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## **The Effect of Capital Structure and Agency Costs on Value among Non-Financial Firms in Nigeria**

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### **Abstract**

*This study aimed at examining the impact of capital structure and agency cost on firms' value of non-financial listed firms in Nigeria from 2011 to 2020. A panel regression techniques was adopted to test the hypothesis. Findings of the study revealed that capital structure has a significant effect on firm's value. Also, it was revealed that there is a positive and significant effect of asset tangibility and operating expenses to sales on the value of the non-Financial firms in Nigeria. The interactive effect, reveals that a negative effect of long term debt ratio on return on assets (ROA) is increased for firm with high agency problem. Also, the study discovered that the positive effect of debt to assets on return on assets (ROA) is reduced for the firm with high agency problem. Based on the findings, the study recommended that managers should use debt as a source of finance with the utmost efficiency since it is relevant in determining the value of the firm. The report also suggested that shareholders use a variety of ways to keep an eye on agents so that they may be held responsible for any debt necessary to increase the firm's value. We therefore conclude that optimal debt level will reduce agency cost and increase firm's value.*

**Keywords:** *Capital Structure, Total Debt, Agency Cost, Asset Tangibility, Operating Expenses to Sales and Firms' Value*

### **Introduction**

Management and corporate executives made a crucial choice regarding the capital structure in order to raise the firm's market value and reduce its overall capital costs. The strain in the current global business environment, according to Onger (2015), has made corporate financial managers more wary of the combination of long-term debt that minimizes the associated cost of agency between the shareholders and the management. Moreover, Uremadu and Onyekachi (2018) asserted that capital structure is meaningless and exposes the firm to high risk, and worsens the firm's agency problem especially in cases where the management are not being monitored in the utilization of the borrowed funds. Additionally, it was stated that the ratio of a firm's debt to equity moderates the agency cost (Jensen, 1986, in Kalash, 2019). As a result, having an ideal capital structure is a requirement for achieving a firm's overall goals, which drives the need to research how capital structure and agency costs affect the value of firms in Nigeria (Habib, Khan & Wazir, 2016).

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According to Lawal (2014), capital structure refers to the mix of debt and equity instruments used to accomplish a company's objectives, which may include reducing all related debt costs and boosting shareholder wealth. The choice of a company's financial mix is crucial since it gives the company the resources it needs to finance its investment alternatives. Particularly, the utilization of capital structure will allow business owners to lessen issues with opportunistic management and other agency-related issues. Excess debt financing, according to Rakesh and Lakshni's (2013) study, lowers agency costs by allowing directors (managers) to carry out their duties with greater care and awareness of maximizing shareholders' wealth by efficiently allocating free cash flow to be able to pay their debt holders' obligations. As a result, agency problem arises from the conflict of interest between owners and managers and can be mitigated by the capital structure option made by a company.

According to Onger (2015), the agency problem is typically brought on by the disagreement between the owners (shareholders) and the managers of the company. These agency-related expenditures are expenses related to monitoring management excesses as a means of accomplishing the shareholders' goal. If the surplus funds are also distributed to shareholders in the form of bonuses, the firm can avoid the agency cost associated with the misuse of free cash flow (Zakaria et al., 2016). Importantly, the study confirmed that in order for a corporate organization to eliminate the cost of agency, they should pay the managers with some equity so as to avoid needless disagreements regarding the allocation of free cash flow for productive uses as well as the best capital structure for investment decisions. According to the agency theory, using debt instead of equity capital will boost a company's value since it will save money on interest taxes shield and be better able to allocate free cash flow. The agency theory also supports the idea that the firm's capital structure will aid in resolving agency costs and the prospect of bankruptcy, both of which can have an impact on managers personally. Thus, this study looked at how Nigerian non-financial firm's capital structures and agency costs affected the firm's values.

There are many problems with the paucity of empirical research on the impact of company value, agency cost, and capital structure, particularly in developing and emerging economies. The capital structure and agency cost in industrialized nations have been evaluated in a number of studies (Doorasamy, 2021; Wu, 2019; Pandey and Sahu, 2017), where the types of frictions and market imperfections vary. How unique market frictions like transaction costs, information asymmetries, agency conflict, taxation, and bankruptcy costs can alter the forecast of Modigliani & Miller has received little attention in the literature (1958).

