

Trade-Off Variables and Market Value: An Estimated Panel Data Study of Quoted Small and Medium Scale Enterprises from Nigeria



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ABSTRACT: This study was undertaken to examine the relationship between trade off variables and market value of quoted small and medium scale enterprises in Nigeria. Secondary data obtained from financial statement of 10 quoted small and medium scale enterprises from 2009 – 2018. Market value was modeled as the function of, non-tax shield, business risk and tangibility. Panel data methods were employed while the fixed and random effects models were used as estimation technique at 5% level of significance. Fixed effects, random effects and pooled estimates were tested while the Hausman test was used to determine the best fit. Panel unit roots and panel cointegration analysis were conducted on the study. The study found that trade off variables has significant relationship with market value of the small and medium scale enterprises. From the regression summary, we conclude that, trade off variables have significant relationship with market value of the small and medium scale enterprises. We recommend that financial managers should institute sound, efficient and coherent capital structure management policies such that will enable them determine the right mix or combination of debt, equity or both that will enhance firms' value in Nigeria. Firm should expand to a level it does not result to diseconomies of scale and the eventual fall in the value of the small and medium scale enterprises. Government and policy makers should provide an enabling market environment capable of enhancing easy source of capital to enhance firm value in Nigeria. Management of the small and medium scale enterprises should employ more of long-term debt than equity capital in financing their operations, because it results in higher small and medium scale enterprises value. Corporate financial decision makers should employ more of long-term-debt than equity in their financial option. This is in line with the pecking order theory. Management of the small and medium scale enterprises should compare the marginal benefit of using long-term-debt to the marginal costs of long-term-debt before concluding on using it in financing their operations. This is because as shown by this work, long-term-debt impact positively on firm's value unlike equity capital.

KEYWORDS: Trade-Off Variables, Market Value, Estimated Panel Data, Quoted Small and Medium Scale Enterprises

INTRODUCTION

Prior to the emergence of behavioural finance, corporate financial decisions and finance management functions such as capital structure was mainly determine by the management and the internal operating factors of the firms such as the firm size, composition of assets, ownership structure, profitability and board composition. Every firm whether small scale firms or large scale firms need funds to operate; especially large scale firms, they need funds to expand their operations and activities (Akinyomi, 2013). The motive of every firm is to make profit, maximize owner's wealth, and to achieve this motive they need to source for fund in order to finance their operations and activities. Firms have multiple financing sources to finance their investment. Basically, financing sources can be categorized into two; the internal financing sources which include reserves and retained earnings; external financing which includes long-term loans, bond issuance, ordinary and preferred stock issuance. Capital structure theory proponents explained how firms finance investments using different sources of funds, such as short-term debts, long-term debts, common stock and preferred equity (Ebaid, 2009). The Firms can apply the capital structure theories suggestions for their investment portfolios.

According to the trade-off theory, financial leadership consists mainly of maximizing investors' equity by increasing the market value of the company (Aabi, 2014; Serrasqueiro et al., 2016). Proponents of the trade-off theory have suggested that an optimal capital structure maximizes the value of the firm by balancing the prices and benefits of an additional unit of debt (Serrasqueiro et al., 2016). In tradeoff theory, the interests of agents are dependable and valuable to the leader (Aabi, 2014). Firms achieve an optimal level of debt by balancing the benefits and costs of debt (Serrasqueiro et al., 2016). Determining the optimal capital

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structure of a firm is one of the financial management functions. Finance managers therefore have significant role in achieving optimal capital structure that will add value to a firm.

From the assumption of market imperfections, firms seem to get an optimal, value-maximizing debt-equity ratio by trading off the advantages of debt against the disadvantages. So firms will set a target debt ratio and gradually will move towards achieving it (Myers, 1984). One of the main assumptions in the Modigliani and Miller (1958) is that there are no taxes. The trade-off theory is a development of the Modigliani and Miller theorem but taking in consideration the effects of taxes and bankruptcy costs. This theory is considered as the first step for the development of many other theories which have studied how firms choose their capital structure. Modigliani and Miller's (1958) theory can be used to describe how firms use taxation to manipulate profitability and to choose an optimum debt level.

Trade-off theory supports the leverage to construct capital structure by assuming leverage-benefits. Optimal level of leverage is achieved by balancing the benefits from interest payments and costs of issuing debt. Financially, debt is considered beneficial because of the debt-tax-shields that help to minimize expected tax bills and maximize the after-tax cash flows (Modigliani & Miller, 1958). Trade-off theory hence predicts the cost and benefit analysis of debt financing to achieve optimal capital structure. The trade-off theory was seriously taken under consideration after the debate on the theorem of Modigliani-Miller (Imad, 2015). Trade-off theory's original version came into being after the debate of Modigliani-Miller theorem. When the irrelevance theorem was added with the corporate income tax, this favored benefit for debt; it shields the earnings from taxes. Firm manager evaluates and analyzes the various costs and benefits of several alternatives of leverage plans. Most of the time it is presumed that interior solution should be obtained so that balance can be acquired between marginal costs and benefits.

Furthermore, optimal capital structure is acquired by firms by trading off the costs of debt and equity against their benefits. Major benefit to use debt is the advantage of debt tax shield. On the other side cost of potential financial distress may be the disadvantages of debt, particularly when a firm acquires too much debt. Tax deductibility of interest payments is the main benefit of debt; this promotes the application of debt. It increases with the existence of non-debt tax protection (Duan, Chik bin and Liu, 2012) and personal taxes (Miller, 1977).

LITERATURE REVIEW

Concept of Trade off Variable

Trade off theory was formulated by Modigliani and Miller in 1963. The theory altered the underlying argument of their classical proposition of capital structure. They incorporate the corporate income tax and contend that the value of the firm, if levered, equals the value of the firm if unlevered plus the value of the generated tax benefit. Modigliani and Miller (1963) as Modigliani and Miller (1958) ignore the agency and bankruptcy costs of debt. To certain limits, the presence of agency and bankruptcy costs of debt may outweigh its tax benefit, suggesting that there is some threshold level of debt, under which the firm's value is maximized. This threshold of debt is generally called the optimal (target) level of capital structure and is defined by the trade-off between costs of debt and its benefits.

The static trade-off theory is about finding the optimal balance between the benefits and the cost of debt and equity (de Bie and de Haan, 2007). Based on the influence of tax and costs of financial distress, organizations have a target debt-to-equity ratio (Brounen, de Jong and Koedijk, 2006). The debt-to-equity ratio leads to the optimal capital structure for the organization. Organizations are trying to achieve this target ratio (Myers, 1984).

