

# THE DETERMINANTS OF CAPITAL STRUCTURE OF LARGE NON-FINANCIAL LISTED FIRMS IN NIGERIA

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## ABSTRACT

*This paper examines capital structure determinants of non-financial firms in Nigeria using a panel of 33 large firms. Statistical tests are performed for the period 1990-2004. The results reveal that profitability, tangibility and company size are positively related to total debt and long-term debt, and growth opportunities are negatively associated with total debt. The empirical results indicate that the financing decisions of large firms in Nigeria can be explained by the determinants suggested by trade-off theory.*

**JEL:** G31, G32

## INTRODUCTION

The move towards a free market, coupled with the widening and deepening of various financial markets has provided the basis for the corporate sectors to optimally determine their capital structure. This environment has also encouraged more meaningful research of the capital structure issue. The corporate sector in Nigeria is characterized by a large number of firms operating in a largely deregulated and increasingly competitive environment. Since 1987, financial liberalization has changed the operating environment of firms, by giving more flexibility to the Nigerian financial managers in choosing the firm's capital structure.

There are only a limited number of studies that examine factors which influence the capital structure of Nigerian firms. Although the capital structure issue has received substantial attention in developed countries, it has remained neglected in the developing countries. The reasons for this neglect are discussed by Bhaduri (2002). He notes that until recently, development economics have placed little importance to the role of firms in economic development. Second, until the eighties, the corporate sectors in many lesser developed countries (LDCs) faced several constraints on their choices regarding sources of funds. Access to equity markets was either regulated, or limited due to the underdeveloped stock market (Bhaduri, 2002).

Planning capital structure involves the consideration of shareholders interest and other groups. Upon firm initiation, a company should plan its capital structure. Subsequently, whenever funds have to be raised to finance investment, a capital structure decision is also involved (Salawu, 2007). It is clear that capital structure is an important management decision as it greatly influences the owner's equity return, the owners risks as well as the market value of the shares. It is therefore incumbent on management of a company to develop an appropriate capital structure. In doing this, all factors that are relevant to the company's capital decision should be properly analyzed and balanced. The remainder of the paper is organized as follows: Section II discussed the relevant literature. Section III describes the methodology and data used. Section IV presents the results, and some concluding comments are provided in Section V.

## LITERATURE REVIEW

The empirical literature suggests a number of factors that may influence the financial structure of companies. Salawu, (2006) examined the considerable factors involved in deciding on the appropriate amount of equity and debt in the Nigerian banking industry and the factors influencing banks' capital

structure. His study revealed that ownership structure and management control, growth and opportunity, profitability, issuing cost, and tax issues associated with debt are the major factors influencing bank's capital structure. Following Rajan and Zingales (1995); Banerages, Heshmati and Wihlborg (2000) and Bevan and Danbolt (2001), the following variables shall be considered in this study: company size, profitability, tangibility, growth opportunities, non-debt tax shields and dividend as possible determinants of the capital structure choice. We discuss the relevant literature for each of these variables in turn.

### Company Size

The trade-off theory predicts an inverse relationship between size and the probability of bankruptcy, i.e., a positive relationship between size and leverage. Berger et. al., (1997) find the positive relationship between leverage and company size. The results hold regardless of whether the regressions are estimated using OLS, random effects or fixed effects panel estimation. Rajan and Zingales (1995) argued that larger firms tend to be more diversified and fail less often, so size may be an inverse proxy for the probability of bankruptcy. Large firms are also expected to incur lower costs in issuing debt or equity. Thus, large firms are expected to hold more debt in their capital structure than small firms.

Ozkan (2000, 2001) – who control for firm heterogeneity through random effect and generalized method of moments (GMM) estimation respectively – obtain results similar to prior studies, which have failed to control for such effects. Barclay and Smith (1996), Stohs and Mauer (1996), Demirguc Kunt and Maksimovic (1999) all find debt maturity to be positively correlated with company size.

According to Drobetz and Fix (2003), the effect of size on leverage is ambiguous. Some studies reveal a positive relationship between size and the debt maturity structure of companies (Michaelas et. al. 1999). Accordingly, the pecking order theory of the capital structure predicts a negative relationship between leverage and size, with larger firms exhibiting increasing preference for equity relative to debt. Despite some contradictory evidence, the weight of available empirical evidence finds debt maturity to be positively correlated with company size.