Hence, researchers looking into capital structure that takes the influence of market frictions into account in order to fill a significant gap in the corporate finance literature regarding the variations in market imperfections in the Nigerian stock market with the world. The current study was carried out in an emerging economy (Nigeria) to determine the influence of capital structure on the market value of the firm within the agency cost theoretical model. Some attempts to bridge this emerging market line of research, and specifically, studies on in Nigerian market, include (Ibrahim and Isiaka, 2020, Ateibuero, 2020, Foyeke, Olusola, and Aderemi, 2016, Nuhu, Dandago, Mohammad, Ado, and Abdulkarim, 2020), this current Study adds to the studies on the capital structure by incorporating one of the frictions (agency cost) from an emerging market to verify the impact on the value of the firms in Nigeria.

### **Research Objectives**

The study examines the effect of capital structure, agency cost, and firms' value on quoted non-financial firms in Nigeria. The specific objectives of the study are;

- (a) Assess the impact of long-term debt to asset ratio on the value of firms in Nigeria
- (b) Examine the impact of total debt to asset ratio on the value of firms in Nigeria
- (c) Analyze the influence of assets tangibility ratio on the value of firms in Nigeria
- (d) Ascertain the effect of operating expenses to sales on the value of firms in Nigeria

### **Literature Review**

#### **Theoretical Framework**

##### **Trade-off Theory**

When the tax assumption was relaxed, Modigliani and Miller (1963) developed this hypothesis. The idea, which was developed by Kraus and Litzenberger in 1973 and further developed by Myers in 1984 and Frank and Goyal in 2005, contends that corporate finance managers must weigh or trade off the advantages and costs of using leverage. According to the theory, managers must choose a capital structure that maximizes the tax shield's benefits while minimizing any costs that could result in bankruptcy or other outcomes that would be detrimental to the firm's shareholders (Agency Cost). The trade-off theory was founded on a number of hypotheses, including that: firms with safe tangible assets are typically less vulnerable to the risk of financial distress, which can lead them to increase their debt financing; the debt or leverage ratio of each firm differs since all firms have their debt thresholds. For less successful businesses with uncertain intangible assets, the situation is the opposite. Their assumption that businesses with risky intangible assets

are likely to be more exposed to risk proved accurate, according to the study by Qiu and La (2010), which was conducted in Australia. According to the trade-off theory, businesses with high tax rates would borrow more money since they stand to gain more from the tax break. According to MacKie-(1990) Mason's research, businesses with large tax margins borrow more money (high leverage), while those with low tax margins are less leveraged (that is, they should finance using equity than debt). Last but not least, the theory suggested that businesses with high profit before tax but low non-debt tax shields (depreciation and investment tax) would be more inclined to borrow because the incentives would be higher than for businesses with strong non-debt tax shields. The static and dynamic trade-off theories were included to the trade-off theory's classification.

The trade-off hypothesis, which claimed that a firm's worth is a function of its goal debt ratio subject to the price of bankruptcy and agency, served as the foundation for this concept. The company will therefore need to weigh the advantages of the tax shield against the disadvantages of bankruptcy and agency costs. As a result, in this instance, the problem of agency arises from the primary and managers' divergent goals as a result of the managers' operating decisions or their extensive use of debt financing (Jensen and Meckling, 1976). Nonetheless, particular indicators like Return on Assets was utilized to analyze the business value.

### **Empirical Review**

The rise in East Africa encouraged investments from outside investors in the firm's equity and loans, which served as the impetus for Doorasamy's study on the effects of capital structure, firm value, and managerial ownership in East African countries, which was completed in 2021. The study took into account sixty-five (65) publicly traded companies in East Africa. To test the hypothesis, the GMM test was used. The results showed that there is a strong and negative association between leverage and the firm's worth. The report also contends that if a company takes on more debt, its value will decline. Using leverage in a company's capital structure will, in short, decrease shareholder wealth, according to this empirical study. This study clarified the link between capital structure and managerial ownership, but it ignored the cost of agency, which has long-term implications for managerial ownership and business value. The current research will fully explain the causes of the short-term deterioration, which are mostly brought on by conflict between owners and agents and hence harm the firm's worth.

