Risk and Capital Structure Policy of Quoted Manufacturing Firms: Evidence from Nigeria

Daniel Ikezam Nwonodi
Department of Finance, Rivers State University,
Port Harcourt, Rivers State

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Abstract
This study examined the effect of risk on capital structure of quoted manufacturing firms in Nigeria. Panel data was sourced from financial statement of the manufacturing firm's from 2014-2023. Capital structure was poxied by debt equity ratio while risk was poxied by exchange rate risk, equity price risk, interest rate risk, operational risk, leverage risk, liquidity risk. Panel data methodology was employed while the fixed effects model was 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 interest rate risk, consume price risk and equity price have positive effect while leverage risk and consumer price risk have negative effect on the capital structure. Findings further revealed that interest rate risk have positive effect while equity price risk, consumer price risk and exchange risk have negative effect on the capital structure of the quoted manufacturing firms. From the findings, the study concludes that risk has significant effect on capital structure of the quoted manufacturing firms in Nigeria. The study recommends that the need for the manufacturing firms to adopt more appropriate measures for managing liquidity risks and ensuring compliance at all times and at all levels, policy directed towards management of the effect of consumer price index on capital structure of the quoted manufacturing firms and The need for management to direct financing policy toward optimal capital structure to reduce the effect of leverage risk on shareholders' value of the quoted manufacturing firm. This can be achieved through proper planning and management of the financing decisions of the firms.

Keywords: *Risk, Capital Structure Policy, Manufacturing Firms, Nigeria*

INTRODUCTION

The relationship between capital structure and risk-taking has a direct bearing on the solvency of individual banks and on the soundness of the banking industry in general. The relationship between the capital ratio and levels of risk should be such that increases in business risk are offset by reductions in financial risk, and vice versa. According to the Trade-off theory of corporate finance, a positive relationship between a firm's capital ratio and risk is required to minimize the cost of capital. Firms might be encouraged to increase the percentage debt in the capital structure, because of the tax deductibility of interest charges and the lower cost of capital. Expected costs associated with financial distress provide an opposing force to the above-mentioned advantages offered by debt (Brealy, Myers, & Allen, 2004). Investors, on the other hand, demand a premium to

compensate for increased bankruptcy risk associated with the probability of financial distress and proportionately low capital ratios. Thus, increased risk requires greater proportions of equity in the firm's capital structure to prevent an inefficient cost of capital indicative of the willingness of shareholders to provide a 'cushion' to absorb possible firms losses (Reserve Bank of Australia, 1994). The greater the risk is, the greater the equity 'cushion' should be in order to maintain the solvency position of the bank. A positive relationship between capital ratio and risk provides stability, thus providing shelter to corporate creditors.

The business environment is very risky, this is because to the uncertainties that characterized the operating environment. Some of the risks emanate from the business known as systemic risk while others emanate from the external environment known as unsystematic risk. The cost of bearing risk is a crucial concept for any corporation most of financial policy decision whether capital structure, dividend policy, investment or capital budgeting and hedging policies revolves around the benefits and cost of corporation holding risks (Daunfeldt&Hartwig, 2012). The investment functions of the finance managers such as the capital budgeting requires an analysis of the future cash flows, uncertainties of future cash flows and values of these future cash flow (Adler,2000). Risk exist because of the inability of the decision makes to make perfect forecast. Risk in capital budgeting refers a situation where the probability distribution of the cash flow the investment proposal is known.

Thorough risk analysis, finance managers can predict cash flow values and can predict how deferent capital budgeting decision affects enterprise values such as market value, terminal value and cash flow values (Alhamoud,& Ibrahim, 1997). Financial risk emerges from the financing of corporate entities such as leverage while operating risk emerges from the operation of a firm. Management of risk is an integrated part of planning and financial control submitted to strategic and tactical decisions for a continuous adaptation to inside and outside company conditions constantly changing. The notion that a key goal of corporate management should be to maximize shareholder value has evoked controversy for decades (Berle, 1931; Dodd, 1932). There are two opposing views on this idea, first, that it is aspirational and is subject to management's discretionary power, and second, that it is absolute and should be the only measure of management's performance. In whose interest does the corporation exist, and what power and responsibility do managers have in this context? Nonetheless, corporate value does not depend only on the managers' performance but other determinants as well for example investment decision, capital structure, dividend policy, cost of capital and liquidity. As a result, due to the external influences unrelated to managers' performance on share price, management compensation plans are less effective (Aretz, Bartram &Dufey, 2007). If managers and shareholders have different risk preferences, the firm may not be able to achieve its maximum value since the managers will be less like take risky investments. There are many studies on the effect of risk, some of the studies focused on risk management and corporate profitability. Taiwo and Abayomi (2013) evaluated the impact of credit risk management on bank profitability of some selected DMBs in Nigeria. Saeed and Zahid 2016) studied the impact of credit risk on profitability of the commercial banks and the result showed that credit risk indicators had a positive association with profitability of the banks. Alalade, Binuyo&Oguntodu (2014) examined the impact of managing

credit risk and profitability of banks in Lagos state. From the above knowledge gap this study examined the relationship between risk and capital structure of quotted manufacturing firms in Nigeria.

LITERATURE REVIEW

Conceptual Review

Risk

Risk is the potential that a chosen action or activity (including the choice of inaction) will lead to a loss. The notion implies that a choice has an influence on the outcome. Potential losses themselves may also be called risks. There are numerous kinds of risks to be taken into account when considering capital budgeting including:

i. Corporate risk
ii. International risk (including currency risk)
iii. Industry-specific risk
iv. market risk
v. Stand-alone risk
vi. Project-specific risk

Each of these risks addresses an area in which some sort of volatility could forcibly alter the plan of firm managers. Market risk involves the risk of losses in position due to movement in market positions (Ahmed, 2013). There are different ways to measure and prepare to deal with risks as well. One such way is to conduct a sensitivity analysis. Sensitivity analysis is the study of how the uncertainty in the output of a model can be apportioned to different sources of uncertainty in the model input. A related practice is uncertainty analysis which focuses rather on quantifying uncertainty in model output. Uncertainty and sensitivity analysis should be run in tandem. Another method is scenario analysis, which involves the process of analyzing possible future events by considering alternative possible outcomes (Ahmed, 2013).