The trade-off theory suggests that an organization is balancing their choice for financing with debt or equity on the costs and the benefits of debt. The target debt-to-equity ratio is based on finding the best balance between the benefits of tax and the cost of financial distress. In most empirical studies, two proxies are taken in consideration to measure the trade-off theory. These proxies have to deal with the benefits of tax and the bankruptcy costs, the non-debt tax shield and the costs of financial distress (Aamir and Zullfiqar, 2011).

Most empirical studies found evidence that support the trade-off theory (Frank and Goyal, 2008). Deesomsak, Paudyal and Pescetto (2004) found empirical evidence that the trade-off theory influenced the capital structure decisions of firms in the Asia Pacific. De Haan and Hinloopen (2003) tested different proxies of the trade-off theory and found empirical evidence that the trade-off theory was an important determinant in the capital structure choice of their target sample. However, they did not found evidence for all the proxies they tested. Delcours (2007) found for organizations in the Western of Europe evidence that the trade-off theory was important in the financing choice. In their capital structure study of 42 countries, de Jong, Kabir and Nguyen (2008) found empirical evidence that the trade-off theory influenced the financing decisions. Brounen, de Jong and Koedijk (2006)

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showed also evidence of the existence of the trade-off theory in organizations. They investigated firms in four countries, including the Netherlands. Overall, they found for all four countries a moderately support of the trade-off theory.

Non-debt tax shield

The non-debt tax shield influences the capital structure of an organization (Miller, 1977). DeAngelo and Masulis (1980) presented a model which incorporated corporate tax, personal tax and non-debt tax shield in order to find the optimal capital structure. Interest, which should be paid over debt, is tax deductible. Therefore firms prefer to finance their deficit with debt instead of equity. According to DeAngelo and Masulis (1980), the non-debt tax shield is a substitute for the benefits of debt financing. Firms are motivated to use debt instead of equity in order to save corporate taxes. The non-debt tax shield can be used as depreciation to reduce the tax of the corporation. Firms with large non-debt tax shields, this are organizations which has a low taxable income, issue less debt. De Jong (2002) investigated Dutch listed firms and found that the leverage of Dutch organizations is determined by the non-debt tax shield.

Financing with debt has some benefits. DeAngelo and Masulis (1980) stated that the non-debt tax shield is a substitute for these benefits of debt. Interest is tax deductible, therefore organizations are motivated to finance with debt instead of equity. As a consequence, firms with a large non-debt tax shield issues less debt. A common way to measure non-debt tax shield is dividing depreciation by total assets (Deesomsak, Paudyal and Pescetto, 2004; Degryse, de Goeij and Kappert, 2012; Delcoure, 2007; Frank and Goyal, 2008; de Haan and Hinloopen, 2003; Titman and Wessels, 1988).

Business Risk

Businesses face the risk that they go bankrupt. Paying the debt holders is mandatory, while paying returns to the shareholder is voluntary. If an organization fails in servicing debt, the debt holders can ask for bankruptcy of the organization (de Jong, 2002). Debt has some influence on this risk of going bankrupt. The disadvantage of debt is that it increases the possibility of going bankrupt. This possibility of going bankrupt produces costs for the organization: (1) direct costs and (2) indirect costs. Direct costs include administrative fees and legal fees, such as accountants. Indirect costs are costs which are not directly related to the possibility of going bankrupt, but it is the cause of costs like loss of sales, employees who leave the company, additional cost to operate, et cetera (Hillier, Jaffe, Jordan, Ross and Westerfield, 2010). Business risk increases the bankruptcy costs.

However, the use of tangible assets can reduce the costs of financial distress (Delcoure, 2007). De Jong, Kabir and Nguyen (2008) and de Jong (2002) used business risk, tangibility and size as proxies to measure the cost of financial distress. Where some researchers found significant evidence that business risk influenced the financial leverage of an organization (de Jong, 2002; de Jong, Kabir and Nguyen, 2008), Antoniou, Guney & Paudyal (2008), Delcoure (2007), de Jong (2002) and Titman and Wessels (1988) found empirical evidence that there was a relationship between tangibility and financial leverage.

Business risk has to deal with the risk that an organization goes bankrupt. Earnings volatility is an important determinant in determining business risk and is used by several researchers (Antoniou, Guney and Paudyal, 2008; Brounen, de Jong and Koedijk, 2006; Delcoure, 2007; de Jong, 2002; de Jong, Kabir and Ngyen, 2008). De Jong, Kabir and Ngyen (2008) stated that higher risk indicates higher volatility of earnings and higher probability of bankruptcy. Organizations which have a higher earnings volatility faces the risk that their earnings are not enough to pay their debt servicing to the debt holders. Therefore, organizations with higher earnings volatility have a larger probability of financial distress (Delcoure, 2007). This leads to an increase in the rate of return to the debt holders, because the business risk is higher.

Tangibility

The costs of financial distress play an important role in the trade-off theory. Tangible assets can reduce the bankruptcy costs. This is because tangible assets can be used as collateral. In this way, lenders are provided with securities when the firm is in financial distress and the organization can obtain debt. When the organization provides the lenders with collateral, the risk of the lenders has decreased. In this way, an organization can borrow debt even if the organization is in financial distress (Delcoure, 2007). Delcoure (2007) found a positive relationship between asset tangibility and leverage, just as Titman and Wessels (1988). De Jong (2002) found also a positive relationship between tangibility and leverage for large Dutch listed firms.

Tangible assets reduce the costs of financial distress if they are used as collateral. The risk of the debt holder decreases, which means that organization, can borrow loans at a lower rate. Tangibility is by Chen and Jiang (2001), Deesomsak, Pescetto and Paudyal (2004) and de Jong, Kabir and Nguyen (2008) defined as total fixed assets divided by the total assets.

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Tax Advantage and Reduction of Free Cash Flow

It has been argued that the corporate profit tax treatment allows for the deduction of interest payments in computing taxable income (Modigliani Miller, 1963). Consequently, using debt decreases a firm's expected tax liability and increases its after-tax cash flow, making profitable firms employ more debt to increase the value of their debt tax shield. However, Taggart (1985) contends that corporate debt enjoys a net tax advantage when corporate tax rates exceed marginal personal tax rates. This violates the earlier Modigliani- Miller conclusion regarding corporate income tax, making corporate tax deductions at least partially offset by additional personal tax liabilities of the acquiring debt holders.