Wu (2019) used a sample of 217 Chinese multinational companies (CMNEs) from 2009 to 2016 to conduct a study on the effects of debt finance and ownership concentration on internationalization performance. To evaluate the hypotheses, the study used dynamic threshold analysis and fixed effect regression. In addition, ownership concentration among Chinese multinational enterprises (CMNEs) has an impact on risk preferences, which in turn has an impact on the performance of the firm, according to the study. Short-term debts and the performance of Chinese multinational enterprises (CMNEs) are positively and significantly correlated. According to the study's findings, debt financing and ownership concentration are appropriate and will help the company increase its value. This study provided evidence in a developed country like China where the stock market exhibit some level efficiency and transparency unlike that of a developing economy like Nigeria. Thus, this current studies will provide evidence of the effect of capital structure and agency cost on value of firms in Nigeria where the market is less efficient.

Hoang, et al. (2019) investigated agency problem on the value of a firm in the Vietnamese market. From 2010 to 2015, a sample of 736 businesses from Vietnam was taken into account. The Generalized System Method of Moments (GMM) approach and the robustness test were both used to test the hypotheses. The outcome demonstrated that agency costs had a detrimental effect on business performance. Furthermore, the study suggest that the use of debt instrument will assist businesses minimize any associated cost of agency. This study focuses on agency cost without considering the effect of capital structure in minimizing the cost of agency faced by firms. This current study provides evidence on how capital structure assist in minimizing conflict among agents and owners of firms.

Faisal and Sakir (2020) used a non-monotonic model and a variety of agency conflict management techniques to study agency conflicts, firm value, and monitoring systems in Indonesia. Between 2009 and 2018, 580 Indonesian companies' performance data were gathered for the study. Panel piecewise and moderated regression models were used to evaluate the hypotheses. The results showed that the link between ownership concentration and business performance had not followed a monotone pattern, demonstrating the validity of the monitoring and expropriation hypotheses for non-financial firms in Indonesia. Also, it was discovered that the performance of the chosen enterprises in Indonesia is influenced by agency conflict control mechanisms such as stockholders, dividends, and forms of foreign ownership. This study provided insight into the performance of the business based on agency conflict but failed to

assess the implication of the debt structure in minimizing the conflict and providing a business pattern that will make shareholders happy.

In Nigeria, the impact of financial leverage on business value was examined by Ibrahim and Isiaka (2020). From 2014 to 2018, panel data were gathered from non-financial manufacturing companies. The study's sample of 18 firms was chosen using practical sampling approaches. Tobin's Q ratio was employed as a proxy for business value, while non-current liabilities to equity ratios were used as a proxy for financial leverage. Also, the study included the firm's age, size, and return on assets as control factors. The findings of the regression analysis showed that financial leverage has a significant and unfavorable impact on the firm's value. The investigation came to the conclusion that debt financing would reduce the firm's worth. The results of this study may be impacted by the small sample size because it was restricted to Nigerian manufacturing companies. As a result, our analysis took into account all non-financial enterprises with data from 2011 to 2020.

A study on the effect of agency expenses on financial performance in Nigeria, specifically with regard to consumer products companies listed on the Stock Exchange, was done by Nuhu et al. in 2020. From 2007 to 2016, data from companies' audited financial statements were gathered for the study. The performance of the enterprises under examination is negatively impacted by agency costs, according to evaluations using a panel data regression technique. According to the study's findings, a well-managed agency problem would enable the company to maximize shareholder wealth. This study's focus was only on consumer goods that were readily accessible in the Nigerian stock market under examination, which may not be a sound foundation for generalization. Thus, the current analysis takes into account non-financial firms from 2011 to 2020, including those in the consumer products industry and other non-financial firms.

## **Methodology**

### **Model Specification and Theoretical Background**

The study investigates the effects of company valuation, agency costs, and capital structure on Nigerian listed non-financial companies. The general multi-factor model was created to investigate the impact of agency costs and capital structure on company value. An initial model will be estimated to find mutual causality and adjust its implications on the structural equation in order to achieve this causality without

bias. Jensen and Meckling's Agency theory and Myers' Trade-off Theory (Static) provided support for these ideas (1984).