It might consider sub-sets of each of the possibilities. It might further seek to determine correlations and assign probabilities to the scenarios. Then it will be in a position to consider how to distribute assets between asset types. The institution can also calculate the scenario-weighted expected return. It may also perform stress testing, using adverse scenarios.While appraising projects, future cash flows are estimated using probability measures like forecasting techniques. These measures do not give a true picture of future events. To avoid uncertainty, convert expected future cash flows into certain cash flows. Certain cash flows are cash flows obtained by multiplying uncertain cash flows with a predetermined base known as certainty-equivalent coefficient. A certainty-equivalent coefficient is factor that determines the risk associated with future cash flows (Ahmed, 2013). Risky investments have a low certainty equivalent rating, hence they are avoided. This is because the probability of netting the estimated cash flows is unlikely.A project's return on investment is affected by factors such as sales, investments, tax rate and cost of sales. Sensitivity analysis measures the extent to which the project's cash flows change in response to changes in

one of these factors. The sensitivity analysis process involves identifying the factors that influence the project's cash flows, establishing a mathematical relationship between these factors and analyzing how a change in each of these factors affect the project's cash flows. If a project's cash flows are sensitive to changes in any of the above-listed factors, it is considered risky and hence avoided.

Risk is linked with possible hazards and dangers, while in finance it is a technical matter of unpredictability in expected outcomes, both negative and positive. In other businesses and political settings, risk is closely associated with the spirit of enterprise and value creation (Power, 2007). (Ale, 2009) defined risk as "the objectified uncertainty regarding the occurrence of an undesired event, risk is inherent in any walk of life and can be associated with every human decision-making action of which the consequences are uncertain. Over the last decades, risk analysis and corporate risk management activities have become very important elements for both financial as well as non-financial corporations. Firms are exposed to different sources of risk, which can be divided into operational risks and financial risks. Operational risks or alternatively business risks relate to the uncertainty regarding the firm's investments and investment opportunities, and are influenced by the product markets in which a firm operates. In addition to operational risks, unexpected changes in e.g. interest rates, exchange rates, and oil prices create financial risks for individual companies. As opposed to operational risks, which influence a specific firm or industry, financial risks are market-wide risks that can affect the financial performance of companies in the whole economy. Both kinds of risk exposure can have substantial impact on the value of a firm (Ahmed, 2013). To study the effect of risk on profitability, we need to have clear understanding what risk means in former literature. The conservative definition states that risk is the possibility of a loss or failure. However, in finance literature risk usually also has an upside. Volatility of returns/income is a common measure of this. Malkiel (1982) sums the reasoning behind this measure of risk: for an investor risk is the disappointment of not earning the expected return.

Financing risk comprises of financial leverage risk and borrowing cost risk. Financial leverage means the ratio of debt to equity. If this ratio gets too high, the company has no buffer to withstand potential losses and is in effect on the brink of bankruptcy, the borrowing cost as an absolute figure is not relevant, but the spread between borrowing cost and RNOA. If the company is creating high returns on its operating assets, it can in turn afford to pay high interest rates. However, if the average interest rate surpasses RNOA, every dollar of debt generates losses for the company (Ahmed, 2013). Given that the total risk of a company is a product of operating leverage and financial leverage, Mandelker and Rhee (1984) tested whether companies try to balance these two risks, or whether an increase in the other leads to an increase in the other part as well. The latter could be expected to happen if financial leverage is increased due to the financing of fixed assets (operating leverage). The study found that companies with high operating leverage usually have lower financial leverage, and vice versa. This means that companies indeed balance their total risk level by choosing the amount of financial leverage on the basis of their cost structure.

Systematic Risk

The risk inherent to the entire market or an entire market segment, systematic risk, also known as undiversifiable risk volatility or market risk, affects the overall market, not just a particular stock or industry. This type of risk is both unpredictable and impossible to completely avoid (Pandey, 2005). It cannot be mitigated through diversification, only through hedging or by using the right asset allocation strategy. Pandey (1993) stated that systematic risk is the relevant risk measure for assets a risk arises from the uncertainty about economic fluctuation, earthquake and changes in world energy situation. This risk affects all securities and consequently cannot be diversified away by an investor. According to Van Horne (1989) while stating the principles of systematic risk that expected return on a risky asset depends only on that asset and systematic number of assets to a greater or lesser extent. The normalized systematic risk is of the individual risky assets. Berger and Udeu (1993) were of the opinion that the relevant measure of risk for a risky asset is its systematic risk covariance of returns with the market portfolio of a risky asset. For when the covariance (systematic risk) which is normalized beta coefficient is derived it relates the stocks' variance to market total variance.

Unsystematic Risk

Company- or industry-specific hazard that is inherent in each investment, unsystematic risk, also known as nonsystematic risk, specific risk, diversifiable risk or residual risk, can be reduced through diversification. By owning stocks in different companies and in different industries, as well as by owning other types of securities such as treasuries and municipal securities, investors will be less affected by an event or decision that has a strong impact on one company, industry or investment type. Examples of unsystematic risk include a new competitor, a regulatory change, a management change and a product recall (Brookfield, 2005).

The risk that airline industry employees will go on strike, and airline stock prices will suffer as a result, is considered to be unsystematic risk. This risk primarily affects the airline industry, airline companies and the companies with whom the airlines do business. It does not affect the entire market system, so it is an unsystematic or nonsystematic risk. An investor who owned nothing but airline stocks would face a high level of unsystematic risk. However, even a portfolio of well-diversified assets cannot escape all risk. It will still be exposed to systematic risk, which is the uncertainty that faces the market as a whole (Zeller &Stanko, 2009). Even staying out of the market completely will not take an investor's risk down to zero, because he or she would still face risks such as losing money from inflation and not having enough assets to retire. Investors may be aware of some potential sources of unsystematic risk, but it is impossible to be aware of all of them or to know whether or when they might occur. An investor in health-care stocks may be aware that a major shift in government regulations could affect the profitability of the companies they are invested in, but they cannot know when new regulations will go into effect, how the regulations might change over time or how companies will respond (Pike, 1996).

Capital Structure

The term capital structure according to Kennon (2010) refers to the percentage of capital (money) at work in a business by type. There are two forms of capital: equity capital and debt capital. Each has its own benefits and drawbacks and a substantial part of wise corporate stewardship and management is attempting to find the perfect capital structure in terms of risk and reward payoff for shareholders. Alfred (2007) stated that a firm's capital structure implies the proportion of debt and equity in the total capital structure of the firm. Pandey (1999) differentiated between capital structure and financial structure of a firm by affirming that the various means used to raise funds represent the firm's financial structure, while the capital structure represents the proportionate relationship between long-term debt and equity. The capital structure of a firm as discussed by Inanga and Ajayi (1999) does not include short-term credit, but means the composite of a firm's long-term funds obtained from various sources. Therefore, a firm's capital structure is described as the capital mix of both equity and debt capital in financing its assets. However, whether or not an optimal capital structure exists is one of the most important and complex issues in corporate finance.

