

Debt Financing and Ability of Firms to Maximise Asset Use

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Abstract

Assets are the livewire of any firm as there are the resources that must be used to generate the much needed cash-flow that sustains the long term growth of the firm. However, the volume of funds available to the firm is not always enough to finance its operations. As a result, management will have to source for external funds to finance asset purchases. The use of outsider funds can have detrimental effect on asset utilization as there may be covenants that restrict the use of such assets, thus limiting the value-creating potentials of the firm. This paper seeks to examine how debt financing impacts on the ability of firms to maximize the use of its assets. The study revealed a negative and insignificant impact of total debt rate on total asset turnover for most firms sampled. As revealed from the research findings, an increase in debt leads to a reduction in the asset utilization potentials of the firm. This may be partly attributed to covenants attached to the use of these assets by creditors. Therefore, management must chose the right amount of debt in the financing mix so as to reverse the negative impact of outsider funds on the ability of firms to maximise the use of its assets.

Keywords: Total Debt Rate, Total Asset Turnover

1.0 Introduction

Most debt financing arrangements entered into by the firm are often linked to the assets of the firm as collaterals. The firm cannot use the assets without notifying the debt holders. This limits the ability of the firm to fully maximize the use of these assets to enhance shareholders' value. Thus, the value which would have been enhanced as a result of the maximization of assets of the firm is impeded. The use of debt finance which is linked to assets of the firm create a problem for the firm because management may not want to run the risk of having conflicts with debt holders. As a result, the value of shareholders may not be enhanced when restrictive covenants included in debt financing agreements limit the ability of firms to fully harness the potentials of the firm's resources.

The role of debt finance in magnifying the returns of the shareholders is based on the assumptions that fixed charges can be obtained at a cost lower than the firm's rate of return on assets. Thus, when the difference between the earnings generated by its assets financed by these funds and the cost of these funds is not big enough to be distributed to shareholders as earnings, a problem exists. Thus, when the amount of debt used in the financial mix of the firm is huge, it reduces the profitability of the firm as a result of the fixed charges paid to debt holders as compensation for using their' fund.

It is therefore in line with the above that this paper's specific objective is to determine how debt financing impacts on the ability of firms to maximize the use of its assets.

2.0 Literature Review

Pandey (2005) list four major decisions that the financial manager of a firm makes. These are; investment decision, financing decision, dividend decision and liquidity decision. He postulates that the financial manager should strive to maximize the market value of its shares by ensuring that decisions made on any of the above functions should enhance the value of the firm. Chance (2005) and Damodaran (2002) add that achieving the goals of corporate finance requires that any corporate investment be financed appropriately because the financing mix of the firm can impact on the firm's valuation. Management must match the financing mix to the assets being financed as closely as possible in terms of both timing and cash flows so as to achieve the overall objective of the firm which is shareholders wealth maximization (Pandey, 2005).

According to Myers (2002), there are four major theories that evaluate the firm's financial decisions. These are: the Modigliani and Miller (MM) theory of financial structure irrelevance, where the firm's real investment decisions are unaffected by the financing decisions of the firm (MM, 1958); the Trade-off theory in which firms balance the tax advantage of borrowing against the cost of financial distress with the firm assumed to trade off the tax benefits of debt with the bankruptcy cost of debt when making their decision (Kraus and Litzenberger, 1973); the Agency cost theory in which financing responds to managers incentives (Jensen and Meckling, 1976); and the Pecking-order theory in which financing is adapted to mitigate problems created by differences in information. It is suggested that firms avoid external financing while they have internal financing available; and avoid new equity financing while they can engage in new debt financing at reasonably low interest rate (Myers and Majluf, 1984).

However, another emerging theory is the market timing hypothesis which states that firms looks for cheaper type of financing regardless of their current levels of internal sources- debt and equity (Baker and Wurgler, 2002). These theories of financing are conditional, according to Myers, (2002), not general, thus, it is easy to find examples of each theory at work but otherwise difficult to distinguish the theories empirically. Therefore, large scale firms with mostly tangible assets tend to borrow more in their financing decision while firms with high profitability and viable growth opportunities tend to borrow less. Each of these tendencies is consistent with two or more of the major theories of financing. It may be possible then to devise sharper tests by exporting the theories to developing economies where agency and information problem are more severe. This view was supported by Margaritis and Psillaki (2008), when they opine that corporate financing decisions of the firm are quite complex processes and existing theories can at best explain only certain facets of the diversity and complexity of financing choices. It is because of the complexities of these financing decisions that Zingales (2000) feels we need new foundations for the firm's financing decisions, and as Myers (2002) puts it, the foundation will require a deeper understanding of the motives and

behaviours of managers and employees of the firm in achieving the overall objectives of shareholders wealth maximization.