**Return on Asset (ROA) Model**

The equation below shows the functional relationship:

$$ROA_{it} = f (LTDA_{it}, DA_{it}, ATAN_{it}, OPEX_{it}, EMZSCORE_{it}, SIZE_{it}, ASSGWT_{it}, LAOPEX_{it}, DAOPEX_{it}) \dots \dots \dots (3)$$

**Where**

- DA<sub>it</sub> = Total debt to assets ratio of firm i at time t
- LTDA = Long-term debt to assets ratio of firm i at time t
- ATAN<sub>it</sub> = Assets Tangibility ratio of firm i at time t
- OPEX = Operating Expenses to sale firm i at time t
- EMZSCORE<sub>it</sub> = Emerging Market Altman Z-Score of firm i at time t
- SIZE<sub>it</sub> = firm size of firm i at time t
- ASSGWT<sub>it</sub> = Asset growth of firm i at time t
- LAOPEX = Long term debt and operating expenses firm i at time t
- DAOPEX = Debt to asset and operating expenses of firm i at time t
- ROA<sub>it</sub> = Return on Assets firm i at time t

The econometrics model for the Study is as follows;

$$ROA_{it} = \beta_0 + \beta_1 DA_{it} + \beta_2 LTDA_{it} + \beta_3 ATAN_{it} + \beta_4 OPEX_{it} + \beta_5 EMZSCORE_{it} + \beta_6 SIZE_{it} + \beta_7 ASSGWT_{it} + \beta_8 LAOPEX_{it} + \beta_9 DAOPEX_{it} + \epsilon_{it} \dots \dots \dots (3)$$

Where

- β<sub>0</sub>, β<sub>1</sub>, β<sub>2</sub>, β<sub>3</sub>, β<sub>4</sub>, β<sub>5</sub>, β<sub>6</sub>, β<sub>7</sub>, β<sub>8</sub> and β<sub>9</sub> = Parameters estimated
- ε<sub>it</sub> = the error term firm i at time t

**Data Analysis Procedure**

In the study, panel multiple regression was utilized to calculate the relationship between the independent and dependent variables. Data were gathered over a specified time period from several homogeneous



individuals, hence this estimation method was taken into consideration. This approach is effective in that it helps the cross-sectional model's heterogeneity to correct. Since all the variable data are complete, a balanced panel regression model was used. In order to evaluate the provided hypotheses, the panel model generates both fixed effect and random effect regression and uses the Hausman chi square test to determine which of the two is best. The study of mean, standard deviation, minimum and maximum, among other analyses, were also done using descriptive statistics. Interestingly, Excel and STATA 13 were both employed in the execution of all of these tests.

## Results and Discussions

### Descriptive Statistics

**Table 1: Descriptive Statistics**

Variables	Mean	Median	Maximum	Minimum	Std. Dev.	JB	Prob	Ob
ROA	1.73168	3.09	176.27	-179.92	16.70998	52500.2	0	744
TQ	1.446519	0.99	11.3	-0.44	1.332474	5919.894	0	744
DA	64.13215	60	395.45	4.28	36.3798	21162.1	0	744
ATAN	41.64316	39.43	98.82	0.08	23.6773	32.7191	0	744
LTDA	17.78191	12.525	192.28	-333.65	26.95568	101404.1	0	744
OPEX	43.29797	22.015	3836.73	1.06	178.2913	3051897	0	744
ASSGWT	10.57168	5.615	590.08	-66.78	34.34493	412964.7	0	744
SIZE	7.127849	7.02	9.31	5.24	0.810966	10.12854	0.006319	744
EMZSCORE	4.86129	5.3	22.59	-26.51	4.215419	5539.952	0	744
LDAOPEX	790.0253	247.33	70373.62	-6655.45	3533.894	2089682	0	744
DAOPEX	3520.071	1174.724	335214.9	66.69875	16724.1	1693452	0	744