Components of a Firm's Capital Structure

The various components of a firm's capital structure according to Inanga and Ajayi (1999) may be classified into equity capital, preference capital and long-term loan (debt) capital.

Debt Capital

The debt capital in a firm's capital structure refers to the long-term bonds the firm use in financing its investment decisions because the firm has years, if not decades, to come up with the principal, while paying interest only in the meantime. The cost of debt capital in the capital structure depends on the health of the firm's balance sheet. This can be expressed as:

$$Kd = Int/Bo \quad (1)$$

Where:

*Kd*equals the before-tax cost of debt;

Int, the interest element and *Bo*, the issue price of bond (debt). The after-tax cost of debt capital will be:

Kd (1-T). Where: *T* is corporate tax rate.

Equity Capital

Pandey (1999) defined equity capital as including share-capital, share premium, reserves and surpluses (retained earnings). Typically, equity capital consists of two types which include: contributed capital, which is the money that was originally invested in the business in exchange for shares of stock or ownership and retained earnings, which represents profits from past years that have been kept by the company and used to strengthen the Balance Sheet or fund growth, acquisitions, or expansion. The cost of equity capital of a firm using the dividend growth basis can be expressed as:

$$Ke = do\ (1 + g)/Pe + g \quad (2)$$

(1) Where

*K*e equals the cost of equity capital;

do, the current dividend per share;

Pe, the Ex-dividend market price per share and

g, the expected constant annual growth rate in earnings and dividend per share.

Preference Capital

The preference share capital is a hybrid in that it combines the features of debentures and those of equity shares except the benefits. Its cost can be expressed as:

Kp = Pdiv/Po (3)

(2) Where: *Kp*equals the cost of preference share;

Pdiv, the expected preference dividend and

Po, the issue price of preference shares.

Furthermore, equity finance refers to the sale of an ownership interest to raise funds for business purposes. In order to grow, any company will face the need for additional capital, which it may try to obtain through debt or equity. If the company opts for equity, the owner sells a stake to others. During early growth stages of a company, especially when the company does not have sufficient equity financing can provide capital from investors who are willing to take risks along with the entrepreneur (Berger &Udell, 1998). Similarly, when a company has prospects of explosive growth, it can raise substantial capital through equity financing. Various types of equity financing are available. Equity investors may combine equity with convertible debt or straight debt. This is done either as a form of extended due diligence, or to meet cash flow requirements while limiting dilution of the principal owner's shareholding.

Shares are the universal and typical forms of raising capital from the capital market. The capital of a company is divided into certain units of a fixed amount. Share' means a share in the share capital of a company. It includes stock except where a distinction between stock and share is expressed or implied. Stock is merely a name for the aggregate ownership of a company, which is divided into a number of units, each unit called a share (Rafiu, Taiwo and Dauda, 2012). The holders of common stock are called shareholders or stockholders. The capital represented by common shares is called share capital or equity capital. Authorized share capital represents the maximum amount of capital, which a company is permitted to raise from shareholders. A Company may however change its authorized share capital by altering its Memorandum of Association. The portion of the authorized share capital that has been offered to shareholders is called issued share capital. Subscribed share capital represents that part of the issued share capital, which has been accepted by shareholders. The amount of subscribed share capital actually paid up by shareholders to the company is called paid-up share capital. Often subscribed and paid-up share capitals are the same.

The total paid-up share capital is equal to the issue price of common share multiplied by the number of common shares. The issue price may include two components: the par value and the share premium. The par value is the price per common share stated in the memorandum of association. Any amount in excess of the par value is called the share premium. In the case of new companies the par value and the issue price may be the same. The existing highly profitable companies may issue common shares at a premium (Rafiu, Taiwo&Dauda, 2012). The paid-up share capital is stated at the par value. The excess amount is separately shown as the share premium. The company's earnings, which have not been distributed to shareholders and have been

retained in the business, are called reserves and surplus. They belong to the common shareholders. Thus the total common shareholders' equity is the sum of paid up share capital, share premium and reserves and surplus.

Ordinary shares, a synonym of common shares, represent the basic voting shares of a corporation. Holders of ordinary shares are typically entitled to one vote per share, and do not have any predetermined dividend amounts. An ordinary share represents equity ownership in a company proportionally with all other ordinary shareholders, according to their percentage of ownership in the company (Pandey, 2009). All other shares of a company's stock are, by definition, preferred share. Ordinary shareholders have the right to a corporation's residual profits. In other words, they are entitled to receive dividends if any are available after the dividends on preferred shares are paid. They are also entitled to their share of the residual economic value of the company should the business unwind; however, they are last in line after bondholders and preferred shareholders for receiving business proceeds.

Ordinary shareholders are considered unsecured creditors. While they face greater economic risk than creditors and preferred shareholders of a corporation, they can also reap greater rewards. If a company makes large profits, the creditors and preferred shareholders are not paid more than the fixed amounts to which they are entitled, while the ordinary shareholders divide the large profits among themselves. The same occurs when companies, such as start-up, are sold to larger corporations (Rafiu, Taiwo&Dauda, 2012). The ordinary shareholders usually profit the most. The only obligation that an ordinary shareholder has is to pay the price of the share to the company when it is issued. In addition to the shareholder's right to residual profits, he is entitled to vote for the company's board members (although some preferred shareholders may also vote) and to receive and approve the company's annual financial statements.

Trade-off Theory

Trade-off theory first arising to determines the best decision that is taken by the firm it comes to their choice of capital structures. Trade-off theory originated from proposition by Modigliani and Miller (1963). They argued that when a firm's corporate income tax is able to create a benefit for debt and it will be served as shield earnings from taxes. By this theory, a firm will choose how much debt finance and how much equity funding they want to use by balancing the costs and benefits. Since the firm's objective function is linear, there is no cost from the offsetting cost of debt, which suggests that firms choose all debt financing (Modigliani & Miller, 1963).

However, the same with debt, cash holding is essential to the firm and has several costs and benefits. Miller and Orr (1966) on their firm's money demand model argued that there are economies of scale in cash management which will lead to large firms holding less cash than small firms. The principal benefit of holding cash is that it provides firms with a safety buffer that will allow them to avoid making costs by raising external funds or preventing them from being forced to liquidate their existing assets (Levasseur, 1979). Fees that incurred for obtaining funds through borrowing are not related to the size of the loan, which indicates that the fee for borrowing is a fixed amount (Peterson &Rajan, 2003). Because of that, the fees that come from the borrowing

itself is more expensive for small firms compared to large firms. As a result, small firms are forced to finance their operations by using insider financing, acceptance of higher costs of funding or taking shorter-term financing alternatives (Berger and Udell, 1998). Bates (1971) found that small firms, compared to large ones, tended to be more self-financing, have lower liquidity, rarely issue stock, have less leverage and rely more on bank financing.