### Profitability

In the trade-off theory, agency costs, taxes, and bankruptcy costs push more profitable firms toward higher book leverage. First expected bankruptcy costs decline when profitability increases. Second, the deductibility of corporate interest payments induces more profitable firms to finance with debt. In a trade-off theory framework, when firms are profitable, they prefer debt to benefit from the tax shield. In addition, if past profitability is a good proxy for future profitability, profitable firms can borrow more, as the likelihood of paying back the loans is greater. In the agency models of Jensen and Meckling (1976), Easterbook (1984), and Jensen (1986), higher leverage helps control agency problems by forcing managers to pay out more of the firm's excess cash. Accordingly, the pecking-order model predicts a negative relationship between book leverage and profitability.

Again, the empirical evidence on the issue is mixed. For instance, Toy et. al., (1974); Kester (1986); Titman and Wessels (1988); Harris and Raviv (1991); Bennett and Donnelly (1993); Rajan and Zingales (1995), and Michaelas et. al. (1999); Booth et al. (2001); Bevan and Danbolt (2001) all find leverage to be negatively related to the level of profitability (supporting the pecking-order theory), while Jensen, Solberg and Zorn (1992) find a positive one (supporting the trade-off theory).

### Tangibility

The nature of a firms assets impact capital structure choice. Tangible assets are less subject to informational asymmetries and usually they have a greater value than intangible assets in the event of

bankruptcy. In addition, moral hazard risks are reduced when the firm offers tangible assets as collateral, because this constitutes a positive signal to the creditors. Creditors can sell off these assets in the event of default.

The trade-off theory predicts a positive relationship between measures of leverage and the proportion of tangible assets. Relative to this theory, Bradley et. al., (1984); Rajan and Zingales (1995); Kremp et al., (1999) and Frank and Goyal (2002) find leverage to be positively related to the level of tangibility. However, Chittenden et. al., (1996) and Bevan and Danbolt (2001) find the relationship between tangibility and leverage to depend on the measure of debt applied.

Alternatively, Grossman and Hart (1982) argue that the agency costs of managers consuming more than the optimal level of perquisites is higher for firms with lower levels of assets that can be used as collateral. The monitoring costs of the agency relationship are higher for firms with less collateralizable assets. Therefore, firms with less collateralizable assets might voluntarily choose higher debt levels to limit consumption of perquisites (Drobtz and Fix, 2003). This agency model predicts a negative relationship between tangibility of assets and leverage. Firms with more tangible assets have a greater ability to secure debt. Consequently, collateral value is found to be a major determinant of the level of debt financing (Omet and Mashharance, 2002).

From a pecking order theory perspective, firms with few tangible assets are more sensitive to informational asymmetries. These firms will thus issue debt rather than equity when they need external financing (Harris and Raviv, 1991), leading to an expected negative relation between the importance of intangible assets and leverage.

#### Growth Opportunities

The trade-off model predicts that firms with more investment opportunities have less leverage because they have stronger incentives to avoid under-investment and asset substitution that can arise from stockholder-bondholder agency conflicts. This theory predicts a negative relationship between leverage and investment opportunities.

The empirical evidence regarding the relationship between leverage and growth opportunities is, at best, mixed. Titman and Wessles (1988); Barclay and Smith (1996) and Chen et. al., (1997) all find a negative relationship between growth opportunities and the level of either long-term or total debt. Rajan and Zingales (1995) find a negative relationship between growth opportunities and leverage. They suggest that this may be due to firms issuing equity when stock prices are high. As mentioned by Hovakimian et al. (2001), large stock price increases are usually associated with improved growth opportunities, leading to a lower debt ratio. However, Bevan and Danbolt (2001) find a negative correlation between growth and long-term debt, but find total leverage to be positively related to the level of growth opportunities. On the other hand, Beran and Danbolt (2001) find short-term debt to be positively related to growth opportunities. In fact, the simple version of the pecking order theory supports a positive relationship. Debt typically grows when investment exceeds retained earnings and falls when investment is less than retained earnings.

#### Non-debt Tax Shields

The effective tax rate has been used as a possible determinant of the capital structure choice. According to Modigliani and Miller (1958), if interest payments on debt are tax-deductible, firms with positive taxable income have an incentive to issue more debt. That is, the main incentive for borrowing is to take advantage of interest tax shields.

