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STOCK MARKET DEVELOPMENT AND EQUITY FINANCING: EVIDENCE FROM QUOTED MANUFACTURING FIRMS IN NIGERIA

Toby A. J.¹ , & James E. D²

ABSTRACT

This study examined the relationship between stock market development and equity financing of quoted manufacturing firm in Nigeria. Cross sectional data was sourced from financial statement of the quoted manufacturing firms and Central Bank of Nigeria Statistical Bulletin from 1985-2018. Two regression models were formulated to explore the relationship between stock market development and equity financing. Equity financing ratio was used as dependent variables while Market capitalization ratio, Volume of shares retained Volume of share traded, all share index and Market Capitalization were used as independent variables. The study employed Ordinary Least Square Methods of panel co-integration, panel unit root test and granger causality test. After cross examination of the validity of the pooled effect, fixed effect and the random effect, the study accepts the fixed effect model. The study found from model 1 that 45.8 percent of the variation in equity ratio explained by the variables in the equation. while beta coefficient proved that market capitalization ratio have positive but no significant effect on equity ratio while market capitalization ratio have negative and significant effect on equity ratio of the quoted manufacturing firms. model II found that 60.1 percent of the variation in debt ratio explained by the variables in the equation while the beta coefficient proved that all share price index, have positive but no significant effect, market capitalization have positive but no significant effect while value of share traded have negative and no significant effect on debt ratio of the quoted manufacturing firms. From the findings, we conclude that stock market development have significant effect on equity financing of the quoted manufacturing firms. From the findings, stock market development has significant effect on equity financing. We recommend that the capital market regulatory authorities should ensure that Nigeria stock market operate with international best practice and all barriers to inflow of foreign portfolio investment should be discouraged.

Keywords: Stock Market Development, Equity Financing, Quoted Manufacturing.

INTRODUCTION

The stock market enables organizations to raise medium to long-term finance, particularly for the small and medium scale enterprises. The market enables the individuals, corporate organizations and institutions to invest their surplus funds (Oteh, 2014). The market gives individuals and corporate organizations the opportunity to participate in the creation of wealth (Mobolurin, 2001) via a particular company by investing in such a company. Stock market provides risk management instruments to the investors; this enables them to manage their investments for better returns.

Nigeria has a stock market that is in total of \$121 billion, as at the end of the first quarter in 2018, which is about 18 trillion in terms of market capitalization. The equities market is about 12.9trillion, while the rest of the investments actually belong the bonds market. This implies that, the Nigeria capital is an emerging market compared to stock market of the developed economy and among the fastest growing in Africa (Anyamaobi, 2018). Company financing decisions involve a wide range of policy issues. At the macro level, they have implications for stock market development, interest rate and security price determination, and regulation. At the micro level they have implications for capital structure, corporate governance, and company development (Green et al., 2002).

The indicators of stock market development include turnover ratio, total share of traded ratio, market capitalization ratio, stock market liquidity and stock market openness. Liquidity is the ease and speed with which economic agents can buy and sell securities. With a liquid market, the initial investors do not lose access to their savings for the duration of the investment project because they can easily, quickly, and cheaply, sell their stake in the company. Openness of stock market attracts foreign investors and enhances the development of the capital market.

Signaling Theory suggests that an issuer, through the action of pricing an issue, signals the quality of the Firm. Proponents of signaling theory also argue that security issuers of high quality firms are more likely to set a relatively

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higher price, while the opposite is expected from low quality firms. The Leland and Pyle (1977) signaling theory effect implies that sales of shares by better informed investors signal that they believe shares are overpriced. Miller and Rock (1985) further add that secondary equity issuance may signal a fall in earnings which may be interpreted negatively by investors resulting in lower stock prices.

The theory of capital structure choice focuses on several determining factors such life-cycle approach, differential taxation of income from different sources, bankruptcy cost/risks, the agency theory, pecking order hypothesis, and signaling theory. Directors who are concerned with a firm's reputation tend to act more prudently and avoid riskier projects in favour of safer projects, even when the latter have not been approved by shareholders, thus reducing debt agency costs (by reducing the "temptation" to gamble at creditors' cost). This perspective has also been seconded within the context of small business (Ang, 1991).

There are many studies on the effect of capital market on the economy, however significant proportion of the study focused on the effect of capital market on economic performance and economic growth. Adegbiwe, Nwanna and Amala (2015) examined the effect of stock market development on Nigeria's economic growth. Ieoluwa and Omotilewa (2015) examined the impact of stock market liquidity on economic growth of Nigeria between the years 1980 and 2012. Ikikii and Nzomoi (2013) evaluated stock market development effects on economic growth in Kenya. From the above problems and knowledge gap, this study examined the effect of capital market development on equity financing of quoted firms in Nigeria.

LITERATURE REVIEW

Stock Market Development

According to Okereke (2000) stock market is defined as the section of the financial system that is responsible for efficiency channeling of funds from the surplus to deficit economic limits on a long-term basis. The stock market as an institution is rather a network of specialized financial institution that in various ways bring together suppliers and users of fund. These institutions include Merchant Banks, Stock Broking Firms, Issuing House, Venture Capital Companies, Unit Trust Scheme, the Central Bank, the Securities and Exchange Commission and Stock Exchange which is the hallmark of the Stock Market. Stock Market development is categorized using three main characteristics: traditional, institutional and asset pricing (Demirgüç-Kunt and Levine 1996). Traditional characteristics are concerned with basic growth measures of stock market. These measures include number of listed companies and market capitalization. There are also the Institutional characteristics measures. These Institutional characteristics measures are the regulatory and legal role that may influence functioning of the market, information disclosure and transparency requirements as well as market barriers and trading costs. The Asset Pricing characteristics measures focus on the efficiency of the market especially in relation to the pricing of risk.

Stock market development may influence corporate control. Jensen and Murphy (1990) show that efficient stock markets help mitigate the principal-agent problem. Efficient stock markets make it easier to tie manager compensation to stock prices. This helps align the interests of managers and owners. Furthermore, Laffont and Tirole (1988) and Scharfstein (1988) argued that takeover threats induce managers to maximize the firm's equity price. Thus, well-functioning stock markets that ease corporate takeovers can mitigate the principal-agent problem and promote efficient resource allocation and growth.

Opinion differs on this issue too. Stiglitz (1985) argues that outsiders will be reluctant to take over firms because outsiders generally have worse information about firms than existing owners. Thus, the takeover threat will not be a useful mechanism for exerting corporate control; stock market development, therefore, will not importantly improve corporate control Stiglitz (1985).

Indicators of Stock Market Development

Turnover Ratio

Liquidity is the ease and speed with which economic agents can buy and sell securities. With a liquid market, the initial investors do not lose access to their savings for the duration of the investment project because they can easily, quickly,

and cheaply, sell their stake in the company. Thus, more liquid markets could ease investment in long term, potentially more profitable projects, thereby improving the allocation of capital and enhancing prospects for long-term growth. The ratio measures the market liquidity which is usually given as total value of shares traded divided by total value of listed shares or market capitalization. Beck and Levine (2004) prefer this measurement to other measurement of stock market variables. This is because unlike other measures, the numerator and denominator of turnover ratio contain prices. Since traded value can be given more meaning by relating it to the value outstanding volume of shares being considered, turnover ratio is commonly used as a second indicator of liquidity. Turnover ratio gives an indicator of the number of times the outstanding volume of shares changes hands. Turnover ratio equals the value of total shares traded divided by market capitalization.

Total Value of Shares Traded Ratio

Rousseau and Wattle (2000) and Beck and Levine (2004), used this measurement and it is given as the ratio of total value of shares traded to GDP. It measures the degree of trading relative to the size of the economy. Therefore, it reflects stock market liquidity on an economy wide basis.

Market Capitalization Ratio

Stock Market capitalization refers to the total naira market value of a company's outstanding shares. Commonly referred to as market cap is calculated by multiplying a company's shares outstanding by the current market price of one share, the investment community uses this figure to determine a company's size, as opposed to using sales or total asset figures (Osinubi, 2004). In this study, stock market capitalization is measured in relationship to Broad Money Supply which signifies percentage of Broad Money Supply that is invested in the Nigeria capital market.

Beck and Levine (2004) have shown that with market capitalization, there is no theory suggesting that mere listing of shares will influence resource allocation and economic growth. Levine and Zervos (1998) also indicate that market capitalization is not a good predictor of economic growth. However, Yartey (2008) differs on this issue and opined that the assumption behind this measure is that overall market size is positively correlated with the ability to mobilize capital and diversify risk on an economy-wide basis. For these unsettled discussions, we shall use market capitalization as a ratio of GDP, total value of shares traded ratio and turnover ratio, each at a time to determine the performance of each of them, and avoid multicollinearity in the model since Demiguc-Kunt and Levine (1996) has observed that different measures of stock

Stock Market Concentration

It is possible for stock markets to be large relative to their economies, but still concentrated. That is, only a few companies dominate the given market. Consequently, market concentration may be measured by looking at the share of market capitalization accounted for by the large companies in the market. These large companies are seen by some analysts as being the leading three to five companies in the market (Maunder et al., 1991) Yet, Another commonly used indicator of the degree of stock market concentration is the share of market capitalization accounted for by the ten largest stocks (e.g. International Finance Corporation, S&P).

Concentration adversely affects market development as it hampers market breadth by the concentration of capitalization within a handful of large companies, limiting the range of attractive investment opportunities and thus adversely affecting liquidity in the stock market in question. In addition, having a stock market which is driven by only a few companies could weaken the link between stock prices for non-leading companies and/or their performance and growth prospects. That is to say, the prices of stocks in non-leading companies are affected by market movements of stock prices of leading companies more than their own performance and prospects. This distorts the "signaling" function of stock markets. Market concentration also might encourage speculative activities as investment alternatives are limited and diversification possibilities are limited as well.

The Number of Listed Companies

The number of listed companies is used as a complementary measure of stock market size. The main advantage of this measure is that it is a proxy for the breadth of the stock market and is not subject to stock market fluctuations (Bekaert et al., 2001; Rajan and Zingales, 2003, and Karolyi, (2004). Moreover, it is not tainted by possible mis-measurement

of GDP, which often happens in many developing countries. Nevertheless, this measure suffers from two main weaknesses: first, the number of listed companies is too slow-moving to fully capture high frequency changes among listed companies. The number of listed companies can also be affected by corporate restructuring, combining and merging. Second, this measure may allocate a low score to economies whose industrial structure is concentrated in the sense of having only a smaller number of large companies. It can be a noisy measure as concentration only partly reflects limited access to finance (Rajan and Zingales, 2003 and Karolyi, (2004). It is worth highlighting that while marginal differences in the number of listed companies are uninformative, extreme value can be useful.

Stock Market Volatility

Stock prices are supposed to serve as signals for resource allocation. Yet, excessive volatility which does not reflect economic fundamentals would distort the “function of stock market development. However, a certain degree of stock market volatility is unavoidable, even desirable, as stock price movements indicate changing values across economic activities so resources can be better allocated. There are significant implications surrounding stock market volatility, given that it affects incentives to save and to invest. Theoretically, all other things being equal, the more volatile the stock market, the fewer savers will save and hence the less investment there will be. Excessive stock market volatility would lead investors to demand a higher risk premium, increasing the cost of capital which in turn would impede investment and hamper economic growth. In addition, this volatility might lead to a shift of funds to less risky assets which-once-again- will cost companies to pay more for access to capital (Zuliu, 1995, Levine and Zervos, 1996; and Arestis et al., 2001).

Stock market volatility might result from the volatility of underlying economic fundamentals, in particular, the volatility of the real output flow whose present discount value that the stock price is supposed to reflect should matter. Black and Scholes (1973) argue that a higher leverage ratio may induce companies’ managers to undertake riskier projects than they otherwise would. In addition, uncertainty of macroeconomic policies may also result in stock market volatility may also be caused by the arrival of new, unanticipated information that alters expected returns on stocks (Engle and Ng, 1993). In light of the above discussion, one could define a “developed” stock market as “a market that sufficiently large and liquid-relative to the size of its economy-possessing a non-concentrated market capitalization and demonstrating adequate linkage to the performance of the real economic sector”. It is worth highlighting that the previous discussion does not cover other important dimensions of stock market development, namely, institutional factors. Yet the status of institutional and all other factors are indeed reflected in the five aspects we have discussed. Finally, it would be possible to establish a stock market development index by elaborating a weighted average comprising market size, liquidity, volatility, linkage to real stock and market concentration. However, the weight to be assigned to each individual factor could be an issue of some contention.

Equity Financing

Floegel (1990) defined equity financing as where by corporations raise money by selling ownership interests (represented by shares of stock) to investors. There are two types of equity issuance, the first is initial public offering, and it occurs when a company "goes public," selling its stock on a major exchange for the first time. The second is called a "seasoned issue," occurring when an established public company sells shares from its supply of authorized but unissued stock. Financial theory suggests that financing by equity presents the most costly means of attracting capital. The decision by a firm’s management to attract funds by issuing equity is undertaken if funds can’t be attracted in any other way or if the shares are overvalued such that the benefits of an issue outweigh the costs (Rad & Tsai, 2006).

Equity financing being a component of capital structure generally aims at strengthening Capital structure and to finance investments opportunities that require large funds which cannot be financed internally, such as expansions or acquisitions (Myers & Majluf, 1984). Therefore announcements of equity should signal good news to investors since it would be seen that the firm has identified value adding projects to invest in. However as seen in studies of (Ndatimana (2008; Asquith and Mullins, 1986; Eckbo and Marsulis, 1992) equity financing in form of firms announcements are followed by a share price drop which is inconsistent with the efficient market hypothesis (EMH) which advocates that if capital markets are efficient share prices should be correctly priced with no under or overpricing (Fama, 1970). Growth of firms that use proceeds obtained from equity financing is certain if the proceeds are invested in positive NPV projects. Poor investments lead to deterioration of firm performance due to presence of free cash flows

or if the proceeds are used to finance debts. Loughran and Ritter (1997) and McLaughlin et al. (1998) posit that, equity financed firms tend to perform poorly in the long run. However these results for mature stock markets cannot be generalized for emerging markets due to institutional differences.

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 a 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.

THEORETICAL REVIEW

Capital Structure Irrelevance Theory

The modern theory of capital structure began with celebrated paper of Modigliani and Miller (1958). They (MM) pointed the direction that such theories must take by showing under what conditions capital structure is irrelevant. Since then, many economists have followed the path they mapped.

Theory Modigliani and Miller (1958) proposition concluded that the value of the firm, that is, its stock price, does not depend on the capital structure of the firm. The main idea behind Modigliani and Miller's theory is that, a rational investor can create any capital structure on his/her own through homemade leverage substitution. Capital structure irrelevance" is based on assumptions that include perfect capital markets, homogenous expectations, no taxes, and no transaction costs; all earnings are paid out as dividend. Modigliani and Miller (1963) stated that borrowing will only cause the value of the firm to rise by the amount of the capitalized value of the tax subsidy. The introduction of tax deductibility of interest payments has an implication on the choice of capital structure. Profitability increases, non-debt tax shields reduce and liquidity increases. Modigliani and Miller's capital structure theory is not completely right in its assumption that a firm's value is independent of its capital structure in a perfect capital market (Xiaodong and Birge, 2008).

By borrowing on a personal account at a risk-free rate and buying shares of the unlevered firm investors can create homemade leverage. The other way around, investors can undo undesirable leverage by buying fewer stocks of the levered firm and lending at a risk-free rate. As investors have this opportunity, they are not willing to pay a premium for levered firms over unlevered firms. Hence, the values of two companies, identical in all aspects except their capital structures, should be equal. The second type of capital structure irrelevance is related to multiple equilibrium (Frank & Goyal, 2008). Miller (1977) considers both personal and corporate taxes, which determine the equilibrium level of aggregate corporate debt and, hence, an equilibrium debt-equity ratio for a whole corporate sector. However, Miller's (1977) model does not specify how aggregate quantities are split up among individual firms. Although tax considerations establish an economy-wide leverage ratio, there is a multiple equilibrium which debt is issued by different firms (Frank & Goyal, 2008).

Theory of Financial Sector Development

The theory of financial intermediation was first formalized and popularized in the works of Goldsmith (1969), Shaw (1973) and McKinnon (1973), who see financial markets (both money and capital markets) playing a pivotal role in economic development, attributing the differences in economic growth across countries to the quantity and quality of services provided by financial institutions. Supporting this view is the result of a research by Nwaogwugwu, (2008) and Dabwor, (2009) on the Nigerian stock market development and economic growth, the causal linkage. However, this contrasts with Robinson (1952), who argued that financial markets are essentially hand maidens to domestic industry, and respond passively to other factors that produce cross-country differences in growth. Moreover there are general tendency for supply of finance to move along with the demand for it. The same impulse within an economy, which set enterprises on foot, makes owners of wealth, venturesome and when a strong impulse to invest is fettered by lack of finance, devices are invented to release it.

The Robinson school of thought therefore believes that economic growth will bring about the expansion of the financial sector. Goldsmith, (1969) attributed the direct correlation between the level of real per capita GNP and financial development to the positive effect that financial development has on encouraging more efficient use of the capital stock. In addition, the process of growth has feedback effects on financial markets by creating incentives for further financial development. Mckinnon, (1973) in his study argued that there is a complimentary relationship between physical capital and money that is reflected in money demand. This complimentary relationship according to Mckinnon (1973), links the demand for money directly with the process of physical capital accumulation mainly because the conditions of money supply have a first order impact on decision to save and invest. Debt intermediary hypothesis was proposed by Shaw (1973), whereby expanded financial intermediation between the savers and investors resulting from financial liberalisation (higher real interest rates) and development increase the incentive to save and invest, stimulates investments due to an increase supply of credit, and raises the average efficiency of investment. This view stresses the importance of free entry into and competition within the financial markets as prerequisites for successful financial intermediation.

EMPIRICAL REVIEW

Guardo and Castriotta (2014) examined three crowd sourcing models: contest, collaborative, and moderated. In an open innovation paradigm, small firms could use internal and external concepts during the innovation development (Guardo & Castriotta, 2014). Explanations for the increased importance of markets for technologies were emerging in various industries while the need for crowd sourcing is evolving (Guardo & Castriotta, 2014). The survey of SBA of 2003 indicated security increase to lenders by 90% (Geho & Frakes, 2013). Elimination of fees encouraged SMEs interest to borrow and banks interest in lending to SMEs (Geho & Frakes, 2013). Access to capital with highly attractive terms and the environment created demand for funds by a small business community (Geho & Frakes, 2013; Krishnan, Nandy, & Puri, 2014). South Africa adopted business incubation as one vehicle for upgrading the SMME sector (Masutha & Rogerson, 2014). Masutha and Rogerson noted that 67% of mainstream SMMEs leaders financed their start-up businesses from private or family savings, while 33% funded through bank credits. Masutha and Rogerson also noted that 90% of the SME entrepreneurs reluctantly joined the incubation program (Masutha and Rogerson, 2014). The World Bank account reported that 15% of the small business in Malawi used bank financing, which was higher than the 10% of firms using bank funding in the Sub-Saharan Africa (Caceres & Caceres, 2015; Mulaga, 2013).