Miller (1977) claimed that even in a world in which interest payments are fully deductible in computing corporate income taxes, the value of the firm, in equilibrium will still be independent of its capital structure. Miller (1977) concluded that personal income taxes paid by investors in corporate debt just offset the corporate tax shield provided that the firm pays the full statutory tax rate. Miller (1977) concluded that the firm should be indifferent to the level of outstanding debt since there is no optimal level of debt for the firm; it exists only for the whole economy. Hence, the presence of a personal tax rate with corporate income tax induce investors to demand premiums to compensate for the reduction in the net income (Graham, 2003), making the use of debt negatively related to the personal tax rate and positively related to the corporate income rate.

Reduction of Free Cash Flow Agency Costs

It worth noting that the tax advantage of debt is not the sole reason for using debt; this has been suggested by Jensen and Meckling (1976) and Jensen (1986) as a mechanism to mitigate the agency costs of managers-shareholders conflicts. The agency theory of Jensen and Meckling (1976) addresses the incentive problems that could arise due to the separation between ownership and control. This separation may provide them with the incentive to maximize their wealth in a way that may harm stockholders. They may conduct actions that are costly to shareholders, such as consuming excessive perquisites or over-investing in managerially rewarding but unprofitable activities or to overvalue the investment requirements and to take the difference between the dummy value and real value of investment.

Gillan and Starts (2003) claimed that the separation between ownership and control is not the only factor that gives rise to the agency problems, the diffuse nature of corporate ownership may motivate the agency problem, where no incentive exists for small shareholders to bear the cost of monitoring the management behaviour. The conflict of interests between managers and shareholders and thereby its costs, will significantly increase when managers have free cash under control. Jensen (1986) addresses the agency problem in his free cash flow theory which is formally modelled by Stulz (1990). Jensen (1986) defined free cash flow as cash flow in excess of that required funding all projects that have positive net present value when discounted at the relevant cost of capital. Accordingly, when managers have more cash flow than is needed to fund all of the firm's available profitable projects, they will have the incentive to invest the excess cash in unprofitable projects (Jensen, 1986).

The introduction of debt decreases stockholder-manager agency costs, but as the use of debt increases, stockholders and bondholders agency costs arise. For a large amount of debt, these costs will exceed the stockholder-manager agency costs savings. According to Jensen and Meckling (1976), the trade-off between these costs results in an optimal capital structure. In a traditional tax/bankruptcy trade-off model, the stockholder-manager agency costs savings and stockholders and bondholders agency costs are not considered. Tong and Green (2005) have argued that the modern version of trade-off theory is based on trade-offs among agency costs, implying that value-maximizing firms consider all the costs and benefits of debt when setting their optimal or target capital structure. The following section analyzes the bankruptcy/financial distress and agency costs of debt.

Firm Value

Firm value is a measure of a company's total value. It looks at the entire market value rather than just the equity value, so all ownership interests and asset claims from both debt and equity are included. Firm value can be thought of as the effective cost of buying a company or the theoretical price of a target company (before a takeover premium is considered). The value of the company can be derived from the assets it owns. However, obtaining the market value of each and every asset can be quite tedious and difficult. What we could do instead is look at how the assets have been paid for. The simple accounting equation can serve as a guide by looking at assets as the application of funds and both liabilities and shareholders' equity as the sources of funds used to finance those assets (Cheng and Tzeng, 2011). Corporate value means current or market value of the company, so it's the market value of liabilities and the market value of equity that we consider.

The Firm value represents the right to buy a firm's core cash flow; it's the acquisition cost of the firm. As such, it must incorporate not just the market capitalization but also the net debt and all claims pertaining to preferred stock and non-controlling minority interests as well. The non-operating assets (net cash balances) that do not contribute to the day-to-day-operations of the firm need to be deducted. One method of predicting the enterprise value is based upon the projection of expected future after-tax

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cash flows, after taking into account investments in capital assets and net working capital. It's treated as a perpetuity that grows at a constant growth rate and is discounted at a weighted average cost of capital. However, this paper utilizes a linear operational model that can be expressed as:

$$\text{Enterprise Value (EV)} = \text{Market Capitalization (MC)} + \text{Debt (D)} + \text{Non-controlling minority interest (MI)} + \text{Preferred Shares (PS)} - \text{Excess Cash (EC)}$$

Where

The market capitalization (MC) is the number of common diluted shares outstanding multiplied by the share price. The diluted shares reflect any changes from the exercise or conversion of options, warrants, and convertible securities. The debt (D) comprises all long-term debt and the current portion of long-term debt. Capital leases are also included. Once a business is acquired, its debt has also been acquired.

Market Value

Market value is the value of an asset/security as determined by the forces of demand for and supply of the assets. It is the perceived or observed value of an asset on the market. It is also known as current value. It is in fact the mutually accepted worth (cost or price depending on the individual) of the asset after negotiation. Most assets that have market values have their values determined by specialized markets such as the stock exchange. The acceptance of any asset depends on the perception of the potential investor after comparing the market value to the intrinsic value. An asset is undervalued or under-price or favorably priced if the market value of the asset is less than the intrinsic value. If the intrinsic value of the asset is less the market value, then the asset is overvalued, over-priced or favorably priced. Where the latter occurs, the investor would ordinarily be acquiring an asset at more expensive value than he would ordinarily have paid. An investor would acquire an overpriced asset if he expects the asset to record a bullish price movement such that if the anticipated price movement crystallizes, the investor can make capital gain.

Empirical Review

Imad (2015) examined the impact of the leverage on the firms' value utilizing unbalanced pooled Ordinary Least Square (OLS) cross-sectional time series panel data regression approach to all listed companies in Amman Stock Exchange (ASE) during the period 2000-2013 after excluding the financial sector and services sector, due to their own characteristics. F-test was used to test the hypothesis that the changes in the firms' leverage level significantly explain the changes in the firms' value. The results shows that the firms' leverage level affect the firms' value for the Jordanian listed companies included in the sample test.

