FINANCING DECISION AND SHAREHOLDERS' WEALTH MAXIMISATION OF NIGERIA LISTED COMPANIES

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Abstract

The primary objective of financial managers is to utilize the available resources to increase the company value that would lead to the shareholders' wealth maximization. The wealth maximization is the major challenge facing firms as a result of financial sub-optimality. The study examined the relationship between financing decision and shareholders' wealth maximization. Ex-post facto research design was adopted. Data were extracted from a sample of thirty-five (35) non-financial firms listed on the Nigeria Stock Exchange for a period of ten (10) years (2008 to 2017), giving 350 firm-year observations. The effect of self-financing, equity-financing and debt-financing on market value added were empirically tested using multiple linear regression analysis. The findings indicated that financing decision had significant effect on market value added; self-financing had positive and significant effect on market value added, equity-financing negatively and significantly affected market value added while debt-financing (DFD) had insignificant negative effect on market value added. Results further revealed that firm size significantly controlled the effect of financing decision on market value added. The study opined that management should enhance their financial planning strategy and increase the asset base of the firm for the achievement of shareholders' wealth maximization objective.

Keywords: Debt finance, Equity finance, Financing decision, Self-finance, Shareholders' wealth, Size.

Introduction

Wealth maximization is the major focus of management and shareholders of companies. The management is concerned with the effective and efficient utilization of resources in line with the goal of the company to grow the business by expansion and enhance profitability (Shodiya, Sanyaolu, Ojenike, Ogunmefun, 2019). The management manages the internal factors that drive the shareholders' wealth such as customer's satisfaction, cost management and capital expenditure (Metz, Ilieş, & Nistor, 2020). Shareholders are the providers of equity funds to enable the management implement all the strategic decisions that would lead to the attainment of a company's goals (Pandey, 2015).

It has been noted from existing literature that the optimal financing mix is the combination of equity and debt which reduces the cost of capital of a firm and its financial risk to the barest minimum in order to increase firm value (Aljamaan, 2018). Financial policies of companies depend on the investment, dividend and financing decisions. The interconnectivity among these three decisions enables the firm to attain its primary objectives of profit and wealth maximization. Investment decisions depend on the availability of funds in the system that the management can mobilize to generate

incomes and payment of financial obligations to the stakeholders.

One of the main objectives of a corporate finance manager is to minimize the cost of capital and maximize the wealth of shareholders. Nagalakshmi (2015) asserts that financing decision entails selection of appropriate financing mix by way of combination of debt and equity in a company's capital structure. Companies can be financed entirely by equity or by debt or a combination of both. The debt and equity mix in a company is refered to as capital structure. Managers consider various options before taking the decision on the best way to source for funds. The most common option is internal financing. Internal financing has to do with ploughing back the profit, with little or no dividend payment to the shareholders and also the disposal of aging or idle assets that are no longer adding value due to change in technology and economic policy. Internal restructuring of business in term of reducing the number of cost centres and increase in the profit centres also boost a company's operation. Insufficient internal fund leads the management to look outside the box for other funding alternatives. Myers (2001) affirms that the company should borrow rather than issue equity when the internal funding is inadequate to support capital expenditure. Equity finance has associated costs which would add to the cost of doing business alongside many bureaucratic procedures that may affect the business decisions.

Capital structure of the organization depends on the strategic plan and goal of the organization. Most business organizations tend to use equity method of financing which may not adequately address the goal of the business. Akintoye (2016) documented that the company finances its operations in terms of debt and equity combination in line with four basic elements: Ordinary shares, Preference shares, Debenture /Long term loan and Retained Earnings. Each of these components of capital structure has direct associated cost expectation on the holders, for example, debt has cost of interest, and preference and ordinary share capital have the cost of dividend. The manager should aim to reduce the weighted average cost of capital to the barest minimum in order to increase the return to the shareholders.

Various studies, (for example, Shodiya et al., 2019; Prrabha, Jayapriya & Joslin, 2017; Farooq, Rehman, Khan, & Bilal, 2017) have been conducted using different indicators as measures of shareholders' wealth. Similar studies (Chaleeda, Tunku, & Anas, 2019; Khan, Shaikh, Shah, Zahid, & Shaikh, 2017; Tan & Hamid, 2016) used accounting profit as part of indicators to measure the shareholders' wealth. The accounting profit is associated with the following financial indicators: Earning per share (EPS), Return on investment (ROI), and Return on equity (ROE). Accounting profit is determined after charging both explicit costs and provision for non cash items. Explicit costs are transactions that involve cash outflow while provisions are not cash out flow transaction, but only the reserve set aside to meet future obligations.

Economic profit is determined after charging both the explicit and imputed costs to earnings without considering the provisions. Economic profit is also based on value based measure and provide real cashflow information profile of the company unlike accounting profit that has been subjected to a lot of non cash transactions.This study uses value based measures namely, Market Value Added

(MVA) to measure shareholders' wealth as found in the stuyd of Attiyet (2012).

One of the means of maximizing shareholders' wealth is optimization of capital structure; having the right proportions of all means of funding available to the firm. This has been a great challenge to firms operating in Nigeria. During the pre- and post- economic recession, a lot of companies' shareholders' wealth are eroded. Financing is a great challenge that is facing companies. Sourcing funds through the capital market is difficult because of investors' loss of confidence in the market operations. In a similar vein, the retained earnings that are supposed to be the available fund to grow the business is not sufficient or not attained.

The interest rate on loan is too high as the interest rate on bank loan as at January 29, 2021 stood at 4-49% depending on the sector of the economy to invest the fund and the bank granting the loan as the rates varies across sectors and differs among the banks (CBN, 2021), and makes it difficult for companies to access the loan. Currently in Nigeria, there is no capital market that trade in debts compared with developed countries. Based on these challenges, the returns to shareholders are always affected. This study investigates the effect of financing decision on the shareholders' wealth in Nigerian listed companies whether is adding value or otherwise.