Hoque, Sultana, and Thalil (2016) examined the credit rationing of SMEs in the city of Chittagong, Bangladesh using a sample of 200 SMEs. The Bangladesh government established an SME Foundation (SMEF) in 2007, to support in promoting the financing of SMEs to grow to their full potential (Hoque et al., 2016). The Central Bank of Bangladesh encourages lending to SMEs through a refinancing window for business directly involved in the SME sector (Hoque et al., 2016). The outcome of the study revealed that 89 % of the SMEs obtained loans from microfinance institutions, while 60 % obtained credits from the banks, and 48 % obtained less than desired to obtain (Hoque et al., 2016). Taiwo, Yewande, Edwin, and Benson (2016) explored the roles of microfinance banks on SMEs and the benefit derived from the credit scheme of microfinance banks.

Taiwo et al., (2016) interviewed 1.5 SMEs leaders across Lagos state in Nigeria. They indicated that the recapitalization of microfinance banks in Nigeria would improve the capacity to granting credit to SME for growth and development. Hoque et al., (2016) noted that improving the accessibility of credit facility to SMEs was significant to the development of SMEs in Bangladesh. Erdoğan (2015) examined firm-level determinants of the funding sources and structure of operational funds of Turkish SMEs (Erdoğan, 2015). Erdoğan used a cross sectional data set of 1,278 SMEs for the year 2013. Larger firms and businesses with international standard quality certification had a lower proportion of working capital from internal sources (Erdoğan, 2015).

Adel, Tarek, Affes, and Jarbouï (2016) examined VC as a source of financing SMEs in Tunisia. Tunisia created an Investment Company with VC called SICARs. The motivation for VC financing was because new businesses often found it difficult to obtain loans from commercial banks (Abe, 2015; Abdulazeez, Suleiman, & Yahaya, 2016; Adel et al., 2015; Bomyr and Wabo, 2015; Oke & Aluko, 2015).

Popa and Ciobanu (2014) examined the financial factors that affected the functionality and profitability of SMEs in Romania, taking into consideration the financial indicators from 2009 to 2012 on investment capital and profitability.

The SMEs contributed significantly to the developments of the SME sector and the economy, which characterized about 99% of all businesses in Romania, provided around 50% of GDP and approximately 65% of employment (Neagu, 2016; Popa and Ciobanu, 2014).

Kumar and Rao (2015) examined the funding preferences of SMEs and what influences the financing decisions of SMEs in India. The inadequate finance faced by SMEs was a result of demand and supply gap (Kumar & Rao, 2015). There was also a lack of information on the accessibility to sources of finance and the unwillingness of financial institutions to provide SMEs with funding (Kumar & Rao, 2015). Kumar and Rao proposed a conceptual framework that could analyze the financing preferences of SMEs, through incorporating the fundamentals of capital structure theories elements.

Yazdanfar and Öhman (2015) examined the correlation between debt degree and performance among Swedish SMEs. Debt policy influences firm performance, firm value and survival; therefore, SME owners should have an emphasis on finding a reasonable debt level (Yazdanfar & Öhman, 2015). The population sample comprised active unlisted, non-financial limited liability firms with fewer than 200 employees in five industry sectors (Yazdanfar & Öhman, 2015). Trade credit (accounts payable), short-term debt, and long-term debt significantly and negatively affected SMEs' profitability (Yazdanfar & Öhman, 2015). Profitable SMEs were more likely to use equity capital and retained earnings than external funding in line with the pecking order theory (Mulaga, 2013; Yazdanfar & Öhman, 2015).

Moro, Fink, and Maresch (2015) examined the association between reduction in information asymmetry and provision of bank credit to SMEs. Moro et al. (2015) used 828 loan applications of SME managers to examine the relationships between 16 local cooperative banks and SMEs in northern and central Italy. Moro et al., (2015) and Serrasqueiro et al., (2016) noted that decrease in information asymmetry influenced access to credit by SMEs. Moro et al. pointed out that there was a positive relationship between the loan manager's assessment of the amount, quality, completeness, and the period of the receiving information from the SMEs on short-term credit, and the credit obtained by SMEs.

Kraemer-Eis and Passaris (2015) examined the importance of securitization in financing SMEs in Europe. Kraemer-Eis and Passaris (2015) noted that the European securitization market grew progressively in the preceding years until the outburst of the financial crisis in 2008. In the first three-quarters of 2014 overall SME securitization grew in Europe with France having a market share of 29%, UK 19%, the Netherlands 13%, Italy 9%, and Germany 9% (Kraemer-Eis & Passaris, 2015).

Vasilescu (2014) conducted an economic review on financing innovative SMEs in the EU after the financial crises of 2008. The financial crisis increased the financing gap for EU SME's financing (Cowling & Zhang, 2016; Moro et al., 2015; Vasilescu, 2014). Banks tightened lending principles throughout the financial crisis (Cowling & Zhang, 2016; Vasilescu, 2014). The European Commission created a single portal in 2013 termed Horizon 2020 to help alleviate the financial needs of innovative SMEs in the EU (Cowling & Zhang, 2016; Moscalu, 2015; Vasilescu, 2014). Even, though, bank financing was the leading source of capital for European SMEs, access to the bank loans deteriorated in recent years because of the current economic crisis (Jeger, Šarlija, & Bilandžić, 2016; Moro et al., 2015; Moscalu, 2015).

Hong and Zhou (2013) reviewed the policy of collateral provisions including guarantee fee rates, risk consortium; capital assurance requirements and supporting organizations in China. The findings indicated that only under certain conditions can third party's guarantee provisions tackle the financing problems of SMEs (Hong & Zhou, 2013). The most significant way was the efficient control by collateral agencies, primarily when the agency would benefit from the lending (Hong & Zhou, 2013).

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, this result inconsistent with the result of Rajan and Zingales (1995) who find inverse association between debt and performance.

METHODOLOGY

This study used quasi experimental research design approach for the data analysis. This study covers a population of quoted stock market firms in Nigeria. The total number of quoted stock market firms is 169. Our sample is based on data formulated from quoted manufacturing firms in Nigeria. The researcher used random sampling procedure to select 23 quoted companies. The choice of the 23 quoted manufacturing firms was based on the availability of data and the existence of the firms within the time covered in this study. This study used secondary data sourced from The Central Bank of Nigeria (CBN), Statistical Bulletin, The Nigerian Stock Exchange Factsheet (NSE) (1985-2018).

Model Specification

Based on the objectives of the study, the functional model specified as follows:

$$EF = \alpha + \beta_1 MCR + \beta_2 VOSR + \varepsilon_i \quad (1)$$

$$EF = \alpha + \beta_1 VOST + \beta_2 ASI + \beta_3 MC + \varepsilon_i \quad (2)$$

Where

EF	=	Equity financing
MCR	=	Market capitalization ratio
VOSR	=	Volume of shares retained
VOST	=	Volume of share traded
ASI	=	All share index
MC	=	Market Capitalization
ε_i	=	Error term

Methods of Data Analysis

Ujunwa (2012) opined that coefficient of estimations are reliable when regression parameters do not change over time and do not differ between various cross-sectional units. Therefore, when the regression estimation differ widely between the two models (fixed effects and random effects model), the adoption of Hausman test will be essential. Cross-sectional data over the period from 1985-2018 is used and in line with notable literature, such as the work of Majumdar and Chhibber (1999), Zeitun and Tian (2007), Onaolapo and Kajola (2010). These analytical techniques will enable the researcher attain justifiable and robust result.

Pooled Regression Model (PRM) Is equally known as the constant coefficient model (CCM). It is the simplest among the three models in panel data analysis. However, it disregards the space and the time dimension of the pooled data.

Fixed Effects (FE) Model: In the fixed effect technique, the slope coefficient is constant but the intercept varies across space i.e the intercept in the regression model is allowed to vary across space (individuals). This is as a result of the fact that each cross sectional unit may have some special characteristics.

Random Effect (RE) Model: The RE technique which is equally known as the Error component model (ECM) is an alternative to FE techniques. Basically, the RE estimator assumes that the intercept of an individual unit is a random component that is drawn from a larger population with a constant mean value.

Panel Unit Root Test: Based on the panel data used in the study, the researcher used panel unit roots test to test the validity of the data. Panel unit root involves testing whether a stochastic process is stationary or non-stationary and the order of integration of the individual series under consideration. The tests are to be conducted with and without a deterministic trend (t) for each of the series. For the purpose of this study, the ADF unit root will be adopted and the general form of ADF test to be estimated by the following regression:

$$y_t = \alpha^0 + \alpha^{1t-1} + \sum_{i=1}^n \alpha \Delta y_i + e^t \quad (3)$$

$$\Delta y_t = \alpha_0 + \alpha_1 y_{t-1} + \sum_{i=1}^n \alpha_1 \Delta y_i + \delta_t + e^t \quad (4)$$

Where Y is the time series, t is the linear trend, Δ is the first differential operator, α is the random error term.

For the cointegration test, the maximum likelihood test procedure established by Johansen & Juselius (1990) and Johansen (1991) will be used. In the test, if Y_t is a vector of n stochastic variable then there exist a P-lag vector auto regression with Gaussian errors. Johansen methodology takes its starting point in the vector auto regression (VAR) of order of P given by;

$$y_t = \mu + \Delta y_{t-1} + \dots + \Delta p y_{t-p} + e_t \quad (5)$$

Where y_t is an (nX1) vector of variables that are integrated of order commonly denoted (1) and is an e_t (nx1) vector of innovations. In order to determine number of co-integration vectors, Johanson (1989) and Johansen & Juselius (1990) suggested two statistic tests, the first one is the trace test (trace). It tests the null hypothesis that the number of distinct cointegrating vector is less than or equal to q against a general unrestricted alternatives $q=r$ the test calculated as follows:

$$\lambda \text{ trace } (r) = T \sum_{i=R+1}^n (1 - \lambda_i) \quad (6)$$

T is the number of usable observations, and the λ_i is the estimated eigenvalue from the matrix. The second statistical test (λ_{max}) that is, calculated according to the following formula; $\lambda_{max}(r,r+1) T$ in $(1-\lambda_{r+1})$. The test concerns a test of the hull hypothesis that there is r of co-integrating vectors against the alternative that r+1 con-integrating vector.

Granger Causality Test

The test of cointegration ignores the effect of the past values of one variable on the current value of the other variable. The test for Granger causality is performed by estimating equations of the following form;

$$\Delta y_t + \alpha_0 + \sum_{i=1}^m \alpha_{1,i} \Delta y_{t-1} \Delta y_{t-i} + \sum_{i=0}^m \alpha_{2,i} \Delta x_{t-1} + \delta ECM_{t-1} + \varepsilon_i \quad (7)$$

$$\Delta y_t + \beta_0 + \sum_{i=1}^m \beta_{1,i} \Delta y_{t-i} + \sum_{i=0}^m \beta_{2,i} \Delta y_{t-1} + \lambda ECM_{t-1} + \varepsilon_i \quad (8)$$

Where e_t and μ are white noise disturbance terms (normally and independently distributed), m is the number of lags necessary to induce white noise in the residuals, and ECM_{t-1} , is the error correction term from the long-run relationship.

ANALYSIS AND DISCUSSION OF FINDINGS

Market Capitalization Ratio, Volume of Shares Retained and Equity Financing of Quoted Manufacturing Firms in Nigeria

Table 1: Panel Unit Root Analysis

Method: Series: D(EF,2)	Statistic	Prob.**	Cross-sections	Obs
Levin, Lin & Chu t*	-16.3527	0.0000	41	747
Im, Pesaran and Shin W-stat	-22.0818	0.0000	41	747
ADF - Fisher Chi-square	613.017	0.0000	41	747
PP - Fisher Chi-square	810.985	0.0000	41	788
Series: D(MCR,2)				
Levin, Lin & Chu t*	-16.6960	0.0000	41	747
Im, Pesaran and Shin W-stat	-22.7084	0.0000	41	747
ADF - Fisher Chi-square	609.446	0.0000	41	747
PP - Fisher Chi-square	1074.06	0.0000	41	788

Series: D(VOSR,2)

Levin, Lin & Chu t*	-25.2384	0.0000	40	733
Im, Pesaran and Shin W-stat	-30.9174	0.0000	40	733
ADF - Fisher Chi-square	788.526	0.0000	40	733
PP - Fisher Chi-square	845.095	0.0000	40	773

Source: E-View 9.0

The result of panel unit root test, result shows that of the time series are nonstationary in levels form while the first difference of all the series indicates stationary process. However, some series are not stationary in difference form based on Levin, Lin & Chu criteria, but the other test statistics suggested the stationary behavior of the series. The result further suggested that given set of variables have mixed order of integration and no series is integrated of more than one order. The first generation panel unit root tests confirms that all the variables are non-stationary at level and found to be stationary at I(1) meaning that they are non-stationary at level but stationary at first difference. All the other variables are found to be stationary at level.

Table 2: Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
MCR	0.029520	0.038731	0.762201	0.4461
VOSR	-6.543730	4.280458	-1.528745	0.1267
C	0.769711	0.122244	6.296536	0.0000
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.483686	Mean dependent var		0.702810
Adjusted R-squared	0.458703	S.D. dependent var		1.503141
S.E. of regression	1.105904	Akaike info criterion		3.085253
Sum squared resid	1061.584	Schwarz criterion		3.312504
Log likelihood	-1362.333	Hannan-Quinn criter.		3.172014
F-statistic	19.36068	Durbin-Watson stat		0.493155
Prob(F-statistic)	0.000000			
Correlated Random Effects - Hausman Test				
Test Summary		Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random		6.486980	2	0.0084

Source: E-View 9.0

From the table the probability coefficient of Hausman test 0.0084 and 0.0063 is less than the critical value of 0.05, the study adopt fixed effect model. The results in Table 2 outline the regression results for model 1. The adjusted R-squared indicates that approximately 45.8 percent of the variation in equity ratio explained by the variables in the equation. In addition, the F-statistics show that the overall regression is significant at the 5 percent level, as the P-values are less than 0.05. The beta coefficient proved that market capitalization ratio have positive but no significant effect on equity ratio while market capitalization ratio have negative and significant effect on equity ratio of the quoted manufacturing firms.

Table 3: Presentation of Panel Cointegration

	Statistic	Prob.	Weighted-Statistic	Prob.
Panel v-Statistic	0.116147	0.4538	-2.334002	0.9902
Panel rho-Statistic	-0.724948	0.2342	-5.237630	0.0000
Panel PP-Statistic	-1.677844	0.0467	-7.714840	0.0000
Panel ADF-Statistic	-1.207103	0.1137	-2.809138	0.0025
	Statistic	Prob.		
Group rho-Statistic	-1.374098	0.0847		
Group PP-Statistic	-7.812491	0.0000		
Group ADF-Statistic	-2.332937	0.0098		
Group ADF-Statistic	-2.492224	0.0063		

Source: E-View 9.0

To ascertain if there is long run relationship, we test cointegrated using Pedroni's (1999, 2001, 2004). This is to investigate whether long-run steady state or cointegration exist among the variables and to confirm what Coiteux and Olivier (2000) state that the panel cointegration tests have much higher testing power than conventional cointegration test. Since the variables are found to be integrated in the same order I (1), we continue with the panel cointegration tests proposed by Pedroni (1999, 2004). Cointegrations are carried out for constant and constant plus time trend and the summary of the results of cointegrations analyses are presented in table 4.7. In constant level, we found that the seven statistics reject null hypothesis of no cointegration at the five percent level of significance for the ADF statistic and group ρ -statistic, while the group ρ -ADF is significant at one percent level.

Table 4: Granger Causality Test

Null Hypothesis:	Obs	F-Statistic	Prob.
MCR does not Granger Cause ER	829	0.50116	0.6060
ER does not Granger Cause MCR		0.15381	0.8575
VOSR does not Granger Cause ER	829	1.67416	0.1881
ER does not Granger Cause VOSR		0.51632	0.5969

Source: E-View 9.0

Granger causality between two variables cannot be interpreted as a real causal relationship but merely shows that one variable can help to predict the other one better (Zouet *et al.*, 2010). From table 4.8, the study found that there is no causal relationship that exists among the variables. The no presence of causal relationship among the variables contradicts the a-priori expectation of the results.

Table 5: Panel Unit Root Analysis

Method: D(EF)	Statistic	Prob.**	Cross-sections	Obs
Levin, Lin & Chu t^*	-13.0482	0.0000	41	710
Im, Pesaran and Shin W-stat	-19.7317	0.0000	41	710
ADF - Fisher Chi-square	533.398	0.0000	41	710
PP - Fisher Chi-square	882.039	0.0000	41	751
Series: D(ASI,2)				
Levin, Lin & Chu t^*	-19.7132	0.0000	41	710
Im, Pesaran and Shin W-stat	-24.8912	0.0000	41	710
ADF - Fisher Chi-square	648.865	0.0000	41	710
PP - Fisher Chi-square	865.499	0.0000	41	751
Series: D(MC,2)				
Levin, Lin & Chu t^*	-23.4605	0.0000	41	710
Im, Pesaran and Shin W-stat	-28.2432	0.0000	41	710
ADF - Fisher Chi-square	704.119	0.0000	41	710
PP - Fisher Chi-square	940.579	0.0000	41	751
Series: D(VOST,2)				
Levin, Lin & Chu t^*	-16.9028	0.0000	41	710
Im, Pesaran and Shin W-stat	-25.8228	0.0000	41	710
ADF - Fisher Chi-square	589.913	0.0000	41	710
PP - Fisher Chi-square	892.992	0.0000	41	751

Source: E-View 9.0

The result of panel unit root test, result shows that of the time series are nonstationary in levels form while the first difference of all the series indicates stationary process. However, some series are not stationary in difference form based on LLC criteria, but the other test statistics suggested the stationary behavior of the series. The result further suggested that given set of variables have mixed order of integration and no series is integrated of more than one order. The first generation panel unit root tests confirms that all the variables are non-stationary at level and found to be stationary at I(1) meaning that they are non-stationary at level but stationary at first difference. All the other variables are found to be stationary at level.

Table 6: Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ASI	0.060872	0.092973	0.654730	0.5128
MC	0.000346	0.000203	1.700427	0.0394
VOST	-5.667506	3.604505	-0.157368	0.8750
C	-0.063367	0.682766	-0.092809	0.9261
Effects Specification				
			S.D.	Rho
Cross-section random			1.081209	0.4176
Idiosyncratic random			1.276753	0.5824
Weighted Statistics				
R-squared	0.804992	Mean dependent var		0.170600
Adjusted R-squared	0.601561	S.D. dependent var		1.283287
S.E. of regression	1.281630	Sum squared resid		1429.042
F-statistic	1.455061	Durbin-Watson stat		1.109548
Prob(F-statistic)	0.225427			
Unweighted Statistics				
R-squared	0.008122	Mean dependent var		0.685343
Sum squared resid	2426.485	Durbin-Watson stat		0.664364
Correlated Random Effects - Hausman Test				
Equation: Untitled				
Test cross-section random effects				
Test Summary		Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random		4.202525	3	0.2404

Source: E-View 9.0

From the table the probability coefficient of Hausman test coefficient of 0.664364 and 0.3576 implies that random effect is valid therefore the study adopt random effect model. The results in Table 7 outline the regression results for model 2. The adjusted R-squared indicates that approximately 60.1 percent of the variation in debt ratio explained by the variables in the equation. In addition, the F-statistics show that the overall regression is significant at the 5 percent level, as the P-values are less than 0.05. The beta coefficient proved that all share price index, have positive but no significant effect, market capitalization have positive but no significant effect while value of share traded have negative and no significant effect on debt ratio of the quoted manufacturing companies.