Accordingly, in the framework of the trade-off theory, one hypothesizes a negative relationship between leverage and non-debt tax shields. DeAngelo and Masulis (1980) argue that the marginal corporate savings from an additional unit of debt decreases with increasing non-debt tax shields. This is because of the likelihood of bankruptcy increases with leverage. The empirical evidence is mixed. According to Graham (2000), the tax shield accounts on average to 4.3% of the firm value when both corporate and personal taxes are considered. In this study, dividend is included as a supplementary indicator of firm liquidity.

## METHODOLOGY AND DATA

This study covers only non-financial quoted companies on the first and second tiers of Nigerian Stock Exchange. Thirty-three firms with market capitalization of five hundred million naira and above were regarded as large firms and included in the sample. Data were obtained from the annual reports of the sampled firms and publications of the Nigerian Stock Exchange. The study excludes the financial and securities sector companies for two reasons. First, these firms tend to have substantially different financial characteristics and use of leverage than other companies. In addition, the balance sheets of the firms in the financial sector (banks, insurance companies, and investments trust) have a significantly different structure from those of non-financial firms.

The selection of the variables (regressand and regressor) is primarily guided by the results of the previous empirical studies and the available data. The dependent and independent variables are defined so that they are consistent with those of Rajan and Zingales (1995). The analysis utilizes the following variables.

Leverage (LEV1)	= Total Debt/Total Assets
Leverage (LEV2)	= Long-term debt/Total Assets
Leverage (LEV3)	= Short-term debt/Total assets
Profitability	= Earnings after interest and tax to book value of total assets
Tangibility	= Book value of fixed assets to total assets
Size	= Natural logarithm of sales
Growth Opportunities	= Total Assets in year (t)/Total assets in year (t-1)
Non-debt Tax Shields (NDTS)	= Depreciation divided by Total Assets
Dividend (DIV)	= Dividend paid/Book value of equity

Using the above defined variables, the following model is estimated for the sample

$$\text{Leverage}_{it} = \beta_1 + \beta_2 \text{Profitability} + \beta_3 \text{Tangibility} + \beta_4 \text{Growth} + \beta_5 \text{Size} + \beta_6 \text{NDTS} + \beta_7 \text{Dividend} + \mu_i + \varepsilon_{i,t} \quad (1)$$

Where  $\mu$  is used to capture the unobserved individual effects (either fixed or random), and  $\varepsilon$  is the error term, which represents measurement errors in the independent variables, and any other explanatory variables that have been omitted, as well as in the measurement of the independent variables. In order to estimate the panel regression model, three alternative methods were used: pooled ordinary least squares, the fixed effects model, and random effects model.

## RESULTS AND DISCUSSION

Based on data availability, six potential determinants of capital structure are analyzed in this study—profitability, tangibility, growth opportunity, size, non-debt tax shields and dividend. The regression results for the large firms are presented in Tables 1 to 3 respectively.

In the case of large firms, the pooled OLS, fixed effect and random effects results in Tables 1 to 3 reveal a positive correlation between profitability and total and long-term debt. These results indicate that large firms in Nigeria are profitable and they are expected to prefer debt in order to benefit from the tax shield. The positive effect might be due to the tax advantage of debt with profitable firms having a high demand. Also, debt holders may see more profitable firms as less risky (i.e. probability of bankruptcy is low). As a result, these firms can get debt financing relatively easily. However, despite the fact that the relationship between the profitability and leverage (LEV1 and LEV2) are positive, they are not statistically significant. The relationship between profitability and short-term debt (LEV3) are negative under pooled OLS and fixed effect estimation with coefficients of  $-0.0013$  and  $-0.0031$  respectively. This suggests that large firms in Nigeria prefer short-term debt to long-term debt. The positive coefficients of profitability for large firms provide evidence supporting the trade-off theory.

In the case of large firms, tangibility (TANG) is positively correlated with both total debt and long-term debt. In Table 1, the coefficient of tangibility is positive (0.0743, 0.0685 and 0.0976 respectively) and significant at the 1%, 5% and 1% levels respectively in the case of long-term liabilities/total asset (LEV2). Firms with more tangible assets have a greater ability to secure debt. Consequently, collateral value is found to be a major determinant of the level of debt financing. This finding shows that a large firm in Nigeria has the potential to obtain external financing, especially equity and short-term debt.