In contrary, large firms sometimes considered the cost that arises from issuing debt or equities as immaterial. It is suggested that large firms have less information asymmetry than small firms (Brennan 8 and Hughes, 1991). Therefore, small firms face borrowing constraints and higher costs of external financing than large firms (Kim et al, 2011). Large firms will have less trouble with the process of issuing debt or securities compared to small firms. Smith (1977) found that small firms pay much more than large firms to issue new equity, and more to issue debt. This suggests that large firms will prefer to perform financing activities by issuing debt or security. They are considered to have more active shareholders that participate in the monitoring of the company.

Pecking Order Theory

According to Donaldson's (1961) pecking order theory is a theory of how firms have to decide its financing decisions. It was discussed again by Myers (1984) and Myers and Majluff (1984). This theory stated that firm finances their investments first with their internal funds that usually come from their retained earnings, then they will use debt, and lastly they will use equity. This theory argued that there is no optimal level of debt, as there is no optimal level of cash. The cash balance that is owned by the company is the outcome of investment and financing decisions that are taken by the firm. Issuing debt had a positive effect presented in the previous section such as discipline managers.

Stulz (1990) found that the impact of leverage on the increase of the firm growth is that it increases firm value by preventing managers from taking poor projects. However, there are also negative effects that arise from the issuance of the debt. If a firm has a high level of debt, the likelihood of going bankrupt is also increasing (Kaplan and Stein, 1993). This is because firm must also be able to repay its debt interest and principal periodically. In a pecking order world, debt typically grows when the investment level of the firm exceeds the retained earnings and fall when investment is less than retained earnings (Ferreira and Vilela, 2004). Firms that have a high level of leverage are more likely to go bankrupt (Kaplan & Stein, 1993). They also find that if a firm has a high level of debt, the likelihood of going bankrupt is also increasing.

A firm can also maintain financial flexibility through having unused debt slot (low leverage) and having large cash reserves, which suggests a negative relationship between leverage and cash holding (Graham and Harvey, 2001). Pecking order theory also predicts that firms with better investment opportunities have higher financial distress costs because the positive NPV of these investments will disappear when the firms faces 10 bankruptcy (Ferreira and Vilela, 2004). Therefore, firms with higher investment opportunities will keep a higher level of cash holdings to avoid financial distress. When there are information asymmetries between managers and shareholders, raising funds from outside is considered to be more expensive. When firms are faced

by large investment opportunities demand for cash will increase as well. Ferreira and Vilela (2004) argued that when firms face a cash shortage, they will have to force to forgo better project due to insufficient cash level.

They also argued that firms with high investment opportunity will create demand for a large stock of cash, which forces a positive relationship between cash holding and investment opportunity. Also because of diversification, larger firms will have more stability in their cash and lower the probability of financial distress (Rajan & Zingales, 1995). For large firms, the cost to issue equity or debt sometimes deemed as immaterial. Opler et al (1999) argued that large firms are presumably more successful and should have more cash compared to a small firm. In pecking order theory, a firm preferably finances their activities by using their internal funding.

Saddour (2006) argued that larger firms have a higher level of operating cash flow compared to small firms. Therefore, large firms will tend to hold their retained earnings as cash on their asset and have larger cash balances than small firms. Dittmar and Smith (2003) argued that there are no optimal levels of cash, just like there is no optimal level of debt. In this theory, debt is typically used by the firm when the investment level is exceeding their retained earnings (Ferreira and Vilela, 2004). They also argued that debt level will fall when investment level is less than its retained earnings. Therefore, every increase in the leverage of the firm will lead to decrease in corporate cash holding.

Efficiency Theory

The efficiency theory was formulated by Demsetz (1973) as an alternative to the market power theory. The efficiency theory presupposes that better management and scale efficiency results to higher concentration thus greater and higher profits. Accordingly, the theory posits that management efficiency not only increases profits, but also results to larger market share gains and improved market concentration (Athanasoglou, Brissimis & Delis, 2005). The efficiency theory also states that a positive concentration profitability relation may be a sign of a positive connection relating to efficiency and size. The theory postulates that positive association between the concentration and profit arise from a lower cost which is mainly achieved through production efficient practices and increased managerial process (Birhanu, 2012).

The efficiency theory supports that the most favorable production can be attained through economies of scale. Thus, maximum operational efficiency in the short run is achieved at a level of output where all economies of scale available are being employed in an efficient manner (Odunga et al., 2013). Additionally, the efficiency theory explains that attaining higher profit margins arises from efficiency which allows banks to obtain both good financial performance and market shares (Mirzaei, 2012).

Empirical Review

Bolarinwa and Adegboye (2021) investigated the determinants of capital structure and the speed of adjustment of capital structure decisions of Nigerian firms. The empirical results show that firms' efficiency affects the capital structure decisions of Nigerian firms. At the same time, short-term debt has a higher speed of adjustment in the context of Nigerian firms. The roles of other

control variables are established in the paper. Nigerian firms should adopt short-term debt in order to achieve their targeted debt levels. Managers of Nigerian firms are also advised to be more efficient in order to attract higher performance. The paper is the first literature to measure the efficiency of firms using SFA method. Extant studies in the literature have neglected the determinant while four papers that adopt the determinant data envelope analysis (DEA) method. This is also the first study to document the speed of adjustment in capital structure decisions in the context of Nigerian firms.

Iwedi, Oriakpono, Barisua and Zaagha (2020) examined business risks and risk management as well as their effects on shareholders 'value using data from selected non-financial firms in the Nigerian Stock Exchange by focusing on reward systems to firm owners through dividend and other earning structures. The study employs panel data for 48 non-financial firms in the Nigerian Stock Exchange for the period 2011 to 2018. The panel data analytical framework is used in the empirical analysis with focus on the Random Effects estimation technique. The results show that in general, the effect of risk on shareholder value depends on the pattern of risk, as well as on the value being considered. The study also finds that increased business risk lowers both dividend per share and earnings per share of the firms. On the other hand, financial risks were shown to have positive impact on shareholder value, especially the value not related to dividend payout. Also, it is found that risk management based on institutional shareholding has the most effective positive impact on shareholder value. It is recommended that enterprise risk management implementation should not just be for compliance purposes among companies in Nigeria, but it must also be for the purposes of pursuing best practices and long-term survival. The above studies focused on risk and corporate performance, this study focused on risk and capital structure of quoted manufacturing firms in Nigeria.