Review of Extant Literature
Conceptual review

The primary objective of shareholders is to get sufficient value for their investments. Value is on different angles; the investment should yield adequate returns that would reduce the pay back periods in form of dividends. Also, the value in term of going concern that is, the

company is profitable and the company size is increasing year in year out. Prrabha et al., (2017) defined the wealth maximization as the present value of the expected future returns to the shareholders of the company. In pursuing this shareholders objective, the business manager's goal is to maximize the wealth of the company, which results into increase in stock market prices that would lead to increase in the net worth of shareholders.

Market value added (MVA) used as a measure of shareholders' wealth maximization, means the difference between the equity market valuation of a listed company and the sum of the adjusted book value of debt and equity invested in the company financial statements (Wibowo & Berasategui, 2008). MVA is a measure of how much wealth investors have created on their investment and the level of value a company has accumulated over time. Brigham and Ehrhardt (2002) as cited in Wibowo and Berasategui (2008) stated Market value added (MVA) formula as follows:

MVA = Market value of the firm − Book value of the firm

Where:

Market value (MV) of Stock = Market Capitalization = Shares Outstanding x Stock Price; and
Book value of the firm =   Book Value of Equity

This study noted that the market value of debt is deemed to be equivalent with the book value of debt since there is no active secondary debt market in Nigeria. Also, long and short term debt come from the financial institutions, corporate organisations and individuals. Therefore, it is hard to estimate the market value for the debt.

Companies after having determined their investment policy, should consider plans on how to source for required financing and their mix. Financing decision involves two sources: the internal and external. Internal financing has to do with owner's capital, retained earnings, and cost structuring, while external financing is borrowed from external sources like, debenture, bank loans and Bond. Most of the time, Companies start up businesses with shareholders'contributions . Shareholders contribution at the commencement of business may be combination of assets and cash. Shareholders at time place their personal assets like motor vehicle, building and office equipment as part of the start up capital. Effective and efficient utilisation of the capital may lead the company to break even, which gradually lead to the profitability. There are different methods of self finance; Retained earnings, debt factoring, deffered payments and internal restructuring. Internal restructuring is another way of enhanced self finance; the reduction in costs may be achieved through sound cost control by reducing the number of offices, sharing facilities, and putting in place sound internal control policy on procurement of goods and service.

Self finance has no restrictions like other financing options, in as much as the company can sustain the growth. The issue of information asymmetry is not relevant because all the information available is being employed to the growth of business. According to the Signaling Theory, successful self financing of a project has positive signal to the investors and potential investors. Self financing offers an advantage of saving the agency costs which is associated with external financing. It allows the manager to develop better attitude toward attaining the goal of the company. Despite the merit of the self financing, the Free Cash Flow theory gives negative effect on the financing (Jensen,1986). Self financing may lead to conflict of interest between shareholders and management over dividend payout policies and compensation packages when the organization generates substantial free cash flow. Surplus cash flow may be misapplied by the managers to white elephant projects that favor them. External funding would reduce the conflict of interest between the managers and shareholders. Self- finance is measured as follows:

$$\text{Self-finance} = \frac{\textbf{Operating cash flow}}{\textbf{Total assets}} \times 100$$

Equity finance is one of the financing options open to both the company and individual. It is the owner's capital contribution that is permanent in nature without specfic maturity date and only entitle to dividend after all financial obligations have been fulfiled to the fund providers (Pandey, 2015). Sources of Equity finance include ordinary share capital, irreedemable debenture, and irreedemable preference shares. Increase in equity finance may be through right issues, public offer and private placement (Akintoye, 2016; Pandey, 2015). Companies choose equity finance method that is in line with the existing capital structure; companies facing under valuation of market share in regulated market would consider finance through equity. Most of the time existing shareholders favour right issues as a way of funding rather than fresh issue to avoid loosing control and reduction on returns. Apart from the ownersip dilution, the transaction costs associated with the processing are much which have effect on the net earnings of the company. Myers and

Majluf (1984) grouped the financing hierarchy and rated equity share as the last financing option.

Equity finance is measured as follows:

Equity finance ratio

$$= \textbf{\underline{Total shareholders equity}} \quad \text{X 100}$$
$$\text{Total Assets}$$

Where :

Total shareholders' equity = Ordinary share capital, irredeemable preference share and irredeemable debentures; and

Total assets = Shareholders' equity and liabilities

Debt finance is one of the external financing options that are available to the company to boost its operation. Debt finance is a systemic way of using debt to finance the company operation and form part of the company's capital structure. Debt finance can be short, medium and long term; it depends on the target of the company. Debt finance would include defined debt instruments, for example debentures, and redeemable preference shares. Redeemable preference shares have both the fixed dividend and maturity period (Olowe, 1998). Modigliani and Miller (1963), affirms that debt has effect on the value of the company. Optimal debt finance of the company is when the company minimizes the cost of the capital and at the same time maximize the shareholders wealth.

Debt finance serves as financial control that guide managers to make use of the resources in right directions that would enable the company to pay off all associated costs arising from the financing and at the same time enhance the value of the company. Debt finance contributes to conflict resolution among the managers and investors which guide them to work toward success of the company to avoid the risk of bankruptcy, takeover and loss of their employment.The study used the debt ratio as total debts that is, short and long term debts and redeemable preference share over the total assets. The formula is as follows:

$$\textbf{Debt ratio} = \textbf{\underline{Total debts}} \quad \text{X 100}$$
$$\textbf{Total assets}$$

Management increases the size of the company in different ways.The size may be as a result of the growth in operation or increase in total assets of the company. At times, manager increases the size by way of opening more branches or outlets outside the Head office. This may lead to increase in cost of doing business with expectations that it will lead to increase in profitability and enhance the marketing strategy. In another way, the size can be increased without opening more branches or outlets but by reducing costs of doing business like merger of the unprofitable branches or outlets with profitable ones. Project financing is also another way of increasing size of the company. Total assets, total sales and market capitalisation can be used to measure the size of an entity.

Size of company is measured as follows:

Size ratio = Log of Total assets

A high ratio indicates that the company is adding value to the return to fund providers.