Taiwo (2015) examined the optimum level of capital structure through which a firm can increase its financial performance using annual data of ten firms spanning a five-year period. The results from Im, Pesaran Shine unit root test show that all the variables were non-stationary at level. The study hypothesized negative relationship between capital structure and operational firm performance. However, the results from Panel Least Square (PLS) confirm that asset turnover, size, firm's age and firm's asset tangibility are positively related to firm's performance. Findings provide evidence of a negative and significant relationship between asset tangibility and ROA as a measure of performance in the model. The implication of this is that the sampled firms were not able to utilize the fixed asset composition of their total assets judiciously to impact positively on their firms' performance. Hence, this study recommends that asset tangibility should be a driven factor to capital structure because firms with more tangible assets are less likely to be financially constrained.

Saeed and Badar (2013) examined the impact of capital structure on firm performance by analyzing the ROA and ATR against different levels of debt i.e. STD, LTD and TD. The results came were different from most of the previous studies. According to the results LTD has a significantly positive impact on the ROA. The results were compatible with Aghabeygzadeh and Akbarpour (2011) as they found a positive impact as well. On the other hand TD and STD were found to have a negative but significant effect on the ROA. The reason mentioned by the author is that because the LTD is mostly given by banks and due to competition among the banks the LTDs are usually taken with lower required rate of returns and also efficiently use of the funds. STD has relatively higher required rate of return and because in Pakistan the Money Market is not well developed and that's why affect negatively the ROA. Patel and Bhatt (2013) discussed the impact of the capital structure on the performance of the firm for the nonfinancial firms listed on the National Stock Exchange by studying any alteration in firm's Net Operating Profitability (NOP) due to change in capital structure variables. The author ended up with a conclusion that Total Debt has a negative impact on the firm's profitability. LTD was also found to have an indirect impact on the firm's net profitability, this was attributed by the author that as LTD increases the management started fearing about their jobs and thus lead to underinvestment, plus the high interest rates incurred on LTD increases the fixed cost and ultimately financial leverage and thus decreases free cash flows and eventually profitability (Mesquita

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and Lara, 2003). Equity was found to have a positive impact on the net profits and the author has suggested for the firms to go for equity financing.

Saeed, Gull and Rasheed (2013) gave empirical results for the impact of capital structure on firm performance by observing firm performance against the capital structure decisions. Based on the results of the study STDTA has a positive and significant impact on ROA, ROE and EPS while LTDTA was found to be negatively related to all the performance variables. On the other hand TD proved to have an optimistic impact of ROA, ROE and EPS. SIZE of the firm also affected the performance positively and significantly as well. AG (Assets Growth) affected ROA and ROE insignificantly negative but for EPS the relation was significantly negative. The reason for positive impact of STDTA was because of its lower required rate (Mesquita & Lara, 2003). An addition to that according to the author STDTA is easily accessible as compared to LTDTA because bonds market is not yet developed in the country.

Yuvarajsambasivam and Gashaw (2013) examined the effects of firm specific factors (age of company, size of company, volume of capital, leverage ratio, liquidity ratio, growth and tangibility of assets) on profitability proxies by Return on Assets. Profitability is dependent variable while age of company, size of company, volume of capital, leverage, liquidity ratio, growth and tangibility of assets are independent variables. The sample in this study includes nine of the listed insurance companies for nine years (2003-2011). From the regression results; growth, leverage, volume of capital, size, and liquidity are identified as most important determinant factors of profitability hence growth, size, and volume of capita are positively related. In contrast, liquidity ratio and leverage ratio are negatively but significantly related with profitability. The age of companies and tangibility of assets are not significantly related with profitability.

Babalola (2014) used 31 manufacturing firms with audited financial statements for a period of fourteen years (1999-2012) from static trade-off point of view. He employed the triangulation analysis and the study revealed that capital structure is a trade-off between the costs and benefits of debt, and it has been refuted that large firms are more inclined to retain higher performance than middle firms under the same level debt ratio.

Akinyomi (2013) used three manufacturing companies selected randomly from the food and beverage categories and a period of five years (2007-2011) using the static trade-off and the pecking order theory point of view. He adopted the use of correlation analysis method and revealed that each of debt to capital, debt to common equity, short term debt to total debt and the age of the firms' is significantly and positively related to return on asset and return on equity but long term debt to capital is significantly and relatively related to return on asset and return on return on equity. His hypothesis also tested that there is significant relationship between capital structure and financial performance using both return on asset and return on equity.

Bassey, Aniekan, Ikpe and Udo (2013) used a sample of 60 unquoted agro-based firms in Nigeria within a period of six years (2005-2010) from the agency cost theory point of view. They employed the Ordinary Least Square regression and descriptive statistics and revealed that only growth and educational level of firms owners were significant determinants of both long and short term debt ratios, assets structure, age of the firms, gender of owners and export status impacted significantly on long term debt ratios, while business risk, size and profitability of firms were major determinants of short term debt ratio for the firms under investigation.

Literature Gap

The literature examined in this study did not investigate the relationship between the tradeoff theory and market value of quoted small and medium scale enterprises in Nigeria. Studies that attempted to do so failed to establish exact and causal relationship between the variables (Aisjah, 2017, Lawal, 2014) this study enhances the analysis by establishing the causal dynamic relationship that exists between trade-off theory and market value of quoted small and medium scale enterprises in Nigeria.

METHODOLOGY

This study used quasi-experimental research design approach for the data analysis. This approach combines theoretical consideration (a priori criterion) with the empirical observation and extracts maximum information from the available data. It enables us therefore to observe the effects of explanatory variables on the dependent variables. In order to examine the effect of trade off variables and market value of quoted small and medium scale enterprises in Nigeria, this study focuses on Nigerian quoted small and medium scale enterprises in Nigeria, listed on stock exchange. The chosen time period is 2009 - 2019, which is a total 10 years. According Nigeria Stock Exchange reports 2019, there are 10 quoted small and medium scale enterprises trading in the second tier security market. Therefore the population of this study 10 quoted small and medium scale enterprises. Our original sample consisted of 10 quoted entrepreneurial firms. All non - quoted Nigerian firms, are excluded, thus including these could mislead the results. The above the sample size of the study is the existing 10 quoted small and medium scale enterprises in

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Nigeria. The reason for the sample size is for easy source and reliability of required data from the annual reports submitted to the exchange.

Model Specification

In order to achieve the objectives of this study and test of the hypotheses, a functional relationship in form of multiple linear regression model consisting of dependent and independent variables will be formulated. The regression models are presented as follows;

Trade-Off Variables

$$MV = \beta_0 + \beta_1 NTS_{it} + \beta_2 BR_{it} + \beta_3 TB_{it} + \mu_{it} \quad (1)$$

Where

MV = Market value of the quoted entrepreneurial firms

NTS = Non-tax shield

BR = Bankruptcy Risk

TB = Tangibility

μ_{it} = Stochastic or disturbance/error term.