METHODOLOGY

This study used quasi-experimental research design approach for the data analysis. This approach combines theoretical consideration (a prior criterion) with the empirical observation and extract maximum information from the available data. It enables us therefore to observe the effects of explanatory variables on the dependent variables. The population of the study involves the listed firms in the Nigerian stock exchange. However, the target population is the listed manufacturing firms on the floor of Nigeria Stock exchange. The sample size of the study was 20 quoted manufacturing firms. Data for this study were secondary data sourced from the financial statement and annual reports of the selected quoted firms.

Model Specification

From theories, principles and empirical findings, the model below is specified in this study.

Systematic Risk

CS= f (EXR, EQR, INTR, CPR) (4)

It is empirically stated as

$$CS = \beta_0 + \beta_1 EXR + \beta_2 EQR + \beta_3 INTR + \beta_4 CPR + \mu \quad (5)$$

Unsystematic Risk

CS = f (OPR, CFR, LR, LIQR) (6)

It is empirically stated as

$$CS = \beta_0 + \beta_1 OPR + \beta_2 CFR + \beta_3 LR + \beta_4 LIQR + \mu \quad (7)$$

Where

CS	=	Capital structure measured by debt equity ratio
EXR	=	Exchange Rate Risk
EQR	=	Equity Price Risk
INTR	=	Interest rate risk
CPR	=	Commodity Price Risk
OPR	=	Operational risk
CFR	=	Cash flow Risk
LR	=	Leverage Risk
LIQR	=	Liquidity Risk
β_0	=	Regression Intercept
β_1 - $\beta 4$	=	Coefficient of the independent variables to the Dependent variable
μ	=	Error term

Techniques of Analysis

The hypotheses stated will be tested using the Ordinary Least Square model. The signs and significance of the regression coefficients will be relied upon in explaining the nature and influence of the independent and dependent variables as to determine both magnitude and direction of impact. Regression analysis is often concerned with the study of the dependence of one variable, the dependent variable, on one or more other variables, the explanatory variables, with a view to estimating and/or predicting the population mean or average value of the former in terms of the known or fixed (in repeated sampling) values of the latter (Gujarati and Porter, 2009). Most commonly, regression analysis estimates the conditional expectation of the dependent variable

given the independent variables that is, the average value of the dependent variable when the independent variables are held fixed. Less commonly, the focus is on a quartile, or other location parameter of the conditional distribution of the dependent variable given the independent variables. In all cases, the estimation target is a function of the independent variables called the regression function. In regression analysis, it is also of interest to characterize the variation of the dependent variable around the regression function, which can be described by a probability (Gujarati, 1995). There are several multiple regression analyses techniques that dwell on either time series or cross-sectional data. However, for the purpose of this study, panel data regression is employed because available data contain both time series and cross-sectional elements. A panel of data embodies information across time and space and most importantly, a panel retains the same entities and measures some quantity about them over time (Brooks, 2008). As such, this study employs the use of the panel data regression to analyze the performance of Nigerian manufacturing firms from 2014-2023.

Additionally, the advantages of Panel Data (Baltagi, 2013; Gujarati & Porter, 2009), that reinforced the utilization of panel data regressions are presented below:

1. Panel data relates to individuals, firms, states, countries, regions, etc., over time, and as such, there is bound to be heterogeneity in these units. And estimation techniques for panel data can take such heterogeneity explicitly into account by allowing for subject specific variables.

2. Panel data combines time series and cross-section observations, thus providing more informative data, more variability, less co-linearity among variables, more degrees of freedom and most importantly more efficiency.

3. By repeatedly studying cross sections of observations, panel data estimation techniques are better suited to study the dynamics of change.

4. Panel data estimation techniques can better detect and measure effects that cross section or pure time series cannot.

5. Panel data enables the study of more complicated behavioural models. For instance, phenomena like economies of scale and technological change are better handled by panel data estimation techniques than by pure cross-section or pure time series data.

6. Panel data minimizes the bias that might arise when individuals or firms are aggregated into broad categories due to the availability of several thousand units.

Econometrically, the panel data standard linear model can be written as follows (Verbeek, 2012; Brooks, 2014);

$$Y_{it} = \beta_0 + X_{it}\beta + \varepsilon_{it} \quad (8)$$

Where Y_{it} is the dependent variable for firm —*I* at time-i; fib is the intercept term; X1 is a k dimensional vector of independent variables; ε_{it} is the error term; the error term changes over individuals and time, and encompasses all unobservable factors that affect Y_{it}.

Moreover, in examining the panel data set through multiple regression techniques, this study is aware of the treatment of the possibilities of individual effects in the adopted models. Individual effect implies that each individual has a divergent effect. There are two core individual effects models in panel data analysis: the fixed effects model and the random effects model (Koop, 2008).

The **Fixed Effects Model (FEM)** takes into account the existence of each individual effect of the observations in a particular model. Put differently, the FEM allows for heterogeneity or individuality among entities by allowing them have separate intercept values. Hence, the individual effect subsists when it is assumed that each entity can have diverse intercepts in a particular model. Econometrically, the fixed effects model can be expressed as the equation below (Koop, 2008).

$$Y_{it} = ai + X_{it}\beta + \varepsilon_{it} \quad (9)$$

The above equation is almost similar with the common pooled model. Where, a1 symbolizes a fixed (individual) effect. The difference resides in a1, which varies across entities. Hence, it allows each entity to have its own separate intercept.

While the **Random Effects Model (REM)** just like the fixed effects model suggests different intercept terms for each entity, it maintains that intercepts are constant over time, with the relationships between independent and dependent variables assumed to be same, both cross-sectionally and temporally (Brooks, 2014). Nonetheless, the divergent view is that under the random effects model, the intercepts for each cross-sectional unit are presumed to originate from a common intercept, which is the same for all cross-sectional units and over time, in addition to a random variable that varies cross-sectionallybutitmains constant over time.

The random effects model can be written as:

$$Y_{it} = \beta_0 + X_{it}\beta + ai + u_{it} \quad (10)$$

Where, Y_{it} is a k-dimensional vector of independent variables, but unlike the FEM, there are no dummy variables to capture the heterogeneity (variation) in the cross-sectional element;

$= \varepsilon_{it} = ai + u_{it}$,, which implies that the error term consist of two components: an individual specific component that does not vary over time, and a remainder component that is assumed to be uncorrelated over time (Brooks, 2014; Verbeek, 2012). Moreover, in deciding whether to adopt either the FEM or the REM, this study employs the Hausman-test. According to Koop (2008), the idea behind the Hausnian-test rests on the assumption that if Ho (the individual effect is uncorrelated with any of the independent variables) is true, then both the FEM and REM estimators are consistent and provide relatively identical results. But, in the instance where '*Ho'* is false, the

REM will be inappropriate, while FEM will be suitable, and the results obtained could be quite dissimilar.