Underpinning theory

The Pecking Order Theory as proposed by Donaldson in 1961, modified by Stewart C Myers in 1984 and rebranded by both Stewart C Myers and Nicolas Majluf in 1984, stated that when a company is considering its financing options, attention is placed on the option that has the least cost. Companies have three financing options namely: internal funds, debt, and new equity. Based on this, the ranking is as follows: Companies will first prefer internal

financing, then debt, before issuing new Equity, in that order. Internal financing has to do with using retained earnings to finance any new project and expansion without incurring any extra costs.

The debt option has to do with borrowing from third parties: corporate or individual for short or long term period. The cost of borrowing, that is, interest on loan has tax advantage and fixed cost in nature. While the new equity has long processing with associated costs like payment of dividends, stamp duty and statutory costs. Pecking Order Theory favors the companies that opted for internally generated fund (retained earnings) in financing their operations. The issue of information asymmetric can be resolved by using retained earnings and debt to finance the business.

Equity finance gives room for expensive information asymmetry between the management and investors. The companies with large information asymmetry would prefer debt finance than equity to avoid selling underpriced securities. Myers and Majluf (1984) in the hieracy of financing structure supports the Pecking Order Theory, that is, using internal fund option first, followed by debt and equity finance as the last option. The primary purpose of this theory is in line with the shareholder wealth maximization by using the cheapest financing option which would lead to profitability of the company and has positive effect on the company 's value. In contrast to the pecking order theory, Pachori and Totala (2012) affirmed that equity finance is considered as a cheaper means of financing than debt but less risky because of high cost of financial risk associated with debt.

Empirical Review

Chaleeda et al., (2019), as they also reported that debt-asset ratio negatively but insignificantly influnece firm value. Other studies like Khan, et al., (2017) carried out an empirical analysis of the effect of financing decision on the financial performance of selected 100 firms listed on KSE in Pakistan and reported that debt-equity ratio insignificantly influenced return on euity, return on asset, Tobin's Q, and martket capitalization of Pakistiani firms; while debt-equity ratio negatively impacted on all the measures of performance except Tobin's Q with positive effect. Likewise, Uremadu and Onuegbu (2018) found that debt-equity ratio negatively but insignificantly impacted on return on equity and return on assets of consumer goods producing companies in Nigeria. On the contrary, Malik, Awais, and Qaisar (2016) reported a positive but insignificant relationship between debt finance and firm value while Tan and Hamid (2016) obtained mixed results in their study as debt finance positively impacted return on equity, the reverse was found for return on assets.

Atiyet (2012) carried out the study on effect of financial leverage on shareholder value creation on French firms using secondary data from 1999 to 2005. This study used the factors that drive shareholders' wealth to determine the most factor that have effect on shareholders' wealth.The data were analysed with regression analysis. The study used Shareholder's wealth creation as dependent variable measured by Economic value added (EVA) and Market value added (MVA).The independent variable of the study was debt finance which was measured by the self finance, equity finance and leverage. The study measured self-finance by Cash flow

from financing activities .The findings pointed out that self-financing positively and significantly favour shareholder value creation.While the leverage had positive and signifacnt effect on the EVA and negatively related to the MVA. The study concluded that French firms supported the pecking order theory because they considered self-financing as first option, followed by leverage and lastly the equity issue.

Similarly, Farooq et al., (2017) investigated the effect of internal financial policy on shareholders' wealth and firm value in Pakistan. The findings indicated that dividend payout, retained earnings, net total assetss per share have positive and significant relation with firm value. The results aslo revealed that firm book value per share ratio has positive but insignificant relationship with firm value while retained earning (internal financial policy) and dividend payout contributed to shareholders' wealth. Also, Akinkoye and Akinadewo (2018) examined the effect of retained earnings on firms'market value in Nigeria. The study affirmed that earnings retention had a positive and significant relationship with market value of firms.

Musila (2015) investigated relationship between equity financing and financial performance of the energy and petroleum companies listed at the Nairobi Securities Exchange (NSE) and concluded that there was no significant relationship between equity financing and financial performance. On the contrary, Adenugba, Ige, and Kesinro (2016) affirmed that the financial leverage had significant influence on company's value. Ogundajo, Enyi and Oyedokun (2019) submitted that past dividend, agency cost, debt-equity ratio and size had significant positive effect on market capitalisation of listed manufacturing firms in Nigeria. The result supported the pecking

order theory that the firms consider the debt option of financing when internal financing cannot adequately meet the firms' operations.

Jahfer (2006) posited that in Sri Lanka, financial leverage had no significant relationship with shareholders wealth based on research carried out. The study used financial data from sixty (60) listed companies in the Colombo Stock Exchange covering eight sectors out of eighteen sectors listed from 1992 to 2001. Debt equity ratio was used as independent variable,while the Price earning ratio and market value of share were used as dependent variables. The findings of the test carried out indicated that there is no significant relationship between the financial leverage and shareholders wealth among the selected sample companies in Sri Lanka Stock Exchange.

Pandya (2016, 2017) posited that financial leverage and cost of capital were statistically negatively correlated. The study used debt finance measured by debt-equity ratio and interest cover as independent variable. Shareholder value as dependent variable was measured by Market value added, Residual income, and Refined Economic value added.The findings indicated that the debt – equity ratio was found to have a statistically negative association with market value, residual income and refined economic value added. On the other hand, the interest cover was found to have a significant positive correlation with residual income and refined economic added value, however, it was not significantly correlated to market value added. The findings implied that the debt in a company capital structure can reduce or incease the weighted average cost of capital depending on the proportion of debt maintain by the management. This study was carried out in India using the

financial data of 28 companies listed in the Bombay Stock Exchange from 2013 – 2015.

Ishari and Abeyrathna (2016), submitted that financial leverage had no effect on value of companies based on the study carried out from 2011 to 2015 on ten (10) listed manafacturing companies in Columbia Stock Exchange. Based on the findings, the debt equity ratio has insignificant effect on the Return on equity and return on assets; there is indication that there are other factors that significantly affect firm value but not considerd in the study. Innocent, Ikechukwu and Nnagbogu (2014) investigated the effect of financial leverage on financial performance of selected quoted pharmaceutical companies in Nigeria. The study used Ex-post facto research design. The findings of the study showed that financial leverage has no signifacant effect on the financial performance of the selected companies.

