

Nigeria Ailing Industries and the Capital Structure Theory: A Need for Concern

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ABSTRACT

It is necessary to identify that what are factors contribute to the firms' capital structure composition in its operation. Hence the present study was undertaken with the objective of finding out the relationship between capital structure determinants and ailing manufacturing firms of the listed companies in Nigeria. Using a multiple regression analysis, ailing manufacturing companies in Nigeria stock exchange market was examined for the period of 2005-2010. The final sample consists of 14 manufacturing companies. In this study, dependent variable that is, leverage level of the companies, is measured by long-term debt ratio, short term debt ratio and total debt ratio. Capital structure determinants (independent variables) are measured by capital intensity, tangibility, profitability, firm size and non-debt tax shield. Findings showed that the direction of the explanatory variables such as tangibility, profitability, firm size and non-debt tax shields with total debt largely consistent with the explanations of trade-off theory and prove past empirical findings also.

Keywords: *Capital structure determinants, Ailing firms, Non-debt tax shields, trade - off theory.*

INTRODUCTION

Nigeria, like any other nation has witnessed dramatic changes in its industrial landscape. These changes are largely due to the efforts of the government to convert the economy from agricultural to an industrialized one. This arises from the belief that industrialization beside minimizing dependence on the developed economies, increases the country's national output, generates funds for the government, and leads to the conservation of foreign exchange earnings. The path towards industrialization in Nigeria has not been easy because of the disparity in resources endowment of the economic units and the low level of investment in the economy. While some units have resources beyond their immediate needs, others may have need for resources beyond what they can presently generate. Pass and Pike (1983) opined that the level of investment in an economy is one of the major elements in determining its future productive capacity and ultimately the growth in the real living standards of its people. Also, other authors (Ekpenyong and Nyong, 1992, Adeyemi and Badmus, 2000) argued that shortage of finance is a critical limiting factor in industrial growth and the realization of an entrepreneur's dream.

Though industrial production in Nigeria stalled for many years with the annual average capacity utilization of manufacturing firms not exceeding 50%, it is noteworthy that there is a renewed interest in promoting industrial development. Increasing the pace of industrialization is the core of Nigeria's current economic vision of making Nigeria one of the 20 largest economies by the year 2020. The vision emphasizes the importance of growing the private sector not only for the purpose of satisfying local demand but also to make the economy internationally competitive. The Nigerian manufacturing sector is a major part of the private sector and a first step to realizing the economic vision' objectives, there should be a clear understanding of the current state of the manufacturing firms and the determinants of their capital structure.

The issue of capital structure has been identified as an important reason for business growth or failure. It is imperative for firms in Nigeria to be able to finance their operations and growth over time if they are to remain and play an increasing and predominant role in creating value-added, providing employment as well as income in terms of profits, dividends, and wages to households, expanding the size of the direct productive sector in the economy, generating tax revenue for the government and facilitating poverty reduction through fiscal transfers and income from employment and firm ownership. It is important in this regard to understand how firms in Nigeria finance their operations and generate an income to investors by examining their capital structure.

Capital structure, otherwise referred to as, financial structure, is the means by which an organization is financed. It is the mix of debt and equity capital maintained by a firm. The literature is awash with theories on capital structure since the seminal work of Modigliani and Miller (1958). How an organization is financed is of paramount importance to both the managers of firms and providers of funds. This is because if a wrong mix of finance is employed, the performance and survival of the business enterprise may be seriously affected. Capital structure is one of the effective tools of management to manage the cost of capital. An optimal capital structure is reached at a point where the cost of the capital is at minimum. Much of the empirical research on the determinants of firm's capital structure has been directed largely towards companies listed in developed countries, such as the US, UK and Western Europe.

STATEMENT OF THE PROBLEM

The current problems of hunger, poverty and unemployment have undermined the capacity of the economy and manufacturing industry is seen as mechanism for intervention to addressing these long term problem of the economy. Unfortunately, manufacturing industry have not been able to propel economic growth and development which are quintessence of mitigating the effect of Poverty, hunger, unemployment, and low standard of living on the economy. The challenge of addressing the problem of hunger, poverty and unemployment is even more worrisome when considering the actualization of the millennium development goals by the country in 2015. If Nigeria is to achieve the millennium development goals by 2015, one of the sure ways is to enhance the capacity of its manufacturing industry. The core issues identified by the millennium development goal such as hunger, poverty, literacy, maternal and mortality rate would not be achieved unless the problems of manufacturing industry are clearly tackled.

