

IMPACT OF FINANCIAL LEVERAGE ON DIVIDEND POLICY OF SELECTED MANUFACTURING FIRMS IN NIGERIA

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ABSTRACT

With increased need in upgrading financial leverage in firms, this paper seeks to investigate the influence of leverage on dividend payout of selected manufacturing companies in Nigeria. The study used a sample of 50 quoted companies that have dividend history and consistently published their audited annual financial report from 2011 to 2015. A pooled regression analysis was adopted in the study. The result revealed that long term leverage has a significant positive effect on firm's dividend policy. The study went further to reveal that interaction of age and profitability was significant in influencing dividend payout within the period under study. The study recommended among others that leverage structure and dividend consistency can be a consideration when choosing stocks for dividend purposes in Nigeria and that the investors should consider the financial leverage if the selected companies are old.

Keywords: Financial leverage, dividend policy, firm age (size), free cash flow and profitability.

INTRODUCTION

A firm will depend on capital to achieve its short-term and long-term financial needs. Equity, debt and hybrid securities constitute the broad sources of funds available to a firm. A successful integration of these different sources of funds is desirable from the point of view of investors, creditors and the firm. That means that a firm can finance its investment project either through debt or equity as long as the prime objective of the firm is achieved. That objective is to maximize shareholders wealth.

Such wealth maximization invariably means the maximization of market price of shares which depend on Economic Value Added (EVA) and focus on stake holders. A positive EVA represents increase in owners' wealth. No wonder, only investments with positive EVA are desirable for maximizing shareholders.

Sometimes, in order to achieve this objective, funds are borrowed. The use of borrowed funds along with preferred and equity capital is known as leverage. Financial leverage is a financial technique that uses borrowed funds or preferred stock (items involving fixed financial costs) to improve the return on an equity investment. As long as a higher rate of return can be earned on assets than is paid for the capital used to acquire the assets, the rate of return to owners can be increased. The financial leverage is a prerequisite for achieving optimal capital structure. An optimal capital structure can affect the value of firm as well as the wealth of shareholders through reduced cost of capital. Hence, the determination of an optimal financial leverage and its impact on the firm's over all capital

structure is regarded as an integral part of a firm's financial decision. The objective of this study therefore is to determine the impact of financial leverage on dividend policy of selected manufacturing companies in Nigeria

Statement of Problem

Various researches have been carried out on financial leverage, earnings and dividend policies in Europe, US and some in developing countries like India, China and Malaysia. The results of these studies are compatible to Nigeria because the firm's structure, economic condition, market structure and variables considered in the various studies are quite different from the Nigerian scenario.

Though, financial leverage is seen as the degree to which a firm utilizes borrowed money, capital structure choices are among the tough choices because higher leverage can lead to risk of bankruptcy. Despite this, financial leverage can increase shareholders' return on investment and usually have tax advantages.

Therefore, financial leverage decision is important and a firm can use a specific mix of debt and equity to finance its operations and since previous studies, researchers have not considered its impact on the manufacturing sector as an entity, the study finds it imperative to execute this.

Objectives of the Study

The primary objective of this study is to study the impact of financial leverage on dividend policy of manufacturing firms in Nigeria. The secondary objectives however are:

- To ascertain whether the age (size) of a firm has any impact on dividend policy of such firms
- To determine whether free cash flow has any relationship with the firm's dividend policy
- To ascertain whether profitability of a firm has any relationship with the dividend policy

Hypotheses

Ho₁: There is no significant relationship between age (size) of a firm and dividend policy

Ho₂: There is no significant relationship between free cashflow and dividend policy

Ho₃: There is no significant relationship between firm's profitability and dividend policy

Conceptual Framework

Generally, when leverage increases, this results in increase in return and risk, whereas a decrease in leverage results in decreased return and risk. Financial Leverage thus results from the use of fixed-cost assets or funds to magnify returns to the firm's owners. The volume of leverage in the capital structure of the firm can significantly affect its value by affecting return and risk. Management has relative control over the risk caused by the adoption and use of leverage.

There are basically three types of leverage with reference to the firm's income statement:

- Operating leverage: this type of leverage is concerned with the relationship between the firm's sales revenue and its earnings before interest and taxes, or EBIT. (EBIT is a descriptive label for operating profits.)

- Financial leverage: this leverage type is concerned with the relationship between the firm's EBIT and its common stock earnings per share (EPS).
- Total leverage is concerned with the relationship between the firm's sales revenue and earnings per share (EPS).