Al-Hasan and Gupta (2013) investigated the effect of leverage on shareholders'return of some selected listed companies in Bangladesh. The result concluded that there was negative relationship between the EPS and leverage. Rehman (2013) in his paper titled Relationship between financial leverage and financial performance: Emperical evidence of listed Sugar companies of Pakistan found positive relationship between debt equity ratio and earnings per share, net profit margin,and return on equity. The researcher concluded that debt had significant impact on the financial performance of the companies either positive or negative.

Vijayalakshmi and Manoharan (2013) discovered that leverage has significant influence on shareholders' value creation. The study was on Corporate leverage and its impact on shareholder value creation with reference to Miscellaneous Manufacturing sector in India. The study concluded that leverage ratio has influence on shareholder value creation and also the interest cover ratio was indicated as the most relevant variable that played a significant impact on shareholders value creations. Arowoshegbe and Emeni (2014) reported that there is a sigificant negative relationship between shareholders' wealth and debt-equity mix of quoted companies in Nigeria.The study supported the Pecking Order Theory which state that the companies should consider the least cost means of financing during investments and project execution.

Akinmulegun (2012) affirmed that leverage shocks have significant effect on corporate performance especially when the net assets per share is used as a measure of corporate performance in Nigeria. The result indicated that leverage has effect on earnings per share that indirectly affect the net assets per share of firms. The study used econometric technique of Vector Auto Regression (VAR) model to carry on the impulse respone analysis on variables. Mehta (2014) investigated the effect of financial leverage on shareholders' return based on the study carried out on listed Sugar sector on Karachi Stock Exchange of Pakistan from 2005-2010. The findings indicated that financial leverage had no significant effect on the shareholders return. The sample companies have other means of financing considered cheaper than debt finance.

Matemilola, Bany-Ariffin, and Azman-Saini (2012) examined the effect of financial leverage and shareholders' required returns among South African Corporate sector and revealed that long term debt was positively related to shareholders' required return. The study suggested that debt finance is an important risk factor to be priced in equity valuation. The findings also revealed that the

dynamic nature of firms capital mix decision should be given attention because companies operate in dynamic economic and business enviroments. This implies that companies' capital structure decision would be change as economic and business conditions change. Chaleeda,Tunku and Anas Najeeb (2019) affirmed that debt had positive significant relationship with firm value. It was also established that debt and dividends mitigated agency costs of free cash flow problems, thereby enhancing firm value.

Akinlo and Asaolu (2012) concluded that the use of debt by the firms in Nigeria reduces profitability and the firm size was significant to firm profitability. The findings of the study indicated that firms in Nigeria need to check debt ratio in capital structure to enhance their profitability and at the same time increase the sales to enjoy more profit. Pachori and Totala (2012) investigated the influence of financial leverage (Debt finance) on shareholder returns and market capitalization among Automotive cluster companies of Pithompur (M.P), India. The study affirmed that there was no significant influence of financial leverage on shareholders' return and market capitalisation. The study confirmed the MM thoery on capital structure and also concluded that high geared firm increases shareholders return only when the rate of return on equity fund is higher than the cost of debt financing.

Qaisar and Malik (2015) affirmed that the firm size has a significant effect on the firm growth and performance based on the study carried out in Pakistan titled Firm size moderating financial performance in growing firms. Olang, (2017) confirmed that financial leverage has impact on the profitability of firms listed in the Nairobi Security Exchange likewise the firm size;

contrarily, Venugopal and Reddy (2016) could not find any statistically significant relationship between capital structure and the profitability, market value and shareholder wealth. The result indicated that the dependent variables, Return on assets (ROA), Tobin's Q(TQ) and Earning per share(EPS) as proxies for the profitability,market value, and shareholders wealth were positively correlated with debt equity ratio but not statistically significant. Size was negatively correlated with all the dependent variables. Growth had insignificant positive corelation with all dependent variables. The study showed that the capital structure of selected listed cement companies had no influence on the profitability, market value and shareholders wealth

Based on these mixed results, this study hypothesised that:

Ho1: Financing decision has no significant effect on Shareholders' wealth maximisation;

Ho2: Firm size does not significantly control the effect of financing decision on Shareholders' wealth maximisation.

Methodology

The study adopted *ex-post facto* research design to investigate the cause and effect relationship between the dependent and independent variables using a multiple regression predictive model. Secondary data extracted from the selected thirty-five (35) companies' annual audited financial statements for the period of 10 years (from 2008 to 2017) were used for this study. This research employed descriptive statistics, correlation and variance inflation factor analyses to investigate the characteristics and the appropriateness of the series in the distribution. Relevant diagnostic tests were carried out to confirm appropriateness of

estimation methods and to avoid biased results. All the statistical tests conducted are evaluated at 5% level of significance and with the aid of STATA IC/14.

Description and measurement of variables

In this study, the dependent variable that is, Shareholders wealth maximization was measured by Market Value Added while the independent variable - financing decisions was measured by self-finance decision, debt finance decision and equity finance decision. The independent variables are the variables that have direct impact on the shareholders' value. Atiyet (2012) used the similar variables in research carried on the impact of financing decision on the shareholder value creation in French countries. The measures of these variables and the justifications for the measurements are depicted in Table 1

Table 1:   Variables Measurements

Variables	Abbreviation	Measurement	Justification
Market Value Added	MVA	Market value of stock plus market value of debt – Total book value of debt and equity	Akinkoye and Akinadewo (2018), Musila (2015)
Self – Finance Decision	SFD	Ratio of operating cash flow to total assets	Akinkoye and Akinadewo (2018), Musila (2015)
Debt finance Decision	DFD	Ratio of short and long term debt and redeemable preference share to total assets	Chaleeda et al., (2019); Khan et al., (2017).
Equity Finance Decision	SFD	Ratio of equity shares, irredeemable preference shares and irredeemable debentures to total assets	Akinkoye and Akinadewo (2018), Musila (2015)
Size	SIZE	Log of total assets	Ogundajo et al., (2019)