Table 1 above displays the mean and median values as well as the maximum and minimum values as well as the standard deviation and Jarque-Bera (JB) statistics for each variable (normality test). The findings in table 4.1 shed some light on the characteristics of the non-financial companies that were chosen for this study. The mean return on assets (ROA) for the total sample is 1.73168, with maximum and minimum values of 176.27 and -179.92 respectively. This shows that some non-financial sector companies appear to be inefficient in their use of assets, resulting in negative profit margins. The standard deviation, which is relatively far from the mean value, also represented the variations in the values. Also, the Tobin's Q performance indicator has a mean value of 1.446519, which indicates that the majority of the business values are centered around 1.4, suggesting that the firms are overpriced given that the mean value is higher than 1. Also, the performance indicator's maximum and minimum values of 11.3 and -0.44 respectively show that not all of the firms used are overvalued. The spread or dispersion of the Tobin's Q value from the

mean could also be seen in the standard deviation. The majority of the firms used have a Tobin's Q ratio above 1, which indicates that they are overvalued. The standard deviation value of 1.332474 suggests that there is little variety. The majority of the enterprises have a debt to assets ratio that clusters around 64%, according to the sample's mean value of 64.13215 for the debt to assets ratio. This ratio's greatest and minimum values were 395.45 and 4.28, respectively, showing that the majority of the sample's businesses are heavily leveraged and susceptible to financial risk. Also, the standard deviation showed a dispersion of 36.3798 from the mean, demonstrating that there is a significant difference in the method by which businesses finance their assets in order to raise their worth. ATAN data once more showed a mean value of 41.64316 and maximum and minimum values of 98.82 and 0.08, respectively. This suggests that the majority of the selected companies generate a significant portion of their sales from the usage of their assets in ongoing business operations. Demonstrating their effective use of resources. Also, the standard deviation of 23.6773 suggests that the tangibility of the enterprises' assets across the period was dispersed. The sampled non-financial firms have a very high level of variability in how they use long-term debt to finance their assets, as indicated by the long-term debt to total assets (LTDA) ratio, which has a mean value of 17.78191, a maximum and minimum value of 192.28 and -333.65, respectively, and a standard deviation of 26.95568. With a mean value of 43.29797, maximum and minimum values of 3836.73 and 1.06, respectively, and a standard deviation of 178.2913, the operating expenses ratio to sales suggests that the businesses under consideration have a wide range of operating expenses from the mean value. This indicates that some of the companies have engaged in agency conflict.

Based on the control variables of asset growth, firm size, and bankruptcy risk, the mean value was 10.57168, the maximum and minimum values were 590.08 and -66.78, respectively, and the asset growth standard deviation was 34.34493. This indicates that the selected firms are experiencing constant asset growth of 10.57% due to the wide spread between the maximum and minimum values. Also, the sampled firms' mean firm size of 7.127849, with maximum and minimum values of 9.31 and 5.24, respectively, suggests that large enterprises predominate among the sampled firms. With a maximum and minimum value of 22.59 and -26.51, respectively, the mean bankruptcy value was 4.86129. Since the mean value clusters around 4.8, which is higher than the 2.6 benchmark of a safety position, the result suggests that the majority of the tested companies used have a very low likelihood of going out of business.

Also, the relationship between capital structure and agency cost was looked at. The variables' mean values were 790.0253 (LDAOPEX) and 3520.071 (DAOPEX), with standard deviations of 4.215419 and 3533.894, respectively. This data shows that the interaction variables are significantly different from their mean. Since the Jaque-Bera (J-B) statistic for the variables is significant at the 1% level and suggests that the probability distribution of the sample for the variable is not normally distributed, the summary statistics for the variables also suggest that the distribution of the variables is not symmetric.

### **Panel Regression Results**

This section's aim was to investigate the causal connections between the capital structure factors, agency cost variables, and other control variables, and the firm value of non-financial enterprises listed on the Nigerian stock market. We also include interaction terms to investigate any potential interactions between agency cost and capital structure. Here is a presentation and discussion of the decomposed panel data regression results.

### **ROA MODEL**

The results of the Return on Assets (ROA) panel data regression analysis look at how the capital structure and agency costs indicators impact the value of non-financial enterprises in Nigeria. The findings are displayed in a table.