From the above, it follows that financial leverage is used in many business transactions, especially where real estate and financing by bonds or preferred stock since it is concerned with the relationship between earnings before interest and taxes (EBIT) and the earnings available to common stockholders or other owners. That is why it is often referred to as "trading on the equity."

Dividend policy in itself represents the practice that management follows in making dividend payout decisions. In other words, it involves the size and pattern of cash distributions over the time to shareholders [1]. Dividend policy should be seen as a firm's plan of action to be followed when dividend decisions are made. It is the decision about how much of earnings to pay out as dividends versus retaining and reinvesting earnings in the firm.

Why Leverage?

Companies that have relatively high leverages may be at financial risk of bankruptcy if they are unable to make payments on their debt. It may also result in the inability to find lenders in the future. In spite of these, Leverage can increase the shareholders' return on their investment and make good use of the tax advantages associated with borrowing. That is why there is urgent need for every firm to have a specific optimal debt-to-equity ratio determined by balancing the present value of expected marginal benefits of leverage against the present value of expected marginal costs of leverage [2 and 3].

[4], proposed that increased debts can reduce the probability of a firm's failure. [5], agree that leverage increases with fixed assets, non - debt tax shields, growth opportunities and firm size and decreases with volatility, expenditures and profitability, though [6], provide no support for an effect on debt ratios arising from non - debt tax shields, volatility and future growth.

Financial Performance

A series of variables can be used to measure financial performance. The performance of the firm can be measured by its financial results. There are three major factors employed namely firm age (size), free cash flow and firm profitability. Financial decisions which increase risks will decrease the value of the firm while financial decisions which increase the profitability will increase value of the firm. Risk and profitability are two essential ingredients of a business concern.

Key variables relating to leverage

Basically, three key variables are identified:

Firm Age (Size)

A firm's leverage and assets is affected by its size. Firms with higher cash availability pay higher dividends than other firms with insufficient cash. This positive relationship is supported by the signaling theory of dividend policy. Smaller firms would have less long-term debt and more short-term debt because of shareholders-lenders conflict. In the same

vein, many studies find a significant positive relation between size and debt ratio [6, 7 and 8].

As the size of the firm increase there will be more need for funds to finance expansion. This will necessitate the firm is to retain earnings rather than pay them as dividends [9]. This is in line with the findings of [10], which asserted that firms with high growth opportunities will have low payout ratios. This negative relationship is supported by the agency theory of dividend policy by the [11].

Free Cash Flow (FCF)

Free cash flow is another indicator of a firm's ability to meet fixed financial obligation. High cash flow can be expected to lead to an increased reliance on borrowed funds or debt. Free cash flow is one of the predictors or factors of dividend policy. [12], showed that there exists a positive relationship between free cash flow and dividend policy ratio. This is because less liquidity means fewer dividends caused by shortage of cash. Thus, the firm's dividend payout depends to a large extent on more cash flow.

Profitability

The value of any firm can be seen by its revenue strength which is represented by its ability to make profits from sales as well as its ability to invest in its assets to increase sales (assets turnover. When a firm is able to reduce costs (sales cost, or general and administrative expenses) there is bound to be increase in its profitability. Such a firm can retain a larger part of its net annual profits to finance its business needs thus relying less debt, [13]. That implies that profitability is an indicator of management efficiency. It will definitely lead to increased dividend payout.

Theoretical Framework

There are some theories related to capital structure of firms which throw more light on leverage and choice of leverage.

Modigliani and Miller theorem:

[14], propositions I and II laid the ground for several studies about capital structure that are relevant in corporate finance today.

Proposition I: "The market value of a firm is constant regardless of the amount of leverage that the firm uses to finance its assets"

MM Proposition II: "The expected return on a firm's equity is an increasing function of the firm's leverage"

These propositions were later revised to accommodate taxes and interest rate deductibility as well as the effects on a firm's leverage. In this revised version, firms could through interest rate deductibility shift payments from going to the government and stream such payments to the firm's shareholders and creditors by increasing the level of leverage.

Trade - Off Theory of Capital Structure Choice

The trade-off theory is an approach adopted to determine the optimal capital structure. It is described as the trade-off between tax gain and the cost of financial distress (proxied by Risk). [15], describe it as the debt ratio that managers should choose in order to maximize the firm value.