α_0 = Constant or intercept.

Methods of Data Analysis

The study used multiple regression defined as an equation with one dependent variable and more than one independent variables, the technique used in this study is the Ordinary Least Square (OLS) estimation technique. The test instruments in the OLS are the T-statistic and F-test which were used to test the significance of variables and the overall significance of the regression respectively. Other test instruments also employed were the Durbin Watson test which was used to test the presence or absence of auto correlation between and among the explanatory variables and the adjusted R square used to test the percentage variation of the dependent and the independent variables.

Pooled Regression

According to Brooks (2014) we started by testing pooled regression by using ordinary least squares (OLS) first as it is the simplest to do with panel data. This will lead to assumptions of no heterogeneity and no time-specificity, thus the disadvantage - the information is lost in time dimension and cross-section dimension.

Redundant Fixed Effect Test

The study used redundant fixed effect test, also called likelihood ratio test, to test whether the data can simply be pooled and estimated using a standard ordinary least squares regression model effects panel regression model can be employed (Brooks 2014). The study used exercise redundant fixed effect test by E-views, with the null hypothesis that a pooled sample can be employed.

Fixed Effects Model vs. Random Effects Model

Fixed effects models allow the intercept in the regression model to differ cross-sectionally but not over time, while all of the slope estimates are fixed both cross-sectionally and over time (Brooks, 2014). With time-fixed effects models, the average value of $y_{(i,t)}$ is assumed to change over time but not cross-sectionally, hence the intercepts would be allowed to vary over time but be the same across entities at each given point in time (Brooks, 2014). Although fixed effects model is easy to apply, there are drawbacks. Gujarati (2004) argues that when introducing many dummy variables, the degrees of freedom would decrease. Problems with many dummy variables can also cause the possibility of multicollinearity to increase. With both entities fixed effects and time fixed effects, a model would contain both cross-sectional and time series dummies (Brooks, 2014).

Hausman Test

Since random effects model is invalid when heterogeneity exists, meaning that error term is correlated with explanatory variables, Hausman test is often used to test whether a variable can be treated as exogenous or whether that variable needs a separate structural equation. Hausman test refers to a test for whether a random effects approach to panel regression is valid or whether a fixed effects model is necessary (Brooks, 2014). We exercise Hausman test by E-views, with the null hypothesis that random effects model can be applied.

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Table 1: Measurement of Variables and a-Priori Expectations

| Variable | Measurement | Notation | Expected Relationship |
|----------------|--|----------|-----------------------|
| Market value | Log of end of the year share trading price | MV | Dependent variable |
| Non-tax shield | Log of depreciation to total assets | NTS | - |
| Business risk | Log of variation in total revenue | BR | - |
| Tangibility | Log of total fixed assets to total assets | TB | + |

RESULTS AND DISCUSSION OF FINDINGS

Table 2: Analysis of Panel Unit Root

| Method: Series: MV | Statistic | Prob.** | Cross-sections | Obs |
|--|-----------|---------|----------------|-----|
| PANEL A: Panel Unit Root at Level | | | | |
| Levin, Lin & Chu t* | -0.26937 | 0.3938 | 9 | 72 |
| Im, Pesaran and Shin W-stat | 1.46296 | 0.9283 | 8 | 64 |
| ADF - Fisher Chi-square | 7.29887 | 0.9671 | 8 | 64 |
| PP - Fisher Chi-square | 23.9910 | 0.0897 | 8 | 72 |
| Series: D(NTS) | | | | |
| Levin, Lin & Chu t* | -0.68958 | 0.2452 | 10 | 70 |
| Im, Pesaran and Shin W-stat | -1.13986 | 0.1272 | 10 | 70 |
| ADF - Fisher Chi-square | 33.2343 | 0.0318 | 10 | 70 |
| PP - Fisher Chi-square | 70.5756 | 0.0000 | 10 | 80 |
| Series: TB | | | | |
| Levin, Lin & Chu t* | -3.17453 | 0.0008 | 10 | 80 |
| Im, Pesaran and Shin W-stat | -0.55737 | 0.2886 | 10 | 80 |
| ADF - Fisher Chi-square | 20.8919 | 0.4035 | 10 | 80 |
| PP - Fisher Chi-square | 30.1578 | 0.0673 | 10 | 90 |
| Series: BR | | | | |
| Levin, Lin & Chu t* | -7.31890 | 0.0000 | 10 | 80 |
| Im, Pesaran and Shin W-stat | -2.42377 | 0.0077 | 10 | 80 |
| ADF - Fisher Chi-square | 42.7962 | 0.0022 | 10 | 80 |
| PP - Fisher Chi-square | 56.3438 | 0.0000 | 10 | 90 |
| PANEL A: Panel Unit Root Difference Level | | | | |
| Series: D(MV,2) | | | | |
| Levin, Lin & Chu t* | -17.2049 | 0.0000 | 8 | 48 |
| Im, Pesaran and Shin W-stat | -5.07219 | 0.0000 | 8 | 48 |
| ADF - Fisher Chi-square | 56.9027 | 0.0000 | 8 | 48 |
| PP - Fisher Chi-square | 79.9143 | 0.0000 | 8 | 56 |
| Series: D(NTS,2) | | | | |
| Levin, Lin & Chu t* | 1.97050 | 0.9756 | 10 | 60 |
| Im, Pesaran and Shin W-stat | -3.32612 | 0.0004 | 10 | 60 |
| ADF - Fisher Chi-square | 48.9926 | 0.0003 | 10 | 60 |
| PP - Fisher Chi-square | 105.424 | 0.0000 | 10 | 70 |
| Series: D(TB,2) | | | | |
| Levin, Lin & Chu t* | -5.62115 | 0.0000 | 10 | 60 |
| Im, Pesaran and Shin W-stat | -3.00476 | 0.0013 | 10 | 60 |
| ADF - Fisher Chi-square | 47.7969 | 0.0005 | 10 | 60 |
| PP - Fisher Chi-square | 125.742 | 0.0000 | 10 | 70 |
| Series: D(BR,2) | | | | |
| Levin, Lin & Chu t* | -10.2914 | 0.0000 | 10 | 60 |
| Im, Pesaran and Shin W-stat | -3.68816 | 0.0001 | 10 | 60 |

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| | | | | |
|-------------------------|---------|--------|----|----|
| ADF - Fisher Chi-square | 52.1683 | 0.0001 | 10 | 60 |
| PP - Fisher Chi-square | 126.035 | 0.0000 | 10 | 70 |

Source: Computed by Researchers from E-view 9.0

The null hypothesis of the non-stationary data is accepted at the 5% level of significance because the statistics of the ADF test at the same level form two variables that are less than their respective critical values. It was also found that it could not be rejected for the level. The study accepted the alternate hypothesis and rejected the null hypothesis for the following reasons. First and foremost, the output file of the results indicates that all the variables are the stationary first difference. This has an implication of the rejection of the null hypothesis and acceptance of the alternate hypothesis because of no significant trend yet availability of stationary data.