Source: Researcher's Compilation (2021)

Model specification

This study employed the following models to investigate the effect of financing decision and shareholders' wealth in Nigeria listed companies:

The functional relationship between dependent and independent variables are stated as follows:

Y = f(X)

Y = f(X, Z)

Thus,

$MVA_{it} = \alpha_0 + \alpha_1 SFD_{it} + \alpha_2 DFD_{it} + \alpha_3 EFD_{it} + \varepsilon_{it}$...equation 1

$MVA_{it} = \alpha_0 + \alpha_1 SFD_{it} + \alpha_2 DFD_{it} + \alpha_3 EFD_{it} + \alpha_4 SIZE_{it} + \varepsilon_{it}$..................................equation 2

Where:

Y is the dependent variable (Shareholders' wealth maximization (SHW)) measured as Market Value Added (MVA)

X= Financing Decision (FD)= Independent Variable

Z = Control Variable

$X = x_1, x_2, x_3$

$Z = z$

x_1 = Self- finance decision (SFD)

x_2 = Debt finance decision (DFD)

x_3 = Equity finance decision (EFD)

z = Size (S)

α_0 = constant term represents intercept of the equation; I = number of selected firms; t= years of study; ε_{it}=Error term; and α_{1-4}= represent coefficients of independent variables

Results and Discussions

Descriptive statistics

The study consists of thirty–five (35) selected listed firms on the Nigerian stock exchange. The descriptive statistics presented in Table 1 highlight the mean, standard deviations, minimum, and maximum, for each of the dependent and independent variables.

Table 2: Characteristics of the Variables

Variable	SFD	DFD	EFD	SIZE	MVA	OBS
Mean	0.101	0.318	0.375	7.175	18.21	350
Std.Dev	0.130	0.307	0.255	0.807	116.64	350
Min	-0.69	0	-0.98	5.18	-337.35	350
Max	0.56	2.75	1.33	9.02	118.49	350

Source: Researcher's Work, 2021.

Interpretation

As shown in Table 2, the mean value of market value added is 18.21; this shows that on the average the selected listed companies created value for their shareholders. The maximum value of 118.49billion naira and the minimum value of -337.35 further suggest that there were periods when the equity holders of the companies lost their worth in the market, that is book value surpass market value of the firms. Thus, some firms are creating high returns for their shareholders while some are operating at a loss. The standard deviation of 116.64 shows that market value added is less susceptible to change. The mean value of self-financing decision is .101, suggesting that on the average the selected listed companies self-financing is positive although small. The maximum value for self-financing is 0.56 and the minimum value is -0.69. This shows that there is difference in the degree of self-financing of the selected companies.

The standard deviation of 0.130 shows that self-financing is less susceptible to change. The mean value of the ratio of total debt to total assets for all the selected companies is 0.318, which implies that the debt owed by these companies is about 32 per cent of their total asset. In addition, the maximum value is given as 2.75 and the minimum is 0.00. This shows that companies included in the sample size has varying degree of debt. The standard deviation of 0.307 shows that debt finances of the companies is less susceptible to change. The mean value of equity financing is 0.375. The maximum value for equity financing is 1.33 and the minimum value is -0.98. These suggest that there is a wide range in the degree of financing options of Nigeria listed companies. The standard deviation of 0.572 shows that equity financing is less susceptible to change. The mean value of the logarithm of total asset is given as 7.175. This suggests that companies have enough assets to carry out their business activities.

In addition, the maximum and the minimum values are given as 9.02 and 5.18 respectively. The standard deviations of 0.807 shows that firm size is less susceptible to change overtime.

Multicollinearity Analysis

Correlation matrix test and Variance Inflation Factor test are carried out and the results presented in Table 3 respectively. Variance Inflation Factor test denotes the existence of multicollinearity or otherwise without estimating the magnitude of the association among the variables but Pearson Correlation Matrix showed the magnitude of the associations as reflected in the correlation matrix test in Table 3. A correlation ratio denotes the existence or non-existence of relationship among variables which do not necessarily mean that the variables influence one another, that is; it is not an indication of causal effect.

Table 3: Multicollinearity Test

Variable	SFD	DFD	EFD	SIZE	VIF	1/VIF
SFD	1.00				1.09	0.918
DFD	-0.133	1.00			1.08	0.926
EFD	0.256	-0.163	1.00		1.04	0.965
SIZE	0.066	0.05	-0.095	1.00		
					Mean =1.07	

Source: Researcher's Work (2021).

Interpretation

Baltagi (2015) indicated that there exists a multicollinearity problem among variables when the correlation coefficients between variables exceed the benchmark of 0.75 in absolute value. The result of the correlation test presented in Table 3 shows the minimum and maximum correlation coefficients in both periods and within the combined periods of -0.163 and 0.256 which are less than the benchmark; this indicates that there is no evidence of multicollinearity problem among the variables. In Table 3, debt finance decision, equity finance decision and size are negatively correlated with self-financing and equity finance.

The result of the correlation matrix was corroborated by the result of the variance inflation factor to explain the nature of associations among the variables. The result of the variance inflation factor is as presented together with the multicollinearity test results in Table 3. Considering the reverse variance inflation factor of each of the variables all below the threshold of "1" (Baltagi, 2015) with the average of the aggregate for all the periods being all is 1.07 less than the benchmark of 5.0 (Baltagi, 2015); this confirmed the report of the correlation matrix which indicated that multicollinearity problem does not exist among the variables.