[10], also explains that the trade-off approach requires that the theory of the firm's leverage can be broken into two parts:

1. The static trade-off theory: the firm's leverage is determined by a single period trade-off.
2. Target adjustment behavior: where the firm's leverage gradually reverts to the target over time.

Methodology

Research Design

The study adopted a Modified Linter's model similar to those performed in other countries thus test its applicability in Nigeria. The study relied solely on secondary data these data were obtained from annual reports of companies quoted on the Nigerian Stock Exchange from the year 2011 to 2015. The population of the study consists of all the quoted manufacturing firms on the Nigerian Stock Exchange. However, a sample of 50 quoted Manufacturing companies who have consistently published their annual accounts were used. For companies to be included in the sample, two criteria had to be met: Firstly, companies should be listed on the Stock Exchange for whole of the period as well as give the positive earnings in any one of the fiscal year. Secondly, some companies included were those that never declared dividend in any fiscal year this is in order to have a mix of both dividend payer and some non - payer companies.

Descriptive statistics are used to describe and summarize the behavior of the variables in this study. Correlation and Regression analysis has been brought into play to find out the relationship between financial performance and financial leverage. The data collected were analyzed using E-Views 9 and SPSS Software. The data were collected from the Nigeria Stock Exchange website and the annual reports of the firms.

Model Specification

The functional model formulated for this study is expressed as;

$DP = f(STL, LTL, TL, AGE, FCF, PROFITY)$

In econometrics we have,

$$DP = \beta_0 + \beta_1 STL + \beta_2 AGE + \beta_3 FCF + \beta_4 PROFITY + e_t \dots (1)$$

$$DP = \beta_0 + \beta_1 LTL + \beta_2 AGE + \beta_3 FCF + \beta_4 PROFITY + e_t \dots (2)$$

$$DP = \beta_0 + \beta_1 TL + \beta_2 AGE + \beta_3 FCF + \beta_4 PROFITY + e_t \dots (3)$$

Where:

DP	=	DIVIDEND PAYOUT
STL	=	SHORT TERM LEVERAGE
LTL	=	LONG TERM LEVERAGE
TL	=	TOTAL LEVERAGE
AGE	=	FIRM AGE
FCF	=	FREE CASH FLOW
PROFITY	=	PROFITABILITY
e_t	=	ERROR TERM

Measurement of Variables

The variables used in this study were measured as follows:

1. **Dividend Payout:** Dividend payout is a ratio of dividend to total profits.
2. **Short Term Leverage:** Debt ratio-short term debt/total asset
3. **Long Term Leverage:** Debt ratio-long term debt/total asset
4. **Total Leverage:** Debt ratio-total debt/total asset.

5. **Firm Age:** A firm's age also determine the quantum of profits to be declared as dividends. A new company should restrict itself to lower dividend payment due to saving funds for expansion and growth compared to the already existing companies who can pay more dividends.
6. **Free cash flow:** This variable is used to measure the availability of cash with the company. It reveals the amount of cash that is available for shareholders and creditors after all expenses have been made, and determine the ability of the company to pay dividend.
7. **Profitability:** Profitability is among the main characteristics that strongly and directly influences dividend payout. Directors normally recommend the payment of dividend when the firm has made sufficient profit to warrant such payments. The profitability was measured by return on equity (ROA) = Net profit after preference dividend/ Number of equity shares outstanding.

Presentation and Analysis of Results

In this study, we studied the influence of leverage on dividend payout of some selected companies in Nigeria for the period of 2011 to 2015. A total sample of 50 quoted companies who have consistently published their annual accounts were used. Descriptive statistics and correlation matrix were employed alongside the pooled regression to investigate this relationship. The variables employed in the study include Dividend Payout (DP) as the dependent variables while the independent variables are Short Term liability (SLT), Long Term Debt (LTL), Total Liability (TL_TA), Free Cash Flow (CASH_TA), Firm Age (AGE)