Table 3: Presentation of Regression Results

| Variable | t- | | | | t- | | | |
|--|-------------------|------------|--------------|--------|-------------------------------------|------------|-------------|--------|
| | Coefficient | Std. Error | Statistic | Prob. | Coefficient | Std. Error | t-Statistic | Prob. |
| PANEL A: FIXED EFFECT MODEL | | | | | PANEL B: RANDOM EFFECT MODEL | | | |
| BR | 0.819030 | 1.112964 | 0.735900 | 0.4638 | 0.583670 | 1.043476 | 3.559351 | 0.0000 |
| - | - | - | - | - | - | - | - | - |
| NTS | 0.175837 | 0.692904 | -0.253768 | 0.8003 | -0.157713 | 0.691038 | 0.228226 | 0.8200 |
| - | - | - | - | - | - | - | - | - |
| TB | 0.879384 | 0.749814 | -1.172804 | 0.2441 | -0.657478 | 0.699102 | 0.940461 | 0.3493 |
| C | 0.354652 | 1.938423 | 0.182959 | 0.8553 | 0.327240 | 1.925661 | 0.169936 | 0.8654 |
| R2 | 0.744301 | | | | 0.710068 | | | |
| Adj R2 | 0.709032 | | | | 0.620867 | | | |
| F-Stat | 21.10360 | | | | 11.35468 | | | |
| F-prob | 0.000000 | | | | 0.000000 | | | |
| DW | 1.169493 | | | | 1.119836 | | | |
| Cross-section random effects test comparisons | | | | | | | | |
| BR | 0.819030 | 0.583670 | 0.149847 | 0.5432 | | | | |
| - | - | - | - | - | - | - | - | - |
| NTS | 0.175837 | -0.157713 | 0.002583 | 0.7214 | | | | |
| - | - | - | - | - | - | - | - | - |
| TB | 0.879384 | -0.657478 | 0.073477 | 0.4130 | | | | |
| BR | 0.819030 | 0.583670 | 0.149847 | 0.5432 | | | | |
| Correlated Random Effects - Hausman Test | | | | | | | | |
| Test Summary | Chi-Sq. Statistic | | Chi-Sq. d.f. | Prob. | | | | |
| Cross-section random | 1.282010 | | 3 | 0.7334 | | | | |

Source: Computed by Researchers from E-view 9.0

Table 3 presents the result of Hausman test. Meanwhile, the result shows the chi-square value of 1.282010 alongside the probability value of 0.7334 which implies that there is enough evidence to accept the null hypothesis of random effect model is appropriate. From the foregoing, it thus stands that among the two estimators (fixed effect model and random effect model) used for analysis in this study, random effect estimates presented the most efficient and consistent estimate that can track the true nature of the nexus between trade-off variables and enterprise value.

The result of random effect estimation reveals that the adjusted R-squared (R^2) value is 0.709032, that is 70.9 percent, implying that the independent variables such as business risk, non-tax shield and tangibility account for 70.9 percent variation in the market value of the quoted small and medium scale enterprises in Nigeria. However, the F-statistic value is 21.10360 and its p-value is 0.000000 indicating that the independent variables jointly can impact significantly in market value of the quoted small and medium scale enterprises in Nigeria. The Durbin-Watson reveals that there is no serial correlation in the variables. Nonetheless, the beta coefficient of constant is positive with the value of 1.925661 and its p-value is 0.8654 indicating that when

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all the independent variables are held constant, there will be a positive variation up to the tune of 0.8 units in market value of the quoted entrepreneurial firms and it is significant.

Additional, the coefficient of business risk is 0.583670 and p-value is 0.0000 implying that business risk has a positive coefficient and significant to influence market value of the quoted small and medium scale enterprises in Nigeria. The coefficient value of non-tax shield is -0.157713 and its p-value is 0.8200 meaning that non-tax shield is negative and not significant to impact on market value of the quoted small and medium scale enterprises in Nigeria, the coefficient value of tangibility is -0.657478 and its p-value is 0.3493 meaning that tangibility have negative and not significant to impact on market value of the quoted small and medium scale enterprises in Nigeria.