Table 4: Results of the Multiple Regression Analysis

Variable	MODEL ONE				MODEL TWO			
	Coeff	Std.Err	t-	Prob	Coeff	Std.Err	t-	Prob
Constant	29.99	13.31	2.25	0.02	-79.24	54.46	-1.45	0.14
SFD	293.46	46.86	6.26	0.00	283.99	46.87	6.06	0.00
DFD	-14.31	19.53	-0.73	0.46	-16.11	19.45	-0.83	0.40
EFD	-98.34	24.05	-4.09	0.00	-92.91	24.08	-3.86	0.00
SIZE	-	-	-	-	15.15	7.33	2.07	0.03
Adj. R^2; F-Stat (Prob)	0.1123; $F_{(3, 346)}$ = 15.72 (0.00)				0.1206; $F_{(4, 345)}$ = 12.97 (0.00)			

Hausman Test	$chi^2_{(3)} = 47.12$ (0.00)	$chi^2_{(4)} = 23.88$ (0.00)
Testparm Test	$F_{(9, 303)} = 0.52$ (0.86)	$F_{(9, 302)} = 0.50$ (0.87)
Heteroskedasticity Test	$chi^2_{(1)} = 311.66$ (0.00)	$chi^2_{(1)} = 388.84$ (0.00)
Serial Auto-Correlation	$F_{(1, 34)} = 63.21$ (0.00)	$F_{(1, 3)} = 64.02$ (0.00)

Source: Author's Work (2021)

Interpretation
Diagnostic Tests:

The results of the Hausman tests for both models (ρ-values of 0.00, and 0.00) as presented in Table 4 revealed that Random Effect is the most appropriate estimator but the results of the confirmatory tests carried out using testparmTests with ρ-values of 0.86, and 0.87 negate the Hausman Test results, thus confirming the inappropriateness of the Fixed Effect; therefore, Pooled OLS is the most appropriate and is used for the analyses of both models with and without control variables.

Breusch-Pagan/Cook-Weisberg Test with ρ-values of 0.00 and 0.00 indicated that there is presence of heteroskedasticity problem in both models; which implies that the variations in the residuals of the model over the period "t" in both models are not constant over time. The existence of associations among the coefficients of the model and its residuals were tested using Wooldridge test for serial auto-correlation as an unhealthy association result to the error terms being smaller than expected and the co-efficient of determination being higher than normal. The statistics derived with ρ-values of 0.00 and 0.00 negate the null hypothesis which states that there is no first order autocorrelation. This implies that there is autocorrelation problem among the series in both models.

Based on the results of the diagnostic tests carried out; both Models (with and without control variables) are estimated using Pooled Ordinary Least Square with Cluster Standard Errors.

$$MVA_{it} = \alpha_0 + \alpha_1 SFD_{it} + \alpha_2 DFD_{it} + \alpha_3 EFD_{it} + \varepsilon_{it} \ldots\ldots\ldots\text{equation 1a}$$

$$MVA_{it} = 29.99 + 293.46 SFD_{it} - 14.31 DFD_{it} - 98.34 EFD_{it} + \varepsilon_{it} \ldots\ldots \text{equation 1b}$$

$$MVA_{it} = \alpha_0 + \alpha_1 SFD_{it} + \alpha_2 DFD_{it} + \alpha_3 EFD_{it} + \alpha_4 SIZE_{it} + \varepsilon_{it} \ldots\ldots \text{equation 2a}$$

$$MVA_{it} = -79.24 + 283.99 SFD_{it} - 16.11 DFD_{it} - 92.91 EFD_{it} + 15.15 SIZE_{it} + \varepsilon_{it} \ldots\ldots \text{equation 2b}$$

The results of the regression model presented in Table 4 showed a significant positive effect of self-financing (SFD) on Market Value Added (MVA) (α = 293.46, ρ=0.00); a thousand naira increase in SFD would yield 293.46 million naira increase in MVA; an insignificant negative effect of debt-financing (DFD) on MVA (α = -14.31, ρ=0.464); and a significant negative effect of equity-financing (EFD) on MVA (α = -98.34, ρ=0.000), a thousand naira increase in EFD would yield 98.34 million naira decrease in MVA. The explanatory powers of the independent variables reflect that the joint variations in the independent variables yield 11.23% difference in MVA, while the remaining 88.77% variations in MVA resulted from other indicators not measured in the model. The probability of the F-test (ρ-values of 0.00) evidenced that financing decision measured as self-financing, debt finance and equity-financing significantly affects value (measured as market value added (MVA) of listed companies in Nigeria.

With Control Variables:

Introduction of firm size (SIZE) as a control variable to Main Model led to the variations in the result of the regression model as presented in Table 3b showed that a significant positive effect of self-financing (SFD) on market value added (MVA) (α = 283.99, ρ=0.00); a thousand naira increase in SFD would yield to 283.99 million naira increase in MVA; an insignificant negative effect of debt-financing (DFD) on market value added (MVA) (α = -16.11, ρ=0.408); a significant negative effect of equity-financing (EFD) on market value added (MVA) (α = -92.91, ρ=0.000), a thousand naira increase in EFD would yield to 98.34 million naira decrease in MVA; and significant positive effect of SIZE market value added (MVA) (α = 15.15, ρ=0.039); a percentage change in the total asset of listed Nigerian companies would yield to 15.15 million naira increase in MVA.

The explanatory powers of the independent variables and size as control variable reflect that the joint variations in the independent variables yield 12.06% difference in the MVA, while the remaining 87.94% variations in MVA resulted from other indicators not measured in the model. The probability of the F-test (ρ-values of 0.00) evidenced that financing measured as self-financing, debt-financing and equity-financing, controlling for firm size (SIZE) significantly affects Shareholders' wealth maximisation measured as MVA of listed companies in Nigeria.

It is observed that the coefficient of multiple determination of the model increased with the introduction of the firm size (SIZE) as control variable from 11.23% to 12.06%; which implies that SIZE significantly controlled the relationship between financing decision and MVA of listed companies in Nigeria.

Decision

The study does not accept Ho1 and Ho2 but affirms the alternative hypotheses that financing decision has significant effect on Shareholders' wealth maximisation; and that firm size significantly control the effect of financing decision on Shareholders' wealth maximisation.