Descriptive Statistics
Table 1: Descriptive Statistics

<i>DESCRIPTIVE STATISTICS</i>							
	<i>DP</i>	<i>SLT</i>	<i>LTL</i>	<i>PROFIT</i>	<i>CASH_TA</i>	<i>TL_TA</i>	<i>AGE</i>
<i>Mean</i>	0.37	0.44	0.14	0.01	0.09	0.58	25.9
<i>Median</i>	0.25	0.39	0.11	0.04	0.06	0.56	32
<i>Maximum</i>	2.7	2.23	0.71	0.35	0.59	2.24	41
<i>Minimum</i>	0	0.05	0	-4.19	-0.05	0.05	1
<i>Std. Dev.</i>	0.48	0.27	0.13	0.45	0.12	0.26	11.74
<i>Jarque-Bera</i>	326	1397	79.1	20732	190.43	889.11	18.68
<i>Probability</i>	0	0	0	0	0	0	0
<i>Observations</i>	150	150	150	150	150	150	150

Source: Authors' Computation (2017)

Table 1 from the table above, certain observations about the data can be made. Firstly, the average dividend paid within the period of study is 37%, the average of total debt carried by the sampled firms is 58%, and the mean age is 26 years while the average profit is 1%. The maximum value of dividend paid within the period is 2.7; age is 32years old, total debt is 2.24 which mean that some of the companies are over leveraged. Also, the maximum profit returned within the period is 35%.

The mean values show that some companies did not pay dividend at some point within the sampled period. Also, the minimum age of the companies is 1 year old. Minimum liability stood at 1%.

Lastly, the Jarque-Bera (JB) which test for normality or the existence of outliers or extreme values among the variables suggests that the variables are normally distributed at 1% level of significance thereby suggesting that we are 99% confident that the variables are normally distributed.

In examining the association among the variables, we employed the Pearson correlation coefficient (correlation matrix) and the results are presented in Table 4. 2.

TABLE 2: Pearson Correlation Matrix

	<i>DP</i>	<i>SLT</i>	<i>LTL</i>	<i>PROFIT</i>	<i>CASH_TA</i>	<i>TL_TA</i>	<i>AGE</i>
<i>DP</i>	1	0.14	0.05	0.17	0.08	-0.12	0.01
<i>SLT</i>		1	0.31	-0.49	-0.08	0.88	0.18
<i>LTL</i>			1	0.09	-0.23	0.16	-0.05
<i>PROFIT</i>				1	0.17	-0.46	0.18
<i>CASH_TA</i>					1	-0.2	0.16
<i>TL_TA</i>						1	0.16
<i>AGE</i>							1

Source: Authors' computation (2017)

Table 4.2 focuses on the correlation between the dependent and independent variables in our study. The correlation analysis would also aid our investigation of multicollinearity in our sample. The table reveals that there is weak positive correlation between dividend payout and short term liability (SLT=0.14), Long Term Liability (LTL=0.05), profit (PROFIT=0.17), Free Cash Flow (CASH_TA=0.08), Firm Age (AGE=0.01). An increase in any of these variables would increase dividend payout. But dividend payout is inversely related with Total Liability (-0.12). Meaning that increase in Total liability would reduce Dividend payout.

A close look at the correlation matrix also revealed that no two explanatory variables were perfectly correlated suggesting absence of multicollinearity problem in our model which could result to wrong signs or implausible magnitudes in the estimated model coefficients, and the bias of the standard errors of the coefficients.

Regression Results

Regression is used to test the cause-effect relationships between the dependent variable (DP) and the independent variables, to also test our formulated hypotheses, a pooled regression analysis would be employed since the data have both time series (2011 to 2015)

and cross-sectional properties (50 quoted companies). The pooled data regression results obtained in the model and the results are analyzed below.

Influence of Leverage Models

The influence of leverage on Dividend Payout is analyzed below. The results obtained are presented below:

Table 3: INFLUENCE OF LEVERAGE RESULT

	EXPECTED SIGN	FIRST MODEL (POOLED)	SECOND MODEL (POOLED)	THIRD MODEL
C		0.33 (3.52) [0.00]	0.34 (4.62) [0.00]	0.31 (2.57) [0.01]
SLT	+	0.00 (0.55) [0.74]	- - -	- - -
LTL	+	- (-) [-]	0.09 (0.15) [0.00]*	- (-) []
CASH_TA	+	-0.00 (-0.18) [0.85]	-0.02 (-0.06) [0.94]	-0.02 (-0.15) [0.70]
TL_TA		- (-) [-]	- (-) [-]	0.07 (0.41) [0.68]
PROFIT*AGE		0.03 (2.63) [0.00]	0.04	0.02 (2.83) [0.04]

			(2.99)	
			[0.00]	
R-Squared	0.05	0.045	0.045	0.08
Adj-R-Squared	0.045	0.04	0.04	0.06
F-Statistic	5.63(0.01)*	6.62(0.00)*	6.62(0.00)*	3.66[0.01]*
N	150	150	150	150