Table 4: Presentation of cointegration test

| | <u>Statistic</u> | <u>Prob.</u> | <u>Weighted Statistic</u> | <u>Prob.</u> | |
|--|------------------|-------------------|---------------------------|--------------|-----|
| Panel v-Statistic | -12.94416 | 0.0000 | -1.479384 | 0.9305 | |
| Panel rho-Statistic | -0.440641 | 0.3297 | 1.814180 | 0.0052 | |
| Panel PP-Statistic | -4.792220 | 0.0000 | -0.046961 | 0.4813 | |
| Panel ADF-Statistic | 2.727497 | 0.0068 | 2.364904 | 0.0010 | |
| | <u>Statistic</u> | <u>Prob.</u> | | | |
| Group rho-Statistic | 2.654851 | 0.0060 | | | |
| Group PP-Statistic | -0.290818 | 0.3856 | | | |
| Group ADF-Statistic | 3.302328 | 0.0095 | | | |
| Cross section specific results | | | | | |
| Phillips-Peron results (non-parametric) | | | | | |
| Cross ID | AR(1) | Variance | HAC | Bandwidth | Obs |
| Afrik Pharmacuetical Plc | | Dropped from Test | | | |
| Anino International Plc | -0.025 | 0.000585 | 0.000594 | 1.00 | 9 |
| Capital Oil Plc | -0.426 | 0.006195 | 0.006023 | 1.00 | 9 |
| Chellarams Plc | 0.053 | 0.012169 | 0.008299 | 8.00 | 9 |
| Juli Plc | 0.477 | 0.004183 | 0.004921 | 2.00 | 9 |
| Mc Nichols Plc | 0.412 | 0.010251 | 0.010251 | 0.00 | 9 |
| Omoluabi Mortgage Bank | -0.135 | 0.004344 | 0.004344 | 0.00 | 9 |
| Rak Unity Pet, Coy, Plc | 0.332 | 0.004463 | 0.004225 | 1.00 | 9 |
| Smart Products Nig. Plc | 0.427 | 0.003715 | 0.004304 | 1.00 | 9 |
| The Initiates Plc | -0.772 | 0.127829 | 0.140572 | 1.00 | 9 |
| Augmented Dickey-Fuller results (parametric) | | | | | |
| Cross ID | AR(1) | Variance | Lag | Max lag | Obs |
| Afrik Pharmacuetical Plc | | Dropped from Test | | | |
| Anino International Plc | 0.190 | 0.000539 | 1 | -- | 8 |
| Capital Oil Plc | -0.290 | 0.005829 | 1 | -- | 8 |
| Chellarams Plc | -0.393 | 0.010250 | 1 | -- | 8 |
| Juli Plc | 0.743 | 0.003329 | 1 | -- | 8 |
| Mc Nichols Plc | 0.135 | 0.004528 | 1 | -- | 8 |
| Omoluabi Mortgage Bank | -0.169 | 0.004750 | 1 | -- | 8 |
| Rak Unity Pet, Coy, Plc | 0.263 | 0.004899 | 1 | -- | 8 |
| Smart Products Nig. Plc | 0.242 | 0.003581 | 1 | -- | 8 |
| The Initiates Plc | 0.005 | 0.100824 | 1 | -- | 8 |

Source: Computed by Researchers from E-view 9.0

The Pedroni Residual Co-integration technique is applied to explore the possibility of long-run equilibrium. Co-integration test clarifies the existence of long-run equilibrium relationship between the variables. The study estimated that the Pedroni (1999) extends the procedure of residual-based panel Cointegration tests model using market value (Dependent variable) and the independent variables with Individual intercept and individual trend. In the seven tests, there are eleven outcomes. And we shall

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consider the entire outcome. In this outcome result shows that probability value is more than 5%, meaning that we cannot reject the null hypothesis and six results shows that probability value is less than 5% meaning that we can reject the null hypothesis. Our null hypothesis is, there is co-integration and the alternative hypothesis is there is co-integration.

Here out of eleven corresponding probabilities, 10 can reject the null hypothesis meaning that majority can reject the null hypothesis. So we can take the decision that we should reject null hypothesis and can accept the alternative hypothesis meaning that our independent variables such as trade-off variables are co-integrated, meaning that they have long run associations. From the above results, we test for causality using Granger causality test.

Table 5: Presentation of Granger Causality Test

| Null Hypothesis: | Obs | F-Statistic | Prob. |
|-------------------------------|-----|-------------|--------|
| BR does not Granger Cause MV | 80 | 0.53401 | 0.5885 |
| MV does not Granger Cause BR | | 0.03409 | 0.9665 |
| NTS does not Granger Cause MV | 80 | 0.47707 | 0.6225 |
| MV does not Granger Cause NTS | | 0.09425 | 0.9102 |
| TB does not Granger Cause MV | 80 | 0.56792 | 0.5691 |
| MV does not Granger Cause TB | | 0.23756 | 0.7891 |

Source: Computed by Researchers from E-view 9.0

As summarized in Table 5 there is no causal relationship found between trade off variables and market value. The absence of causality between trade off variables and market value of the quoted entrepreneurial firm contradict our a-priori expectation.

Discussion of Findings

The estimated multiple regression results on the relationship between trade off variables and market value of the quoted entrepreneurial found that business risk have positive and significant relationship with market value of the quoted small and medium scale enterprises in Nigeria. The estimated coefficient found that a unit increase in business risk lead to 0.58 percent increase on the market value of the quoted small and medium scale enterprises in Nigeria. From the measurement and a-priori expectation, the positive relationship between business risk and market value of the firms contradict our a-priori expectation as we expected negative relationship between business risk and market value of the quoted small and medium scale enterprises in Nigeria. The positive relationship can be traced to measures adopted by the firms to manage business risk. The positive findings contradict the findings of De Jong, Kabir and Nguyen (2008) found a negative relationship between business risk and leverage. De Jong (2002) stated that organizations with higher business risk obtain less debt. Therefore, in organizations with higher business risk is the leverage of an organization lower. De Jong (2002) found empirical evidence for this statement for large Dutch listed firms.

Additionally, the empirical model found that non-tax shield and tangibility have negative and significant relationship with market value of the quoted small and medium scale enterprises in Nigeria. The regression coefficient found that with a unit increase in the variables, market value of the firms reduces by 0.15 and 0.65 percent on market value of the quoted small and medium scale enterprises in Nigeria. While the negative effect non-tax shield confirms our a-priori expectation of the study, the negative relationship between tangibility and market value contradict our a-priori expectations. The negative effect of tangibility on market value can be traced to assets composition of the firms. The negative effect of tangibility contradict the findings of Delcours (2007) found a positive relationship between asset tangibility and leverage, just as Titman and Wessels (1988). De Jong (2002) found also a positive relationship between tangibility and leverage for large Dutch listed firms while the negative effect on non-tax shield of De Jong (2002) investigated Dutch listed firms and found that the leverage of Dutch organizations is determined by the non-debt tax shield.

CONCLUSION AND RECOMMENDATIONS

Conclusion

The regression model proved that 70.9 percent variation in the market value of the quoted entrepreneurial firms. The study found that business risk has a positive coefficient and significant to influence market value of the quoted small and medium scale enterprises in Nigeria, non-tax shield have negative and not significant to impact on market value of the quoted small and medium scale enterprises in Nigeria, tangibility is have negative and not significant to impact on market value of the quoted small and medium scale enterprises in Nigeria. From the findings, the study concludes that there is no significant relationship between non-

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tax shield and market value of quoted small and medium scale enterprises in Nigeria, that there is significant relationship between business risk and market value of quoted entrepreneurial value in Nigeria, that there is no significant relationship between tangibility and market value of quoted small and medium scale enterprises in Nigeria.