The challenges and the problem of manufacturing industries are tied to some economic variables and the challenges that generally characterized the nation's economy. Some of the challenges and problems include high level of unemployment, high poverty incidence, and low industrialization capacity, lack of finance, inconsistent government policies, inadequate infrastructure and insecurity of the business climate, among others. Nevertheless, the internal characteristics of manufacturing industries too have also interacted with some economic variables to undermine the capacity of the economy. Issues of low level of entrepreneurial skills, poor management practice, inadequate equity capital and lack of information among other problems. In spite of these problems and challenges, the current economic reform process ongoing in Nigeria aimed at reducing poverty, unemployment and strengthening of basic institutions and sub sector of the economy target at improving and enhancing the capacity of manufacturing industry is beginning to show a renew optimism on manufacturing industry as instrument of economic growth and development.

The greatest issue striving against the management of any firm in Nigeria and the world over is how to minimize cost of capital and maximize shareholders wealth. To achieve this major objective, financial managers of firms need to understand the source of capital to finance the growth of the firm and also the efficient use of the available capital. A cursory look at quoted companies in Nigeria reveals large differences in capital structure; that is the proportion of debt: equity: retained earnings differ from one firm to the other. There is also growing predictions of bankruptcy, financial distress and restructuring. This is usually caused by wrong combinations and mismanagement of debt, equity and retained earnings among others. The instability of the economic environment seems to be another major factor to consider. Some firms therefore become riskier than others and as a result rational and informed investors purchase the securities of one firm more than the other (Holfer, 2001), consequently, this research work is aimed at finding out the determinants of capital structure with respect to ailing manufacturing industry in Nigeria.

OBJECTIVE OF THE STUDY

The objective of this study is to investigate the impact of the determinants of capital structure on listed companies in Nigeria during the period 2005 - 2010. The objectives are,

- (i) To find out the significant factors which determine the long -term debt level.
- (ii) To find out the significant factors which determine the short- term debt level?
- (iii) To find out the significant factors which determine total debt level?
- (iv) To evaluate the trend of the determinants of the capital structure during the last five years of manufacturing firms in Nigeria.

JUSTIFICATION OF THE STUDY

As stated earlier, the manufacturing industry is highly important and is accorded high priority in the challenges posed by industrialization in many emerging economies. To enable manufacturing industry meet the objectives of industrialization, their problems are given the desired attention by policy makers. This study is highly

important to the extent that the results will be beneficial to policy makers both in the private and government circles so that Nigeria can be one of 20 industrialised countries in year 2020.

RESEARCH HYPOTHESIS

In relation to this research work, these hypotheses will be formulated.

H0: Capital structure has no significant effect on the ailing manufacturing industry in Nigeria

H1: Capital structure has significant effect on the ailing manufacturing industry in Nigeria

LITERATURE REVIEW

OVERVIEW OF THE NIGERIA INDUSTRIALISATION PROCESS

According to Ekudara (1973) Industrialisation became a major development objective in Nigeria with the enactment of Aid to pioneer industries Ordinance of 1952. Thereafter several policy initiatives and industrialization programmes have been targeted towards achieving significant structural transformation of the economy. The past independence Nigeria adopted the import substitution industrialization strategy (ISI). Helmsing and Kolstee (1993) observed that the only import substitution industries were generally of a factory mass production type, though the scale was much smaller than in Europe or North America.

These industries were largely monopolist or oligopolistic producer (multinational enterprises or affiliates), either under foreign or expatriate ownership and or with considerable expatriate technical and managerial dominant until the mid-1980s', the Nigeria government assumed a control-oriented policy involving administrative measures, foreign exchange allocation, investment regulation and the like; the peak of which was the Indigenization of ownership schemes in the 1070s. These control measures were supposed to stimulate an active participation of the indigenous business community and thereby enhance the entrepreneurship and technical capacities of the Nigerian partners of foreign firms (Biersteker 1987; Forest 1994).