According to Brigham (1995), debt allows people and organizations to do things that they would otherwise not be able or allowed to do commonly, for instance, people in industrialized nations use it to purchase houses, cars, and many others things too expensive to buy with cash. Companies use debt in many ways to leverage the investments made in their assets that is, leveraging the return on equity. To firms, leveraging the proportion of debt to equity is considered important in determining the riskiness of an investment, the more debt per equity; the riskier. Also, as agreed by Grunewald and Erwin (1970), a public corporation may leverage its equity by borrowing money; the more the firm borrows, the less equity capital it needs; so profit or loss is shared among a smaller base and is proportionately larger as a result.

Traditionally, the tax savings that accrue to the firm as a result of the firms' use of debt finance comes in the form of interest which is deductible while equity is not, this being the major primary benefit of debt (Kraus and Litzenberger, 1973). Other benefits of debt include committing managers to operate efficiently (Jensen, 1984), and engaging lenders to monitor the firm (Jensen and Meckling 1976). The cost of debt includes the cost of financial distress (Scott, 1976), personal taxes (Miller, 1977), debt overhang (Myers, 1977), and agency conflict between manager and investors or among different groups of investors (Binsbergen, Graham and Yang, 2007). However, empirical results in this area are much and are somewhat mixed and as a result, a number of empirical regularities have been documented. Large firms with tangible assets and few growth options tend to use a relatively large amount of debt (Rajan and Zingales, 2003; Frank and Goyal, 2004) while firms with high corporate tax rates tend to have higher debt ratios and use more debt incrementally (Graham, Lemon and Schallheim, 1998). Examining the benefit of debt from an empirical point of view, Tim, Michael and Sheridan (1997) are of the view that there are varieties of potential benefits from debt financing. To them, a heavy use of debt is likely to produce efficiency in companies with abundant free cash flows that don't require much additional capital to fund investment requirements. In such a case, substituting debt for equity is likely to add value by strengthening management incentive to increase future cash flows and return excess capital to investors; this was confirm by Jensen (1986), Grossman and Hart, (1982) and Stulz (1990).

Jensen (1986) argues that managers often prefer to grow the firm beyond its optimal size. This may be the case because according to him, they have the compensation contract, based on the measure of firm size or their desire to run a firm from a small business to a large one. If this is the case, then managers may invest in projects that increase firm size, but have a negative impact on shareholders' value. As opined by Servaes and Tufano (2006), a firm with huge debt capital would be prevented to some extent from engaging in this managerial self servicing behaviour because, the cash flows generated by the assets of the firm cannot all be re-invested instead they need to be employed to service debts in the form of interest. This is valuable if their alternative use was in projects that destroy value for shareholders. To them, debt thus serves as a bonding device on the part of managers where they commit themselves not to over invest (Servaes and Tufano, 2006). The managerial self interest argument thus

implies a positive relationship between firm value and the amount of debt outstanding. Debt increases the value of the assets of the firm because it prevents managers from wasting resources (Denis and Denis, 1993). Of course, this is only part of the argument as Kaplan (1998) finds out, not only will debt prevent managers from misallocating resources, it also forces managers to run the current operations more efficiently so that funds are available to service the debt and also make managers to carefully examine whether the current assets are the most valuable in the current financial structure or whether they would be worth more if sold off.

In addition, taxes also provide an important and quantifiable benefit of debt financing. In particular, interest payment to creditors is tax deductible while dividend payments to equity holders are not. This gives a clear reason for firms to borrow rather than issue equity (Tim, Michael and Sheridan, 1997). In fact, Inselberg and Kaufold (1997) are of the view that the value of the tax shield provided by debt in a given year is a function of the interest paid and the marginal tax rate. Also as noted by Tim, Michael and Sheridan, (1997), a firm that expects low earnings in the future will not benefit greatly from the tax shield afforded by debt and should have relatively low amount of debt in their balance sheet all else equal. On the other hand, they continued, a firm with high expected future earnings should consider taking on more debt as a means of shielding earnings from taxes. Tim, Michael and Sheridan, (1997) also hold that the important point to note here is the expected benefit of debt financing which is greatest when corporate taxable earnings and free cash flows are projected to be both large and predictable and the cost of debt are highest when earnings and cash flows are low and uncertain.

To Myers (1977), as the firm adds more debt, it will not only cut projects that do not add value, but may also have to start cutting projects that do not add value because the funds will not be available to service the debt. This is the debt overcrowding argument of the cost of debts, that while debt may prevent firms from making investment, it also prevents them from making good investments Myers (1977). An optimal amount of debt must be chosen to minimize the joint costs of under investment (Stulz, 1990). Empirical evidence that debt may sometimes prevent firms from investing optimally is also found in Shivdasani (1993). That debt may sometimes present firms from making good investment is also another theoretical motivation for the flexibility argument (see, Servaes and Tufano, 2006).