The ROA model's causal relationship between the variables of interest and was examined using fixed and random effect regression. The findings reveal variations in the coefficient magnitude, sign, and significance. The fixed effect panel regression model estimation was predicated on the idea that there was no relationship between the error term and the explanatory factors, in contrast to the random effect regression model's presumption that there was. The Hausman test, which is based on the null hypothesis that the random effect model is preferred to the fixed effect model, was used to choose the best technique between the two effects. The Hausman test result from Table 4.3 was 59.63 (0.0000), which suggests that the null hypothesis should not be accepted. The outcome thus suggests that fixed effect should be employed to carry out the hypothesis test.

The corrected R-Squared value (Fixed effect) from Table 2 above is 0.77. This indicates that the sum of all the independent variables may account for 77% of the changes or fluctuations in the dependent variable

(ROA). While additional elements that are outside the purview of this study's investigation can account for the remaining 23%. The ROA model exhibits overall statistical significance at the 5% level, as indicated by the F-value statistics of 30.46 and its p-value of 0.000. Consequently, we can draw the conclusion that this model can be generalized with confidence.

**Table 2: Result with Return on Assets (Dependent Variable = ROA)**

Variable	Fixed Effect (FE)			Random Effect		
	Coefficient	t-Statistic	Prob.	Coefficient	t-Statistic	Prob.
C	-62.33683	-4.111703	0.0000	-92.51263	-16.80079	0.0000
DA	0.571270	22.98201	0.0000*	0.523479	23.19193	0.0000*
LTDA	-0.408341	-19.70998	0.0000*	-0.361336	-19.14501	0.0000*
ATAN	0.194560	6.841120	0.0000*	0.252821	12.00333	0.0000*
OPEX	0.041330	5.373810	0.0000*	0.040841	5.570958	0.0000*
ASSGWT	0.032555	3.402468	0.0007*	0.032915	3.579968	0.0004*
SIZE	-0.787207	-0.382544	0.7022	3.630878	5.413412	0.0000*
EMZSCORE	6.586611	36.17657	0.0000*	6.258124	36.81847	0.0000*
LDAOPEX	-0.000354	-2.718534	0.0067*	-0.000366	-2.964702	0.0031*
DAOPEX	-0.000475	-5.450454	0.0000*	-0.000450	-5.392286	0.0000*
R-square	0.793015			0.685341		
Adj. R-square	0.766985			0.681483		
F-statistics	30.46555			177.6314		
P-statistic	0.000000*			0.000000*		
Hausman Test	59.634008					
P-statistic	0.000000*					

*Source: Author's Computation, 2022*

*Note: \*1% level of sig., \*\*5% level of sig.*

## Test of Hypothesis

### The Effect of Capital Structure

The hypothesis predicts the impact of capital structure factors on the firm's value, including debt to total assets and long-term debt to assets. Since the estimated coefficient was 0.571270 and was statistically significant at 5% because the probability value of 0.0000 is below the significant level, it was determined by the fixed effect in table 4.3 that debt to assets, which was regressed against return on asset with the control variables, has a positive effect on the value of the firm. The value of non-financial enterprises in Nigeria is consequently positively and significantly impacted by debt ratio, as a result of which. While the probability value of 0.0000% is less than the significant threshold at 5%, the long-term debt-to-assets ratio's

result (-0.408341) reflects a negative influence on the firm's worth and was statistically significant even at that level. We can therefore draw the conclusion that long-term debt to assets has a large negative impact on the value of non-financial companies in Nigeria.

### **The Effect of Agency Cost**

Using the asset tangibility ratio and the operational expenses to sales ratio, the agency cost hypothesis was anticipated. As the probability value of 0.0000% is less than the 5% level of significance, the panel regression table indicated that asset tangibility had a positive influence (0.194560) on the firm's worth. This effect was also statistically significant. We can therefore draw the conclusion that asset tangibility has a favorable and considerable impact on the value of non-financial enterprises in Nigeria. The slope coefficient for the operating expenses to sales ratio was (0.041330), and this looked to have a favorable impact on the value of the firms. As the probability value of 0.000% was below the level of significance, the result was statistically significant at 5%. We can draw the conclusion that the ratio of operational expenses to sales has a favorable and significant effect on the value of non-financial enterprises in Nigeria.

