test is a model specification test used in panel data analysis to select between fixed and random effects models. Because the datasets utilized in this investigation were panel, both fixed and random effects regressions were performed. A Hausmann specification test was then used to choose between the fixed-effects and random-effects regression models. This test determined if the error term was connected to the regressor. As a result, the decision rule for the Hausmann specification test is presented at a 5% level of significance:

Decision Rule: If the P value is less than 0.05 (5%), the null hypothesis is rejected and the alternative hypothesis should be accepted

H_0: Random effect is more appropriate for the Panel Regression analysis

H_1: Fixed effect is more appropriate for the Panel Regression analysis

As previously stated, if the p-value is less than 0.05, the null hypothesis is rejected. According to the null hypothesis, fixed effects are best suited for panel regression analysis (that is, the preferred model is the random effects). Similarly, if the p-value is less than 0.05, the null hypothesis is rejected. As a result, fixed effects are best suited for panel regression analysis (meaning we reject the random effects model)

Table 6: Hausman Specification Test.

Correlated Random Effects – Hausman Test			
Equation: Untitled			
Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	1.601656	3	0.6590

Source: E-View 10 Output (2024)

The result of the Hausman test appended in the table above does not provide sufficient evidence to reject this null hypothesis at 5% level of significance as can be seen that the probability value (0.6590) of the test is greater than the critical value of 0.05. Therefore, the study upholds that difference in coefficients is not systematic and hence, the random effect model is the most appropriate models for the study. It is logical therefore, to proceed to another test which is the Langranger Multiplier test, which will indicate the appropriateness or otherwise of using the pooled effect model or the random effect model.

Breusch-Pagan and Lagranger Multiplier Test

In panel data analysis, the Lagranger multiplier test is used to select between pooled and random effects models. Because the dataset was a panel, both pooled and random effects regression analyses were done. The optimum model among the pooled-effects and random-effects regression models was then determined using a Breusch-Pagan Lagrangian multiplier test. At a 5% significance level, the decision rule for the Breusch-Pagan Lagrangian multiplier test is provide:

Decision Rule: If the P value is less than 0.05 (5%), the null hypothesis is rejected and the alternative hypothesis should be accepted

H_0: Pooled effect is more appropriate for the Panel Regression analysis

H_1: Random effect is more appropriate for the Panel Regression analysis

As previously stated, if the p-value is less than 0.05 the decision rule is to reject the null hypothesis which states that pooled effect is most appropriate for the Panel Regression analysis (meaning that the preferred model is random effects). Similarly, if the p-value is greater than 0.05 the decision rule is to accept the null hypothesis which states that pooled effect is most appropriate for the Panel Regression analysis (meaning that the random effect model is to be rejected).

Table 7: Breusch-Pagan Langranger Multiplier Test

Test	Statistic	d.f.	Prob.
Breusch-Pagan LM	4746.962	2415	0.0000

Source: E-View 10 Output (2024)

Based on the probability value of the Breusch-Pagan Langranger Multiplier Test at probability value of 0.0000, the null hypothesis is rejected, thus random effect is most appropriate when compared to pooled effect.

Test of Research Hypotheses

H_{01}: Debt to Equity Ratio (DER) has no significant relationship with the Price-to-book value of listed non-financial companies in Nigeria.

H_{02}: Dividend Per Share (DPS) does not significantly affect the Price-to-book value of listed non-financial companies in Nigeria.

Table 8: Random Effect Regression Result

Dependent Variable: PBV				
Method: Panel EGLS (Cross-section random effects)				
Date: 02/06/24 Time: 04:41				
Sample: 2011 2022				
Periods included: 12				
Cross-sections included: 70				
Total panel (balanced) observations: 840				
Swamy and Arora estimator of component variances				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.445508	0.112464	3.961323	0.0001
DER	-0.009184	0.017465	-0.525872	0.5991
DPS	0.041962	0.027651	2.070942	0.0435
FS	-0.028801	0.015411	-1.868883	0.0620
	Effects Specification			
			S.D.	Rho
Cross-section random			0.175391	0.5200
Idiosyncratic random			0.168495	0.4800
	Weighted Statistics			
R-squared	0.594466	Mean dependent var		0.062878
Adjusted R-squared	0.570893	S.D. dependent var		0.168429
S.E. of regression	0.168354	Sum squared resid		23.69474
F-statistic	18.50011	Durbin-Watson stat		1.761972
Prob(F-statistic)	0.000481			

Source: E-View 10 Output (2024)