The Nigerian economy was particularly improved by the exploitation of crude oil in commercial quantities in the 1960s and subsequently by the oil boom of the early 1970s. The import substitution industrialization strategy was notably inefficient and the cost of the apparent inefficiency of the ISI policies was paid for by the unprecedented large oil revenues. However the crash of the oil price on international market in the early 1980s, poor economic management and the independence on imported inputs by the import-substituting industries, combined together to bring about a drastic economic down-turn in the early 1980. This had profound impact on the Nigerian Manufacturing Industry. The industry was highly import-dependent for manufacturing inputs. Foreign exchange to purchase machinery and equipment and critical immediate products became scarce and hence there was drastic decline in capacity utilization.

Attempt to revamp the economy and put it on the path of sustainable growth led to the introduction of the World Bank / IMF led structural adjustment programme SAP in July 1986 (Moser et al 1997; Mkandawire and Soludo; 1998) As rightly observed by Oginkola (2002), Under SAP, there was overbearing reliance on the role of the market in getting the price right. Government interventionist approaches were jettisoned for exchange rate and trade liberalisation. Oginkola's analysis demonstrated that the response of the manufacturing sector to SAP reform was far below expectation. Specific case studies also revealed that many large scale public manufacturing firms failed inspite of SAP. Oyeyinka et al 1997 provided illustrations of this for the fertilizer, iron and steel plants, while Adubifa (1990) present account of the auto industry.

Understandably SAP recognized that though the revitalization of the country's industries, a viable productive base that could serve as a nerve centre of the nation's economic stability and growth would be created. However, SAP did not succeed in this respect. The period from 1960 to 1980 generally witnessed rapid industrial growth largely due to the inefficient ISI aided by the oil economy. The decade of the 1980s was a period of industrial decline. There are evident that the average growth rate for industry in the following decade (1990s) shows that the decline might have been halted but possible improvement appears to be only marginal; and recent report by Adeoti et al (2010) indicates that the decade of 200s is yet to demonstrate significant and sustainable improvement. Earlier study by Ayorinde and Olayinka (2002) also included from the findings of their empirical study that the impact of reform especially trade liberalization has been limited on the Nigerian Manufacturing Industry and increasing the pace of reform would be helpful to stimulate the ailing manufacturing industry in Nigeria.

THEORETICAL FRAMEWORK

The point of departure for all modern researches on firm's capital structure is the Modigliani and Miller (1958) proposition which states that in a world of perfect capital market and no taxes, a firm's financial structure will not influence its cost of capital. Consequently, the proposition submitted that firms in a given risk class would

have the same applicable discount rate, differing based on “scale factor” only and would be unaffected by financial gearing. (Weston and Copeland, 1998). However, Brigham and Gapenski (1996) argue that an optimal capital structure can be attained if there exist a tax sheltering benefits provided an increase in debt level is equal to the bankruptcy costs. They suggest that managers of the firm should be able to identify when the optimal capital structure is attained and try to maintain it at that level. This is the point at which the financing costs and the cost of capital (WACC) are minimized, thereby increasing firm value and performance.

The agency theory initially put forward by Berle and Means (1932) also contributes to the capital structure decision. According to the theory, agency conflicts arise from the possible divergence of interests between shareholders (principals) and managers (agents) of firms. The primary duty of managers is to manage the firm in such a way that it generates returns to shareholders thereby increasing the profit figures and cash flows (Elliot and Elliot, 2002). However, Jensen and Meckling (1976) and Jensen and Ruback (1983) argue that managers do not always run the firm to maximize returns to shareholders. As a result of this, managers may adopt non-profitable investments, even though the outcome is likely to be losses for shareholders. They tend to use the free cash flow available to fulfill their personal interest instead of investing in positive Net Present Value projects that would benefit the shareholders. Jensen (1986) argues that the agency cost is likely to exacerbate in the presence of free cash flow in the firm.