For the large firms in Nigeria, tangible assets are likely to have an impact on the borrowing decisions of a firm because they are less subject to informational asymmetries and usually have a greater value than intangible assets in the event of bankruptcy. The trade-off theory predicts a positive relationship between measures of leverage and the proportion of tangible assets. Most empirical studies conclude to a positive relation between tangibility and the level of debt (Rajan and Zingales, 1995, Krempp et al, 1999; Frank and Goyal, 2002).

The pooled OLS and random results in Table 1 uncover a negative correlation between growth opportunities (GROW) and total liabilities for large firms. Similarly, the results in Table 2 reveal negative correlation between growth and long-term liabilities. The results are significant at the 5% level using the pooled OLS and random effect methodologies. This result is consistent with trade-off theory. The theory predicts that firms with more investment opportunities have less leverage because they have stronger incentives to avoid under-investment and asset substitution that can arise from stockholder-bond holder agency conflicts. Moreover, the costs associated with agency problems are likely to be higher for growing firms, since they may have more flexibility in the choice of future investments. Therefore, one would expect a negative association between long-term debt and growth of firm. Table 3 shows that large firms in Nigeria substitute short-term debt for long-term debt. This is because growth is positively correlated with short-term debts (LEV3) especially under pooled OLS and fixed effect estimation. However, the growth factor coefficients are not significant in the short-term model.

The size (SIZ) of firms (measured by the logarithm of sales) is positive related with all debt types except pooled OLS result for long-term debt (LEV2), which is negative but significant at 5% level. The signs of the coefficients of the firm size are consistent with trade-off theory. These coefficients are significant for total debt in Table 1 (both OLS and fixed) and short-term debt in Table 3 (under fixed effect at 5% level).

These findings suggest that large firms have the capacity to employ more debt, because they can hold a greater bargaining power towards creditors. In other words, larger firms might be more diversified and fail less often. To the extent that this is the case, small firms are expected to borrow less than large firms. Moreover, the informational asymmetries tend to be less severe for larger firms than for smaller firms and hence, large firms find it easier to raise debt financing. Therefore, a significant and positive debt level indicates that large firms in Nigeria depend more on short-term borrowing. This is probably because firms

with poor financial health solve the risk premium problem by issuing short-term borrowing as it involves less risk for creditors.

In the case of large firms, non-debt tax shield (NDTS) is positively related to both total debt and short-term debt (LEV3) in Tables 1 and 3. However, NDTS is negatively correlated with long-term debts in Table 2. The inverse relationship between NDTS and long-term debt suggests that tax deductions for depreciation, losses and investment tax credits are substitutes for the tax benefits of debt financing. Therefore a firm with a large non-debt tax shield is likely to be less leveraged.

Table 1: Regression Model Estimates: Total Liabilities (LEV1)

	OLS	Fixed Effect Result	Random Effect Result
Constant	0.3856 (3.4893)	0.3057 (2.4703)	-0.0518 (-0.2308)
PROF	0.0133 (1.0999)	0.0006 (0.0519)	0.0043 (0.2604)
TANG	0.0650 (1.0379)	0.3240 (3.7794)	0.8917 (7.8658)
GROW	-0.0007 (-0.0277)	0.0069 (0.3481)	-0.0142 (-0.5813)
SIZ	0.0152 (2.1433)**	0.0171 (2.2011)**	0.0243 (1.6438)
NDTS	0.5927 (1.1999)	0.6737 (1.3776)	3.6525 (4.7389)*
DIV	0.0116 (3.7352)*	-0.0005 (-0.1472)	-0.0020 (-0.2523)
Adjusted R <sup>2</sup>	0.1013	0.5241	0.2621
F – statistic	9.720 (0.0000)	14.44 (0.0000)	28.47 (0.0000)
D-Watson Stat	1.075	1.346	
Hausman Test	-	-	33.34 (0.0000)
Cross-sections included	33	33	33
Number of observations	465	465	465

*Profitability (PROF) refers to earning after interest and tax/ net assets, tangibility (TANG) is defined as fixed assets/total assets, growth prospect (GROW) refers to the ratio of total assets in year t to total assets in year t-1. Size (SIZ) is the natural logarithm of sales. Non-debt tax shield (NDTS) is defined as the ratio of depreciation to total assets and dividends (DIV) refers to dividend paid/total equity. Numbers in parentheses appearing below the coefficients are t-values. \*, \*\* and \*\*\* indicates the coefficient is significant at the 1, 5 and 10 percent levels respectively.*

The large firms results in Table 2 indicate that dividend (DIV) is positively correlated with long-term debt under each of the three estimation models. However, only the fixed effect result is statistically significant at the 5% confidence level. Both total debt and short-term debt are negatively correlated with dividend except in the pooled OLS results. In the case of short-term debt, none of the coefficients are significant. These results indicate that dividend payment does not represent a better financial approach for large firms in Nigeria.