Table 7: Presentation of Panel Cointegration

	Statistic	Prob.	WeightedStatistic	Prob.
Panel v-Statistic	2.326700	0.0100	0.098356	0.4608
Panel rho-Statistic	-7.005725	0.0000	-0.662108	0.2540
Panel PP-Statistic	-20.21040	0.0000	-4.120366	0.0000
Panel ADF-Statistic	-2.123205	0.0169	-2.345321	0.0095
	Statistic	Prob.		
Group rho-Statistic	2.340463	0.9904		
Group PP-Statistic	-8.579100	0.0000		
Group ADF-Statistic	-1.867078	0.0309		

Source: E-View 9.0

Cointegrations are carried out for constant and constant plus time trend and the summary of the results of cointegrations analyses are presented in table 4.19. In constant level, we found that the seven statistics reject null hypothesis of no cointegration at the five percent level of significance for the ADF statistic and group ρ -statistic, while the group -ADF is significant at one percent level.

Table 8: Granger Causality Test

Null Hypothesis:	Obs	F-Statistic	Prob.
ASI does not Granger Cause DEBT_RATIO	792	0.00793	0.9921
DEBT_RATIO does not Granger Cause ASI		0.20157	0.8175

MC does not Granger Cause DEBT_RATIO	792	0.91111	0.4025
DEBT_RATIO does not Granger Cause MC		0.38990	0.6773
VOST does not Granger Cause DEBT_RATIO	792	0.11766	0.8890
DEBT_RATIO does not Granger Cause VOST		1.15325	0.3161

Source: E-View 9.0

Granger causality between two variables cannot be interpreted as a real causal relationship but merely shows that one variable can help to predict the other one better (Zou et al., 2010). From table 9, the study found that there is no causal relationship that exists among the variables. The no presence of causal relationship among the variables contradicts the a-priori expectation of the results.

DISCUSSION OF FINDINGS

The estimated regression model produced adjusted R^2 of 0.417657 which implies that 41.7 percent variation on the debt financing of the quoted manufacturing firms can be traced to variation on stock market development indices estimated in the model. The empirical findings from the F-statistics and probability justifies that the model is statistically significant. The estimated model proved that bank capitalization has positive and significant relationship with debt financing of the quoted manufacturing firms.

Empirical findings from the estimated regression results proved that market capitalization have positive but no significant relationship with equity financing of the quoted manufacturing firms. This finding confirm the a-priori expectation of this study as well as reforms carried out of the policy makers aimed at increasing the operational efficiency of the stock market. The positive findings confirm the findings of Kumar and Rao (2015) that there was also a lack of information on the accessibility to sources of finance and the unwillingness of financial institutions to provide SMEs with funding (Kumar & Rao, 2015) and the findings of Moro, Fink, and Maresch (2015) that decrease in information asymmetry influenced access to credit by SMEs and that there was a positive relationship between the loan manager's assessment of the amount, quality, completeness, and the period of the receiving information from the SMEs on short-term credit, and the credit obtained by SMEs. However, findings revealed that there is negative but no significant relationship between value of share retained and equity financing of the quoted manufacturing firms, this contrary to the expectations of the study and contradicts the empirical findings listed above.

The estimated regression model produced adjusted R^2 of 0.601561 which implies that 60.1 percent variation on the equity financing of the quoted manufacturing firms can be traced to variation on stock market development indices estimated in the model. The empirical findings from the F-statistics and probability justifies that the model is statistically significant. The estimated model proved that market capitalization and all share price index have positive and significant relationship with equity financing while volume of share traded have negative but no significant relationship with debt financing of the quoted manufacturing firms.

The positive relationship that exists between the dependent and independent variables confirm the a-priori expectations of the results. The positive effect of the variables confirm the findings of Kraemer-Eis and Passaris (2015), Vasilescu (2014), Hong and Zhou (2013) while the negative relationship between the dependent and independent variables contradicts the findings of Kraemer-Eis and Passaris (2015), Vasilescu (2014) and Hong and Zhou (2013).

CONCLUSION

Model I proved that 45.8 percent of the variation in equity ratio explained by the variables in the equation. while beta coefficient proved that market capitalization ratio have positive but no significant effect on equity ratio while market capitalization ratio have negative and significant effect on equity ratio of the quoted manufacturing firms. The results in for model II found that 60.1 percent of the variation in debt ratio explained by the variables in the equation while the beta coefficient proved that all share price index, have positive but no significant effect, market capitalization have positive but no significant effect while value of share traded have negative and no significant effect on debt ratio of the quoted manufacturing firms. From the findings, we conclude that stock market development have significant effect on equity financing of the quoted manufacturing firms.

RECOMMENDATIONS

1. The stock market regulatory authorities should ensure that Nigeria stock market operate with international best practice, all barriers to inflow of foreign portfolio investment should be discouraged.
2. Policies should be directed toward increasing the openness of the stock market. In fact Nigeria should, as a matter of urgency, deploy resources towards gathering reliable and accurate information which would facilitate development of comprehensive strategies to manage investment inflows.
3. Orderly market rules should be made and enforced in the stock market, this is because orderly market rules help maintain liquidity and prevent destabilizing market events. Orderly market rules are inclusive of: requirements on dealers to maintain bid and ask quotes at all times on a trading day; price limits for derivatives exchanges; fair credit reporting rules; prohibitions against predatory lending and deposit insurance.

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CAPITAL STRUCTURE AND VALUATION OF QUOTED INSURANCE FIRMS IN NIGERIA

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ABSTRACT

This study examined capital structure and valuation of quoted insurance firms in Nigeria using a sample of (15) quoted insurance firms. Panel data was sourced from financial statement and annual reports of the quoted insurance firms from 2010-2019. Panel ordinary least square methods were used to examine the relationship between signaling theory, capital structure and corporate valuation of the quoted insurance firms. Adjusted R², t-test, probability coefficient, Durbin Watson statistic, f-statistic, panel cointegration, panel unit root and granger causality test were used to examine the extent to which capital structure affects corporate valuation. The study found that 57.6 percent of the variation in economic value added is explained by the independent variables in the equation. Long term debt have negative and significant relationship, retained earnings have positive and no significant relationship, share capital positive and significant relationship while short term debt have positive and significant relationship with economic value added of the quoted insurance firms. The study concludes that there is significant relationship between signaling, capital structure and valuation of the quoted insurance firms. It recommends that management of Nigerian quoted insurance firms should work very hard to optimize the capital structure of their listed quoted insurance firms in order to increase the valuation. The Management of Nigerian quoted insurance firms should increase their commitments into short term debt to total asset in order to improve valuation from their business operation. The Management of Nigerian quoted insurance firms should be concerned about the level of their total debt and Stakeholders of quoted insurance firms in Nigeria should also reduce the level of long term debt.

Keywords: Capital Structure, Valuation, Quoted Insurance Firms,

INTRODUCTION

The divergences on capital structure and corporate valuation dates back to 1959 when Modigliani and Miller opposed the relevance theory of Gordon. Over the years various theories have been formulated by scholars to examine the relationship between capital structure and corporate valuation. However, the Modigliani - Miller theory was criticized, mostly for its hypotheses, and less for its content. Its most important flaw is the fact that presupposes the existence of perfect financial markets. In their second article, the writers import the notion of taxation, leaving all the other hypotheses the same. The optimal capital structure, is the one where the company was financed almost exclusively with debt, something that is not usual in reality, because the cost of debt increases, when leverage increases. The increase of a firm's leverage seems to be a solution, but in fact it is a short-term solution, since a company cannot constantly increase its debt.

Trade-off theory suggests as an optimal capital structure, that mix of equity and debt where present value of tax advantages equals to the present value of costs related to debt. Its main advantage is the fact that it suggests mediocre leverage and that it is easy to understand. Its disadvantage is the fact that it is a general, descriptive theory that does not explain which exactly is the right level of leverage. Determining the optimal capital structure of the firm is a critical finance management function. It involves the weighing of the pros and cons of various sources of financing and selects the most advantageous keeping in view the target capital and its effect on the value of the firm. It is continuous decision that is taken whenever a firm needs additional capital (Pandy, 2005).

Prior to 1958, the traditional capital structure theory (the Naïve Theory) was based on the idea of weighted average cost of capital principle, which states that companies issue debt in order to reduce their weighted average cost of capital as debt is considered less costly than equity (Prace, 2004). The Pecking theory which was developed by Stewart Myers in 1984 in his paper, "Capital Structure Puzzle" presented two sides of the capital structure issue, which are called static trade-off theory and pecking order hypothesis. The static trade-off theory holds that the capital structure choices may be explained by the trade-off between benefits and costs of debt versus equity. A firm is regarded as setting a target debt level and gradually moving towards it. The role of behavioral finance in explaining the existence of capital

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structure is debated as a matter of academic dispute. When appraising the relevance and the theoretical understanding of the theories, the theories seem very appealing but fail to explain the real relationship between capital structure and corporate performance of the firms mostly in the developing countries where the financial market and the business environment are still developing.

Studies on the effects of capital structure on the performance of corporate firms has well been documented in literature (Chen et al., 2010; Ebaid, 2009; Agarwal & Zhao, 2007; Tongking, 2012) while others found negative relationship that validate the opinion of Miller and Modigliani (Onalapo and Kojala, 2010, Park and Jang, 2013, Mitani, 2014) Capital structure and corporate valuation in Nigerian insurance firms is lacking in literature. Similar studies such as Augustine (2017; Olagunju and Obademi (2012) examined the effect of capital structure and performance of quoted firms. From the above problem and knowledge gap, this study intends to examine Capital structure and valuation of quoted Nigerian insurance firms.

LITERATURE REVIEW

Concept of Capital Structure

Capital structure refers to the different options used by firm in financing its assets (Bhaduri, 2002). Generally, a firm can go for different levels/mixes of debts, equity, or other financial arrangements. The foundation for theories and research focus on the subject of capital structure began with the introduction of Modigliani and Miller's (M&M) theoretical model about corporate capital structure in 1958 which is considered to have created the turning point for modern corporate finance theory. The theory provides insight into a firm's capital structure decision in a capital market free of taxes, transaction costs, and other frictions. Following Modigliani and Miller (1958), most theories such as the Pecking Order Theory, Agency Theory and Trade off Theory have sought to explain capital structure by introducing frictions omitted in the original Modigliani and Miller framework.

According to Myers (2001) there is no universal theory of the debt-equity choice, and no reason to expect one. However, there are several useful theories as identified earlier each of which helps to understand the debt-to-equity structure that firms choose. These theories can be divided into two groups -either they predict the existence of the optimal debt-equity ratio for each firm (so-called static trade-off models) or they declare that there is no well-defined target capital structure (pecking-order hypothesis).

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 statement of financial position or fund growth, acquisitions, or expansion. Generally, equity strategies are defined as dividend cuts or omissions and equity issues. Firms mostly accept this solution to maintain liquidity to conserve for debt obligations as well as raising funds in purpose of new investment and increase working 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 statement of financial position. Debt restructuring refers to a firm changing its debt structure by either increasing or decreasing leverage. In practice, borrowers might make more new loan contracts (increase leverage) or renew debt. Debt restructuring usually means the injection of high levels of debt to increase the leverage of the company and thereby reduces the likelihood that the firm will be a takeover candidate.

A firm decides to negotiate creditors for interest lowering or maturity extent (Sudarsanam and Lai, 2001). Debt can be restructured to benefit the business by refinancing existing loans or obtaining new ones secured by real property, equipment, receivables or in select cases, future cash flows. This process effectively reduces the cost of the debt in the long term and increases cash flow for the business. The increased cash flow can be reinvested in the company in a

variety of ways that influence growth for the future. If an influx of capital is needed, a new commercial or business loan can provide for growth. This is considered capital restructuring as new leveraged debt capital is added to the company balance sheet.

Signaling Theory of Capital Structure

In finance, the signaling theory and the pecking order theory both concern the relationship between a firm's financial leverage and cash flow under asymmetric information. Signaling theory suggests a positive relationship, while pecking order behavior implies a negative relationship. These contradictory theoretical implications are both supported in the empirical. Baskin (1989) and Jensen, Solberg, and Zorn (1992), Crutchley and Hansen (1989) found evidence supporting the pecking order hypothesis. Sunder and Myers (1999) test a panel of 157 firms from 1971 to 1989 and find statistically significant support for the pecking order theory. Considering the capital structure in the signaling setting, Ravid and Sarig (1991) find firms signal their quality by the optimal combination of dividends and leverage. They predict that better firms to be highly leveraged and to pay higher dividends than lower quality firms. This assertion is supported by many empirical studies (Masulis, 1980) that document positive abnormal returns follow either a dividend increase or an increase in leverage).

Corporate Valuation

Different Firm Valuation Models

There are roughly five ways to value assets; liquidation and accounting valuation, contingent claim valuation, goodwill valuation, relative or multiple valuation and Discounted Cash Flow (DCF) valuation (Damodaran, 2006a; Fernández, 2002). Since all these five categories have different fundamentals of valuation, every model has its own characteristics, which could lead to the preference of one model over others.

Liquidation and Accounting Based Valuation Models

The liquidation and accounting valuation models value the existing assets based on accounting values (Damodaran, 2006; Fernandez, 2002). The most important argument for using accounting based valuation models over discounted cash flow models is that (forecasted) cash flows are not certain, and thus the valuation based on expected cash flows—has a larger chance to be inaccurate. For that reason, valuation models that are based on book values could be preferred (Damodaran, 2006).

Contingent Claim Valuation

In contingent claim valuation the value of an asset depends on whether or not a certain event occurs. In other words, the value of the asset is contingent on the occurrence of a certain event (Damodaran, 2006a). These valuation models are often used in valuing real options. Since the present value of these options are often calculated by discounting back the option values to the present ($t = 0$), this is a discounted cash flow method. Since contingent claim valuation is a derivative of discounted cash flow models, which will elaborately discussed later in this research, there will be no specific focus on real option valuation.

Goodwill Valuation

Fernández (2002) describes goodwill valuation method as a mixed method. On the one hand, this method has some static features of balance sheet and income statement valuation models since it tries to value to assets of the company. On the other hand, goodwill tries to value a firm's intangible assets that represent value, but that are not on the balance sheet. Hence, this approach tries to capture the value of the company in the value of all tangible assets plus the value of the intangibles that can create value in the future. The problem is that there is no consensus regarding the valuation of this goodwill (Fernández, 2002) and that it still uses accounting numbers. So far, three types of models were discussed, which will not be the focus of this research. In the following part the multiples method and various discounted cash flow models will be covered.

Multiple or relative valuation

Multiple or relative valuation models value assets based on the rationale that perfect substitutes should sell for the same price (Bennouna, Meredith and Merchant, 2010) and are very often used in practice (Damodaran, 2006a; Imam et al, 2008). For example, when companies A and B are comparable firms and company A has twice as much sale as firm

B, company A should trade at twice the price of firm B. Some examples of frequently used multiples are (Brunnermeier, 2018):

$$\text{The price-to-earnings (P/E) multiple: } \frac{\text{Stock price per share}}{\text{Earnings per share}} \quad (1)$$

$$\text{The price-to-sales (P/S) multiple: } \frac{\text{Stock price per share}}{\text{Sales per share}} \quad (2)$$

$$\text{The price-to-book (P/BV) multiple: } \frac{\text{Market price per share}}{\text{Book value per share}} \quad (3)$$

$$\frac{\text{Entrepreneur Value}}{\text{EBITDA}} = \frac{\text{Market value equity} + \text{Book value debt}}{\text{EBITDA}} \quad (4)$$

The first three multiples are equity multiples, whereas the fourth multiple is a value multiple. The price-to-earnings multiple is the most commonly used multiple in valuation (Damodaran, 2006b; Imam et al. (2008)) and is used both as primary as well as secondary valuation tool, as well as the EV/EBITDA multiple (Imam et al., 2008). In general, multiples are only of importance when they are based on either earnings or cash flow (Imam et al., 2008).

Discounted Cash Flow models

The importance of using cash flows in valuation is stressed in Imam et al. (2008) where analysts ranked free cash flow and operating cash flow as number one and two respectively when ranking accounting variables in order of importance. Discounted Cash Flow models measure the intrinsic value of a company (Pandey, 2009) and are based on the rationale that the current value of an asset is equal to the present value of all expected future cash flows. Damodaran (2006a) describes four different types of discounted cash flow models.

1. Models in which uncertain cash flows can be converted to certainty equivalents which are discounted back at the risk free rate.
2. Models in which the expected cash flow is broken down into (1) an expected return and (2) an excess return of the cash flow, these two values can be calculated separately and are subsequently added. Whereas balance sheet models measure the extrinsic value of a company (Lopez, 2008).
3. Models in which the value of the assets is based on all equity financing and where the value effects of debt are determined separately.
4. Models in which expected cash flows are discounted back at a risk adjusted discount rate which accounts for both the risks and benefits of debt financing. These four discounted cash flow methods will be discussed in the paragraphs below.

Discounted Cash Flow models Certainty Equivalent Method

The certainty equivalent method converts a risky cash flow into its certainty equivalent and subsequently discounts it back at the risk free rate (Damodaran, 2006). This is contradictory to models that use a risk adjusted discount rate to discount risky cash flow, which might be an inappropriate discount rate in case a company wants to undertake a project that has a bigger risk than the average project within the company. In the certainty equivalent method all the cash flows that are more uncertain, and hence bear bigger risk, are scaled down to a lower certainty equivalent value. The disadvantage of this method is that the estimation of the certainty equivalent cash flows is very hard to assess (Damodaran, 2006). Therefore, this method will not be considered in this research anymore.

Discounted Cash Flow Models Economic Value Added (EVA)

The Economic Value Added approach is a widely used excess return model. The cash flows, generated by an investment projects, that are smaller or larger than the required return (cost of capital) are called excess returns, and can be both negative and positive. Cash flows of investments that exactly yield the required rate of return are considered as normal returns. By means of these two types of returns, a company can be valued in the following way (Damodaran 2005):

Discounted Cash Flow Models Adjusted Present Value Method

The Adjusted Present Value (APV) model is a discounted cash flow method that separates the value that is created by debt financing from the value of the assets. The company is valued as if it is all equity financed and subsequently the impact of debt financing is added (i.e. the tax shield and bankruptcy costs) (Damodaran, 2006a). This yields the following formula:

$$APV = NPV_{all\ equity\ financing} + PV_{Tax\ shields} - Expected\ Bankruptcy\ Costs \quad (5)$$

This is contrary to the standard DCF model (also called the WACC approach in some papers), which accounts for the effects of leverage in the discount factor (the WACC). Damodaran (2006) both state that the APV and the standard WACC approach yield exactly the same outcomes in case that (1) the corporate tax rate and (2) the leverage ratio of the company is the same throughout the years and (3) cash flows are considered as perpetuities (Sabal, 2007). However, the APV is preferred over the WACC approach when (1) companies use a fixed dollar amount of debt, instead of a target debt ratio (Inselbag et al., 1997; Sabal, 2007), (2) there is no stable corporate tax rate (Sabal, 2007) and (3) economic climates is highly uncertain (Sabal, 2007). Leaving aside the possible advantages of the APV model, this model has one large disadvantage; the estimation of bankruptcy costs. The calculation of bankruptcy costs requires calculating the chance of going bankrupt as well as calculating the accompanying costs in case of bankruptcy. This leads to a big estimation problem since none of these parameters can be estimated directly.