In a nutshell, multiple regression analysis makes it possible to analyze the relationships between background variables and the dependent variables of interest under the fixed effects or random effects models. In essence, panel data regression analysis is employed to evaluate the relationship between the risk, agency cost and corporate financial policies of the manufacturing firms.

RESULTS AND DISCUSSIONS

Table4. 1: Hausman Test Analysis

	Chi-Sq. Statistic	Chi-Sq. d.f	Prob.	Decision	Remark
Model 1	2.820306	4	0.5883	Accept null hypothesis	Random effect model valid
Model 2	5.500248	4	0.2397	Accept null hypothesis	Random effect model valid

Source: Computed from E-view 9.0, 2024

Hausman specification test has been used to determine which one of the alternative panel analysis methods (fixed effects model and random effects model) among the 3 panel regression models should be applied. From the table above, fixed effect model is significant for model I while random effect model is significant for model 2.

Table 2: **Presentation of Panel Unit Root Results at Levels**

Method	Statistic	Prob.**	Remark			Remark
MODEL 1: CS				MODEL 2: CS		
Levin, Lin & Chu t*	-3.90228	0.0000	Stationary	-3.90228	0.0000	Stationary
Im, Pesaran and Shin W-stat	-0.90656	0.1823	Not Stationary	-0.90656	0.1823	Not Stationary
ADF - Fisher Chi-square	50.9301	0.1153	Not Stationary	50.9301	0.1153	Not Stationary
PP - Fisher Chi-square	65.8721	0.0061	Stationary	65.8721	0.0061	Stationary
Interest Rate			LR			
Levin, Lin & Chu t*	-2.86168	0.0021	Stationary	-8.02264	0.0000	Stationary
Im, Pesaran and Shin W-stat	-1.13709	0.1278	Not Stationary	-2.20592	0.0137	Stationary
ADF - Fisher Chi-square	44.1420	0.3008		64.9133	0.0076	Stationary
PP - Fisher Chi-square	114.188	0.0000	Stationary	69.6633	0.0025	Stationary
Exchange Rate			OPR			
Levin, Lin & Chu t*	-2.66048	0.0039	Stationary	-6.33204	0.0000	Stationary
Im, Pesaran and Shin W-stat	-1.63994	0.0505	Not Stationary	-2.89041	0.0019	Stationary
ADF - Fisher Chi-square	53.7726	0.0715	Not Stationary	72.8945	0.0011	Stationary
PP - Fisher Chi-square	48.7197	0.1623	Not Stationary	98.0803	0.0000	Stationary
EQR			LIQ			
Levin, Lin & Chu t*	0.98170	0.8369	Not Stationary	-3.93700	0.0000	Stationary
Im, Pesaran and Shin W-stat	1.34095	0.9100	Not Stationary	-0.78010	0.2177	Not Stationary

ADF - Fisher Chi-square	23.1466	0.9848	Not Stationary	53.7139	0.0723	Not Stationary
PP - Fisher Chi-square	52.4847	0.0893	Not Stationary	64.3600	0.0086	Stationary
CPR			CFR			
Levin, Lin & Chu t*	-6.77365	0.0000	Stationary	-3.45883	0.0003	Stationary
Im, Pesaran and Shin W-stat	-2.05385	0.0200	Stationary	-0.47749	0.3165	Not Stationary
ADF - Fisher Chi-square	57.4413	0.0364	Stationary	39.3018	0.5015	
PP - Fisher Chi-square	46.2999	0.2284	Not Stationary	71.2480	0.0017	Stationary

Source: Computed from E-view 9.0, 2024
Source: Computed from E-view 9.0
Null: Unit root
Levin Lin & Chu Test: Assumes common unit root process
Im, Pesaran and Shin: Assumes individual unit root process
ADF-Fisher chi-square: Assumes individual unit root process
PP-Fisher chi-square: Assumes individual unit root process
** Probabilities for fisher tests are computed using an asymptotic chi-Square distribution.

To check stationarity of data the effect of riskandcapital structure of the quoted manufacturing firms through panel unit root test. Panel unit root test are not similar to unit root test. There are two types of panel unit root processes. When the persistence parameters are common across cross-section then this type of processes is called a common unit root process. Levin, Lin and Chu (LLC) employ this assumption. When the persistent parameters freely move across cross section then this type of unit root process is called an individual unit root process. The Im, Pesaran and Shin (IPS), Fisher-ADF and Fisher-PP test are based on this form. To check the stationarity of our data we use the two types of panel unit root tests. As common unit root process we use Levin, Lin and Chu panel unit root test and for individual unit root process we use three type of panel unit root tests, first one is Im, Pesaran and Shin panel unit root test, second is Fisher type test, the ADF-Fisher chi-square test and last one is also a fisher type test, the PP-Fisher Chi square panel unit root test. The result shows that at 5% level of significance we accept null hypothesis that means the series are not stationary for some parameter while some of the variables are stationary.

Table 3:Presentation of Panel Unit Root Results at Difference

Method	**Statistic**	**Prob.****	**Remark**			
Model 1: CS				**Model 2: CS**		
Levin, Lin & Chu t*	-5.88777	0.0000	Stationary	-5.88777	0.0000	Stationary
Im, Pesaran and Shin W-stat	-3.36669	0.0004	Stationary	-3.36669	0.0004	Stationary
ADF - Fisher Chi-square	81.7298	0.0001	Stationary	81.7298	0.0001	Stationary
PP - Fisher Chi-square	193.482	0.0000	Stationary	193.482	0.0000	Stationary
Interest Rate			LR			MC
Levin, Lin & Chu t*	-10.5262	0.0000	Stationary	-6.37440	0.0000	Stationary
Im, Pesaran and Shin W-stat	-6.00822	0.0000	Stationary	-3.41121	0.0003	Stationary
ADF - Fisher Chi-square	123.190	0.0000	Stationary	83.8292	0.0001	Stationary
PP - Fisher Chi-square	199.298	0.0000	Stationary	125.404	0.0000	Stationary
Exchange Rate			OPR			EXC