The seminal work of Modigliani and Miller (MM) in 1958 has led to major discuss on the concept of the firm's financing structure. Several scholarly works have been done in this area. Boodhoo (2009) typical describes financing structure as a mix of debt and equity capital maintained by the firm and also concludes in line with other definitions that the financing structure of a firm is very important since it relates the ability of the firm to meet the need of shareholders. As originally developed by MM in 1958, an optimal financial structure exists for a firm that balances the risk of bankruptcy with the tax savings of debt and once, such is established, this financial structure could provide greater returns to shareholders than they would originally receive from an all equity firm. The above was affirmed by Hatfield, Cheng and Davidson (1994) and Brigham and Gapenski (1996). In fact, Brigham and Gapenski

agree that in theory, the MM model is valid. However, in practice, bankruptcy costs do exist and these costs are directly proportional to the debt level of the firm.

Looking back at the conclusion of MM, the question which has always been in the minds of several researchers are; is there any optional financial structure for the firm that would maximize the wealth of shareholders? If there is, how then do we achieve such optimal financial structure? Sultz (1990) supports the idea of optimal financial structure of financing that would result from a compromise between benefits related to the reduction of cash flows and the inconvenient that these cash flows will bring when there are good investments opportunities. As for Chen and Kin (1979), they argue that it is suitable to look for optimal financial structure through arbitrage between tax benefits on one hand and substitute to debts and risks of bankruptcy on another hand. Concerning the issue of the choice of optimal financial structure, Jensen and Meckling (1976) argue that in the presence of taxes on profits, firms have the interest to issue debt assets because this will generate substantial tax economies which may boost the value of the firm proportionately to increase the debt ratio. Nevertheless, it must be said here that, issuing debt may lead to increasing agency cost, (Jensen and Meckling 1976). In deriving an optimal financial structure for the firm, Champion (1999) is even of the view that the use of debt was one way to improve the performance of an organization, while this can true in some circumstances, it fails to consider either the complexities of the competitive environment or the long term survival needs of the organization (Simerly, and Mingfang 2000). Thus, Simerly and Mingfang were of the opinion that we can argue that when firms use debts to either discipline managers or to achieving economic gain, it is the easy way out, however, in many instances, it can lead to the demise of the organization, thus, contributing to the fact that there is no optimal financial structure. We believe they continued that the original question was framed incorrectly. Rather, than, what is an optimal mix of debt and equity that will maximize shareholders wealth? It should have been under what circumstances should debt be used to maximize shareholders wealth and why? Thus, they find that, many firms do not have an optimal capital structure and the reason advocated by these firms was that in general, the performance of a firm is not related to the compensation of the managers of the firm.

Consistent with the various questions raised concerning the optimality of the firm's financial structure, another question that have often been asked is that, can the MM irrelevance theory of financial structure hold in the real world? In answer to this question, MM shoot themselves on the foot because, their theory was based on certain assumptions which in practice may not work. In fact, they assume a perfect capital market - no transaction or bankruptcy cost, perfect information, thus, firms and individuals can borrow at the same interest rates, no taxes and investment decisions are not affected by financing decisions (Brealey, Myers and Marcus, 2004). Thus, if financial structure is irrelevant in a perfect market, then imperfection which exists in the real world must be the causes of its relevance. Several theories have been advocated by several scholars, such theories like trade off theory of financial structure, pecking order theory of financial structure, agency cost theory of financial structure, market timing hypothesis (Baker and Wurgler, 2002) Accelerated Investment Effect Theory (Lyandres and Zhdanor, 2007) among others.

The classical version of the trade-off theory of financial structure theory goes back to Kraus and Litzenberger (1973) seminal work in which they considered the balance between the dead-weight cost of bankruptcy and the tax savings benefit of debts. According to them, the trade off theory is hinge on the premise that a company chooses how much debt finance and how much equity finance to use by balancing the cost and benefits of debt in the financial structure of the firm. The theory was propounded to counter the perfect market assumptions of MM (1958), and it suggests that in the real world, bankruptcy cost exist for the firm. Kraus and Litzenberger conclude that, there is an advantage of financing with debt and also there is a cost of financing with debt. Therefore, the marginal benefit of further increases in debt declines as debt increases, while the marginal cost increases, so that a firm that is optimizing its overall value will focus on this trade off when choosing how much debt and equity to use for financing. The importance of the theory is that, it explains the fact that corporations usually are financed partly with debt and partly with equity.