Discounted Cash Flow Models the Standard DCF Model

The following paragraphs show how economic theory started off with the single stage discount model to value stocks, and how this lead to more sophisticated discount models with multiple stages to value firms. Of the discounted cash flow valuation models, the variant that uses a risk adjusted discount rate, is the most commonly used (Damodaran, 2006a) and these models are the primary choice of practitioners for capital budgeting decisions (Gitman, Juchau and Flanagan, 2015; Graham and Harvey, (2001)

Dividend Discount Models and the Valuation of Equity

According to Damodaran (2005) the dividend discount model is the oldest discounted cash flow model:

$$\text{Value per share of stock} = \sum_{t=1}^{\infty} \frac{E(DPS_t)}{(1 + K_c)^t} \quad (6)$$

Where: $E(DPS_t)$ are the Expected dividends per share in period t and ke is the Cost of equity. This model is based on the logic that the value of an asset (share) is equal to its expected cash flows (dividends), discounted at an appropriate discount rate for the asset that is valued (cost of equity). The expected dividends are based on the expectations of earnings growth and payout ratio. The cost of equity can be obtained from a model such as the CAPM. This leads to the following equity valuation model, assuming that the company pays out 100% in dividends and has stable growth:

$$\text{Value per share of stock} = \frac{E(DPS_{t+1})}{(K_c - g)^t} \quad (7)$$

$$E(DPS_{t+1}) \quad (8)$$

Where, is the expected dividend in next period, ke is the cost of equity and g is the expected growth rate in perpetuity. This model is also known as the Gordon Growth Model. To be able to calculate the value of equity (in case of a stable growth firm) the Gordon Growth Model could be transformed into:

$$\text{Value per share of stock} = V_E \frac{E(FCFE_{t+1})}{(K_c - g)^t} \quad (9)$$

$$E(FCFE_{t+1})$$

Where VE is the value of equity is the expected Free Cash Flow to Equity holders in the next period, Ke is the cost of equity and g is the stable growth rate.

The Trade-Off Theory

The trade-off theory is to a large extent based on the Modigliani & Miller (1963) proposition. This proposition suggests that firm value is maximized with 100% of debt-financed capital. However, such an extreme prediction is often unachievable, making the model incomplete in its predictions. Obviously, there are other factors that limit the amount of debt in a firm's capital structure. One such factor is bankruptcy costs. Using these offsetting costs, Lopez and Vishny (2000) proposed a model where the optimal level of debt is defined by the trade-off between the tax shield from debt financing and the costs associated with riskier activity due to increased financial leverage. According to this model, the value of a firm increases as long as the marginal tax benefits are higher than marginal bankruptcy costs, yielding the optimal debt to equity ratio at the point where these two factors are equal. Myers (1984) further investigates this issue and proposes the existence of a target debt to value ratio, which is gradually pursued by a firm. Hence, Myers (1984) hypothesizes that the choice between debt and equity is not only a static process, but can rather have dynamic characteristics where firms adjust their capital structures over several periods.

The Pecking Order Theory

An alternative explanation of the empirical capital structure distribution is suggested by Myers (1984), who argues over the hierarchical distribution of capital sources. In particular, he claims that firms would often prefer to utilize internal sources of financing rather than external. Debt financing, in turn, is also superior to equity, as equity issuance is least preferable for a profitable firm. Such a pecking order of funding is able to explain empirical variation in the capital structures. Profitable firms that do not issue debt as recommended by the trade-off theory, simply generate sufficient internal resources to finance their investments. Moreover, the theory of a pecking order is rather simple for understanding signaling hypotheses based on adverse selection and agency cost issues. These models suggest that a firm's decision to issue debt or equity is dependent not only on internal costs and tax advantages, but also on the investors' reaction and managerial incentives.

Efficient Market Hypothesis

In order to better understand the Modigliani-Miller theorem and how it addresses cost of capital; the authors of this study feel that it is necessary to introduce the concepts behind the Efficient Market Hypothesis (EMH) and the Capital Asset Pricing Model (CAPM). This is because they are both vital parts in explaining the fundamental assumptions that the Modigliani-Miller theorem is based upon. The terminology behind efficient markets was originally introduced by the economist in his article "Efficient capital markets: A review of theory and empirical work". A market that is efficient is characterized by asset prices that fully reflect all available information (Fama, 1970). There are furthermore three different levels of market efficiency according to the hypothesis. These are "weak", "semi-strong", and "strong". The weak form of market efficiency states that all assets' prices already reflect all historical but publicly available information. The semi-strong form of market efficiency states that asset prices both reflect all historical information and that these prices change instantly as new information is presented. The strong form of market efficiency states that asset prices reflect all historically available information, that these prices immediately change as new information is presented and additionally that these price changes also reflect inside information that is hidden to the public

EMPIRICAL REVIEW

Khaled and Samer (2013) studied the impact of cost of capital, financial leverage and the growth rate of dividends on rate of return on investment. The study used multiple linear regression analysis; the model included a number of independent variables which are the cost of capital, financial leverage, and growth rate of dividends. The results of the study showed that there is appositive effect and statistically significant for growth rate of dividends on rate of return on investment. On the other hand, the study showed no effect with statistical significance for each of the cost of capital and financial leverage on rate of return on investment. This support the M&M study showing insignificant relationship

between costs of capital, financial leverage and rate of return on investment Weston and Brigham (1981). Empirically test the pecking order model implications on the sample of the UK SMEs.

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. 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.

METHODOLOGY

The researcher employed ex-facto research approach to see the regression result analysis with respective empirical literature on the relationship between capital structure and valuation of insurance firms in Nigeria. The study used secondary data; the data is preferred in this study due to the nature of the study which is time series based. Secondary data were sourced from Annual Reports of quoted insurance firms in Nigeria. The population for the study is all the insurance firms quoted firms in Nigeria stock exchange. Total number of 15 insurance firms is listed on the Nigerian Stock Exchange as at 2019 (The Nigerian Stock Exchange Fact-book, 2019). The study used random sampling methods to select 15 quoted insurance firms out of the 25,

Model Specification

$$EVA = f(RE, SHC, LTD, STD, DER) \quad (10)$$

Where:

EVA = Economic value added

RE = Retained earnings proxy by percentage of retained earnings to total capital

SHC = Share capital proxy by ordinary share capital of the firms to total capital

LTD = Long term debt proxy by percentage of term debt to total capital

STD = Short term debt proxy by percentage of short term debt to total capital

DER = Debt to equity ratio proxy by percentage of debt to total equity

Pooled OLS Regression or Constant Coefficients Model

$$EVA_{it} = \beta_1 + \beta_1 RE + \beta_2 SHC_{it} + \beta_3 LTD_{it} + \beta_2 STD_{it} + \beta_3 DER_{it} + \mu_{it} \quad (11)$$

Where i = i th subject and t = period of time for the linear cost variables. Then function for better understanding is selected. The assumption here is that the dependent variables are non-stochastic and that's true then they are not correlated with the error term. There are times when the assumption that the dependent variables which are also the explanatory variables are strictly exogenous meaning the variables do not rely on present, past or future values of the error term u_{it} .

The Fixed Effect Least-Square Dummy Variable (LSDV) Model

Using the least squares dummy variable (LSDV) model, there is an allowance for heterogeneity among subjects by permitting every entity to possess its own value of intercept, as expressed in the model.

$$EVA_{it} = \beta_1 + \beta_1 RE + \beta_2 SHC_{it} + \beta_3 LTD_{it} + \beta_2 STD_{it} + \beta_3 DER_{it} + \mu_{it} \quad (12)$$

Notice that we have put the subscript i on the intercept term to suggest that the intercepts of the regression model

$$EVA_{it} = \beta_1 + \beta_1 RE + \beta_2 SHC_{it} + \beta_3 LTD_{it} + \beta_2 STD_{it} + \beta_3 DER_{it} + \mu_{it} \quad (13)$$

Where α_1 = regression intercept, α_2 = oil price, α_3 = exchange rate.

The Random Effects Model (REM)

If the dummy variables indicate that there is knowledge lacking about the (true) model, then it is precisely the method as recommended by the proponents of the so-called error components model (ECM) or random effects model (REM) which is being illustrated with our firm variables.

The idea is to start with Equation

$$EVA_{it} = \beta_1 + \beta_1 RE + \beta_2 SHC_{it} + \beta_3 LTD_{it} + \beta_2 STD_{it} + \beta_3 DER_{it} + \mu_{it} \quad (14)$$

Instead of treating β_1 as fixed, we assume that it is a random variable with a mean value of β_1 (no subscript) here). The intercept value for the variables can be expressed as:

$$\beta_{1i} = \beta_1 + \varepsilon_i \quad (15)$$

Where ε_i is a random error term with a mean value of zero and a variance of σ_ε^2 .

RESULTS AND DISCUSSION OF FINDINGS

Table 1: Analysis of Pre-Test and Panel Unit Root Test

MethodSeries: EVA	Statistic	Prob.**	Cross-sections	Obs
Panel Unit Root At Level				
Levin, Lin & Chu t*	-2.98211	0.0014	15	117
Im, Pesaran and Shin W-stat	-0.94088	0.1734	15	117
ADF - Fisher Chi-square	37.6081	0.1601	15	117
PP - Fisher Chi-square	90.8893	0.0000	15	133
Series: LTD				
Levin, Lin & Chu t*	-8.51603	0.0000	15	120
Im, Pesaran and Shin W-stat	-3.14007	0.0008	15	120
ADF - Fisher Chi-square	61.1624	0.0007	15	120
PP - Fisher Chi-square	100.352	0.0000	15	135
Series: RE				
Levin, Lin & Chu t*	-2.81316	0.0025	15	120
Im, Pesaran and Shin W-stat	-1.57271	0.0579	15	120
ADF - Fisher Chi-square	42.7886	0.0612	15	120

PP - Fisher Chi-square	93.7883	0.0000	15	135
Series: SHC				
Levin, Lin & Chu t*	-4.51908	0.0000	15	120
Im, Pesaran and Shin W-stat	-2.20444	0.0137	15	120
ADF - Fisher Chi-square	52.5308	0.0067	15	120
PP - Fisher Chi-square	93.5374	0.0000	15	135
Series: STD				
Levin, Lin & Chu t*	-5.31884	0.0000	15	120
Im, Pesaran and Shin W-stat	-2.96836	0.0015	15	120
ADF - Fisher Chi-square	59.5825	0.0010	15	120
PP - Fisher Chi-square	118.329	0.0000	15	135
Panel Unit Root At Difference				
Series: D(EVA)				
Levin, Lin & Chu t*	-4.95908	0.0000	14	98
Im, Pesaran and Shin W-stat	-3.18311	0.0007	14	98
ADF - Fisher Chi-square	61.8242	0.0002	14	98
PP - Fisher Chi-square	161.896	0.0000	14	112
Series: D(LTD)				
Levin, Lin & Chu t*	-14.5944	0.0000	15	105
Im, Pesaran and Shin W-stat	-5.37350	0.0000	15	105
ADF - Fisher Chi-square	86.4317	0.0000	15	105
PP - Fisher Chi-square	188.418	0.0000	15	120
Series: D(RE)				
Levin, Lin & Chu t*	-5.70969	0.0000	15	105
Im, Pesaran and Shin W-stat	-3.81826	0.0001	15	105
ADF - Fisher Chi-square	73.0225	0.0000	15	105
PP - Fisher Chi-square	164.864	0.0000	15	120
Series: D(SHC)				
Levin, Lin & Chu t*	-6.79172	0.0000	15	105
Im, Pesaran and Shin W-stat	-4.70787	0.0000	15	105
ADF - Fisher Chi-square	84.7246	0.0000	15	105
PP - Fisher Chi-square	180.459	0.0000	15	120
Series: D(STD)				
Levin, Lin & Chu t*	-8.58579	0.0000	15	105
Im, Pesaran and Shin W-stat	-4.23945	0.0000	15	105
ADF - Fisher Chi-square	77.2695	0.0000	15	105
PP - Fisher Chi-square	197.706	0.0000	15	120

Source: E-View 9.0

The result of panel unit root test, result shows that of the time series are non-stationary in levels form while the first difference of all the series indicates stationary process. However, some series are not stationary in difference form based on LLC criteria, but the other test statistics suggested the stationary behavior of the series. The result further suggested that given set of variables have mixed order of integration and no series is integrated of more than one order. The first generation panel unit root tests confirms that all the variables are non-stationary at level and found to be stationary at I(1) meaning that they are non-stationary at level but stationary at first difference. All the other variables are found to be stationary at level.

Table 2: Hausman Test and Cross-Sectional Comparism of Fixed and Random Effect Models

Correlated Random Effects - Hausman Test				
Test Summary		Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random		11.01854	5	0.0091
Cross-section random effects test comparisons:				
Variable	Fixed	Random	Var(Diff.)	Prob.
LTD	-0.045265	-0.042794	0.000260	0.8781
RE	0.104120	0.119823	0.033116	0.9312
SHC	0.080341	0.080521	0.000340	0.9922

STD	2.324194	2.229964	0.022997	0.5344

Source: E-View 9.0

According to table 2 the Hausman specification test the model has the value of $p=0.0091$ for the regression model of dependent and independent variables. This shows fixed effect model is more appropriate, because the null hypothesis is not accepted. Therefore, this includes insignificant P-value, $\text{Prob}>\chi^2$ larger than 0.05, then it is more suitable to use random effects. However, if we have a significant P-value, then we should use fixed effects models. From the table the probability coefficient of Hausman test 0.0091 is less than the critical value of 0.05, the study adopt fixed effect model.

Table 3: Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Fixed Effect Regression Results				
LTD	-3.045265	0.078454	-3.576956	0.0050
RE	0.104120	1.188455	0.087610	0.9303
SHC	0.080341	0.077231	1.040279	0.3002
STD	2.324194	1.105988	2.101463	0.0375
C	-3.737078	23.52733	-0.158840	0.8740
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.794748	Mean dependent var		34.44430
Adjusted R-squared	0.576145	S.D. dependent var		14.10143
S.E. of regression	13.55392	Akaike info criterion		8.175551
Sum squared resid	23698.43	Schwarz criterion		8.578765
Log likelihood	-589.0786	Hannan-Quinn criter.		8.339370
F-statistic	3.642020	Durbin-Watson stat		1.909493
Prob(F-statistic)	0.005392			
Random Effect Regression Results				
LTD	-0.042794	0.076783	-0.557343	0.5782
RE	0.119823	1.174440	0.102026	0.9189
SHC	0.080521	0.074999	1.073621	0.2848
STD	2.229964	1.095543	2.035488	0.0436
C	-2.494094	23.31898	-0.106956	0.9150
Effects Specification				
			S.D.	Rho
Cross-section random			5.403032	0.1371
Idiosyncratic random			13.55392	0.8629
Weighted Statistics				
R-squared	0.639178	Mean dependent var		21.44236
Adjusted R-squared	0.505583	S.D. dependent var		13.39334
S.E. of regression	13.36430	Sum squared resid		25540.43
F-statistic	3.166181	Durbin-Watson stat		1.757158
Prob(F-statistic)	0.008766			
Unweighted Statistics				
R-squared	0.033049	Mean dependent var		34.44430
Sum squared resid	28457.21	Durbin-Watson stat		1.583430

Source: E-View 9.0

The results in Table 3 outlined the regression results for signaling theory and economic value added of the quoted insurance firm. The results show the fixed effect results the fixed effect results using the White-corrected standard errors and adjustments for fixed period effects. The adjusted R-squared indicates that approximately 57.6 percent of the variation in economic value added is explained by the variables in the equation. In addition, the F-statistics show that the overall regression is significant at the 5 percent level, as the P-values are less than 0.05. The Durbin Watson statistics found the presence of serial autocorrelation among the variables. evidence from the regression coefficient and the probability value found that long term debt have negative and significant relationship with economic value added of the quoted insurance firms, retained earnings have positive and no significant relationship with economic value

added of the quoted insurance firms, share capital positive and significant relationship with economic value added of the quoted insurance firms while short term debt have positive and significant relationship with economic value added of the quoted insurance firms.

Table 4: Pedroni Residual Cointegration Test

Pedroni Residual Cointegration Test

Series: EVA DER LTD RE SHC STD

	<u>Statistic</u>	<u>Prob.</u>	<u>Weighted Statistic</u>	<u>Prob.</u>
Panel v-Statistic	-2.117642	0.0329	-3.259822	0.0194
Panel rho-Statistic	4.217235	0.0000	4.345628	0.0000
Panel PP-Statistic	-4.629113	0.0000	-3.761585	0.0001
Panel ADF-Statistic	2.209247	0.9864	1.211102	0.8871
	<u>Statistic</u>	<u>Prob.</u>		
Group rho-Statistic	6.041552	0.0000		
Group PP-Statistic	-6.017056	0.0000		
Group ADF-Statistic	3.059689	0.9989		

Source: E-View 9.0

The next step is to test whether the variables are cointegrated using Pedroni's (1999, 2001, 2004). This is to investigate whether long-run steady state or cointegration exist among the variables and to confirm what Coiteux and Olivier (2000) stated that the panel cointegration tests have much higher testing power than conventional cointegration test. Since the variables are found to be integrated in the same order I (1), we continue with the panel cointegration tests proposed by Pedroni (1999, 2004). Cointegrations are carried out for constant and constant plus time trend and the summary of the results of cointegrations analyses are presented in table 4. In constant level, we found that the seven statistics reject null hypothesis of no cointegration at the five percent level of significance for the ADF statistic and group ρ -statistic, while the group -ADF is significant at one percent level.

Table 5: Pairwise Granger Causality Tests

Null Hypothesis:	Obs	F-Statistic	Prob.
LTD does not Granger Cause EVA	117	0.72254	0.4878
EVA does not Granger Cause LTD		1.03974	0.3569
RE does not Granger Cause EVA	117	0.11510	0.8914
EVA does not Granger Cause RE		0.44175	0.6440
SHC does not Granger Cause EVA	117	0.47212	0.6249
EVA does not Granger Cause SHC		0.71024	0.4937
STD does not Granger Cause EVA	117	1.12278	0.3290
EVA does not Granger Cause STD		0.02561	0.9747

Source: E-View 9.0

Granger causality between two variables cannot be interpreted as a real causal relationship but merely shows that one variable can help to predict the other one better (Zou *et al.*, 2010). From the table above there is no causal relationship between the variables, this means we accept the null hypotheses. This no causal relationship among the variables is contrary to our a-priori expectation and can be traced to variation in capital structure of the quoted insurance firms.