## CONCLUSION

The results of this work further confirm some prior findings and extend the capital structure analysis by analyzing capital structure in Nigerian firms using additional firm characteristics such as non-debt tax shields, dividend and a decomposition analysis of firm leverage. The findings revealed that profitability has positive impact on leverage of large firms in Nigeria, confirming that the tax advantage of debt financing has relevance in these firms. The results indicate that large Nigerian firms are profitable and

Table 2: Regression Model Estimates: Long Term Liabilities (LEV2)

	OLS	Fixed Effect Result	Random Effect Result
Constant	0.1909 (6.0894)	0.0489 (1.6180)	0.0624 (1.2166)
PROF	0.0039 (1.5367)	0.0020 (0.7729)	0.0021 (0.5336)
TANG	0.0743 (4.2927)*	0.0685 (2.9396)**	0.0976 (3.7773)*
GROW	-0.0122 (-2.0078)**	-0.0084 (-1.7982)	-0.0129 (-2.2576)**
SIZ	-0.0095 (-4.5597)*	0.0007 (0.3648)	0.0005 (0.1335)
NDTS	-0.0144 (-0.1110)	-0.0790 (-0.6808)	-0.4013 (-2.2455)**
DIV	0.0018 (1.7937)	0.0029 (3.1037)**	0.0010 (0.5676)
Adjusted R <sup>2</sup>	0.0785	0.4469	0.0339
F – statistic	7.591 (0.0000)	10.867 (0.0000)	3.712 (0.0013)
D-Watson Stat	0.7167	0.9656	0.897
Hausman Test	-	-	13.774 (0.0323)
Cross-section included	33	33	33
Number of observations	465	465	465

*Profitability (PROF) refers to earning after interest and tax/ net assets, tangibility (TANG) is defined as fixed assets/total assets, growth prospect (GROW) refers to the ratio of total assets in year t to total assets in year t-1. Size (SIZ) is the natural logarithm of sales. Non-debt tax shield (NDTS) is defined as the ratio of depreciation to total assets and dividends (DIV) refers to dividend paid /total equity. Numbers in parentheses appearing below the coefficients are t-values. \*, \*\* and \*\*\* indicates the coefficient is significant at the 1, 5 and 10 percent levels respectively.*

they are expected to prefer debt in order to benefit from the tax shield. However, the results reveal that large firms in Nigeria prefer short-term debt to long-term debt financing. The study shows that there was a significant positive relationship between asset structure (tangibility) and long-term debt ratios. Therefore, collateral value is found to be a major determinant of the level of debt finance. The size of the company was found to have a statistically significant positive relationship with both total debt and short-term debt ratios for the sample.

The results reveal that dividend payment does not represent a better financial approach for large firms in Nigeria. In addition, non-debt tax shields are positively and significantly correlated with capital structure. This suggests that large Nigerian firms that have large non-debt tax shields are less leveraged. The evidence of the behavior of large firms in Nigeria is consistent with the trade-off theory.

In conclusion, management should strive to identify and maintain an optimal capital structure of the firm since it represents the point where the market value of the firm is maximized. Furthermore, the top echelon of company management should take interest in the issue of capital structure and constantly monitor its form and adaptability. Further study of this issue might involve taking a dynamic look at the issue and formulating dynamic models of debt policy with instrumental variables. Such an approach could enrich the analysis here. Dynamic models enable researchers to discriminate between the various factors that impact the capital structure and those that impact on the speed of adjustments.