The Pecking Order Theory or Pecking Order Model was developed by Myers and Majluf (1984). It states that firms prioritize their sources of financing according to the principle of least effort or of least resistance, preferring to raise equity as a financing means of last resort (Simerly and Mingfang, 2000). The internal funds are used first and when depleted, debt is raised and when it is not sensible to issue any more debt, equity is issued. As postulated by Myers and Majluf (1984), the theory tries to capture the cost of asymmetric information, thus the form of financing mix a firm chooses can act as a signal of its needs for external finance. In fact, they argued that equity is a less preferred means to raising capital because when managers (who are assumed to know better about the true condition of the firm than investors) issue new equity, investors believe the firm is overvalued and managers are taking advantage of this overvaluation, as a result investors will place a lower value to the new equity issuance. This confirms the opinion of Simerly and Mingfang (2002). In supporting the above opinion, Myers (2002), agrees that investors do not know the true value of either the existing assets or the new opportunity, so they cannot exactly value the shares issued to finance the new investment. Various tests carried out as regards the pecking order theory have not been able to show that it is of first-order importance in determining a firm's capital structure as postulated by Myers and Majluf (see, Simerly and Mingfang, 2000).

One of the defining characteristics of business in the 1990s was the adoption of the Agency theory to address the managerial excesses of the 1970s and 1980s (Simerly and Mingfang, 2000). The classical Agency concept was developed by Berle and Means (1932). They hold that ownership and control which have been separated in larger corporations as a result of dilution in equity positions provide an opportunity for professional managers to act in their own best interest. Thus, the agency theory attempt to provide explanation to firm behaviours in the area of choice financing. Despite the earlier works of Berle and Means, Jensen and Meckling (1976), Grossman and Hart (1982) are seen as pioneer in Agency theory research. Their analyses permitted the building up of interlink between the organization and the agency theory of corporate finance.

Agency theory also has important implications for the relationship between equity holders and debt holders (Simerly and Mingfang, 2000). While equity holders are interested in the

return over and above the amount which is required to repay debt. Debt holders are only interested in the debt payment specified in the contract. Also, it is seen that most equity holders are sometimes being interested in pursuing riskier business activities than debt holders would prefer, when this occurs, debt holders may charge higher prices for debt capital and this constitute greater control measures to prevent up managers, from investing in capital in riskier undertakings (Simerly and Mingfaing, 2000).

Sultz (1990) and Harris and Raviv (1990) provide further developments to the agency model. While Sultz's work is on the hypothesis that the firm is in possession of important cash flows generating abundant liquidity, thus supporting the idea of an optimal financial structure of financing that would result from a compromise between benefits related to the reduction of cash flows and the inconvenience that this cash flows may be so weak when investment opportunities are good, Harris and Raviv approach their research problem under a different angle. They estimated that conflicts between shareholders and managers can results from disagreement in optimal resource allocation. Harris and Raviv predict that firms with stronger liquidity value and therefore with less cost of information are more likely to contract new debts. This would lead them to rapidly experience failure thus favouring their control by investors.

Debt and equity are like sibling rivals within the traditional agency cost framing of the firm. While shareholders want management to act in their best interest and maximize shareholders' wealth, management may have other objectives that at times that may not be at par with shareholders objectives. With that construct, management may be inclined to resist new investment that principally benefits shareholders so as to ensure that creditors' interest are met with the result that over enhancing projects are delayed or abandoned (Myers, 1977; Jensen and Meckling 1976). Lenders as well risk the loss of wealth in the face of management opportunism that favours equity over debt. A responds to this was Carey (2007), who holds that ultimately a cost to the borrower, is an increased covenant that restricts its actions and potentially furnish control right to lenders.

Amibud and Kahan (1999) state that most corporate debt is private and most private lenders are banks and as often seen these days, banks do not just lend to firms but, they attach certain restrictions and covenant to the user or at the extreme to the assets of these firms. In the view of Daniel (1989), covenants acts as early warnings that assist banks to manage credit risks permitting them to reassess borrowers, when weakened financial conditions increase the risk, of opportunism and mitigate loss by renegotiating loans in anticipation of, or following a breach. In this way banks are able to monitor a borrower's compliance at low cost, reinforcing the importance of loan conventions to corporate governance (Triantis and Daniels, 1995).

Convenient levels are determined in part, by the amount of borrower information that a lender possesses or can cheaply acquire. If lenders are less informed, they are more likely to seek a stricter convenient in order to more closely control a borrowers' future activities. Accordingly as opined by Smith and Warner (1979), even in the case of public bonds, higher covenants may be necessary in order to offset the lower levels of information available about

less transparent borrowers. One method of determining how the firm has been able to utilize its assets as a result of debt covenants resulting from borrowed fund (debt financing) is Asset Turnover ratio. In fact, according to Zane, Kane and Marcus (2004) asset turnover is a financial ratio that measures the efficiency of a company's use of its assets in generating sales revenue or sales income while Kennon (2009) sees it as a ratio that calculates the total revenue for every Naira of assets a company owns. As Kennon (2009) puts it asset turnover ratio is meant to measure a firm's efficiency in using its assets. The higher the assets turnover rates the better for the firm. However, investors must be sure to compare a business to its industry as it is a fallacy to compare completely unrelated businesses.