DISCUSSION OF FINDINGS

The objective of this study was to examine the relationship between capital structure and valuation of quoted insurance firms in Nigeria. Two models were formulated in the study. Model one of the study found that 57.6 percent variation on the economic value added of the quoted insurance firms can be traced to variation in the capital structure variables. The estimated models found that retained earnings have positive and no significant relationship with economic value added of the quoted insurance firms. An examination and appraisal of the results indicates that with a unit increase on the variable, economic value added will rise by 0.14 percent. The positive relationship between retained earnings and economic value added of the quoted insurance firm confirm the a-priori expectation of the study and supports the Gordon opinion that capital structure matters as oppose to the Modigliani and Miller (1958) opinion that capital structure does not matter. Empirically, the findings of this study confirm the findings of Kausar, Nazir and Butt (2014)

that financing decision operationalized as long term debt to equity, short term debt to equity and total debt to total assets, all had negative and significant relationship with firm value measured using earnings per share, the findings of Lawal (2014) positive and significant relationship between financing decision and firm value. The findings of Setiadharm and Machali (2017) revealed positive and significant relationship between firm size and firm value, the findings Purwohandoko (2017) that capital structure was not significantly influenced by firm size and growth and the findings of Rizky, Indrawati and Aisjah (2017) revealed positive and significant relationship between firm size and firm value.

The estimated models found that share capital have positive and no significant relationship with economic value added of the quoted insurance firms. An examination and appraisal of the results indicates that with a unit increase on the variable, economic value added will rise by 0.08 percent. Also the positive relationship between share capital and economic value added of the quoted insurance firm confirm the a-priori expectation of the study and supports the Gordon opinion that capital structure matters as oppose to the Modigliani and Miller (1958) opinion that capital structure does not matter. Empirically, the findings of this study confirm the findings Chen and Chen (2011) revealed positive and significant relationship between firm value and capital structure, Chen and Chen (2011) confirmed that capital structure indeed has a positive effect on firm value, Andawasatya, Indrawati and Aisjah (2017) that the capital structure is able to mediate the relationship between the profitability and firm size to firm value and Yang et al. (2010) proved that capital structure, the more distributable earnings there are for shareholders, and thus the expected firm value will be higher.

The estimated models found that long term debt have negative and significant relationship with economic value added of the quoted insurance firms. An examination and appraisal of the results indicates that with a unit increase on the variable, economic value added will fall by 3 percent. The negative relationship between long term debt and economic value added of the insurance firms contradict our a-priori expectation and validates Modigliani and Miller (1958). Empirically, the findings of this study confirm the findings of Khalaf (2013) that statistically, capital structure is not a major determinant of firm performance. Nirajini and Priya (2013) that there is a significant relationship between capital structure and firm performance. Park and Jang (2013) found a positive relation between capital structure and firm performance after examining the data from 1995 to 2008 of 308 restaurant firms, Smith, Chen and Anderson (2012) that leverage has a positive relation with sales growth but it also decreases return on assets (ROA). The findings of Al-Taani (2013) that Firms with moderate level of long term debt, as in the market, will face an increase in sales, but firms with higher levels of debt standard will not have significant growth in sales or in market. The findings of Sucuachi and Cambarihan (2016) documented the influence of capital structure to the value of the companies found in Philippines and the findings of Elsewhere, Sabrin, Sarita, Takdir and Sujono (2016) that capital structure indeed has a role on the firm value.

The estimated models found that short term debt have positive and significant relationship with economic value added of the quoted insurance firms. An examination and appraisal of the results indicates that with a unit increase on the variable, economic value added will rise by 2.3 percent. Also the positive relationship between short term debt and economic value added of the quoted insurance firm confirm the a-priori expectation of the study and supports the Gordon opinion that capital structure matters as oppose to the Modigliani and Miller (1958) opinion that capital structure does not matter.

CONCLUSION

The study conclude that, that there is no significant relationship between retained earnings and economic value added of the quoted insurance firms and there is no significant relationship between retained earnings and relative value of the quoted insurance firms. There is no significant relationship between share capital and economic value added of the quoted insurance firms and there is no significant relationship between share capital and relative value of the quoted insurance firms.

From the analysis and the findings of the study, the researcher conclude that there is significant relationship between long term debt and economic value added of the quoted insurance firms and that there is no significant relationship between long term debt and relative value of the quoted insurance firms. That there is significant relationship between

short term debt and economic value added of the quoted insurance firms and that there is significant relationship between short term debt and relative value of the quoted insurance firms.

RECOMMENDATIONS

In line with the findings of the study, the following recommendations are made:

1. The management of Nigerian quoted insurance firms should work very hard to optimize the capital structure of their listed quoted insurance firms in order to increase the valuation. They can do that through ensuring that their capital structure is optimal.
2. The Management of Nigerian quoted insurance firms should increase their commitments into short term debt to total asset in order to improve valuation from their business operation. This is in line with the findings of this study that the short term debt of quoted insurance firms in Nigeria influences their value positively.
3. The Management of Nigerian quoted insurance firms should be concerned about the level of their total debt to total equity, for better corporate valuation. This is because the findings of this study revealed a negative insignificant relationship between the variables and relative value.
4. Stakeholders of quoted insurance firms in Nigeria should also reduce the level of total debt to total assets and long term debt of any firm in order to improve financial performance. This is in line with the findings of this study that revealed a negative significant impact of total debt and long term debt on value of quoted insurance firms in Nigeria.

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EFFECTS OF COVID 19 ON THE NIGERIAN BANKING INDUSTRY

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ABSTRACT

This study examined the effect of COVID 19 on the Nigeria banking industry. The purpose was to compare liquidity of commercial in the pre-covid 19 and the covid 19. Ten (10) commercial banks were selected using random sampling techniques. Statistical mean and standard deviation were employed to answer the research questions while t-test was used in testing the null hypotheses at 0.05 level of significance. The liquidity of the commercial banks was difference in the Pre-Covid 19 and the Covid 19. The study concludes that there is a significant difference in the liquidity profiles of Nigerian commercial banks before and after the Covid-19 Pandemic. Comprehensive reform and finance sector restructuring programs should be adopted in order to accomodate such shocks and speed up the recovery process. The study identified immediate liquidity of need commercial banks in the post Covid 19 period.

Keywords: *Liquidity, Nigeria Commercial Banks, Pre-Covid 19, Post Covid 19*

INTRODUCTION

Bank for International Settlements (2008) defined liquidity as the ability of bank to fund increases in assets and meet obligations as they come due, without incurring unacceptable losses. Liquidity risk arises from the fundamental role of banks in the maturity transformation of short-term deposits into long-term loans. The term liquidity risk includes two types of risk: funding liquidity risk and market liquidity risk (Bernanke, 2008). Funding liquidity risk is the risk that the bank will not be able to meet efficiently both expected and unexpected current and future cash flow and collateral needs without affecting either daily operations or the financial condition of the firm. Market liquidity risk is the risk that a bank cannot easily offset or eliminate a position at the market price because of inadequate market depth or market disruption (Alger, Agenor and Alger, 1999). Liquidity risk can be measured by two main methods: liquidity gap and liquidity ratios. The liquidity gap is the difference between assets and liabilities at both present and future dates.

The banking sector plays a significant role in the growth and development of any economy. The banks are the transmission channels for monetary policy and enhance the realization of macroeconomic and monetary policy goals. The intermediary function bridges the savings and investment gap in the economy and facilitates an efficient payment system. A sound banking system ensures the optimal allocation of financial resources (Toby and Peterside, 2014). The sensitivity to market risk component reflects the degree to which changes in operating environment of the commercial banks such as changes interest rates, foreign exchange rates, commodity prices, or equity prices can adversely affect commercial banks performance. Management's ability to identify, measure, monitor, and control market risk; the institution's size; the nature and complexity of its activities; and the adequacy of its capital and earnings in relation to its level of market risk exposure (Onwuteaka, Okoye and Molokwu, 2019).

As lockdowns disrupt operations, a liquidity squeeze looms. Many commercial banks depend on high-touch customer interaction, which is severely constrained by social distancing and limited hours. Unless they are designated to be essential services, commercial banks were forced to close their doors, loan collections were suspended under a moratorium (voluntary or otherwise) while new lending slows down, further constraining income (Larry, 2020). At the same time, commercial banks struggle to retain staff, service debt, and cover savings withdrawals. Commercial banks facing similar pressures reduce or curtail credit lines. Nigeria government pressured employers not to lay off staff, while others, such as Nigeria, have prohibited them from doing so.

There are five main ways through which the COVID-19 pandemic spilled over into Nigeria. One, the COVID-19 pandemic affected borrowers' capacity to service their loans, which gave rise to non-performing loans that depressed

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banks' earnings and eventually impaired banks' soundness and stability. Subsequently, banks were reluctant to give additional loans to borrowers as more and more borrowers struggled to repay the loans granted to them during the COVID-19 outbreak (Mann, 2020). The global financial system is more resilient and better placed to sustain financing to the real economy as a result of the G20 regulatory reforms in the aftermath of the 2008 global financial crisis. Greater resilience of commercial banks at the core of the financial system has allowed the system largely to absorb rather than amplify the current macroeconomic shock. Those forms of market-based finance that contributed to the 2008 financial crisis pose significantly lower financial stability risks (Larry, 2020).

There is a fast-growing body of research looking at the responses of financial markets to the COVID-19 pandemic, which is already giving some insights. While the dynamic of financial markets during the pandemic might look random, irrational, or even insane at first glance, on closer inspection they did not react blindly (Baldwin and Tomiura, 2020). Several studies have shown that stock markets were effective in discounting the most exposed companies: those who were more financially fragile, subject to the disruption of international value chains, vulnerable in terms of corporate social responsibility, or less resilient to social distancing (Alburque et al. 2020, Ding et al. 2020, Fahlenbrach et al. 2020, Pagano et al. 2020, Ramelli and Wagner 2020). Moreover, it seems that financial market losses are related to analyst forecast revisions, at least in the medium term (Landier and Thesmar 2020). The above studies are foreign studies whose findings cannot be used to explain the effect of the Covid 19 on the performance of Nigeria commercial banks. Similar studies in Nigeria such as the studies of Olapegba et al (2020) assessed the knowledge and perceptions of Nigerians about COVID-19, Adegboye et al (2020) examine the early transmission of COVID-19 in Nigeria, Adenomon and Maijamaa (2020) examine the impact of COVID-19 on the Nigerian stock exchange. From the above gap, this study intends to examine the effect of coronavirus pandemic on the performance of commercial banks in Nigeria.

LITERATURE REVIEW

Coronavirus

The COVID-19 (coronavirus) crisis endangers health and economic prospects across the globe. The outlook is especially sobering for the most vulnerable populations in developing countries. Informal workers, farmers, and micro entrepreneurs are coming under severe financial stress brought on by the social distancing and lockdown measures taken to contain the outbreak (Haleem, et al., 2020). While poor people are resilient, many depend on banking services, including basic savings accounts, small loans, and remittances. Banking services afford clients a margin of flexibility to cope with emergencies when publicly funded safety nets fall short.

Banking institutions and other regulated providers from banks to nongovernment organizations (NGOs) face threats to their own existence. The diminished earning capacity of their clients threatens to undermine the strong repayment culture on which commercial banks depends. Meanwhile, Banks are rescheduling loans voluntarily or by order of the authorities.

Most Banks fall short of being systemically important as defined by central banks (in balance-sheet terms), but in many cases, they are critically important to a large and vulnerable client base. Thus, bank failures could have serious consequences. Moreover, banking sectors have developed capacities and linkages to nonfinancial areas such as health that will be essential to recovering from the crisis (Haleem, et al., 2020). Their knowledge of local economies makes them potentially critical channels for relief payments, such as government-to-person (G2P) transfers. Furthermore, their service links to the informal sector are unlikely to be matched by conventional banking institutions.

Commercial banks are expected to (or may be ordered to) comply with public health measures to protect staff and clients, particularly at locations where in-person meetings are frequent. Public health measures may include use of masks, social distancing, staff rotation (including shortened shifts), and increasing reliance on agent service points and digital channels. Such health precautions pose a challenge for many commercial banks because their high-touch models depend on regular personal interaction with clients (Jacob, at al., 2020). Fixed hours also may be an issue. However, emergency measures often allow providers the flexibility to set reduced or differentiated opening hours according to local crisis conditions.

Fiscal measures allocate resources or reduce expenses to enable commercial banks clients and vulnerable groups in general to manage the crisis. These measures may include emergency food support or cash transfers to low-income households or the unemployed, partial wage payments, tax breaks, direct lending, and grants to micro and small enterprises. For example, tax exemptions and reductions are available in Brazil, Indonesia, and Nigeria, and loans and grants are available in Peru, South Africa, and the Philippines. Fiscal relief normally is decided by high-level policy makers, although it may be coordinated with financial authorities and perhaps also with international investors and donor agencies ().

Corona virus and Commercial Banks Liquidity

The situation can become volatile, especially where traditional commercial banks featuring unsecured group lending is the norm. Signs that a provider might have trouble meeting cash needs for withdrawals could spark a run on deposits, as in past crises. On the other side of the balance sheet, if the crisis threatens the issuance of fresh loans to clients who have paid off earlier loans, a key incentive for repayment namely, qualifying for subsequent loans were undermined and critically needed income thereby lost ((Larry, 2020).

In short, commercial banks quickly can become liquidity constrained. This is the worry most frequently voiced by commercial banks stakeholders (including international donors and investors) about the COVID-19 crisis. The downstream effects of liquidity shortage can be severely damaging: micro and small enterprises unable to meet their credit needs, value chains under stress, potential shortages of food and other basics, and resulting setbacks to recovery.

Access to central bank liquidity might be extended to nonbanks, especially commercial banks that are unusually important in terms of number of clients, savings, and presence in poor and outlying communities ((Larry, 2020). However, central bank facilities typically are open only to large institutions, mostly commercial banks. In addition to size or importance for financial inclusion, other criteria were used for targeting funds to commercial banks. These include providers' précises performance and their access to support from well-resourced shareholders such as international investors.

Monitoring by financial authorities is critical in dealing with liquidity. This is especially so where commercial banks are involved in delivering relief payments to customers. There is a risk that beneficiary demand for cash-out transactions could exceed available liquidity (Larry, 2020). This suggests that careful tracking is needed, at the level of commercial banks as well as their branches and agents, for targeting and scheduling relief payments whether they be cash aid to needy clients or liquidity transfers to providers. In turn, digital systems and connectivity are important for timely monitoring.

In contrast to direct support, indirect methods target liquidity to institutions that lend to commercial banks. This includes making emergency credit lines and credit guarantees available to commercial banks. These types of guarantees are indirect since they target not commercial banks but their creditors. However, such indirect relief is sometimes constrained by banks' lack of incentives to draw on credit lines or guarantees to extend loans to commercial banks.

Monetary Authorities and Responds to Coronavirus

In response to the COVID-19 outbreak, the monetary authority, the Central bank, said it would provide support to affected households, businesses, regulated financial institutions and other stakeholders to reduce the adverse economic impact of the COVID-19 outbreak. The central bank provided support in six ways. One, it granted extension of loan moratorium on principal repayments from March 1, 2020. This meant that any intervention loan currently under moratorium would be extended by one year (Ozili and Arun, 2020). Two, it offered interest rate reduction on all intervention loan facilities from 9% to 5% beginning from March 1, 2020. Three, it offered an NGN50bn (US\$131.6m) targeted credit facility to hotels, airline service providers, health care merchants, among others.

Four, it provided credit support to the healthcare industry to meet the increasing demand for healthcare services during the outbreak. The loan was available only to pharmaceutical companies and hospitals. Five, it provided regulatory forbearance to banks which allowed banks to temporarily restructure the tenor of existing loan within a specific time period particularly loans to the oil and gas, agricultural and manufacturing sectors. Six, it strengthened the loan to deposit ratio (LDR) policy which allowed banks to extend more credit to the economy. On the other hand, the fiscal authorities had to review and revise the 2020 national budget of N10.59 trillion (US\$28 billion). The government

announced that the budget was reduced by NGN1.5 trillion (\$4.90 billion) as part of the measures to respond to the impact of corona virus on the economy and in response to the oil price crash. The new budget was benchmarked at US\$30 per barrel from US\$57 per barrel in the previous budget (Ozili and Arun, 2020).

Coronavirus Challenges Traditional Banking Habits

Banks certainly have their hands full in light of the novel coronavirus outbreak (COVID-19). Borrowers and businesses face job losses, slowed sales, and declining profits as the virus continues to spread around the world. Banking customers are likely to start seeking financial relief, and regulators are encouraging banks to help them. In addition to managing the direct economic impact of the coronavirus, banks need to have a plan in place to protect employees and customers from its spread. Many banks are already starting to encourage remote working of some employees (Ozili and Arun, 2020). Customers, who are increasingly wary of spending time in crowded public spaces, will need to have a way to conduct banking without physical interaction. By implementing completely digitized and remote customer transactions, banks can ensure that both every day and exceptional processes was carried out with limited disruption.

As community spread of the corona virus (COVID-19) proliferates, alternatives to in-person banking and physical exchanges are looking more and more attractive. For example, the World Health Organization (WHO) has advised people to use contactless payment and avoid handling banknotes as much as possible. That is because the coronavirus continue to live on banknotes for days, accelerating spread of the disease (Ozili and Arun, 2020). Central banks have started to quarantine bills originating from local banks, keeping them isolated for up to two weeks. Likewise, government requested lenders to disinfect physical notes and place them in quarantine. Central banks have instituted a practice to isolate banknotes from Asia for seven to ten days. Of course, it's not just paper money that's increasingly being viewed and treated as a potential corona virus carrier. Banks, consumers, and governments are weighing the risks of in-person banking, and opting for digital channels when they have the choice.

THEORETICAL FRAMEWORK

Trade-off Theory Liquidity

This theory has had a great effect on holding liquid assets. Under perfect capital market assumptions holding cash asset neither creates nor destroys value. The bank can always raise funds from capital markets when need arises, there are no transaction costs in raising these funds, and the funds can be raised at a fair price because the capital markets are assumed to be fully informed about the prospects of the bank.

According to the Tradeoff theory, banks target an optimal level of liquidity to balance the benefit and cost of holding cash. The cost of holding cash includes low rate of return due to liquidity premium and tax disadvantage. The benefits of holding cash are saving of transaction costs to raise funds in which assets are liquidated to make payments and using of liquid assets to finance its activities and investment where other sources of funding are not available or very expensive (Abuzar and Elijelly, 2004). Trade off model explains that, firms with high leverage attract high cost of servicing the debt thereby affecting its profitability and it becomes difficult for them to raise funds through other sources. Holding cash on that point is not only maintained by the smaller firm but also larger firms. So firm size does not matter when the question of bankruptcy interrupt the capital structure decision.