Table 3: Regression Model Estimates: Short Term Liabilities (LEV 3)

	OLS	Fixed Effect	Random Effect
Constant	0.4179 (3.6602)	0.3046 (2.5175)	-0.0436 (-0.1975)
PROF	-0.0013 (-0.0988)	-0.0031 (-0.2459)	0.0011 (0.0691)
TANG	-0.0665 (-1.0551)	0.0762 (0.8978)	0.7718 (6.9140)*
GROW	0.0228 (0.9269)	0.0134 (0.6884)	-0.0007 (-0.0306)
SIZ	0.0068 (0.9333)	0.01616 (2.1516)**	0.0185 (1.2788)
NDTS	0.9941 (1.8822)	0.9382 (1.9774)	4.2496 (5.5897)*
DIV	0.0163 (4.8639)	-0.0017 (-0.4928)	-0.0005 (-0.0764)
Adjusted R <sup>2</sup>	0.0853	0.5855	0.2498
F – statistic	8.211 (0.0000)	18.250 (0.0000)	26.752 (0.0000)
D-Watson Stat	0.733	1.281	0.949
Hausman Test	-	-	31.898 (0.0000)
Cross-section included	33	33	33
Number of observations	465	465	465

*Profitability (PROF) refers to earning after interest and tax/ net assets, tangibility (TANG) is defined as fixed assets/total assets, growth prospect (GROW) refers to the ratio of total assets in year t to total assets in year t-1. Size (SIZ) is the natural logarithm of sales. Non-debt tax shield (NDTS) is defined as the ratio of depreciation to total assets and dividends (DIV) refers to dividend paid /total equity. Numbers in parentheses appearing below the coefficients are t-values. \*, \*\* and \*\*\* indicates the coefficient is significant at the 1, 5 and 10 percent levels respectively.*

## REFERENCES

- Banerjee, S., Heshmati, A. and Wihlborg, C. (2000), “The Dynamics of Capital Structure”. SSE/EFI *Working Paper Series in Economics and Finance* No. 333, May 12.
- Barclay, M.J. and Smith, C.W. (1996), On Financial Architecture: Leverage, Maturity and Priority, *Journal of Applied Corporate Finance*, 8(4), p.4-17.
- Bennett, M. and Donnelly, R. (1993), “The Determinants of Capital Structure: Some UK Evidence”, *British Accounting Review*, 25(1), p. 43-59.
- Berger, P. G., Ofek, E and Yermack, D.L. (1997), “Managerial Entrenchment and Capital Structure Decisions” *The Journal of Finance*, Vol.LII, No. 4, p.1411-38. September.
- Bevan, A. A. and Daubolt, J. (2001), “Testing for Inconsistencies in the Estimation of UK Capital Structure Determinants”, Working Paper 2001/4, Department of Accounting and Finance, University of Glasgow, Glasgow G 12 \*LE.
- Bhaduri, S.N. (2002), “Determinants of Capital Structure Choice: A Study of the Indian Corporate Sector”. *Applied Financial Economics*, Vol. 12, p. 655-665.
- Booth, L., Aivazian, Demirguc – Junt, A. and Maksimolic, V. (2001), “Corporate Structures in Developing Countries” to be Published in the *Journal of Finance*, Vol. 56, p.87-130.