In order to mitigate this agency conflict, Pinegar and Wilbricht (1989) argue that capital structure can be used through increasing the debt level and without causing any radical increase in agency costs. This will force the managers to invest in profitable ventures that will be of benefit to the shareholders. If they decide to invest in non-profitable projects and they are unable to pay the interest due to debt holders, the debt holders can force the firm to liquidation and managers will lose their decision rights or possibly their employment.

Empirical Determinants of Capital Structure

Theoretical constructs of any empirical research are proxies indirectly through the use of firm characteristics. The links between the theoretical determinants and the variables chosen in the empirical studies are complex. In the following, capital intensity, tangibility of assets, profitability, firm size, non – debt tax shield are discussed.

Capital Intensity

Capital intensity, or the employment of fixed assets, is generally synonymous with the concept of operating leverage. Thus, increased capital intensity implies increased risk of future earnings variation. Therefore, top management’s desire to retain control of the firm, and the concern of creditors to limit risk of default, should result in lower debt levels for firms choosing automation over labor as the primary factor of production, *ceteris paribus* (Barton and Gordon, 1988). On the other hand, the traditional argument is the more capital intensive a firm is; larger will be the need for

Long-term debt by the firm due to larger financial requirements and it will also have access to assets which could be collateralized. So, this study hypothesizes that *ceteris paribus*, capital structure to be negatively related to total debt and short-term debt and positively related to long-term debt.

Tangibility of Assets

As Booth et al. (2001) state: “The more tangible the firm’s assets, the greater its ability to issue secured debt.” A firm with large amount of fixed asset can borrow at relatively lower rate of interest by providing the security of these assets to creditors. Having the incentive of getting debt at lower interest rate, a firm with higher percentage of fixed asset is expected to borrow more as compared to a firm whose cost of borrowing is higher because of having less fixed assets. Thus a positive relationship between tangibility of assets and capital structure is expected. Several empirical studies confirm this suggestion, as Rajan and Zingales (1995), Friend and Lang (1988), and Titman and Wessels (1988) find.

Profitability

There are conflicting theoretical predictions on the effects of profitability on capital structure. Following the pecking-order theory, profitable firms, which have access to retained profits, can use these for firm financing rather than accessing outside sources. Jensen (1986) predicts a positive relationship between profitability and financial structure if the market for corporate control is effective because debt reduces the free cash flow generated by profitability. From the Trade-off theory point of view more profitable firms are exposed to lower risks of bankruptcy and have greater incentive to employ debt to exploit interest tax shields. Most empirical studies observe a negative relationship between capital structure and profitability (Huang and Song (2002), Booth et al. (2001), Titman and Wessels (1988), Friend and Lang (1988), Kester (1986), and Rajan and Zingales (1995) for G7 countries except for Germany). A negative relationship between profitability and capital structure is expected in this study.

Firm Size

There are two conflicting viewpoints about the relationship of size to capital structure of a firm. First, large firms don't consider the direct bankruptcy costs as an active variable in deciding the level of leverage as these costs are fixed by constitution and constitute a smaller proportion of the total firm's value. And also, larger firms being more diversified have lesser chances of bankruptcy (Titman and Wessels 1988). Following this, one may expect a positive relationship between size and capital structure of a firm. Second, contrary to first view, Rajan and Zingales (1995) argue that there is less asymmetrical information about the larger firms. This reduces the chances of undervaluation of the new equity issue and thus encourages the large firms to use equity financing. This means that there is negative relationship between size and capital structure of a firm. Following Rajan and Zingales (1995), a negative relationship between size and capital structure of the firm is expected.

Non-Debt Tax Shield

In order to reduce the tax bill, firms want to exploit the tax deductibility of interest. If they have other tax deductible item which they can use as tax shield other than debt then the capital is low. So, there exists a negative relationship between non debt tax shield and capital structure. DeAngelo and Masulis (1980) say that non-debt tax shields can be substitutes for the tax benefits of debt financing and a firm with larger non-debt tax shields is expected to use less debt. Past empirical studies also show mixed results about the relationship of non-debt tax shield and leverage. Gardner and Trcinka (1992) find a positive relationship between non-debt tax shield while Shenoy and Koch (1996) find a negative relation. This study expects a negative relationship between non – debt tax shield and leverage.