Authors' computation using E-views 8.0

Note: () = coefficient

[] = p values

*= 5% level of significance

Table 4.4 above shows the three models that were used in our study. The models consider the influence of Short Term Debt, Long Term Debt and Total Debt on Dividend payout. The results revealed difference in their coefficient magnitudes, signs and the number of significant and insignificant variables. In the table, R-squared values were (0.05) (0.05) and (0.08); the remaining 95% and 95% and 92% that are not explained in our model can be attributed to the error term. This is poor showing that there are more variables which impact dividend policy of companies which are not captured by the model. The F-statistics with their respective p-values are: (5.63) (6.62) (3.66) and its p-values of (0.01) (0.00) (0.001). This shows that the model is well behaved after profit and age were interacted. The following results were further revealed by our regression:

Free cash flow Variable (CASH_TA) with a coefficient values of -0.00, -0.02, -0.04 and P-values of (0.85) (0.94) (0.90) shows that increase in Free Cash Flow reduces Dividend Payout though not significantly. This is a puzzle suggesting that companies with Free Cash Flow who pay dividend out of debt refuse to do so with available free cash flow suggesting that such cash flow is not really free as it is used to service the borrowed funds. But this suggestion must be adopted with caution as the variable is not significant.

The interaction between firm Age and Profitability has the following coefficients and values respectively; 0.03, 0.02 and 0.02(0.00), (0.00), (0.00). This result shows that profitable old companies significantly increase their dividend payout. It means as companies get older and make profits along the way, they tend to reward their shareholders as a way of showing appreciation to them.

Test of Hypotheses

In testing the formulated hypotheses, the influence of leverage result as contained in table 4.3 above will be used for this purpose.

Ho₁: There is no significant relationship between short term leverage and dividend policy

The effect of short terms leverage has a coefficient value of 0.00 with a p-value of 0.74. Since the p-value is greater than 10%, there is no statistically significant relationship between short term leverage and sampled firms dividend policies. This means that, though dividend payout might increase with short term leverage, it will not do so in a significant level. Hence, our hypothesis will be accepted, implying that there is no significant relationship between short term leverage and dividend policy.

Ho₂: There is no significant relationship between long term leverage and dividend policy

Long term leverage has a coefficient value of 0.09 and a p-value of 0.00. The p-value seems to be significant at 1% level of significance. This means that increase in long term leverage significantly impact on dividend payout of the sampled companies it suggest that aggressive shareholders can put massive pressure on Nigeria companies to borrow money and pay dividend. We will therefore not accept our hypothesis and conclude that long term leverage is a significant driver of dividend payout.

Ho₃: There is no significant relationship between total leverage and dividend policy

Total Leverage with a coefficient value of 0.07 and a P-value of 0.68are not significant though positively impacting. Though this is not significant but it shows that total leverage to an extent can impact on the possibility of dividend payment especially if the company is owned by dispersed owners who are hungry for dividend.

SUMMARY OF FINDINGS

The study found out among others that:

- i.* There is no significant relationship between short term leverage and dividend policy
- ii.* Long term leverage is a significant driver of dividend payout.
- iii.* Total leverage to an extent can impact on the possibility of dividend payment especially if the company is owned by dispersed owners who are hungry for dividend

CONCLUSION ANDRECOMMENDATIONS

This work has been an attempt to investigate the influence of different leverage on dividend payout of selected companies' quoted on the Nigeria Stock Exchange within the period of 2011 to 2015. The leverage as used in this work was studied under various tenures to see which of the tenures has a more significant impact on dividend policy of the sampled companies for the period of study

The conclusion of the work is that long .term leverage can significantly impact dividend policy of sampled companies. This suggests that some companies might use part of their long term debts to reward investors as a way of keeping them satisfied without sending any negative signal to the market [17]. Also, we conclude that free cash flow might still not improve dividend pay as most of the companies might still not significantly improve their dividend payout even with positive free cash flow. However, we found that old and profitable companies are able to significantly improve their dividend payout and this is very much expected since it would be a way of showing commitment to the shareholders.

This work boldly recommends that leverage structure and dividend consistency can be a consideration when choosing stocks for dividend purposes in Nigeria. Also, the investors should consider if the selected companies are old and profitable as such companies can significantly improve their dividend outcome.

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