### **The Effect of Interaction**

The aforementioned investigation looked at the relationship between the firm's value, agency cost, and capital structure independently. However, in order to examine any potential interactions between capital structure and agency cost and their effects on firm value, the section explored the interaction variables LDAOPE and DAOPE. As a result of the fixed panel regression model, the coefficient for the long-term debt-to-assets ratio was negative, while the coefficient for LDAOPE was negative (-0.000354) and statistically significant at the 5% level of significance (-0.408341). This suggests that for enterprises with a significant agency problem, the long-term debt ratio's detrimental effect on company value is raised by 0.000354. This outcome was in line with the tradeoff hypothesis, which contends that increasing debt will raise agency costs and bankruptcy costs while also lowering the firm's worth. Additionally, the model's output reveals that while the interacting term DAOPE is negative (-0.000475) and statistically significant at 5% since the probability value of 0.00% is below the significant level, debt to assets has a positive coefficient (0.571270) and is statistically significant. This suggests that for the firm with a significant agency problem, the beneficial impact of debt to assets on return on assets (ROA) is diminished by 0.000475. This was consistent with Jaggi & Gul's (1999) finding that leverage (debt) has a favorable impact on agency costs, which leads to a rise in the firm's value.

## **Conclusions and Recommendations**

This study focused specifically on the non-financial enterprises listed on the Nigeria Stock Exchange between 2011 and 2020 to assess the effects of capital structure and agency cost on firms' value. However, the researchers used panel multiple regression techniques to determine whether there is a causal relationship running from capital structure and agency cost indicators on the value of firm performance measure in order to determine the impact of capital structure and agency costs on the value of firms. Return on Asset (ROA) was used to proxy firm's value, with long-term debt ratio and total debt ratio serving as proxies for capital structure, asset tangibility and operating costs serving as proxies for agency costs, and bankruptcy costs, firm size, and asset growth as control variables. Furthermore, as a measure to correct interaction, we use both long-term debt and the debt ratio on operating expenses to sales to further analyze the relationship between capital structure and agency costs. The study revealed that, long-term debt to assets has a considerable negative impact on a company's value in Nigeria, whereas the capital structure proxy debt ratio has a positive impact. These results were supported by the theories of Modigliani and Miller (1962) and Myers (1984), who came to the conclusion that capital structure matters in determining a company's value as long as the costs and advantages of debt are balanced. The best capital structure is attained, in accordance with Jahanzeb et al. (2014), when a company balances the advantages of debt against the costs. This shows that non-financial enterprises in Nigeria have not yet utilized long-term debt optimally because the effect on profitability and overall firm value is still negative. The study also shows that asset tangibility, a proxy for agency cost, has a positive and significant impact on the value of non-financial enterprises in Nigeria. Additionally, the same relationship between operating expenses and sales was examined, and the results showed a mixed picture, showing a positive and significant effect with return on assets (ROA) and a negative and insignificant effect with Tobin's Q. This suggests that agency cost issues will only occur and have an impact on the company when individuals misuse revenue for their own interests. In conclusion, management will successfully manage operating expenses, invest extra cash flow in physical assets, and remove information asymmetry so as to maximize the firm's value. According to the findings of the interaction effect, firms with a high agency problem are more likely to experience the long-term debt ratio's negative impact on return on assets (ROA). The study also found that for the firm with a significant agency problem, the favorable effect of debt to assets on return on assets (ROA) is diminished. Hence, this rise will only occur when conditions are ideal. As a conclusion, we can state that there is interaction between the capital structure and agency cost of non-financial firm in Nigeria, but it is only advantageous when there is little to no agency issue. In conclusion, debt financing drives up agency costs in situations where effective

oversight and management are lacking. Given that there is a negative correlation between long-term debt and the value of the company variables utilized in this analysis, the study recommended that managers should use debt as a source of finance with the utmost efficiency since it is relevant based on the Modigliani and Miller hypothesis (1962).