Methodology

This section provides information about the source of data, sample size, measurement of the variables, hypotheses formulation and model selection and discussion of different measures of the variables.

Source of Data This study is based on the financial data of sample firms from 2005-2010 and has been taken from Nigeria stock exchange's (NSE) hand book of listed companies.

The Sample

As this study has focused on the Manufacturing Sector, initially all the 26 firms (which are listed on the Nigeria Stock Exchange) in the manufacturing sector were selected. Then after screening the firms with incomplete data were left with only 14 firms. So we have 86 firm-years for panel data analysis.

Model of Study

The study examines the determinants of capital structure of manufacturing firms in Nigeria. Three Linear multiple regression model are used in this study based on model used in Ram Kumar Kalkani et al (1998) with some modification in explanatory measures due to lack of data availability in selected firms. The study uses three different measures of capitals structure, based on book value. They are, long – term debt ratio (LTDR), short – term debt ratio (STDR) and total debt ratio (TDR). The independent variables used in this study include capital intensity (CAPINT), tangibility (TANG), profitability (PROF), firm size (FSIZE), and non-debt tax shield (NDTS). Based on the dependent variable three multiple regression models have been used to estimate the determinants of capital structure. The models are as follows.

Model – I

$$LTDR = a + \beta_1 CAPINT + \beta_2 TANG + \beta_3 ATO + \beta_4 PROF + \beta_5 FSIZE + \beta_6 NDTS + \beta_7 CVA + e\hat{1}$$

Model – II

$$STDR = a + \beta_1 CAPINT + \beta_2 TANG + \beta_3 ATO + \beta_4 PROF + \beta_5 FSIZE + \beta_6 NDTS + \beta_7 CVA + e\hat{1}$$

Model – III

$$TDR = a + \beta_1 CAPINT + \beta_2 TANG + \beta_3 ATO + \beta_4 PROF + \beta_5 FSIZE + \beta_6 NDTS + \beta_7 CVA + e\hat{1}$$

Where, a is constant, $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7$ are coefficients of variables, $\hat{1}$ is residual term and e is the error term.

OPERATIONALISATION

Key concepts and variables used in the conceptual framework are operationalised as follows:

TABLE 1: Key Concepts and Selected Variables

Variable	Indicator	Measurement Level	Measurement
Capital Structure	Long Term Debt Ratio	Ratio	$\frac{\text{Long Term Debt}}{\text{Equity} + \text{Debt}}$
	Short Term Debt Ratio	Ratio	$\frac{\text{Short Term Debt}}{\text{Equity} + \text{Debt}}$
	Total Debt Ratio	Ratio	$\frac{\text{Total Debt}}{\text{Total Asset}}$
Capital Structure Determinants	Capital Intensity	Ratio	$\frac{\text{Total Asset}}{\text{Sales}}$
	Tangibility	Ratio	$\frac{\text{Total Gross Fixed Asset}}{\text{Total Asset}}$
	Profitability	Ratio	$\frac{\text{Earnings Before Interest \& Tax}}{\text{Total Asset}}$
	Firm size	Value	Log of Sales
	Non-Debt Tax Shield	Ratio	$\frac{\text{Earning After Interest \& Tax}/0.5}{\text{Total Assets}}$

Table of Hypotheses

Hypotheses for the present study is formulate as follows (Ram Kumar Kalkani et al (1998).

TABLE 2: Table of Hypotheses

Model	Independent Variable	Dependent Variable	Predicted Sign
Model I	Capital Intensity	Long Term Debt Ratio	Positive
	Tangibility		Positive
	Profitability		Negative
	Firm Size		Negative
	Non-Debt Tax Shield		Negative
Model II	Capital Intensity	Short Term Debt Ratio	Negative
	Tangibility		Positive
	Profitability		Negative
	Firm Size		Negative
	Non-Debt Tax Shield		Negative
Model III	Capital Intensity	Total Debt Ratio	Positive
	Tangibility		Positive
	Profitability		Negative
	Firm Size		Negative
	Non-Debt Tax Shield		Negative