Recommendations

1. Financial managers should institute sound, efficient and coherent capital structure management policies such that will enable them determine the right mix or combination of debt, equity or both that will enhance firms' value in Nigeria.
2. Quoted small and medium scale enterprises in Nigeria should expand to a level it does not result to diseconomies of scale and the eventual fall in the value of the firm. Government and policy makers should provide an enabling market environment capable of enhancing easy source of capital to enhance firm value in Nigeria.
3. Management of the enterprise quoted small and medium scale enterprises in Nigeria should employ more of long-term debt than equity capital in financing their operations, because it results in higher firm value. Corporate financial decision makers should employ more of long-term-debt than equity in their financial option. This is in line with the pecking order theory.
4. Management of the quoted small and medium scale enterprises in Nigeria should compare the marginal benefit of using long-term-debt to the marginal costs of long-term-debt before concluding on using it in financing their operations. This is because as shown by this work, long-term-debt impact positively on firm's value unlike equity capital.

REFERENCES

- 1) Aabo, T., Hansen, M. A., & Muradoglu, Y. G. (2015). Foreign debt usage in non- financial firms: A horse race between operating and accounting exposure hedging. *European Financial Management*, 21(3), 590-611.
- 2) Aamir, M., & Zullfiqar, S. (2011). Dividend announcements and the abnormal stock returns for the event Firm and its rivals, *Australian Journal of Business and Management Research*, 1 (8), 72-76.
- 3) Akinyomi, O. J., (2013). Effect of capital structure on firms' performance: evidence from Nigerian manufacturing company. *International Journal of Innovative Research and Studies*, 2 (9), 2319-9725
- 4) Babalola Y. A. (2014). Triangulation analysis of capital structure and firms' performance in Nigeria. *East Ukrainian National University (Vol. Dahl) 91034 Lugansk, Ukraine*
- 5) Bassey, N.E., Arene, C.J. & Okpukpara, B.C. (2014). Determinants of Capital Structure of Listed Agro Firms in Nigeria. *Economic Affairs: A Quarterly Journal of Economics*, 59 (1),35-47.
- 6) Brooks, C. (2014). *Introductory econometrics for finance*, New York, Cambridge University press.
- 7) Cheng, M-C.&Tzeng, Z-C. (2011). The effect of leverage on firm value and how the firm financial quality influence on this effect. *World Journal of Management*, 10 (3), 30-53.
- 8) Cheng, M-C.&Tzeng, Z-C. (2011). The effect of leverage on firm value and how the firm financial quality influence on this effect. *World Journal of Management*, 10 (3), 30-53.
- 9) Chipeta, C., & Mbululu, D. (2013). Firm heterogeneity, macroeconomic conditions and capital structure adjustment speeds: Evidence from the JSE. *Investment Analysts Journal*, 44(77), 69-80
- 10) De Jong, A., Kabir, R., & Nguyen, T. T. (2008). Capital structure around the world: The roles of firm-and country-specific determinants. *Journal of Banking & Finance*, 32(9), 1954-1969.
- 11) DeAngelo, H., & Masulis, R.W. (1980). Optimal Capital Structure under Corporate and personal Taxation. *Journal of Financial Economics*, 8(3), 3-29.
- 12) Deesomsak, R., Paudyal, K., & Pescetto, G. (2004). The determinants of capital structure: evidence from the Asia Pacific region. *Journal of Multinational Financial management*, 14(4), 387-405.
- 13) Delcoure, N. (2007). The determinants of capital structure in transitional economies. *International Review of Economics & Finance*, 16(3), 400-415.
- 14) Demirguc-Kunt, A. & Maksimovic, V. (1996). Stock market development and financing choices of firms. *The World Bank Economic Review*, 10(2), 341-369.
- 15) Duan, H., Chik bin, A. R. & Liu, C (2012). Institutional environment and capital structure: evidence from private listed enterprises in China. *International journal of financial research*, 3(1), 15-21.
- 16) Ebaid, E.I. (2009). The impact of capital-structure choice on firm performance: empirical evidence from Egypt. *The Journal of Risk Finance*, 10(5):477-487.

Trade-Off Variables and Market Value: An Estimated Panel Data Study of Quoted Small and Medium Scale Enterprises from Nigeria

- 17) Frank, M. Z., & Goyal, V. K. (2009). Capital structure decisions: which factors are reliably important? *Financial management*, 38 (1), 1–37.
- 18) Imad, Z. R., (2015). Leverage and the Jordanian firms' value: Empirical evidence. *International Journal of Economics and Finance*, 7(4), 1-7.
- 19) Imad, Z. R., (2015). Leverage and the Jordanian firms' value: Empirical evidence. *International Journal of Economics and Finance*, 7(4), 1-7
- 20) Jensen M., (1986). Value maximization, stakeholder theory, and the corporate objective function. *European Financial Management*, 7: 297-317.
- 21) Jensen, M. C. (1986). Agency costs of free cash flow, corporate finance, and takeovers. *American Economic Review*, 76(2), 323.
- 22) Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305- 360.
- 23) Miller, M.H. (1977). Corporate income taxes and the cost of capital: A correction *American Economic Review*, 53(3): 433-43.
- 24) Modigliani F., Miller M., (1958).The cost of capital, corporation finance and the theory of investment.*The American Economic Review*, 48(3), 261-281.
- 25) Modigliani, F., & Miller, M., (1963). Corporate income taxes and the cost of capital: a correction. *American Economic Review*, 5(3), 443-453.
- 26) Myers, S. C., (2001). Capital structure. *Journal of Economic Perspectives*, 15(2),81-102.
- 27) Patel, N. M., & Bhatt, V., (2013). Capital structure and profitability: Case of National Stock Exchange. *Indian Journal of Applied Research*, 3 (4), 276-260.
- 28) Saeedi, A., and Mahmoodi, I., (2011). Capital structure and firm performance: evidence from Iranian Companies. *International Research Journal and Economics*, 70 (8),20-26.
- 29) Serrasqueiro, Z., & Nunes P.M, (2010). Are trade-off and pecking order theories mutually exclusive in explaining capital structure decisions? *African Journal of Business Management* 4(11), 2216-2230.
- 30) Taiwo, A. M., (2015). An empirical analysis of capital structure on firms' performance in Nigeria.*International Journal of Advances in Management and Economics*,1 (5), 116- 124
- 31) Titman, S., & Wessels, R. (1988). The determinants of capital structure choice. *Journal of Finance*, 4(3), 1–19.
- 32) Tongkong, S., (2012). Key factors influencing capital structure decision and its speed of adjustment of Thai listed real estate companies *Procedia - Social and Behavioral Sciences* 40, 716 – 720