- Bradley, M., Jarrell, G. and Kim, E. H. (1984), "On the Existence of an Optimal Capital Structure: Theory and Evidence," *Journal of Finance*, 39, p. 857 – 878.
- Chen, C.J.P., Cheng, C.S.A., He, J. and Kim, J. (1997), "An Investigation of the Relationship Between International Activities and Capital Structure", *Journal of International Business Studies*, (Third Quarter), p. 563-577.
- Chittenden, F., Hall, G. and Hutchinson, P. (1996), "Small Firm Growth, Access to Capital Markets and Financial Structure: Review of Issues and An Empirical Investigation". *Small Business Economics*, Vol. 8, p. 59-67.
- De Angelo, H. and Masulis, R. (1980), "Optimal Capital Structure under Corporate and Personal Taxation", *Journal of Financial Economics*, 8(1), p.3-29.
- Demirgüç – Kunt, A. and Maksimovic, V. (1996), "Stock Market Development and Corporate Finance Decisions". *Finance and Development* 33 (2), p. 47 – 49.
- Drobertz, W and Fix, R. (2003), "What are the Determinants of the Capital Structure? Some Evidence for Switzerland", WXYZ / Department of Finance, Working Paper No. 4103, University of Basel.
- Easterbrook, F. (1984), "Two-Agency Cost Explanations of Dividends, *American Economic Review*, 74, p. 650-659.
- Frank, M.Z. and Goyal, V.K. (2003), "Testing the pecking order theory of capital structure", *Journal of Financial Economics*, Vol.67, p. 217-248.
- Graham, J.R. (2000), "How big are the Tax Benefits of Debt?" *Journal of Finance* 55 (No. 5, October), pp. 1901-1941.
- Grossman, S. and Hart, O. (1982), "Corporate Financial Structure and Managerial Incentives", in the *Economics of Information and Uncertainty*, (ed.) J. McCall, Chicago: University of Chicago Press.
- Harris, M. and Raviv, A. (1991), "The Theory of the Capital Structure", *Journal of Finance* 46, p. 297-355.
- Jensen, M.C. and Meckling, W.H. (1976), "Theory of the Firm: Managerial Behaviour, Agency Costs and Ownership Structure", *Journal of Financial Economics*, 3, p. 305-360.
- Jensen, M. (1986), "Agency Costs of Free Cash Flozo, Corporate Finance and Takeovers, *American Economic Review*, 76.
- Jensen, M.; Solberg, D. and Zorn, T. (1992), "Simultaneous Determination of Insider Ownership, Debt and Dividend Policies", *Journal of Financial and Quantitative Analysis* 27, p. 247-261.
- Kester, V. (1986), "Capital and Ownership Structure: A Comparison of United States and Japanese Manufacturing Corporations" *Financial Management*, 15, p.5-16.
- Kremp, E., Stoss, E., and Gerrdesmeier, D. (1999), 'Estimation of a debt function: evidence from French and German firm panel data', in Sauve, A., Scheuer, M. (ed.) *Corporate finance in Germany and France*. A joint research project of Deutsche Bundesbank and the Banque de France, SSRN working paper.
- Michaelas, N., Chittenden, F. and Poutziouris, P. (1999), "Financial Policy and Capital Structure Choice in UK. SMEs: Empirical Evidence from Company Panel Data, *Small Business Economics* 12, p. 113-130.

Modigliani, F. and Miller, M.H. (58), “The Cost of Capital, Corporation Finance and the Theory of Investment”, *American Economic Review*, 48, p. 261-277.

Omet, G. and Mashharawe, F. (2002), “The Capital Structure Choice in Tax Contrasting Environments: Evidence from the Jordanian, Kuwanti, Omani and Sandi Corporate Sectors, The Economic Research Forum 10<sup>th</sup> Annual Conference, December (Marrakesh, Morocco).

Ozkan, A. (2000), “An Empirical Analysis of Corporate Debt Maturity Structure”, *European Financial Management*, 6(1), p.197-212.

Ozkan, A. (2001), “Determinants of Capital Structure and Adjustment to Long Run Target: Evidence from UK Company Panel Data” *Journal of Business Finance and Accounting* 28, p.175-198.

Rajan, R. and Zingales, L. (1995), “What do We Know about Capital Structure? - Some Evidence from International Data”, *Journal of Finance*, Vol.50, p. 1421-1460.

Salawu, R.O. (2006), “The Determinants of the Capital Structure of Financial Firms in Nigeria: The Financial Managers’ Perspectives” Proceeding of the 2006 Global Conference on Business and Finance, organized by the Institute for Business and Finance Research between 31 May and 3 June, at Costa Rica. p. 74-77.

Salawu, R.O. (2007), “An Empirical Analysis of the Capital Structure of Selected Quoted Companies in Nigeria”. An Unpublished M.Phil Thesis submitted to the Department of Management and Accounting, Obafemi Awolowo University, Ile-Ife, Nigeria.

Stohs, M. H and Mauer, D. C. (1996), “The Determinants of Corporate Debt Maturity Structure, *Journal of Business*, 69 (3), p. 279 – 312.

Timan, S. and Wessels, R. (1988), “The Determinants of Capital Structure choice”, *Journal of Finance*, 43, p.1-19.

Toy, N, Stonehill, A. , Remmers, L. , Wright, R. and Beekhuisen, T. (1974), “A Comparative International Study of Growth, profitability and risk as determinants of corporate debt ratios in the manufacturing sector”, *Journal of Financial and Quantitative Analysis*, 9, p. 875 – 886.

## **BIOGRAPHY**

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