PRESENTATION AND DISCUSSION OF RESULT**Correlation Analysis****TABLE 3: Pearson's Correlation(R) Matrix Analysis of the Models**

Independent Variables	Model I Long Term Debt	Model II Short Term Debt	Model III Total Debt
Capital Intensity	-0.392 (0.261)	-0.289 (0.255)	-0.343 (0.150)
Tangibility	(0.768)** (0.000)	0.090 (0.735)	0.657 (0.735)
Profitability	-0.379 (0.121)	-0.756** (0.000)	-0.789** (0.000)
Firm Size	0.268 (0.238)	-0.086 (0.775)	0.061 (0.782)
Non-Debt Tax Shield	-0.416 (0.076)	-0.736** (0.001)	-0.769** (0.000)

Source: Research Data

**Correlation is significant at the 0.01 level (2-tailed)

*Correlation is significant at the 0.05 level (2- tailed)

The results of the Pearson's correlation of the models are shown in the above table. In model – I, weak negative non- significant correlation can be observed between capital intensity, profitability and non-debt tax shield and long- term debt ratio. Furthermore correlation values of these independent variables having with long- term debt, indicating that though changes in these predictor variables negatively contribute towards changes in long- term debt but changes would not be significant. Further, long- term debt ratio has weak positive non- significant relationship with firm size at 0.278. At the same time; long- term debt has significant and strong positive correlation with tangibility. The correlation is significant at 0.01 levels (2- tailed). This correlation values indicate that, changes in tangibility positively contribute towards changes in long- term debt level significantly.

In the case of model - II, there is a weak negative non- significant correlation can be observed between capital intensity, firm size and short- term debt ratio and which indicate that the changes in capital intensity, firm size negatively contribute towards changes in short- term debt level but the impact would not be significant. However, short- term debt has strong significant negative relationship with profitability and non debt tax shield. The correlation is significant at 0.01 levels (2- tailed).

In the case of model – III, total debt level of the firm has strong significant negative relationship with profitability and non-debt tax shield. The correlation is significant at 0.01 levels (2- tailed). There is a weak negative non- significant correlation can be observed between capital intensity and total debt. Variables such as tangibility and firm size have non - significant positive impact on total debt.

Impact of Capital Structure Determinants on of Selected Ailing Manufacturing Industry**Model – I**

The result of impact of Capital Structure Determinants on long-term debt level is shown in the following table.

Table 4: Statistics of Regression between Capital Structure Determinants and Long – Term Debt Level

Regression Statistic	
Multiple R	0.965
R Square	0.737
Adjusted R Square	0.773
Standard Error	5.00398
Sum of Square	1653.674
F. Value	15.243
Significance F	0.000
Observations	14

Source: Research Data

Coefficient of determination – R² is the measure of proportion of the variance of dependent variables about its mean that is explained by the independents or predictor variables. The specification of the five predictor variables in the above model reveals that the ability to predict the leverage level. R Square value of 0.737, which is in the model, denotes that 73.7 % of observed variability in long- term debt can be explained by the differences in the independent variables. Remaining 16.4 % variance in the long- term debt is attributed to other variables. The F value is 15.243, that is significant at 0.05% (p = 0.000), which suggests that the indicators (independent variable) have significantly explained 73.7% of the variation in the leverage level and also indicates the model is a good fit for the data.

Impact of Capital Structure Determinants on Selected Ailing Manufacturing Industry

Model - II

The results of impact of Capital Structure Determinants on short – term debt level is shown in the following table.

Table.5: Statistics of Regression between Capital Structure Determinants and Short – Term Debt Level

Regression Statistic	
Multiple R	0.756
R Square	0.772
Adjusted R Square	0.541
Standard Error	10.16500
Sum of Square	2627.088
F. Value	6.081
Significance F	0.009
Observations	14

Source: Research Data

The square of the multiple regressions R is 0.756, which indicates that 75.6% of the variation in short – term debt is explained by the five indicators of capital structure determinants collectively. Remaining 24.4 % variance in the short - term debt is attributed to other variables. The F value is 6.081 that is significant at 0.05% (p = 0.009), which suggests that the indicators (independent variable) have significantly explained 75.6% of the variation in the short - term debt and also indicates the model is a good fit for the data.