## References

- Ateibueri, A. O. (2020). Capital structure and firm performance: An Empirical Study of Manufacturing Companies in Nigeria. *World Journal of Finance and Investment Research* 5 (1). 34-48
- Doorasamy, M. (2021). Capital structure, firm value and managerial ownership: Evidence from East African countries. *Investment Management and Financial Innovations*, 18(1), 346-356.
- Faisal, M. S. M. and Sakir, A. (2020). Agency conflicts, firm value, and monitoring mechanisms: An empirical evidence from Indonesia. *Cogent Economics & Finance* 8(18).  
<https://doi.org/10.1080/23322039.2020.1822018>
- Foyeke, O. I., Olusola, F. S. and Aderemi, A. K. (2016). Financial structure and the profitability of manufacturing companies in Nigeria. *Journal of Accounting, Finance and Auditing Studies*, 2(3), 56-63
- Habib, H. J., Khan, F. and Wazir, M. I. (2016). Impact of debt on the profitability of firms: Evidence from Non-Financial Sector of Pakistan. *City University Research Journal*, 6(1), 70-80.
- Hoang, L. D., Tuan, T. M., van Tue Nha, P., Long, T. P., and Phuong, T. T. (2019). Impact of agency costs on firm performance: Evidence from Vietnam. *Organizations and Markets in Emerging Economies*, 10(2), 294–309.
- Ibrahim, U. A. and Isiaka, A., (2020). Effect of financial leverage on firm value: Evidence from Selected Firms Quoted on the Nigerian Stock Exchange. *European Journal of Business and Management*, 12(3). DOI: 10.7176/EJBM/12-3-16
- Jahanzeb, A., S. Rehman, N.H. Bajuri, M. Karami and A. Ahmadimousaabad, (2014). Trade-off theory, pecking order theory and market timing theory: A comprehensive review of capital structure theories. *Int. J. Manage. Commer. Innov.*, 1(1): 11-18.
- Jensen, M. C. and Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of financial economics*, 3(4), 305-360
- Lawal, A. I. (2014). Capital structure and the value of the firm: Evidence from the Nigeria banking industry. *The Journal of Accounting and Management*, 1, 31-41

- Modigliani F. and Miller M. (1962). Corporate income taxes and the cost of capital: a correction. *American Economic Review* 53:433-443
- Modigliani, F. and Miller, M. H. (1958). The cost of capital, corporation finance and the theory of investment. *The American Economic Review*, 48(3), 261-297.
- Myers, S.C. (1984). The capital structure puzzle. *Journal of Finance*, 34, 575-592.
- Nuhu, B.A., Dandago, K.I., Mohammad, L., Ado, A.B., and Abdulkarim, F.U (2020). Impact of agency costs on financial performance of listed consumer goods companies in Nigeria. *Journal of Management Theory and Practice (JMTP)* 1(3), <http://dx.doi.org/10.37231/jmtp.2020.1.3.51>
- Ongeri, E.M. (2015). The effect of capital structure on agency costs of the firms listed at the Nairobi Securities Exchange. Master of business administration, School of Business, University of Nairobi
- Pandey, K.D. and Sahu, T.N. (2017). An empirical analysis on capital structure, ownership structure and firm performance: Evidence from India. *Indian Journal of Commerce and Management Studies*, 8(2), 63. <http://doi.org/10.18843/ijcms/v8i2/09>
- Rakesh, H. M. and Lakshni, P. (2013). Capital structure on agency costs: Evidence from Indian companies. *Journal of Business and Management*, 15 (1), 50-53.
- Uremadu, S. O. and Onyekachi, O (2018). The impact of capital structure on corporate performance in Nigeria: A Quantitative Study of Consumer Goods Sector. *Lupine Publishers, LLC* 5 (4)
- Wu, S. (2019). Debt financing structure, ownership concentration and firm performance: a comparison of the listed state-owned and non-state-owned CMNEs. *Journal of Chinese Economic and Business Studies*, 17(2), 147-168.
- Zakaria, Z., Purhanudin, N., Chong, T. P., and William, C. K. S. (2016). Leverage and agency cost: Malaysian Construction Listed Companies. *International Journal of Management Research and Reviews*, 6(12), 1654-1660.