Levin, Lin & Chu t*	4.62237	.0000	Stationary	-17.6516	0.0000	Stationary
Im, Pesaran and Shin W-stat	1.04427	0.8518	Stationary	-6.18193	0.0000	Stationary
ADF - Fisher Chi-square	20.2050	0.9961	Stationary	115.704	0.0000	Stationary
PP - Fisher Chi-square	66.1183	0.0058	Stationary	252.276	0.0000	Stationary
EQR			LIQ			DIR
Levin, Lin & Chu t*	0.60105	0.7261	Stationary	-10.0823	0.0000	Stationary
Im, Pesaran and Shin W-stat	-1.35784	0.0873	Stationary	-2.09202	0.0182	Stationary
ADF - Fisher Chi-square	57.2881	0.0375	Stationary	69.2790	0.0028	Stationary
PP - Fisher Chi-square	182.453	0.0000	Stationary	120.040	0.0000	Stationary
CPR			CFR			ACD
Levin, Lin & Chu t*	-5.11175	0.0000	Stationary	-5.16009	0.0000	Stationary
Im, Pesaran and Shin W-stat	-1.65709	0.0488	Stationary	-2.21177	0.0135	Stationary
ADF - Fisher Chi-square	54.0402	0.0682	Stationary	68.8883	0.0016	Stationary
PP - Fisher Chi-square	75.5255	0.0006	Stationary	202.008	0.0000	Stationary

Source: Computed from E-view 9.0, 2024
Null: Unit root
Levin Lin & Chu Test: Assumes common unit root process
Im, Pesaran and Shin: Assumes individual unit root process
ADF-Fisher chi-square: Assumes individual unit root process
PP-Fisher chi-square: Assumes individual unit root process
** Probabilities for fisher tests are computed using an asymptotic chi-Square distribution.

In case of financing policy series in every test except PP-Fisher chi-square at 5% level of significance it reject null hypothesis but PP-Fisher chi-square accept null hypothesis it seems that the series has a unit root. But first difference of the series at 5% level of significance in all case reject null hypothesis. So after taking first difference the series is stationary. Details of the panel unit root test results of different variables and also after taking first difference of different variables are given in the appendix.

Table 4. Panel Regressions Results on Financing Policy for Quoted Firms in Nigeria

	PANEL I: MODEL 1			PANEL II: MODEL 2	
VAR	**Fixed**	**Random**	**VAR**	**Fixed**	**Random**
	0.010336	0.007498		-0.270286	-0.274847
	*0.154583	*0.112284		*-2.088579	*-2.175633
INTR	**0.8773	**0.9107	LIQR	**0.0382	**0.0308
	-0.006989	0.001160		-0.225055	-0.203309
	*-0.041363	*0.006876		*-2.414991	*-2.229865
EXR	**0.9671	**0.9945	LR	**0.0168	**0.0269
	-0.176522	-0.140202		-0.018714	-0.017842
	*-1.867344	*-1.666289		*-1.929848	*-1.850889
EQR	**0.0435	**0.0973	CFR	**0.0552	**0.0657

	-0.325585	-0.304732		0.006437	0.006956
	*-1.536320	*-1.447817		*0.744964	*0.809333
CPR	**0.1263	**0.1493	OPR	**0.4573	**0.4193
	1.074786	0.986439		0.573420	0.565151
	*2.575917	*2.354003		*8.357625	*4.248966
C	**0.0108	**0.0196	C	**0.0000	**0.0000
R^2	0.753676	0.020619		0.759307	0.741951
Adj R^2	0.721485	0.000529		0.727673	0.522198
F-stat	23.41326	1.026317		24.00293	12.12724
F-Prob	0.000000	0.394837		0.000000	0.000050
		1.252251			1.263524
D.W	1.380852			1.384893	

Notes: * = T-Statistics, ** = Probability Coefficient.
Source: Computed from E-view 9.0, 2024

Interpretation of the Result

Table 4 above, presents the effect of the risk andcapital structure of the quoted manufacturing firms over the 10 years periods covered in this study. Panel I presents results of effect of systemic risk on capital structure as formulated in model IV. Based on the fixed effect regression model, the adjusted coefficient of determination (Adjusted R^2) indicates that 72.1 percent variation on the financing policy of the selected manufacturing firms can be traced b variation on the systemic risk of the firms; this implies that 27.9 percent variation can be traced to factors not captured in the model. The results of the estimated model proved that the model is statistically significant based on the F-statistics and probability. The Durbin Watson statistics proved the presence of serial autocorrelation among the variables. The regression intercept is positive and significant which implies that holding other variables constant, capital structure of the manufacturing firm will increase by 1.07 units. Furthermore, the results indicates that interest rate risk have positive but no significant effect on capital structure of the manufacturing firms with the coefficient of 0.010336 and 0.8773. However, Exchange rate risk, equity price risk and consumer price risk have negative effect on the capital structure of the manufacturing firms.

Panel II presents results of effect of unsystemic risk on financing policy as formulated in model V. Based on the random effect regression model, the adjusted coefficient of determination (Adjusted R^2) indicates that 72.7 percent variation on the financing policy of the selected manufacturing firms can be traced b variation on the unsystemic risk of the firms; this implies that 27.3 percent variation can be traced to factors not captured in the model. The results of the estimated model proved that the model is statistically significant based on the F-statistics and probability. The Durbin Watson statistics proved the presence of serial autocorrelation among the variables. The regression intercept is positive and significant which implies that holding other variables constant, capital structure of the manufacturing firm will increase by 0.56 units. Furthermore, the results indicates that liquidity risk, cash flow risk and leverage risk have negative effect on the financing policy of the manufacturing firms while operational risk have positive effect on the financing policy of the manufacturing firms.

Table 5: Cross Sectional Comparism of Fixed and Random Effect Models

Variable	Fixed	Random	Var(Diff.)	Prob.	Variable	Fixed	Random	Var(Diff.)	Prob.
		MODEL 1					**MODEL 2**		
INTR	0.010336	0.007498	0.000011	0.3993	CFR	-0.018714	-0.017842	0.000001	0.4077
EXR	-0.006989	0.001160	0.000093	0.3993	LIQR	-0.270286	-0.274847	0.000788	0.8710
EQR	-0.176522	-0.140202	0.001857	0.3993	LR	-0.225055	-0.203309	0.000372	0.2593
CPR	-0.325585	-0.304732	0.000612	0.3993	OPR	0.006437	0.006956	0.000001	0.5569

Source: Computed from E-view 9.0, 2024

The table above shows comparable differences between fixed and random effect models in the results, the results in the table shows probability greater than 0.05 which implies that there is a significant difference between random and fixed effect model for the three models.