Impact of Capital Structure Determinants on Selected Ailing Manufacturing Industry

Model – III

The result of impact of Capital Structure Determinants on total debt level is shown in the following table.

Table.6 Statistics of Regression between Capital Structure Determinants and Total debt Level

Regression Statistic	
Multiple R	0.753
R Square	0.675
Adjusted R Square	0.451
Standard Error	10.14321
Sum of Square	2724.055
F. Value	6.745
Significance F	0.001
Observations	14

Source: Research Data

The square of the multiple regressions R is 0.753, which indicates that 75.3% of the variation in total debt is explained by the five predictor variables collectively. Remaining 24.7 % variance in the total debt is attributed to other variables. The F value is 6.745 that is significant at 0.05% (p = 0.001), which suggests that the indicators (independent variable) have significantly explained 75.3% of the variation in the total debt and also indicates the model is a good fit for the data.

Empirical Findings of the Research and Testing of Hypotheses

The objective of this study is to find out the determinants of capital structure of listed companies with respect to ailing manufacturing Industry in Nigeria. The findings are based on collected data from sample of 14 listed companies in Nigerian stock exchange market for the period of 2005-2010. Summary of the testing of hypotheses of the present study is shown in the following table;

Table.7 Summary of Testing of Hypotheses

Model	Independent Variable	Dependent Variable	Predicted Sign	Actual Sign	Accepted/Rejected
Model I	Capital Intensity	Long-Term Debt Ratio	Positive	Negative	Reject
	Tangibility		Positive	Positive	Accept
	Profitability		Positive	Positive	Reject
	Firm Size		Negative	Negative	Accept
	Non Debt Tax Shield		Negative	Negative	Accept
Model II	Capital Intensity	Short-Term Ratio	Negative	Negative	Accept
	Tangibility		Positive	Negative	Reject
	Profitability		Negative	Negative	Accept
	Firm Size		Negative	Negative	Accept
	Non Debt Tax Shield		Negative	Positive	Reject
Model III	Capital Intensity	Total Debt Ratio	Positive	Negative	Reject
	Tangibility		Positive	Positive	Accept
	Profitability		Negative	Negative	Accept
	Firm Size		Negative	Negative	Accept
	Non Debt Tax Shield		Negative	Negative	Accept

Source: Research Data

In the model – I, based on the findings three hypotheses are accepted. That is firm size and non-debt tax shield are negatively associated with long – term debt and tangibility has a direct relationship with the dependent variable.

In model – II, three hypotheses are accepted. The variables, Capital intensity, profitability and firm size have the negative relationship with dependent variable, short – term debt.

In the third and final model four hypotheses are accepted except the variable, capital intensity. Association of the all four variables with dependent variables is in the expected direction.

CONCLUSION

Capital Structure and their determinants have been one of the primary subjects of research in corporate finance. This paper has attempted to find the determinants of capital structure of the manufacturing companies in Nigeria. This is due to the fact that for a company to survive and for the condition of ailing to be reduced, capital structure of companies must be given consideration. The conclusion of the study suggests that, in model

– III, the estimation coefficients on the variables of tangibility, profitability, firm size and non-debt tax shields are largely consistent with the explanations of trade-off theory and prove past empirical findings also.

Capital structure has several important effects in the firms' WACC first it affects the riskiness and thus the cost firms' debt and equity capital. Secondly, because interest is tax deductible, the more the debt the firms use the lower its tax bill and thus more of its operating income is available to its investors. Finally, the higher the debt ratio, the greater the probability of bankruptcy and if this threat becomes excessive, it will lower the cash flows.

RECOMMENDATIONS

From this study, it is recommended that:

1. The top management should maximize market value and not book value because capital structure theory is developed only in market value context.
2. The ailing companies should go public if they are Limited Liabilities Company in order to generate more funds which will represent ordinary share capital.
3. If capital cannot be raised publicly, management should make sure that profit generated is ploughed back into the system in order to build up capital structure.
4. If the company cannot go further merger or acquisition can take place with healthier company.

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