3.0 Methodology

3.1 Research Design and Nature of Data

The *ex-post facto* research design was adopted in this work. This study relies on historic accounting data obtained from the financial statements and accounts of 28 quoted firms on the Nigerian Stock Exchange from 2004 to 2008. Company annual statements and reports are deemed to be reliable because they are statutorily required to be audited by a recognized auditing firm before publication (CAMA, Section 331 – 335). The firms were selected from the following sub sectors;- Agriculture; Airline; Automobile; Breweries; Building materials; Chemical and Paints; Commercial Services; Computer and Office Equipments; Conglomerates; Construction; Engineering Technology; Footwares; Food, Beverages and Tobacco; Health Care; Hotel and Tourism; Industrial and Cosmetic Products; Information and Communication Technology; Leasing; Machinery and Marketing; Maritime; Media; Packaging; Petroleum; Printing and Publishing; Road Construction; Road Transportation and Textiles subsectors.

The Banking, Insurance and other Financial Servicing subsectors were excluded. The exclusion of these subsectors was based on their representativeness of the lending end of the Nigerian financial system.

The ratio data utilized in this paper are presented in table 3.1. These include the ratio values of Total Debt Rate and Total Asset Turnover of the selected 28 firms under study. The computed values are totals of their value parameters from 2000 to 2008. These were derived from the time series data obtained from secondary sources.

Table 3.1 SUMMARY RESULTS OF RATIO ANALYSES FOR THE 28 FIRMS UNDER STUDY

Firms	TDR	TAT
Firm 1	2.9258952	229.283609
Firm 2	6.7336076	403.258142
Firm 3	5.7237068	1172.08576
Firm 4	3.6660557	461.074558
Firm 5	4.9811059	318.074635
Firm 6	3.4061468	594.447452
Firm 7	1.1121155	1476.87932

Firm 8	2.5662289	101.786341
Firm 9	11.717454	751.396701
Firm 10	65.844036	417.870544
Firm 11	8.4656977	2131.06017
Firm 12	4.4801613	1011.16434
Firm 13	3.4559895	561.078185
Firm 14	14.553089	382.687634
Firm 15	5.1828601	891.698795
Firm 16	28.298767	646.527152
Firm 17	12.566291	272.458073
Firm 18	-16.187825	157.19818
Firm 19	4.3108513	255.845853
Firm 20	2.6522951	301.857449
Firm 21	22.65175	2157.89932
Firm 22	2.5157765	374.446409
Firm 23	4.8308507	89.6665171
Firm 24	23.220624	421.513885
Firm 25	1.7877275	636.281445
Firm 26	1.2380615	905.459916
Firm 27	203.70813	30.2376844
Firm 28	1.2947138	153.823789

SOURCE: Computed Ratios from the Annual Reports and Accounts of the relevant Firms quoted on the Nigerian Stock Exchange for the period 2004-2008

TDR = Total Debt Rate, TAT = Total Asset Turnover

As shown from the table 3.1, the results of the computed ratios are presented. TDR was computed using total debt of selected firms divided by shareholders funds. The total debt comprises of both long term and short debts of the firms. It could be seen from the table that firm 26 had the highest TDR with a ratio of 203.7% followed by firm 10, firm 16, firm 21 and firm 24 while firm 18, firm 17, firm 25 and firm 26 in that order had the lower TDR. The implication is that a higher TDR indicates a high proportion of the financial structure is contributed by outsiders funds while a low TDR indicates a low outsider s' fund in the financial structure. Overall, most firms as shown from table 3.1 had a rate between 1-10times, while TAT is a financial ratio that measures the efficiency of a firm's use of its assets in generating sales revenue, Firm 21, Firm, 11, Firm 7, Firm 3 and Firm 12 had the highest TAT while Firm 27, Firm 23, Firm 8, Firm 19 and Firm 1 in that descending order.