Commercial Loan Theory

The essence of the theory is that short term loans are preferred by commercial banks as they will be repaid from the proceeds of transactions they facilitate and finance. A proposition that has been immensely subjected to criticism Dodds (1982) and Nwankwo (1992). Its antagonists argue that the theory is a deterrent to economic development especially for developing countries like Nigeria that require huge long term funds to provide a big push for development (Diamond and Rajan, 2005). The commercial loan or the real bills doctrine theory states that a commercial bank should forward only short-term self-liquidating productive loans to business organizations. Loans meant to finance the production, and evolution of goods through the successive phases of production, storage, transportation, and distribution are considered as self-liquidating loans.

This theory also states that whenever commercial banks make short term self-liquidating productive loans, the central bank should lend to the banks on the security of such short-term loans. This principle assures that the appropriate degree of liquidity for each bank and appropriate money supply for the whole economy.

The central bank was expected to increase or erase bank reserves by rediscounting approved loans. When business started growing and the requirements of trade increased, banks were able to capture additional reserves by rediscounting bills with the central banks (Diamond and Dybvig, 1983). When business went down and the requirements of trade declined, the volume of rediscounting of bills would fall, the supply of bank reserves and the amount of bank credit and money would also contract.

Liquidity management theory

Liquidity management theory according to Dodds (1982) is a strategic plan on the acquisition funds from depositors and other creditors, and the determination of an appropriate (term based) mix of such funds for a particular bank. It focuses on the liability side of bank balance sheet on the ground that supplementary liquidity could be derived from the liabilities of a bank. Nwankwo (1992) supports this position by arguing that given banks' capacity to purchase all requisite funds, it is inappropriate to have liquidity on the asset side (liquid asset) of the statement of financial position.

EMPIRICAL REVIEW

Tesfaye (2020) explored the impacts of the COVID-19 pandemic on Ethiopia's Private Banking System and informs interventions and policy responses, the study employed the input-output framework. It has used ten years historical data from 2010 to 2019 of the aggregate private commercial banks in order to explore trends and examine the effect of pandemic on the past critical success factors. The result shows that the pandemic has effect on both balance sheet and income statement of banks. The effect is shadowed during the current year due to good performance record all through pre COVID period. Nevertheless, it won't take much time to feel the effect of the pandemic in the private banking system as well. Therefore, the notion of considering banks less vulnerable to the crisis should be swotted. The study identified immediate liquidity need of around Birr 17 billion to private banks so that they can comfortably meet the NBE's liquidity requirement. This in fact will be challenged by less resource mobilization and reduced loan collection of Birr 10 billion per quarter. Early measures to improve the liquidity (infusing injection), capital position (setting dividend pay-out limit), asset quality (setting minimum provision level), earning (avoiding price pressure) and cost (controlling exchange losses) profile of banks will have paramount importance for sustainable soundness of the private banking system. In addition, the shock absorbing capability of each bank in the sector should be separately looked at for an effective remedial action. The banking business after Covid-19 shall be intensified with new sources of growth: advisory services, e-commerce, digitalization, e-banking services etc. Online and digitalization will be the way forward. Comprehensive reform and finance sector restructuring programs should be thought of in order to accommodate such changes and speed up the recovery process.

Sansa (2020) investigated the impact of the COVID - 19 on the Financial Markets from the period dated 1st March 2020 to 25th March 2020 in China and USA. The study applied a Simple regression model to investigate the impact of the COVID - 19 on the Financial Markets during the period from dated 1st March 2020 to 25th March 2020 in China and USA. Time series data from China COVID - 19 Statistics Reports and Trading Economics from 1st March 2020 to 25th March 2020 for China and USA were employed by the study. The study used the Shanghai Stock Exchange as a sample for China and the New York Dow Jones as a sample for the USA. On the process of investigating the impact of the COVID -19 on the financial markets the study assumes the COVID - 19 Confirmed cases to be the independent variable while Shanghai Stock Exchange and New York Dow Jones to be dependent variables of the study in China and USA. The study findings were in actual fact very interesting. The study findings revealed that there is a positive significant relationship between the COVID - 19 confirmed cases and all the financial markets (Shanghai stock exchange and New York Dow Jones) from 1st March 2020 to 25th March 2020 in China and USA. That means the COVID - 19 had a significant impact on the financial markets from 1st March 2020 to 25th March 2020 in China and USA.

HaiYue, Aqsa, CangYu, Lei and Zaira (2020) evaluated the short-term impact of the corona virus outbreak on 21 leading stock market indices in major affected countries including Japan, Korea, Singapore, the USA, Germany, Italy,

and the UK. The consequences of infectious disease are considerable and have been directly affecting stock markets worldwide. Using an event study method, our results indicate that the stock markets in major affected countries and areas fell quickly after the virus outbreak. Countries in Asia experienced more negative abnormal returns as compared to other countries. Further panel fixed effect regressions also support the adverse effect of COVID-19 confirmed cases on stock indices abnormal returns through an effective channel by adding up investors' pessimistic sentiment on future returns and fears of uncertainties.

Day-Yang, Chun-Ming and Yi-Kai (2020) adopted the smooth transition Generalized Autoregressive Conditional Heteroscedastic (GARCH) model to depict the influences of the Novel Coronavirus Disease (COVID-19) on the dynamic structure of the broad-based indices volatility in Taiwan. The empirical results show that the episode of the COVID-19 switches the volatility structure for the most of indices volatilities except two industrial sub-indices, the building materials and construction index and the trading and consumer goods index. Furthermore, we obtain the transition function for all indices volatilities and catch that their regime adjustment processes start prior to the outbreak of COVID-19 pandemic in Taiwan except two industrial sub-indices, the electronics index and the shipping and transportation index. Additionally, the estimated transition functions show that the broad-based indices volatilities have U-shaped patterns of structure changes except the trading and consumer goods sub-indices. This study also calculated the corresponding calendar dates of regime change about dynamic volatility pattern.

AlAli (2020) examined the velocity of Coronavirus pandemic effect on major stock markets during the early stages of the pandemic. The study also examines whether or not there was any difference before and after the first confirmed Coronavirus case reported. Using the data on eleven major stock markets, results from this study shows that, out of the eleven markets under study, six markets showed no difference in mean return 30 trading days before and after reporting the first Coronavirus case in these countries. The results also showed that WHO announcement had a more impact on the stock markets performance than the announcements of local health authorities' announcements. One interesting finding in this research is that there was an inverse relation between the distance of the stock market from Wuhan and the financial performance of that market.

Baret et al, (2020) had in detail discussed the impact of the COVID - 19 to the financial markets and banks. Baret et al, (2020), argued that the COVID - 19 have significant effects to the general financial markets as recently the world witness the fall of shares, oil, equity and bonds throughout the world. This is the evidence that the COVID - 19 has seriously pushed the financial markets in a different direction and response on investments. Baret et al, (2020), in detail argued that, since February 21, 2020, bond yields, oil, and equity prices have sharply fallen, and trillions of dollars, across almost all asset classes, have sought safety. In the World Business perspective, the COVID - 19 has as well impacted. Different companies are experiencing the low production which leads to the decline of the revenue collected. Jim, (2020) identified the extent of the companies affected by the recent COVID - 19 pandemic. Jim, (2020) clarified that companies experiencing decreased revenues, higher operating costs and/or cash flow challenges due to COVID-19.

ICAEW Report, (2020), on their report contribution reported that, the COVID-19 pandemic made for difficult, if not entirely unexpected, listening, but did offer hope of a recovery in the longer term. Larry (2020) suggested that since the world is at a large part depend on the goods and china production then the importation of the goods become the challenge because as the spread of corona virus stands serious production stops and exportation as well. Therefore a big number of countries who depend on the importation of goods from China are automatically affected due to this COVID -19. Larry (2020), in detail clarified that, the effect of imports to China have directly affected the export economy of countries around the world. Segal & Gerstel (2020) analyzed the sense of investment worries and in detail argued that, fears of a broader outbreak and its economic impact spread to financial markets last month.

Buetreet *et al.* (2006), studied the effect of pandemic on the Australian economy, and estimated that a pandemic outbreak would cause a 6.8% downfall in Australia's GDP and a GDP drop of 3.0% to 6.8% for countries elsewhere. The degree of impact is found to be greater for developing countries than the developed ones. A study by Brainerd and Siegler (2003) on the economic effects of the Spanish flu during the 1918-1919 period on the U.S. economy and found that while the U.S. economy retracted during the pandemic period, the economy grew during the 1920's. Fernandes (2020), suggests that the longer the pandemic lasts, the more economic damage it will cause resulting in a longer recovery period. Stock markets have always been one step ahead of the economy. Investors use forecasting methods to estimate

the future economic condition and construct their market position based on these forecasts. But, the Coronavirus, which can be labeled as “Black Swan”, caught the investors by surprise. While markets plunge during epidemic periods, history shows that these losses were erased during the first 6 months after the end of the epidemic. Studying the effect of pandemic on the stock market, Velde (2020) found that the negative impact of the Spanish Flu on U.S. stock markets was fairly modest even over time spans of several months. He contributed the modest effect to the lack of information availability during that time.

Mann (2020), concluded that the interlink age between global commodity markets, financial markets, public sentiment, and the economy is likely to make situation worse and challenging for policy responses and would result in a faster spread of the destructive of effect of the pandemic. Fernandes (2020), argue that the difficulties in estimating the economic effects of pandemic outbreak are currently being underestimated, due to over-reliance on historical comparisons with SARS, or the Spanish flu.

Siu and Wong (2019) studied the spread of Hong Kong’s SARS epidemic, and addressed its economic impact and suggested that the most serious negative impacts were seen on the consumer side, with the short term severely affected by local consumption and the export of tourism and air travel-related services. The economy did not face any supply shock, as the manufacturing base present in the Delta of the Pearl River was unaffected and products were usually exported to Hong Kong. By using the G-Cubed (Asia Pacific) model Lee and McKibbin (2004) evaluated the global economic impacts of the severe acute respiratory syndrome (SARS) and according to them the effect of the SARS epidemic on human society all over the world is severe, not only because the disease spreads rapidly through countries by global travel, but also because of financial integration and globalization, any economic shock to one country spreads rapidly to others.

Ichev and Marinč (2016) investigated whether the geographical proximity of information disseminated by the 2014 Ebola outbreak, coupled with widespread media coverage, has elected US asset prices. The results show that the effect on stock prices is generally negative, while local media reporting also has a significant impact on local trading, and the effect is more pronounced in smaller and more volatile stocks and less stable industries. Looking at the effect on stock markets, DeLisle (2003) proposed that the cost of the 2003 SARS outbreak resulted in losses as high as in the financial crisis of Asia, estimated at \$3 trillion value in GDP and \$2 trillion value in financial markets equity. Nippani and Washer (2004) examined the effect of SARS on Canada, China, the particular administrative region of Hong Kong, Indonesia, China, Singapore, the Philippines, Vietnam and Thailand and concluded that SARS only affected the stock markets of China and Vietnam. Del and Paltrinieri (2019) evaluated the 78 mutual equity funds geographically based in African countries with observed monthly flows and results for the 2006–2015 period and suggested that Ebola and the Arab Spring seriously affect the funds flows, controlling the performance of the funds, spending, and returns of the market.

Macciocchi et al., (2016) studied the short-term economic impact of the Zika virus outbreak on Brazil, Argentina and Mexico, and their results showed that, with the exception of Brazil, the market indices of these three Latin American and Caribbean Countries (LCR) did not show large negative returns the day after each shock. The average return was 0.90 per cent but on different occasions and countries it ranged from 0.90 per cent to 4.87 percent. Ming-Hsiang Chen, Shawn, and Gon (2017) checked the SARS outbreak impacts on the efficiency of Taiwanese hotel stocks using an event study approach and found that during the SARS outbreak period, seven publicly traded hotel companies experienced steep declines in income and stock price. Taiwanese hotel stocks showed significant negative cumulative mean abnormal returns on and after the day of the SARS outbreak, indicating a significant impact of the SARS outbreak on performance in hotel stock.

Mei-ping Chen et al., (2018) analysed the effect of the SARS epidemic on China’s long-term relationship with four Asian stock markets their findings support the existence of a time-varying co-integration relationship in aggregate stock price indices, and they also found that the SARS epidemic has weakened China’s long-term relationship with the four markets. Wang, Yang, and Chen (2013) suggested that infectious disease outbreaks have a major impact on the performance of biotechnology stock in Taiwan. According to Bai (2014) Baker, Wurgler, and Yuan (2012) investors may feel pessimistic about investment prospects in a given market, selling of that market’s stocks under communicable disease outbreak.

Chiang, Nam, and Li (2007) examined the daily stock return for nine Asian markets for the period of 1996 to 2003 and found that there was a high correlation among sample Asian countries during the period of crises. Sun and Hou (2018) found that in Southeast Asia, Malaysia, Vietnam, and Thailand were most financially integrated with China. According to Morales and Callaghan (2012) the global stock markets were becoming more interdependent and crisis in one country would soon spread to another. Stock market movements become increasingly correlated.

Olapegba et al (2020) assess the knowledge and perceptions of Nigerians about COVID-19. They find that some Nigerians have misconceptions about COVID-19, for instance, some respondents believe that COVID-19 is a biological weapon of the Chinese government. These misconceptions prevented them from taking maximum preventive measures. They suggest that evidence-based campaign should be intensified to remove misconceptions and promote precautionary measures.

Ozili (2020) show that Nigeria had the highest number of COVID-19 cases in West Africa and the third highest cases in Africa between March and April. Ohia et al (2020) predict that the effect on COVID-19 will be severe in Africa because African countries have fragile health systems. They argue that Nigeria's current national health systems cannot respond to the growing number of infected patients who require admission into intensive care units. They suggest that Nigeria should explore available collective measures and interventions to address the COVID-19 pandemic.

Jacob et al (2020) show that the COVID-19 pandemic affected higher institutions in Nigeria through the lockdown of schools, reduction of international education, disruption of academic calendar of higher institutions, cancellation of local and international conferences, creating teaching and learning gap, loss of manpower in the educational institutions, and cut in budget of higher education. Adegboye et al (2020) examine the early transmission of COVID-19 in Nigeria, and show that the COVID-19 cases in Nigeria were lower than expected. Adenomon and Maijamaa (2020) examine the impact of COVID-19 on the Nigerian stock exchange from the 2nd January 2020 to 16th April 2020. The results revealed a loss in stock returns and high volatility in stock returns during the COVID-19 period in Nigeria.

METHODOLOGY

Research Design

The study approach and style of this research was both empirical and analytical in nature. It employs annual time series data and regression analyses. The study used descriptive research design approach for the data analysis. The approach combined theoretical consideration with the empirical observation and extract maximum information from the available data. **Population**

Nogales (2002) defined population as the total number of elements that conform to the characteristics needed for the purpose of the study. Thus, the population for this study includes the 22 licensed commercial banks in Nigeria as at December, 2013 (CBN, 2018). The banks were, Access Bank Plc, Citibank Nigeria Limited, Sun trust Plc, Enterprise Bank Plc, Fidelity Bank Plc, First Bank of Nigeria Plc, Ecobank Nigeria Limited, First City Monument Bank Plc, Guaranty Trust Bank Plc, Heritage Banking Limited, Jaiz Bank Plc, Key Stone Bank Limited, Main Street Bank Limited, Skye Bank Plc, Stanbic IBTC Bank Limited, Standard Chartered Bank Nigeria Limited, Sterling Bank Plc, Union Bank of Nigeria Plc, United Bank For Africa Plc, Unity Bank Plc, Wema Bank Plc and Zenith Bank Plc.

Sample Size and Sampling Techniques

The study use random sampling methods to examine the relationship between coronavirus and performance. Ten commercial banks are selected as the sample size of the study.

Data Collection Methods

The data in this study was sourced from the publications of Central bank of Nigeria Statistical Bulletin and Stock Exchange Factbook. This constitutes the time series data sourced from the secondary data. Due to the very small number of observations and the narrow lockdown days during the COVID-19 pandemic, it was almost impossible to perform any robust econometric modelling; therefore, descriptive analysis was used to analyse the economic crisis and its structural causes.

Data Analysis Methods

Descriptive analysis will be used to analyse the effect of COVID-19 pandemic on the performance of commercial banks. Descriptive analysis is a basic statistical tool which is widely used to analyse and interpret secondary data. Descriptive statistics provide simple summaries about the sample and about the observations that have been made. Such summaries may be either quantitative.

Mean: The average difference between the two variables.

Standard deviation: The standard deviation of the difference scores.

Standard error mean: The standard error (standard deviation divided by the square root of the sample size). Used in computing both the test statistic and the upper and lower bounds of the confidence interval.

t: The test statistic (denoted t) for the paired T test.

df: The degrees of freedom for this test.

Sig. (2-tailed): The p -value corresponding to the given test statistic t with degrees of freedom df .

ANALYSIS AND DISCUSSION OF FINDINGS

Table 1: Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pre-Coronavirus					
Pair 1	FCMB	39860349.6667	261	71943324.92732	4453180.01732
	ACCESS	59791621.0000	261	116515980.34258	7212158.12425
Pair 2	FIDELITY	112774425.4444	261	203890089.69225	12620479.71878
	FIRST	184560467.5556	261	337641225.67807	20899467.19493
Pair 3	GTB	63513703.0000	261	166408396.62725	10300421.16240
	STERLING	109009527.6667	261	197366376.70342	12216672.02224
Pair 4	STANBIC	99270230.5556	261	197315991.54323	12213553.25912
	UBA	105738827.2222	261	207827286.92397	12864186.10926
Pair 5	UNITY	103238324.8889	261	157780975.08516	9766397.17545
	ZENITH	139777990.1111	261	194251928.70791	12023892.53099
Coronavirus					
Pair 1	FCMB	176730594.3333	261	241569188.65797	14952757.39367
	ACCESS	248871418.8889	261	352103874.24668	21794682.66723
Pair 2	FIDELITY	241864898.6092	261	333376108.70143	20635463.08182
	FIRST	289106237.3065	261	450331137.73502	27874797.63779
Pair 3	GTB	351805222.5364	261	554279715.05926	34309053.04420
	STERLING	405920143.6475	261	639510562.36037	39584710.04844
Pair 4	STANBIC	396046108.8506	261	730394372.44792	45210276.66478
	UBA	450424797.7050	261	833234980.02234	51575950.46540
Pair 5	UNITY	536744170.4789	261	1021779659.91292	63246573.16332
	ZENITH	552250367.6628	261	1145251873.34622	70889311.30631

Source: SPSS, 22.0 (2020)

Table 1 depicted that the mean score of liquidity of the commercial banks in the pre-Covid 19 and the Covid 19. The table shows mean and standard deviation differences of liquidity in the pre-covid 19 and the covid 19. The table shows the mean and standard deviations corresponding to each of the pairs in the sample. The coefficient of the pairs shows that the pairs are significant with high mean and low standard deviation. From the above we accept that the effect of the pre-Covid 19 is difference from the Covid 19.