Discussions

From the analysis in Table 4, the pecking order theory has been supported by this study. The models results show that the self- finance has positive contribution and statistcally significant to Market value added, while both debt and equity financing have negative contribution to the market value added. The equity financing decision is statistically signifcant to the market value added, while the debt financing decision is not statistically significant to market value added. The insignificant negative of debt on firm value aligned with the reports of the studies of Chaleeda et al., (2019), as they also reported that debt-asset ratio negatively but insignificantly influnece firm value. Other studies like Khan, et al., (2017) reported similar findings as it was shown that debt-equity ratio insignificantly influenced return on euity, return on asset, Tobin's Q, and martket capitalization of Pakistiani firms.

On the contrary, Malik et al., (2016) reported a positive but insignificant relationship between debt finance and firm value while Tan and Hamid (2016) obtained mixed results in their study as debt finance positively impacted return on equity, the reverse was found for return on assets. The result indicated that the listed companies in Nigeria embraced self-finance before other financing mix, followed by equity finance and debt finance is considered as the last option. This is in line with the Pecking order

theory. In the same vein, Table 4(b) follow the same pattern except for the introduction of Size as moderating variable. The results show that size has positive contribution and statistically significant to market value added.

The findings this study agreed with the result of previous studies of Akinkoye and Akinadewo (2018); Atiyet (2012); Musila (2015); and Pachori and Totala (2012). Qaisar and Malik (2015) affirmed that the Self finance, equity finance and company size have significant effect on the shareholders wealth maximization represented by MVA. Akinlo and Asaolu (2012) also agreed that company size has positive significant effect on the performance of sampled companies. Olang, (2017) also confirmed that financial leverage and firm size have impact on the profitability of firms listed in the Nairobi Security Exchange.

The outcome of analysis confirmed the *Apriori Expectation* of this study except the debt financing that has negative contribution and not statistically significant to the market value added.

Conclusion and Recommendation

Shareholders' wealth maximization has been a major challenge to investors because the companies have failed to generate the expected returns on their investments. The inability of the company to meet the owners' expectation may be due to many factors which include financing, government intervention, political instability and inadequate infrastructures. Based on this, the study has investigated the impact of financing decision on shareholders' wealth maximization. In line with the objective of this study, findings indicate that financing decisions have impact on shareholders'

wealth maximization measured by the market value added, and that firm size has a significant controlling effect on the finance decisions – shareholders' wealth maximization relationship.

The study reveals that the companies in Nigeria relied on the self-finance option as best source of funding their operations, and see the debt and equity finance decision as expensive finance options due to exorbitant interest rate and frequent Government monetary policies that have significant effect on the Banks. By the empirical result, the study offer support to Pecking order theory.

The study advises that leveraging on the company's size; shareholders' wealth can be positively enhanced through the self-finance option and could be a good means of funding the company's operations especially during the post economic recession period.

References

Adenugba, A. A., Ige, A. A., & Kesinro, O. R. (2016). Financial leverage and firms' value: A study of selected firms in Nigeria. *European Journal of Research and Reflection in Management Sciences, 4*(1), 14-31.

Akinkoye, E. Y., & Akinadewo, I. S. (2018). Retained earnings and firms' value: Nigeria experience. *The Business and Management Review, 9*(3), 482-496.

Akinlo, O., & Asaolu, T. (2012). Profitability and leverage: Evidence from Nigeria firms. *Global Journal of Business Research, 6*(1), 17-25.

Akinmulegun, S. O. (2012). The effect of financial leverage on corporate performance of some selected Companies in Nigeria. *Canadian Social Science, 8*(1), 85-91.

Akintoye, I. R. (2016). *Investment Decision in the 21st Century* (3rd ed.). Lagos: Unique Educational Publishers.

Al-Hasan, A., & Gupta, A. D. (2013). Effect of leverage on shareholders'return: An empirical study on some selected listed companies in Bangladesh. *European Journal of Business and Management, 5*(3), 46-54.

Arowoshegbe, A. O., & Emeni, F. K. (2014). Shareholders' wealth and debit - equity mix of quoted comapies in Nigeria. *International Journal of Financial Research, 5*(1), 107-113.

Atiyet, B. (2012). The impact of financing decision on the shareholders' value creation. *Journal of Business Studies Quarterly, 4*(1), 44-63.

Baltagi, B. H. (2015). *Econometrics*, (7th Ed.). Berlin, Heidelberg: Springer-Verlag

Farooq, M., Rehman, A., Khan, A., & Bilal, M. (2017). Effect of internal fianancial policy on shareholders' wealth and firm value. *Journal of Business and Tourism, 3*(2), 235-246..

Innocent, E. C., Ikechukwu, A. C., & Nnagbogu, E. (2014). The effect of financial leverage on financial performance: Evidence of quoted pharmaceutical companies in Nigeria. *IOSR Journal of Economics and Finance*, 5(3),17-25.

Ishari, M. S., & Abeyrathna, S. (2016). The impact of financial leverage on firms' value (special reference to listed manaufacturing companies in Sri Lanka). *International Journal of Advancement in Engineering Technology,Management and Applied Science, 3*(7), 100-104.

Jahfer, A. (2006). The impact of financial leverage on the wealth of shareholders relevant to the firms in Sri Lanka. *Journal of Management, 5(1),10-18.*

Jensen, C. M. (1986). Agency costs of free cashflow, corporate finance and takeovers. *The American Economic Review, 76*(2), 323-329.

Matemilola, R., Bany-Ariffin, A., & Azman-Saini, W. (2012). Financial leverage and shareholders'required returns: Evidence from South Africa Corporate sector. *African Issue Paper*, 601-612

Mehta, A. M. (2014). Myth vs. Fact: Influence of financial leverage on shareholder's return : An empirical study of sugar sector of Pakistan from year 2005 - 2010. *Journal of Finance and Bank Management, 2*(2), 105-114

Modigliani, F., & Miller, M. (1963). Corporate income taxes and cost of capital. *American Economic Association, 53*(3) 433-443.

Musila, P. (2015). The relationship between equity fianancing and financial performance of the energy and petroleum companies listed at the Nairobi Securities Exchange. *Unpublished Dissertation,* Department of Finance and Accounting School of Business, University of Nairobi.