3.2 Model Specification/ Techniques of Analysis

In specifying our model, the following symbols were used to denote their respective variables:

TDR	=	Total Debt Rate
TAT	=	Total Asset Turnover
a	=	Regression equation intercept
b	=	Regression equation coefficient
μ	=	error term

The model equation is;

$$TAT = a + b TDR + \mu \dots \dots \dots (1)$$

The total debt rate and total asset turnover are defined by the formulae:

$$\text{Total Debt Rate} = \frac{\text{Total debt}}{\text{Shareholders funds}} \dots\dots\dots (2)$$

$$\text{Total asset turnover} = \frac{\text{Turnover x 100}}{\text{Total Assets}} \dots\dots\dots (3)$$

3.3 Techniques of Analysis

Our model equation (1) is analysed by employing the (OLS Linear Regression) techniques and using SPSS. The signs and significance of the regression coefficients were relied upon in explaining the nature and influence of the independent and dependent variables as to determine both magnitude and direction of impact. Analyses are done the model on a firm by firm basis to determine the impact of total debt rate on Total Asset Turnover. In carrying out the analyses, we relied on the following statistical parameters; the Correlation Coefficient (R), Durbin Watson (d) test and the Student (t) test.

4.0 Results

Table 4.1 shows a summary of the regression results

Table 4.1SUMMARIES OF SPSS MODEL REGRESSION RESULTS ON IMPACT OF TDR ON TAT

Firms	R	R ²	DW	Standard Coefficients	
				Beta	T- Value
Firm 1	0.121	0.015	1.363	-0.121	-1.025
Firm 2	.767(a)	.588	2.437	0.767	2.071
Firm 3	.234(a)	.055	1.747	-0.234	-0.418
Firm 4	.027(a)	.001	1.155	-0.027	-0.046
Firm 5	.290(a)	.084	.591	0.290	0.524
Firm 6	.011(a)	.000	.729	-0.011	-0.018
Firm 7	.834(a)	.696	2.085	0.834	2.619
Firm 8	.684(a)	.468	1.138	0.684	1.624
Firm 9	.435(a)	.189	1.371	-0.435	-0.836
Firm 10	.038(a)	.001	1.529	-0.038	-0.065
Firm 11	.748(a)	.560	1.228	0.748	1.954
Firm 12	.711(a)	.505	2.577	-0.711	-1.751
Firm 13	.267(a)	.071	1.010	0.267	1.480
Firm 14	.681(a)	.464	2.598	-0.681	-0.611
Firm 15	.061(a)	.004	3.478	0.061	0.107
Firm 16	.246(a)	.061	2.777	0.246	0.440
Firm 17	.558(a)	.311	2.533	0.558	1.163
Firm 18	.737(a)	.543	.779	-0.737	-1.887
Firm 19	.316(a)	.100	1.400	0.316	0.578
Firm 20	.012(a)	.000	1.534	0.021	0.021
Firm 21	.657(a)	.431	2.337	-0.657	-1.509
Firm 22	.663(a)	.440	1.664	0.663	1.535
Firm 23	.036(a)	.001	1.470	-0.036	0.063
Firm 24	.145(a)	.021	3.193	-0.145	-0.254
Firm 25	.770(a)	.592	.601	0.770	2.088
Firm 26	.096(a)	.009	1.515	-0.096	-0.167
Firm 27	.567(a)	.322	1.168	0.567	1.193
Firm 28	.206(a)	.043	.690	0.206	0.365

SOURCE: SPSS Model Results

NOTE:

R = Correlation Coefficient or Beta
R² = Coefficient of Determination

DW = Durbin Watson (d) test statistic
 T-value = Student t- test Statistic

The result, on a firm by firm basis revealed that there was a positive and significant impact of TDR on TAT for three firms (Firms 2, 7 and 25). Thus, an increase in TDR impacted positively on TAT for these firms in a significant proportion. There was a positive non-significant impact of TDR on TAT for Eleven firms (Firms 5, 8, 13, 15, 16, 17, 19, 20, 22, 27, and 28). For these firms, the impact of TDR on TAT is positive but not significant. There was a negative non-significant impact of TDR on TAT for Fourteen firms (Firms 1, 3, 4, 9, 10, 11, 12, 14, 18, 21, 23, 24 and 26). For these firms an increase in TDR will lead to a decrease in TAT.

Debt and equity are like sibling rivals within the traditional agency cost framing of the firm as management acting as agents for shareholders may be inclined to resist new investment that principally benefit shareholders with the result that over enhancing projects are delayed or abandoned. Thus, from the above, debt finance has a negative impact on asset usage of the firm. The negative impact implies that an increase in the value of one variable tends to be associated with decreases in the value of the other, and vice versa. This way, the impact of debt finance on the firms' ability to utilize its assets is negative.