Table 8 revealed and analyses the panel random regression results of the explained variable proxied by PBV as well as the explanatory variables DER, DPS and FS. Between the R^2 and the adjusted R^2, there is a range of values 59% and 57% respectively. The variation in the dependent variable (PBV) as a result of change in the independent variables is explained by the R^2 of 59%. Therefore, it can be concluded that the independent variables have a combined predictive power of influencing on the firm value of listed non-financial firms in Nigeria, with the remaining 41% been explained by other factors not included in the model. Furthermore, the regression results as presented above reveals an intercept of (0.445508) which is positive. This simply implies that when other variables are held constants, the firm value of listed non-financial firms increases by 0.445508. The result of the constant is statistically significant, as indicated by a P-value of 0.0001. In terms of residual test, the model is free from serial correlation as revealed by the Durbin-Watson statistic of 1.76 is within the acceptable range of 1.5 to 2.0 for a sample of at least 50 observations

Table 8 recorded that the coefficient of the variable DER was -0.009184 with a p-value of 0.5991 (>0.05). It can be deduced that debt-to-equity ratio has a negative and insignificant effect on the firm value of listed non-financial firms which provide support for the null hypothesis.

Also, the second hypothesis revealed that the coefficient of the variable DPS was 0.041962 with a p-value of 0.0435 (<0.05). It can be deduced that dividend per share has a positive and significant effect on the firm value of listed non-financial firms which provide support for the alternative hypothesis. Finally, it is evidence from the control variable that firm size has a negative and statistical insignificant effect on the firm value of listed non-financial firms in Nigeria.

DISCUSSION OF FINDINGS

The research empirically examines how the management practices of capital structure and dividend policy influence the firm value of non-financial companies listed in Nigeria. The result of the analysis as recorded above revealed that debt-to-equity ratio has negative and insignificant effect on firm value of listed non-financial firms. The negative effect suggests that, on average, an increase in the debt-to-equity ratio is associated with a decrease in firm value. This could be due to increased financial risk, higher interest expenses, and concerns among investors regarding the company's ability to meet debt obligations. This study agrees with Oktay and Sinan (2018) which suggests that, under certain assumptions, the capital structure (including the debt-to-equity ratio) doesn't affect the overall value of a firm in a perfect capital market. In the real world, however, factors such as taxes, bankruptcy costs, and market imperfections can influence the relationship between capital structure and firm value. This study is in tandem with the study of Luh and Luh (2019) but disagree with the finding of Hirdinus (2019) who carried out effect of capital structure and firm size on firm value.

From the second hypothesis, the study envisaged that dividend per share has a positive and significant effect on the firm value of listed non-financial firms. This suggests that investors value companies that distribute dividends, considering it a positive signal of financial health and profitability. Dividends are often considered a signaling mechanism. When a company pays consistent or increasing dividends, it signals to investors that the company is generating sufficient cash flows and is confident in its future earnings prospects. This can enhance investor confidence and contribute to an increase in the firm's market value. Modern Portfolio Theory standpoint suggest that dividends can play a role in constructing efficient and diversified portfolios, contributing to a more stable and attractive investment proposition for investors. This study concord with the study of Egbeonu *et al.,* (2016) Ngwoke (2021) on dividend policy.

CONCLUSION AND RECOMMENDATIONS

The research investigated the effect of capital structure, dividend policy and firm value among non-financial firms listed in Nigeria. Drawing conclusions from the study findings derived through the objectives and hypotheses, the following summarizations were drawn: the study affirmed that debt-to-equity ratio has negative and insignificant effect on firm value of listed non-financial firms. Meaning financial managers need to carefully evaluate the risk-return profile associated with different capital structures and communicate effectively with investors to maintain trust and confidence in the company's financial practices. The study also concluded that dividend per share has a significant effect on firm value" implies that the amount of dividends distributed per share by a company plays a crucial role in influencing the overall value or valuation of the company. In other words, the dividends paid to shareholders are considered an important factor in determining the attractiveness of the company as an investment, and consequently, its market value.

Therefore, based on the findings of this study, the following recommendations are made for efficient market value of listed non-financial firms on the Nigeria Exchange Group;

1. Financial management decisions related to capital structure should take into account the trade-off between potential benefits and risks associated with debt financing.

2. Continuous monitoring of industry practices and economic conditions is advised to ensure that the company's dividend practices remain competitive and adaptive to changing circumstances. Overall, recognizing the significance of dividends in influencing firm value, financial managers should integrate thoughtful dividend management into their broader corporate finance strategy.

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