Table 2: Paired Samples Correlations

		N	Correlation	Sig.
Pre-Coronavirus				
Pair 1	FCMB & ACCESS	261	.987	.000
Pair 2	FIDELITY & FIRST	261	.999	.000
Pair 3	GTB & STERLING	261	.809	.000

Pair 4	STANBIC & UBA	261	.976	.000
Pair 5	UNITY & ZENITH	261	.960	.000
Coronavirus				
Pair 1	FCMB & ACCESS	261	.975	.000
Pair 2	FIDELITY & FIRST	261	.933	.000
Pair 3	GTB & STERLING	261	.999	.000
Pair 4	STANBIC & UBA	261	.997	.000
Pair 5	UNITY & ZENITH	261	.996	.000

Source: SPSS, 22.0 (2020)

Table 2 revealed about the paired sample correlation between the pre-covid 19 and the Covid 19. The results disclosed that the correlation value is of the pairs are positive, strong and significant. However, other pairs in the table have positive and significant relationship.

Table 3: Paired Samples Test

		Mean	Std. Deviation	Paired Differences Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2- tailed)
					Lower	Upper			
Pre-Coronavirus									
FCMB – ACCESS		-19931271.3	46947939.1	2906004.4	-25653571.9	-14208970.7	-6.859	260	.000
FIDELITY – FIRST		-71786042.1	134207526.1	8307237.3	-88144072.3	-55428011.8	-8.641	260	.000
GTB - STERLING		-45495824.6	116141689.3	7188990.0	-59651880.7	-31339768.5	-6.329	260	.000
STANBIC - UBA		-6468596.6	11193028.7	692831.0	-7832871.1	-5104322.1	-9.336	260	.000
UNITY - ZENITH		-36539665.22	61589891.5	3812318.5	-44046616.1	-29032714.3	-9.585	260	.000
Coronavirus									
Pair 1	FCMB - ACCESS	-72140824.5	128032544.8	7925015.5	-87746210.4	-56535438.6	-9.103	260	.000
Pair 2	FIDELITY - FIRST	-47241338.6	184166429.2	11399615.	-69688664.1	-24794013.2	-4.144	260	.000
Pair 3	GTB - STERLING	-54114921.1	89145789.4	5517985.8	-64980552.5	-43249289.6	-9.807	260	.000
Pair 4	STANBIC - UBA	-54378688.8	118844013.4	7356259.7	-68864120.6	-39893257.0	-7.392	260	.000
Pair 5	UNITY - ZENITH	-15506197.1	159801764.0	9891480.8	-34983808.9	3971414.5	-1.568	260	.118

Source: SPSS, 22.0 (2020)

Table 3 revealed a higher mean among the pairs in the pre-covid 19 and the covid on liquidity by the commercial banks. The standard deviation of the pairs is also found to be lower in the pre and covid 19. The concerned confidence intervals did not observe zero between them which we can interpret that the sample results are significant, the value of the t-test and t-significant of the shows that, the pairs are statistically significant except the pairs between unity bank and zenith bank.

DISCUSSION OF FINDINGS

The third hypothesis was formulated to test the movement in liquidity of commercial banks in the pre-covid 19 and the covid 19. The results presented in table 2 proved that there are significant differences in the movement of liquidity of the commercial banks in the pre-covid 19 and the covid 19. The correlations results presented in table 3 revealed about the paired sample correlation between the pre-covid 19 and the Covid 19. The results disclosed that the correlation value is of the pairs are positive, strong and significant. However, other pairs in the table have positive and significant

relationship. Evidence from the hypothesis tested proved that there are significant differences in the volume of equity traded movement of the commercial banks within the periods covered in this study.

The significant of movement in the liquidity of the commercial banks within the covid 19 periods confirm the expectations of the study and the findings of Ichev and Marinč (2016) that local media reporting also has a significant impact on local trading, and the effect is more pronounced in smaller and more volatile stocks and less stable industries. DeLisle (2003) that the cost of the 2003 SARS outbreak resulted in losses as high as in the financial crisis of Asia, Macciocchi et al., (2016) that average return was 0.90 per cent but on different occasions and countries it ranged from 0.90 percent to 4.87 percent. Ming-Hsiang Chen, Shawn, and Gon (2017) that during the SARS outbreak period, seven publicly traded hotel companies experienced steep declines in income and stock price and the findings of Meiping Chen et al., (2018) whose findings supported the existence of a time-varying co-integration relationship in aggregate stock price indices.

CONCLUSION

The results show mean and standard deviation differences of liquidity in the pre-covid 19 and the covid 19. The coefficient of the pairs shows that the pairs are significant with high mean and low standard deviation, the study findings validates that there is significant difference in the liquidity of the commercial banks in the pre and covid 19 periods. Table 2 shows mean and standard deviation differences of liquidity in the pre-covid 19 and the covid 19. The table shows the mean and standard deviations corresponding to each of the pairs in the sample. the study concludes that there is significant difference in the liquidity of the commercial banks in the pre-covid 19 and covid 19.

RECOMMENDATIONS

1. The shock absorbing capability of each bank in the sector should be separately looked at for an effective remedial action. Comprehensive reform and finance sector restructuring programs should be thought of in order to accommodate such changes and speed up the recovery process. The study identified immediate liquidity need of liquidity that they can comfortably meet the regulation of the Central bank of Nigeria.
2. The banking sector should intensify effort in developing more competence in formulating strategies of enhancing prices in the post Covid 19 periods. The banking industries will require government bailout as Nigerian banks are in a weak financial state, which has further been exacerbated by the Covid19 pandemic.
3. The banking industry is one sector that has the capacity to revive the financial sector and deepen the Nigeria economy, though there is apprehension from stakeholders especially because of fear of past failures witnessed in the industry. The banking industry should keep showing capacity that they can come out unhurt from the challenges of Covid-19 by reviewing their response strategies with regards to enhancing customer service requirements.
4. The Nigeria commercial business model need to be significantly rethought and additional innovation needed. While it's clear that commercial banks are facing a liquidity crunch, and absent bailouts may quickly face insolvency, it is unclear what happens next.

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RISK AND FINANCING POLICY OF QUOTED MANUFACTURING FIRMS: A PANEL DATA STUDY FROM NIGERIA

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ABSTRACT

This study examined the effect of risk on financing policy of quoted manufacturing firms in Nigeria. Panel data were sourced from financial statement of the manufacturing firms' from 2009-2018. financing policy was proxy for dependent variable while risk were proxied 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. Result from model I proved that interest rate risk have positive effect while equity price risk, consumer price risk and exchange rate risk have negative effect on the financing policy. Model II proved that liquidity risk, leverage risk and cash flow risk have negative effect while leverage risk and operational risk have positive effect on the financing policy. From the findings, the study concludes that risk, and agency cost has significant effect on financial policies of quoted manufacturing firms in Nigeria. We recommend that strategic policies such as employee risk management training should be implemented among the quoted manufacturing firms and financing policy such as debt equity mix should properly be managed to minimize risk. The importance and usefulness of companies' financial information in determining risk and investment may require that quoted firms should ensure that information in the balance sheet that affect systemic risk should be integrated in the finance management policy and internal factors such as corporate size, liquidity, capital structure that affect systemic and unsystematic risk of the quoted manufacturing firms should be taken into consideration in formulating financing policy.

Keywords: Risk, Financing Policy, Systemic Risk, Unsystemic Risk, Leverage Risk, Liquidity Risk

INTRODUCTION

The business environment is very risky, due the uncertainties that characterize the operating environment. Some of the risks emanate from the business (known as systematic 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 financial policy decision, whether capital structure, dividend policy, investment or capital budgeting and hedging policies, revolves around the cost and benefits of corporation's risk holding. The financing functions of the finance managers such as capital structure require an analysis of the future cash flows, uncertainties of future cash flows and values of future cash flow (Adler, 2000).

Risk takes many forms, each affecting the agents economic activity to a lesser or greater extent. It comprises financial risk and operating risk. 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. In corporate finance theory, the principal-agency problem is explained by two individuals who operate in an uncertain environment and for whom risk sharing is desirable. The problem arises when the principal cannot monitor the agent's behavior, leading to the agent acting in his own self-interest, at the expense of the principal (Grossman and Hart, 1983). The action which is optimal for the agent will depend on the extent of risk sharing between the principal and the agent.

From the perspective of debt-funding in the organization, agency costs can be divided into monitoring costs (undertaken by the bond holder), residual costs (change in the value of the firm due to the manager's incentive to transfer value from bond holders to equity-holders, of whom he/she is one), the opportunity cost of the wealth (to the

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bondholder) and bankruptcy costs (the increase in the probability of the firm going bankrupt due to a high amount of leverage) Zingales, (1995).

The relationship between risk and corporate organizations has well been documented in literature, however, existing studies focused on risk and corporate performance. Allayannis and Weston (2018) examined the effect of foreign exchange risk on the profitability of quoted commercial banks, Zeller and Stanko (2019), examined the effect of risk on cash flow of quoted firms in Kenya, Aivazian (2013) examined the effect of financial risk (leverage) on the value of quoted firms. The above studies focused on the relationship between risk and corporate profitability, this study examined the relationship between risk and financing policy of quoted manufacturing firms in Nigeria.

LITERATURE 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).

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.

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 one part, 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 Udell (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 and 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).

Financial policies

The financing policy is known to influence the firm's value and its risk. The value of the firm is affected by capital market imperfections such as corporate taxes, personal taxes and bankruptcy costs. In this study, we examined to what extent these factors and others influence the financing policy. We start by discussing explanatory variables that according to theory should affect the financial leverage, followed by a presentation of the pecking-order theory, and concluding with the use of financial risk hedging techniques. Adeyemi (2016) concluded that the tax benefits of debt (in addition to financial flexibility, bond rating, and profit fluctuation) are the most significant factors shaping the company financing policy. Moreover, they found that bond rating and financial flexibility are the primary factors influencing bond-issue policy, while per share profit, dilution effect and share price on the stock exchange are the primary factors influencing decisions regarding stock issues.

Molina (2005) has focused on the question of whether firms are under leveraged. He found that leverage has a strong effect on ratings that result in a higher impact on the ex-ante costs of financial distress, which can offset the tax benefits of debt. The preference of alternative financing sources is outlined by the pecking-order theory. According to the theory, firms first utilize internal sources of funds and then they employ external financing - debt and equity in that order. Next they make use of hybrid sources of capital such as convertibles, rights and warrants. In our survey we investigate the financing preferences of corporate managers. Another important financial decision is how and to what extent firms should hedge their financial risk.

The Modigliani-Miller model sustains the impact of the borrowing policy on the equity cost of capital, in the sense that increasing the long-term financial debt leads to the increase of financial leverage, which will determine the increase of the return on equity, given an economic profitability higher than the interest rate (Serife and Ugur, 2012). This is the financial leverage effect. If the model accepts the existence of the tax on profit, then levered enterprises will have an

advantage over those unlevered due to the tax savings generated by the tax deduction of interest. These fiscal savings increase the net profit of the indebted enterprise (Rafiu, Taiwo and Dauda, 2012).

The interest paid by the levered company to the creditors represents the interest after taxation, while the difference is borne by the state, which will receive a diminished profit tax in its budget. The agency theory has brought substantial improvement in the theoretical field. According to this theory, the enterprise is no longer addressed only from the perspective of shareholders and their wealth maximization, as the theory tries to offer solutions for harmonizing the stakeholders' interests (Serife and Ugur, 2012). In performing their activity, the decision makers of a company will have to take into account the conflicts that arise from bringing together several interests (Rafiu, et al, 2012). If these conflicts are not recognized and properly regulated, they can jeopardize the efficiency and lead to the reduction of the company's market value. As a natural consequence, the conflicts of interest generate agency costs. The Jensen-Meckling model illustrates that the agency costs can be reduced through leverage. According to an overview from the literature in the field, the agency costs are defined as those costs borne to motivate the entrusted managers to maximize the shareholders' wealth instead of acting in their own benefit.

THEORETICAL REVIEW

Financial Economic Theory

The theory of financial economic theory states that corporate risk management is appropriate to increase firm value in the presence of capital market imperfections such as bankruptcy costs, a convex tax schedule, or underinvestment problems. According to Carter et al. (2006) risk management can increase shareholder value by harmonizing financing and investment policies. A credible risk management can mitigate underinvestment costs by reducing the volatility of firm value. As the underinvestment problem which includes financial risk management is likely to be more severe for firms with significant growth and investment opportunities, various measures such as the market-to-book ratio, research and development to sales ratio, capital expenditure to sales, net assets from acquisitions to size which are indicators of financial performance are used for testing the underinvestment hypothesis.

Trade-off Theory

Trade-off theory first arose to determine the best decision taken by firms when it comes to choice of capital structure. 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 serve 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 and 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 and 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 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 and 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 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.

EMPIRICAL REVIEW

Allayannis and Weston (2018) explained the use of foreign exchange derivatives and the potential effects of these instruments on firm value, in the case of 720 large non-financial firms in the US between 1990 and 1995. A positive relationship was found between the use of foreign exchange derivatives and firm value by selecting Tobin's Q, as a firms' value indicator.

Carter et al. (2016) investigated whether hedging for firms in the US airline industry was a value source in the 1992-2003 periods or not. It was found that protecting risk related to the jet fuel is positively associated with the airline firm value. Jin and Jorion (2016) examined the effect of hedging activities of 119 US firms engaged in oil and gas production between 1998 and 2001. According to outcomes, hedging did not affect the market value of the firm in this industry. It can, also, be noted that hedging activities decreases sensitivity of the market price of firms to oil and gas price.

Perez-Gonzalez and Yun (2013) investigated the impact of effective risk management policies on firm value by employing energy companies' data. At first glance, it can be seen that the use of derivatives increased both the firm value and the leverage ratio. Panaretou (2014) found that although the effects of the use of foreign exchange derivatives are statistically and economically significant, the interest rate derivatives had a weak effect and the commodity derivatives has no effect for non-financial firms in the UK.

Li et al. (2014) established the concept of risk management based on the creation of a risk management unit, the use of financial derivatives, or the utilization of services of international accounting firms as an audit firm by taking into account 189 financial firms in China during the period of 2009-2013. It is determined that the use of financial derivative products affected the firm value.

Aytürk et al. (2016) investigated the effects of the use of financial derivatives on firm value non-financial firms in Turkey from 2007 to 2013. In panel data analysis, it was seen that the use of derivative products, in general, has no effect on firm's value in Turkish Market by employing Fama-French three factor time series technique and sector analysis research method. Akpınar and Fettahoğlu (2016) investigated the effects of using derivative products on firm value through tests conducted on 72 non-financial firms in 2009-2013 periods. It is that there is not any positive significant effect was figured out for the companies that use derivatives to eliminate risk factors. The last group research focuses on assessing the FRM determinants.

Zeller and Stanko (2019) demonstrated how to build risk into capital investment decisions. They illustrate how to combine distribution theory, technology, and a business professional's skills and insight into a capital investment analysis. In addition, we show how management can approximate the risk of each cash flow estimate and display the overall capital investment results. This framework is extended by showing how a mutually exclusive decision can be improved, using a lease versus purchase example. An Excel template is readily available from the authors allowing a hands-on application of the framework presented in this paper. In addition, this paper positions the reader to comfortably use more advanced analytics, such as Monte Carlo simulation, a tool that is readily available in commercial software applications.

Dooskar (2013) offered model for the behavior of stock price liquidity and volatility. In this model, investors predict the recent price changes for variations of an asset with risk. When changes in that asset are great, its risk expenditure is high and current efficiency of that asset goes down, efficiency rate of risk-free asset also is low and market encounters illiquidity.

Literature Gap

The impact of risk on corporate performance has well been documented in literature. Existing literature focused more on the effect of the variables on firms' profitability and value of quoted firms, measuring the relationship between risk and agency cost variables and corporate profitability. This study focused on the existing relationship between risk and financing policy of quoted manufacturing firms in Nigeria

METHODOLOGY

This study used quasi-experimental research design approach for the data analysis. This combines theoretical consideration (a prior criterion) with the empirical observation and extract maximum information from the available data. The target population is the 63 quoted manufacturing firms on the floor of Nigeria Stock exchange. In order to guide against data omission, and ensure uniformity in presentation, a sample size of twenty (20) quoted manufacturing firms, with complete data was selected for the period of ten (10) years, between 2009-2018 (The Nigerian Stock Exchange Report, 2018). The data for this study are secondary data sourced from the financial statement and annual reports of the selected quoted firms.

Model Specification

From theories, principles and empirical findings, the models below are specified in this study.

Systematic Risk

$$FP = f(EXR, EQR, INTR, CPR) \quad (1)$$

It is empirically stated as

$$FP = \phi_0 + \phi_1 EXR + \phi_2 EQR + \phi_3 INTR + \phi_4 CPR + \mu \quad (2)$$

Unsystematic Risk

$$FP = f(OPR, CFR, LR, LIQR) \quad (3)$$

It is empirically stated as

$$FP = \sigma_0 + \beta_1 OPR + \sigma_2 CFR + \sigma_3 LR + \sigma_4 LIQR + \mu \quad (4)$$

Where

FP = Financing policy

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	
$\beta_1 - \beta_4$	=	Coefficient of the independent variables to the Dependent variable	
μ	=	Error term	

Table 1: Analysis of Variables and A-Priori Expectation

Variable	Measurement	Notation	Expected relationship
Financing Policy	Log of total capital to total investment	FP	Dependent variable
Exchange Rate Risk	Log of variation of naira exchange rate per US dollar	EXR	+
Equity Price Risk	Log of variation on stock prices of the quoted firms	EQR	+
Interest Rate Risk	Log of variation of real interest rate	INTR	+
Consumer Price Risk	Log of value of inflation Rate	CPR	+
Operating risk	Log of variation of total revenue	OPR	+
Cash flow risk	Log of variation on net operating cash flow	CFR	+
Leverage risk	Log of variation on debt equity ratio	LR	+
Liquidity risk	Log of variation on current assets to current liability	LIQR	+

Source: Authors Research Desk, 2020

Methods of Data Analysis

The study used panel Ordinary Least Square model. Econometrically, the panel data standard linear model can be written as follows (Verbeek, 2012; Brooks, 2014);

$$Y_{it} = \beta_0 + X_{it}\beta + \varepsilon_{it} \quad (5)$$

Where Y_{it} is the dependent variable for firm i at time- t ; β_0 is the intercept term; X_{it} 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} .

The Fixed Effects Model (FEM) takes into account the existence of each individual effect of the observations in a particular model. Econometrically, the fixed effects model can be expressed as the equation below (Koop, 2008).

$$Y_{it} = \alpha_i + X_{it}\beta + \varepsilon_{it} \quad (6)$$

The Random Effects Model (REM) just like the fixed effects model suggests different intercept terms for each entity, the random effects model can be written as:

$$Y_{it} = \beta_0 + X_{it}\beta + \alpha_i + u_{it} \quad (7)$$

Where, X_{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;

$\varepsilon_{it} = \alpha_i + u_{it}$, which implies that the error term consist of two components.

RESULTS AND DISCUSSION OF FINDINGS

Table 1: Hausman Test Analysis

	Chi-Sq. Statistic	Chi-Sq. d.f	Prob.	Decision	Remark
Model 4	7.785086	4	0.0000	Accept alternate	Fixed effect model valid
Model 5	2.820306	4	0.5883	Accept null hypothesis	Random effect model valid

Source: Computed from E-view 9.0, 2020

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 table 1 above, fixed effect model is significant for model I, while random effect model is significant for model II.