5.0 Conclusion

Debt is costly when a firm cannot cover its interest expenses to creditors because of earnings shortfalls, a condition called financial distress. Also, assets are the life wire of any firm as they are the resources that must be used to generate the much needed cash flows that sustain the long term growth of the firm. However, as often observed in real life, the volume of funds available to the firm is not always enough to finance the operations of the firm compelling, management to source for external funds to finance asset purchases. Our research finding indicates that there was a negative impact of debt finance on asset utilization potentials of quoted firms on the Nigerian Stock Exchange, case studied within the period 2004 to 2008. Thus, an increase in debt led to a reduction in asset utilization potentials of the firm a situation probably due to covenants attached to the use of these assets by creditors. Therefore, management must chose the right amount of debt in the financial mix as to reverse the negative impact of borrowed funds observed in this paper.

APPENDIX

Relevant Quoted Firms on the Nigerian Stock Exchange

Firms	Represented as
Agriculture/ OKOMU PLC	Firm 1
Airlines/ NAHCO PLC	Firm 2
Automobile/ RT BRISCOE PLC	Firm 3
Breweries/ GUINNESS PLC	Firm 4
Building Materials/ NIGERIAN ROPES PLC	Firm 5
Chemical and Paints/ PREMIER PAINTS PLC	Firm 6
Commercial Services/ RED EXPRESS PLC	Firm 7
Computer& Office Equipment/ THOMAS WYATT PLC	Firm 8
Conglomerates/ UNILEVER PLC	Firm 9
Construction/ JULIUS BERGER PLC	Firm 10

Engineering Technology/ INTERLINK PLC	Firm 11
Food, Beverages and Tobacco/ NESTLES PLC	Firm 12
Health Care/ MAY AND BAKER PLC	Firm 13
Hotel and Tourism/ IKEJA HOTELS PLC	Firm 14
Industrial/Domestic Products/ VITAFOAM PLC	Firm 15
Information Communication Technology/ IHS PLC	Firm 16
Leasing / C&I LEASING PLC	Firm 17
Media/ AFROMEDIA PLC	Firm 18
Maritime / JAPUL PLC	Firm 19
Packaging/ BETA- GLASS PLC	Firm 20
Petroleum Marketing / TOTAL PLC	Firm 21
Printing and Publishing / UNIVERSITY PRESS PLC	Firm 22
Real Estate / UACN PROPERTY PLC	Firm 23
Road Construction / COSTAIN PLC	Firm 24
Textile / UNITED NIGERIA TEXTILE PLC	Firm 25
Road Transportation / ABC PLC	Firm 26
Machinery Marketing / SKOVIS NIGERIA PLC	Firm 27
Footwares / LEONARD NIGERIA PLC	Firm 28

References

- Amibud, K.G and Kahan, M. (1999), “A new governance structure for corporate Bonds ”, *Journal of Management*, Volume 51
- Baker, M.P. and Wurlger, J. (2002), “Market Timing and Capital Structure”, *Journal of Finance*, Volume 57, No. 1
- Berle, A.A and Means, G.C (1932), *The Modern Corporation and Private Property*, New York: Macmillan Press
- Binbergen, T.H, Graham, J.R. and Yang, I. (2007), “The Cost of Debt”, *Journal of Finance*, Volume 8, No. 4
- Brealey, R.A, Myers, S.C and Marcus, A.J. (2004), *Fundamentals of Corporate Finance*, New York: McGraw Hill
- Brigham, E.F. (1995), *Fundamentals of Financial Management*, New York: McGraw Hill
- Brigham, E and Gapenski, L. (1996), *Financial Management*, Dallas: The Dryden Press
- Boodhoo, R (2009), “Capital Structure and Ownership Structure; A Review of Literature” *The Journal of Online Education*, Volume 8, No12
- Carrey, M (2007), “The Economics of the Private Placement Market”, *Federal Reserve System Staff Study*, No. 166
- Chance, D.M. (2006), *The Investment Decisions of the Corporation*, New York: Prentice Hall
- Champion, D. (1999), “The Joy of Leverage”, *Harvard Business Review*, July/August
- Chen, A.H. and Kin, E.H.C (1979), “Theories of Corporate Debt Policy, A synthesis”, *The Journal of Finance*, volume 34