Myers, S. C. (2001). Capital structure. *The Journal of Economic Perspectives., 15*(2), 81-102.

Myers, S. C. (1984). The capital structure puzzle. *Journal of Finance*, *39*(1), 575–592.

Myers, S. C., & Majluf, N. (1984). Corporate financing and investment decision when firms have information investors do not have. *Journal of Financial Economics, 13*(2), 187-221.

Nagalakshmi, G. S. (2015). A study on financial leverage and its impact on earnings per share. *Global Journal of Finance and Management., 7*(1), 25-28.

Olang, M. (2017). Effect of financial leverage on profitability of firms listed in the Nairobi Securities Exchange. *International Journal of Science and Research, 6*(7), 290-295.

Olowe, R. A. (1998). *Financial Management Concept, Analysis And Capital Investments.* Lagos: Brierly Jones Nigeria Limited.

Pachori, C. S., & Totala, N. K. (2012). Influence of financial leverage on shareholders return and market capitalisation : A study of automotive cluster companies of Pithampur (M.P), India. *2ND International Conference on Humanities, Geography and Economic*, 23-26.

Pandey, I. M. (2015). *Financial Management.* (11th, Ed.) New Delhi: Vikas Publishing House PVT Ltd.

Pandya, B. (2017). Association of financial leverage with cost of capital and shareholder value: An empirical study of BSE Sensex companies. *NMIMS Journal of Economics and Public Policy, 2*(1), 17-28.

Pandya, B. (2016). Impact of Financial leverage on market value added: Empirical evidence from India. *Journal of Enterpreneurship, Business and Economics, 4*(2), 40-58.

Prrabha, L., Jayapriya, R., & Joslin, M. L. (2017). A study on Shareholders' wealth maximization of muthoot finance limited. *International Journal of Applied Research, 3*(3), 501-503.

Qaisar, A., & Malik, M. S. (2015). Firms' size moderating financial performance in growing firms: An empirical evidence from Pakistan. *International Journal of Economics and Financial issues., 5*(2), 334-339.

Malik, M. S., Awais, M., & Qaisar, A. (2016). Capital structure payoff : An analysis of the non- financial sectors of Pakistan. *European Academic Research, 3*(12), 13140-13165.

Rehman, S. S. (2013). Relationship between financial leverage and financial performance: Emperical evidence of listed sugar companies of Pakistan. *Global Journal of Management and Business Research Finance, 13*(8), 33-39.

Ross, S. A., Westerfield, R. W., & Jaffe, J. (2010). *Corporate Finance.* Maidenhead: McGraw-Hill/IRWIN

Tirmizi, M. A., & Ahmad, M. (2013). Impact of retained earnings on the maximization of firm value and shareholders wealth. *African Journal of Business Management, 7*(18), 1833-1844.

Venugopal, M., & Reddy, M. R. (2016). Impact of capital structure on firms profitability and shareholders wealth maximization: Astudy of listed Indian cement companies. *IOSR Journal of Business and Management, 18*(4), 21-27.

Vijayalakshmi, D., & Manoharan, P. (2013). Corporate leverage and its impact on shareholder value creation with reference to miscellaneous manufacturing sector in India,. *Indian Journal of Applied Research., 3*(7), 140-142.

Wibowo, P. P., & Berasategui, R. G. (2008). The relationship between economic value added (EVA) and market value added (MVA) with reported earnings: An empirical research of 40 listed Companies in Indonesia Stock Exchange for the 2004-2007. *Journal of Applied Finance and Accounting, 1*(1), 60-72.

Shodiya, O. A., Sanyaolu, W. A., Ojenike, J. O., & Ogunmefun, G. T. (2019). Shareholder wealth maximization and investment decisions of Nigerian food and beverage companies. *Acta Univ. Sapientiae, Economics and Business, 7*(2019), 47–63. DOI: 10.1515/auseb-2019-0004.

Chaleeda, M. A. I., Tunku, S. T. A., & Anas, N. M. G. (2019). The effects of corporate financing decisions on firm value in Bursa Malaysia. *International Journal of Economics and Finance, 11*(3), 127-135. https://doi.org/10.5539/ijef.v11n3p127.

Khan, A., Shaikh, M., Shah, A. B., Zahid, I., & Shaikh, F. M. (2017). Impact of financing decisions on firm's performance: an empirical study of Pakistani listed firms in KSE. *International Journal of Management and Information Technology, 12*(1), 3050-3056. DOI: 10.24297/ijmit.v12i1.6058.

Tan, S. L., & Hamid, N. I. N. A. (2016). Capital Structure and Performance of Malaysia Plantation Sector. *Journal of Advanced Research in Social and Behavioural Sciences, 3*(1), 34-45.

Metz, D., Ilieș, L., & Nistor, R. L. (2020). The impact of organizational culture on customer service effectiveness from a sustainability perspective. *Sustainability*, 12(15),6240 . https://doi.org/10.3390/su12156240

Aljamaan, B. E. (2018). Capital structure: definitions, determinants, theories and link with performance literature review. *European Journal of Accounting, Auditing and Finance Research, 6*(2), 49-72.

Uremadu, S.O., & Onuegbu O. (2018). The impact of capital structure on corporate performance in Nigeria: a quantitative study of consumer goods sector. *Current Investigations in Agriculture and Current Research, 5*(4), 697-705. DOI:10.32474/CIACR.2018 .05.000217.

CBN (2021). Deposit and Lending Rates in the Banking Industry for the Week ended January 29, 2021. (Retrieved from weekly interest rate as at January 29, 2021.pdf (cbn.gov.ng) on 03 March, 2021).

Donaldson, G. (1961). *Corporate Debt Capacity*, Cambridge, MA: Harvard University Press.

Ogundajo G. O., Enyi, P. E., & Oyedokun G. E. (2019). Shareholders' return and value of manufacturing firms listed on the Nigerian stock exchange. *African Journal of Business Management, 13*(10), 318-326.