Table 6: Pedroni Residual Cointegration Test

	Statistic	Prob.	Weighted Statistic	Prob.
	Model 1			
Panel v-Statistic	-12.34655	0.0005	-13.03639	0.0088
Panel rho-Statistic	12.98345	0.0016	13.01490	0.0087
Panel PP-Statistic	-15.21223	0.0000	-17.34030	0.0000
Panel ADF-Statistic	-11.51607	0.0652	-12.43535	0.0074
	Statistic	Prob.		
Group rho-Statistic	4.975448	1.0000		
Group PP-Statistic	-9.164653	0.0000		
Group ADF-Statistic	-2.616542	0.0044		
	Model 2			
Panel v-Statistic	-12.26697	0.0082	-2.439981	0.9927
Panel rho-Statistic	13.22385	0.0094	13.13660	0.0091
Panel PP-Statistic	-12.38874	0.0085	-3.838232	0.0001
Panel ADF-Statistic	11.03544	0.0096	0.713991	0.7624
	Statistic	Prob.		
Group rho-Statistic	4.873495	0.0000		
Group PP-Statistic	-6.870708	0.0000		
Group ADF-Statistic	0.150389	0.5598		

Source: Computed from E-view 9.0, 2024

The results of the cointegration test proved that the variables are cointegrated as the probability coefficient of the variables are greater than 0.05, we accept the alternate hypotheses that there is no presence of long run relationship between the dependent and the independent variables.

Discussion of Findings

The estimated regression model (model I) was formulated to examine and test the relationship between systemic risk and the investment policy of the quoted manufacturing firms for the periods covered in this study. The estimated results as presented in table 4 panel 1 indicates that systemic risk explained 66.3 percent variation on capital structure of the quoted manufacturing firms. This implies that the variables in the regression model have significant effect on the investment policy of the manufacturing firms. This further implies that variation on systemic risk of the firms can affect the capital structure of the manufacturing firms. The results in the table proved that interest rate risk and exchange rate have positive but no significant effect on investment policy of the

quoted manufacturing firms. This implies that increase on increase on interest rate risk and exchange rate risk can positively affect capital structure. These findings confirm the expectation of the study and the objective of risk management strategies formulated b corporate organizations. The main premise in finance is that there is a connection between risk and return. Higher risk is assumed to lead to higher return on stocks with rationale pricing of stocks. Highly profitable firms are riskier than the average (Fama and French, 2015). Finance theories suggest that there is a positive relationship between risk and returns, this positive effect on profitability can affect investment policy. The positive effect of risk on capital structure of the manufacturing firms confirm the stakeholder theory which opined that since corporate risk management practices lead to a decrease in these expected costs, a company values raise (Klimczak, 2005).Therefore stakeholder theory provides a new insight into possible rationale for risk management. However, it has not yet been tested directly. Firms can reduce the likelihood of financial distress by hedging variability in earnings by managing financial risk. The positive effect of the variables confirm the findings of Allayannis and Weston (2018) whose stud found positive relationship between the use of foreign exchange derivatives and firm value by selecting Tobin's Q, as a firms' value indicator, Carter et al. (2016) that protecting risk related to the jet fuel is positively associated with the airline firm value, Mackay and Moeller (2017) observed a positive correlation between the revenue and cost of hedging and firm value by applying the model of Smith and Stulz (1985). But contrary to the findings of Jin and Jorion (2016) hedging did not affect the market value of the firm and the findings of Bartram et al. (2011) assessed the effects of using derivative financial instruments on firm risk and value in the geographical context for non-financial firms in 47 countries.

The Keynesian theory of interest rate implies that low interest rate as a component of cost administered is detrimental to increase savings and hence investment demand. Proponents of this theory argue that increase in the real interest rate will have strong positive effects on savings which can be utilized in investment, because those with excess liquidity will be encouraged to save because of the high interest rate, thus banks will have excess money to lend to investors for investment purpose thereby raising the volume of productive investment. Keynes also emphasized that the rate of interest is purely a monetary phenomenon. This theory introduced the concept of liquidity trap, a situation where low interest rates discourage savings and consequently reduces investments due to lack of investable fund.

Furthermore, the estimated result of the model found that equity price risk and consume price risk have negative and no significant effect on the capital structure of the quoted manufacturing firm. The negative effect of the variables on the capital structure of the firms is contrary to the a-priori expectation and can trace to volatility of the variables over the periods covered in the stud. It can also be traced to the multiplier effect of the global financial crisis in 200/2008. The negative effect of the variables confirm the findings of Jin and Jorion (2016) hedging did not affect the market value of the firm and the findings of Bartram et al. (2011) assessed the effects of using derivative financial instruments on firm risk and value in the geographical context for non-financial firms in 47 countries but contradict the findings of Allayannis and Weston (2018) whose stud found positive relationship between the use of foreign exchange derivatives and firm value by selecting

Tobin's Q, as a firms' value indicator, Carter et al. (2016) that protecting risk related to the jet fuel is positively associated with the airline firm value

CONCLUSION AND RECOMMENDATIONS

Conclusion

The objective of this study is to provide evidence of the nature of the relationship between risk and capital structure of quoted manufacturing firms. Corporate financial theory suggests that firms should match capital and risk in a positive way so as to minimize the frictions associated with higher leverage, while taking optimal advantage of the tax deductibility of debt. The results provide support for a positive relationship between capital and risk, consistent with corporate financial theory, but only in the longer term. The lack of evidence of a positive relationship between changes in capital and changes in risk indicates that current movements in capital (risk) of emerging market banks do not reflect the adjustments made to risk (capital).The emerging Nigerian capital markets could inhibit firm's ability to make short-term equity adjustments, while, the greater risk associated with emerging market advances makes the control and anticipation of risk exposures more intricate. The statistically significant positive relationship between the absolute levels of capital and risk identified suggests that over the longer term firms are able to match capital and risk in a positive way, reducing the frictions associated with the misalignment of capital and risk.

Recommendations

i. The study found that there is significant relationship between liquidity risk and capital structure, there is need for the manufacturing firms to adopt more appropriate measures for managing liquidity risks and ensuring compliance at all times and at all levels.

ii. The study findings revealed that consumer price risk demonstrated has no significant relationship capital structure of the quoted manufacturing firms, the study recommend that policy directed towards management of the effect of consumer price index on capital structure of the quoted manufacturing firms.

iii. There is also need for management to direct financing policy toward optimal capital structure to reduce the effect of leverage risk on shareholders' value of the quoted manufacturing firm. This can be achieved through proper planning and management of the financing decisions of the firms.

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