- Damodaran, A (2002), *Corporate Finance, Theory and Practice International Edition*, New York; John Wiley and Son
- Daniels, R.J. and Triantis, G.G. (1995), “The Role of Debt in Interactive Corporate Governance”, *California Law Review*, Volume 83
- Denis, D. J. and Denis, D.K. (1995), “Causes of Financial Distress following Leveraged Recapitalizations”, *Journal of Financial Economics*, No. 37
- Frank, M. Z. and Goyal, V.K (2004), “Testing the Pecking Order theory of Capital Structure”, *Journal of Financial Economics*, volume 67
- Graham, J.R., Lemon, M. and Schallheim, J. (1998), “Debt, Leases, Taxes and the Endogeneity of Corporate Tax Status”, *Journal of Finance*, No. 53
- Grossman, S.J. and Hart, O. (1982), “Corporate Financial Structure and Managerial Incentives” In J McCall (ed) *The Economics of Information and Uncertainty*, Chicago; University of Chicago Press
- Grunewald, A.E. and Erwin, E. N. (1970), *Basic Managerial Finance*, New York; McGraw Hill
- Harris, M and Raviv, A (1990), “Corporate Control contests and capital structure; An Empirical Test”, *Journal of Managerial and Decision Economics*, Volume 15
- Hatfield, G.B, Cheng, L.T.W. and Davidson, W.N. (1994), “The Determination of Optimal Capital Structure, The Effect of firm and Industry Debt Ratios on Market Value”, *Journal of Financial and Strategic Decisions*, Volume 7, No. 3
- Inselbag, I. and Kaufould, H. (1997), “Two DCF Approaches for Valuing firms under Alternative Financing Strategies”, *Journal of Applied Corporate Finance*, Volume 10, No. 1
- Jensen, M.C. and Meckling, W.H. (1976), “Theory of the Firm; Managerial Behaviour, Agency Cost and Ownership Structure”, *Journal of Financial Economics*, Volume 7
- Jensen, M.C. 986), “Agency cost of free cash flow, Corporate Finance and Takeovers” *American Economic Review*, Volume 76
- Kaplan, S. (1994), “Campeau’s Acquisition of Federated Post-bankruptcy Results”, *Journal of Financial Economics*, Volume 15
- Kennon, J. (2009), “Analyzing an Income Statement” (www.about.com/guide. Accessed 20/01/10)
- Kraus, A. and Litzenberger, R.H. (1973), “A State-preference model of Optimal Financial Leverage”, *Journal of Finance*, Volume 4
- Lyandres, E. and Zhadanor, A. (2007), *Investment Opportunities and Bankruptcy*

Predictions, New York; McGraw Hill

Margaritis D and Psillaki M. (2008), “Capital Structure, Equity Ownership and Firm Performance”, *Journal of Finance*, Volume 14

Miller M, (1977), “Debt and Taxes”, *Journal of Finance*, Volume 32, No. 2

Modigliani, F and Miller, M.H. (1958) “The cost of Capital Corporation Finance and the Theory of Investment”, *American Economic Review*, Volume 48, No. 3

Myers, S.C (1977), “Determinants of Corporate Borrowing”, *Journal of Financial Economics*, Volume 5

Myers, S.C and Majluf, N.S (1984), “Corporate financing and Investment Decisions, When Firms have Information that Investors do not have”, *Journal of Financial Economics*, Volume 13

Myers, S.C. (2002), *Financing of Corporations Handbook of the Economics of Finance*, Massachusetts; Prentice Hall

Pagano, M. (2005), “The Modigliani – Miller Theorems: A Cornerstone of Finance”, *Centre For Studies in Economics and Finance*, Working Paper No. 139

Pandey, I.M. (2005), *Financial Management, Ninth Edition*, New Delhi: Vikas Publishers

Rajan, R.G. and Zingales, R (2003), “What do we know about Capital Structure? Some Evidence from International Data”, *Journal of Finance*, Volume 50

Scott, J.H (1976), “A Theory of Optimal Capital Structure”, *Bell Journal of Economics*, Volume 7

Servaes, H and Tufano, P. (2006), “The Theory and practice of Corporate capital Structure” *Deutsche Bank Liability Strategies Group Publishers*

Shivdasani, A. (1993), “Board Composition, Ownership Structure and Hostile Take Over”, *Journal of Accounting and Economics*, Volume 16

Simerly, R and Mingfang, L. (2000), “Environmental Dynamism, Capital Structure and Performance, A Theoretical Integration and an Empirical Test”, *Strategic Management Journal*, No. 21

Smith, C.R and Warner, J.B.C. (1979), “On Financial Contracting: An Analysis of Bond Covenants”, *Journal of Financial Economics*, Volume 7, No. 2

Stulz, R.M (1990), “Managerial Discretion and Optimal Financing Policies”, *Journal of Financial Economics*, Volume 14

Tim, C.O, Michael, S and Sheridan, T (1997), “Designing of capital structure to Create Shareholders Value”, *Journal of Applied Corporate Finance*, Volume 10, No. 1

Triantis, G.G and Daniels, R.J. (1995), “The Role of Debt in Interactive Corporate Governance,” *Journal of Business*, Volume, 83

Zane, B, Kane, A and Marcus, A.T.C (2004), *Essentials of Investments*, 8th ed, New York: McGraw-Hill Irwin

Zingales, L. (2000), “Investment –cash flows Sensitivities are not valid Measures of Financing Constraints”, *The Quarterly Journal of Economics*, Volume 11