Table 2: Presentation of Panel Unit Root Results at Levels

Method	Statistic	Prob.**	Remark			Remark
MODEL 4: FP				MODEL 5: FP		
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			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	Not Stationary
ADF - Fisher Chi-square	44.1420	0.3008		64.9133	0.0076	
PP - Fisher Chi-square	114.188	0.0000	Stationary	69.6633	0.0025	Stationary
Exchange Rate			OPR			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	Not Stationary
ADF - Fisher Chi-square	53.7726	0.0715	Not Stationary	72.8945	0.0011	Not Stationary
PP - Fisher Chi-square	48.7197	0.1623	Not Stationary	98.0803	0.0000	Not Stationary
EQR			LIQ			LIQ
Levin, Lin & Chu t*	0.98170	0.8369	Not Stationary	-3.93700	0.0000	Not 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	Not Stationary
CPR			CFR			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	Stationary
ADF - Fisher Chi-square	57.4413	0.0364	Stationary	39.3018	0.5015	Stationary
PP - Fisher Chi-square	46.2999	0.2284	Not Stationary	71.2480	0.0017	Not Stationary

Source: Computed from E-view 9.0, 2020

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			Remark
	Model 4: FP			Model 5: FP		
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			Stationary			Stationary
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
			LR			MC
Interest Rate						
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			Stationary			Stationary
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
			OPR			EXC
Exchange Rate						
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			Stationary			Stationary
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
			LIQ			DIR
EQR						
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			Stationary			Stationary
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
			CFR			ACD
CPR						
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			Stationary			Stationary
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, 2020

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.

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

Source: Computed from E-view 9.0, 2020

VAR	PANEL I: MODEL 1		VAR	PANEL II: MODEL 2	
	Fixed	Random		Fixed	Random
INTR	0.010336	0.007498	LIQR	-0.270286	-0.274847
	*0.154583	*0.112284		*-2.088579	*-2.175633
	**0.8773	**0.9107		**0.0382	**0.0308
	-0.006989	0.001160		-0.225055	-0.203309
EXR	*-0.041363	*0.006876	LR	*-2.414991	*-2.229865
	**0.9671	**0.9945		**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
	**0.1263	**0.1493		**0.4573	**0.4193
CPR	1.074786	0.986439	OPR	0.573420	0.565151
	*2.575917	*2.354003		*8.357625	*4.248966
	**0.0108	**0.0196		**0.0000	**0.0000
R ²	0.753676	0.020619	C	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
D.W	1.380852	1.252251		1.384893	1.263524

Source: Computed from E-view 9.0, 2020

INTERPRETATION OF THE RESULT

Table 4 presents the effect of the risk, agency cost and financing policy of the quoted selected manufacturing firms over the 10 years periods covered in this study. Panel I presents results of effect of systemic risk on financing policy as formulated in model IV. Based on the fixed effect regression model, the adjusted coefficient of determination (Adjusted R²) indicates that 72.1 percent variation on the financing policy of the selected manufacturing firms can be traced to 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 statistic of 1.25 proved the presence of serial autocorrelation among the variables. The regression intercept is positive and significant which implies that holding other variables constant, financing policy 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 investment policy 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 and no significant effect on the financing policy 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 R²) 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, financing policy of the manufacturing firm will increase by 0.56 units. Furthermore, the results indicates that liquidity risk, cash flow risk and leveragerisk have negative but no significant effect on the

financing policy of the manufacturing firms while operational risk have positive but no significant effect on the financing policy of the manufacturing firms.

Table 5: Pedroni Residual Cointegration Test

Series: FP INTR EXR EQR CPR

	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				
Series: FP CFR LIQR LR OPR				
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, 2020

The results of the cointegration test proved that the variables are cointegrated as the probability coefficient of the variables are less than 0.05, we accept the alternate hypotheses that there is presence of long run relationship between the dependent and the independent variables.

Table 6: Presentation of Granger Causality Test

Null Hypothesis:	Obs	F-Statistic	Prob.
Model 1			
INTR does not Granger Cause FP	160	0.06307	0.9389
FP does not Granger Cause INTR		0.28735	0.7506
EXR does not Granger Cause FP	160	0.12550	0.8821
FP does not Granger Cause EXR		0.15389	0.8575
EQR does not Granger Cause FP	160	2.91514	0.0472
FP does not Granger Cause EQR		0.09709	0.9075
CPR does not Granger Cause FP	160	0.18510	0.8312
FP does not Granger Cause CPR		0.02879	0.9716
Model 2			
CFR does not Granger Cause FP	157	0.93028	0.3967
FP does not Granger Cause CFR		1.09479	0.3372
LIQR does not Granger Cause FP	160	0.78891	0.4562
FP does not Granger Cause LIQR		0.83770	0.4347
LR does not Granger Cause FP	160	0.03339	0.9672
FP does not Granger Cause LR		1.40667	0.2481
OPR does not Granger Cause FP	160	0.37704	0.6865
FP does not Granger Cause OPR		0.83358	0.4364

Source: Computed from E-view 9.0, 2020

From the causality test presented in the above table, there is independent relationship from systemic risk and financing policy of the quoted manufacturing firms in model I except a unidirectional causality from equity price risk to financing policy. We accept the null hypothesis that there is no causal relationship between systemic risk and investment policy of the firms. Model 2 found that there is no causal among the variables, we accept the null hypotheses

DISCUSSION OF FINDINGS

The estimated regression model 1 was formulated to examine and test the relationship between systemic risk and the financing policy of the quoted manufacturing firms for the periods covered in this study. The estimated results as presented in table 2 panel 1 indicates that systemic risk explained 72.1 percent variation on financing policy of the quoted manufacturing firms. This implies that the variables in the regression model have significant effect on the financing policy of the manufacturing firms. This further implies that variation on systemic risk of the firms can affect the investment policy of the manufacturing firms.

Results in the table proved that interest rate risk and consume price risk have positive but no significant effect on investment policy of the quoted manufacturing firms. This implies that increase on interest rate risk and consume price risk can positively affect financing policy. Like the findings in model I, these findings confirm the expectation of the study and the objective of risk management strategies formulated 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). As the underinvestment problem which includes financial risk management is likely to be more severe for firms with significant growth and investment opportunities, various measures such as the market-to-book ratio, research and development to sales ratio, capital expenditure to sales, net assets from acquisitions to size which are indicators of financial performance are used for testing the underinvestment hypothesis. The neo-classical or the loanable fund theory examines interest rate in terms of demand and supply of loanable funds or credit. According to this theory, the rate of interest is the price of credit which is determined by the demand and supply for loanable funds.

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 investment policy 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. Firms can reduce the likelihood of financial distress by hedging variability in earnings by managing financial risk. Like the findings in model I, the positive effect of the variables confirm the findings of Allayannis and Weston (2018) whose study 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) who opined that the effects of using derivative financial instruments on firm risk and value in the geographical context for non-financial firms in 47 countries.

Furthermore, the estimated result of the model found that exchange rate risk and equity price risk have negative and no significant effect on the investment policy of the quoted manufacturing firm. Like the findings in model I, the negative effect of the variables on the financing policy of the firms is contrary to the a-priori expectation and can trace to volatility of the variables over the periods covered in the study. 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 study 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.

The estimated regression model (model 2) was formulated to examine and test the relationship between unsystemic risk and the financing policy of the quoted manufacturing firms for the periods covered in this study. The estimated results as presented in table 4.12 panel II indicates that systemic risk explained 52.2 percent variation on financing policy of the quoted manufacturing firms. The results of the model was however justified by the F-statistics and probability.

The estimated regression results found that liquidity risk and leverage risk have negative and no significant effect on the financing policy of the selected manufacturing firms across the periods covered in this study. This indicates that increase on the variables within the periods of this study led to significant decrease on the financing policy of the firms. It is important to note that company facing liquidity risk discourages credit institutions such as commercial banks in extending short term inventory financing; this implies that the positive effect of liquidity risk on financing policy of the manufacturing firms does not confirm our expectations. Like the findings in model two above, the positive effect of liquidity risk on financing policy of the firms can be traced to excess liquidity and credit policy of the credit institutions and the manufacturing firms. The positive effect of operational risk on the financing policy of the firms implies that the firms have strategic measures of managing risk.

Theoretically, financial economic theory stated that corporate risk management is appropriate to increase firm value in the presence of capital market imperfections such as bankruptcy costs, a convex tax schedule, or underinvestment problems. According to Carter et al. (2006) risk management can increase shareholder value by harmonizing financing and investment policies. A credible risk management can mitigate underinvestment costs by reducing the volatility of firm value.

The negative effect of the variables like the findings in model two above contradicts risk management theories and the findings of Perez-Gonzalez and Yun (2013) that the use of derivatives increased both the firm value and the leverage ratio. Panaretou (2014) found that the use of foreign exchange derivatives are statistically and economically significant, the interest rate derivatives had a weak effect and the commodity derivatives has no effect for non-financial firms in the UK, the findings of Li et al. (2014) that the use of financial derivative products affected the firm value but contrary to the findings of Aytürk et al. (2016) that the use of derivative products, in general, has no effect on firm's value in Turkish Market by employing Fama-French three factor time series technique and sector analysis research method and the findings of Akpınar and Fettahoğlu (2016) that there is not any positive significant effect was figured out for the companies that use derivatives to eliminate risk factors.

The estimated results furthermore, justify that operational and cash flow risk has positive and no significant effect on the financing policy of the quoted manufacturing firms. The positive effect of cash flow and operational risk on the financing policy of the firms conduct the expectation of this study.

Like the findings in model two above, the positive effect of the variables can be traced to effective risk management strategies formulated by the firms. The negative effect of the variables confirm the findings of Aytürk et al. (2016) that the use of derivative products, in general, has no effect on firm's value in Turkish Market by employing Fama-French three factor time series technique and sector analysis research method and the findings of Akpınar and Fettahoğlu (2016) that there is not any positive significant effect was figured out for the companies that use derivatives to eliminate risk factors but contrary to the findings of Perez-Gonzalez and Yun (2013) that the use of derivatives increased both the firm value and the leverage ratio. Panaretou (2014) found that the use of foreign exchange derivatives are statistically and economically significant, the interest rate derivatives had a weak effect and the commodity derivatives has no effect for non-financial firms in the UK, the findings of Li et al. (2014) that the use of financial derivative products affected the firm value.

CONCLUSION

Model I in the study examined the effect of systemic risk on the financing policy of quoted manufacturing firms. The model produced adjusted R^2 of 0.721485 which implies that 72.1 percent variation on the financing policy of the selected manufacturing firms can be traced to variation on the systemic risk of the firms. Result from the model proved that interest rate risk have positive effect on investment policy of the quoted manufacturing firms while equity price risk, consumer price risk and exchange risk have negative effect on the investment policy. The panel unit root produced results that the variables were stationary at first difference while the causality test proved no causality from systemic risk and financing policy of the quoted manufacturing firms within the time scope of this study.

Model 2 in the study examined the effect of unsystemic risk on the financing policy of quoted manufacturing firms. The model produced adjusted R^2 of 0.522198 which implies that 52.2 percent variation on the financing policy of the selected manufacturing firms can be traced to variation on the unsystemic risk of the firms. Result from the model proved that liquidity risk, leverage risk and cash flow risk have negative effect on financing policy of the quoted

manufacturing firms while leverage risk and operational risk have positive effect on the financing policy. The panel unit root produced results that the variables were stationary at first difference while the causality test proved no causality among the variables. The study concludes that there is significant relationship between systemic risk and financing policy of the manufacturing firms within the periods covered in this study. That there is significant relationship between unsystemic risk and financing policy of the quoted manufacturing firm

RECOMMENDATIONS

1. Strategic policies such as employee risk management training should be implemented among the quoted manufacturing firms and investments policies such as long term investment should properly be managed to minimize risk.
2. The importance and usefulness of companies' financial information in determining risk and investment may require that quoted firms should ensure that information in the balance sheet that affect systemic risk should be integrated in the finance management policy.
3. Internal factors such as corporate size, liquidity, capital structure that affect systemic and unsystematic risk of the quoted manufacturing firms should be taken into consideration in formulating financial policies

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CORPORATE FUNDING AND MARKET CAPITALIZATION VALUE OF QUOTED INDUSTRIAL GOODS MANUFACTURING FIRMS IN NIGERIA

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ABSTRACT

This study examined the relationship between corporate funding and value of quoted industrial goods manufacturing firms in Nigeria. Secondary data obtained from 15 quoted industrial goods manufacturing firms from 2010 - 2019 obtained from the Nigerian Stock Exchange Fact sheet and annual reports of the quoted industrial goods manufacturing firms. The study modeled market capitalization value as the dependent variables while retained earnings, share capital, short term debt, long term debt and debt equity ratio were the independent variables. Panel data methodology is employed while the fixed effects model is 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 established that 61.5 percent variation on market capitalization value of the quoted industrial goods manufacturing firms was explained by the independent variables such as retained earnings, share capital, short term debt, long term debt, and debt equity ratio. Retained earnings have negative but no significant effect, share capital have positive but no significant effect, short term debt have positive but no significant effect, long term debt have positive but no significant effect while debt equity ratio have positive and no significant effect on the market capitalization value of the quoted industrial goods manufacturing firms. From the findings, we conclude that corporate funding has significant effect on value of the quoted firms. The study recommends that management of the firms should optimize and prioritize the use of retained earnings.

Keywords: Corporate Funding, Market capitalization Value, Industrial Goods Manufacturing Firms, In Nigeria

INTRODCUTION

Corporate investment decisions are made based on two rationales; maximizing profit and/or maximizing market value. For clarification, profit maximization rationale implies that an asset should only be acquired if it increases shareholders' net profit (Abraham and Harrington, 2011). This happens when the expected rate of return exceeds the interest rate. On the other hand, market value maximization rationale claims that an asset should only be acquired if it has a positive effect on shareholders' equity which means the cost of acquiring the assets should be less than the value it adds to the market value of the corporation (Akintoye, 2008). Hence to be able to make the best investment decisions, the optimal combination of debt and equity and the calculation of the cost of capital become essential.

The debates on corporate funding and value of quoted firms dates back to the traditional school of thought. To Modigliani and Miller's (1958) capital structure irrelevance theory states that the firms overall market value and the WACC is independent of capital structure in a perfect market without taxation. However, the taxfree perfect market does not hold in the real world. Modigliani and Miller (1963) further proposed the modified capital structure relevance theory which analyzed the present value of interest tax shield at the corporate level and found that the higher the debt ratio, the higher the firm value. Miller (1977) extends the MM model to personal as well as to corporate taxes, and introduced the Miller theory which considered the relative advantage of debt over equity.

Trade-off theory suggests as an optimal capital structure, that the mix of equity and debt where present value of tax advantages equals to the present value of costs related to debt. Its main advantage is the fact that it suggests mediocre leverage and that it is easy to understand. Its disadvantage is the fact that it is a general descriptive theory that does not explain which exactly is the right level of leverage. According the asymmetric information theory, debt is preferred to equity, because taking a loan is a positive sign for investors who are not as well informed as the management. If a company undertakes a loan, investors will assume that the management believes that the company's common stock is

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undervalued. Pecking order hypothesis is better supported by empirical investigations (Myers and Sunder, 1999; Baskin, 1989).

There are many studies on the effect of corporate funding on corporate values. Some of the studies are foreign studies whose findings, Githira, Muturi and Nasieku (2019) examined the financial characteristics and their respective influence on stock returns of listed firms in Nairobi. Kumaand Rao (2015) examined the funding preferences of SMEs and the influences the financing decisions of SMEs in India. Kraemer-Eis and Passaris (2015) examined the importance of securitization in financing SMEs in Europe. 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.

However, similar studies in Nigeria found a controversial relationship between corporate funding and value of quoted firms. Taiwo Adewale Muritala (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 and found positive relationship between optimal capital structure and stock prices of quoted firms. From the above knowledge gap, this study wants to examine the relationship between corporate funding and market capitalization value of quoted industrial goods manufacturing firms in Nigeria.

LITERATURE REVIEW

Corporate Funding

Corporate funding 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 corporate funding 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.

Aveh and Awunyo-Vitor (2017) noted that corporate funding is defined as the sources of funds to finance growth and operations. The sum of the debt and equity, which forms the capital structure bears a cost to the firm and is defined as the cost of capital. All investments made by the firm should be higher than the cost of capital to satisfy shareholders. Moreover, managers should try to maintain an optimum rate for the cost of capital that balances benefits and costs that maximizes profits and value of the firm. However recent volatilities in the market, for instance, the financial crises, has made this decision challenging as estimating cost of equity capital became more difficult which influences the overall cost of capital.

Share capital Funding

Equity financing according to Abraham and Harrington (2011) comprise of initial public offering and SEOs issues of stock by a firm as means to raise funds through the sale of stock rather than the issuance of additional debt. The offering for common stock may be done using a right offer or a cash offer. SEOs differ from IPOs in that they are made by firms that have matured beyond the IPO with a significant track record of financial performance and with shares already actively trading in the equity market while IPO involve selling stock on a major exchange for the first time, Floegel (1990).

Capital need by firms for investment in projects such as acquisitions of heavy machinery, research and development and availability of debt, firm's current cash flow, investment opportunities at hand are some of the motivating factors

for firms to issue equity, Pandey (2009). Long term debt affects future cash flows which in turn affects liquidity which prompts managers to issue seasoned equity. Managers often view the equity offers as an effective way of increasing firm size and offers incentives to grow their firm beyond optimal size since their compensation is dependent on asset size rather than profitability Jensen (1986). McLaughlin and Vassudevan (1996) found that firms with more investment and growth opportunities opt for equity issuance to avoid debt which is tied to periodic interest payments. Equity financing add value to shareholders by way of improving capital structure of firms to an optimal level so as to balance the benefits of the tax shield and the costs of financial distress, Myers (2001) Floegel (1990) defined equity financing as where by corporations raise money by selling ownership interests (represented by shares of stock) to investors.

Retained Earnings

In finance literature, earnings and dividends occupied an important role in financial accounting research and finance with more emphasis on one than the other. Several studies (Harkavy 1953, Dinayak, 2014 Wright 2014, Kanwal 2012, Hackbarth, and Johnson 2011, Chughtai, A. R., Azeem, A., & Ali, S. 2014) have been conducted by financial scholars with emphasis on the dividend pay-out and its possible effect on common stock price. However, the area of significant effects of retained earnings on different factors i.e. cash dividend per share, capital gain/loss yield and particularly, stock returns are still untapped and need further research. Today, particular attention is placed on the distinctive role that retained earnings can play in predicting future cash flows by the investing community and the biggest reason for the attention to earnings lies with the notion that retained earnings serves as a predictor of future cash flows.

Though, there is still continuing controversy in the investment community that concerns the relevance of earnings as the underlying source of value of a share of common stock but more often, earnings are described as very important to shareholders because earnings provide the cash flow necessary for paying dividends. Therefore, a firm's ability to generate cash flow affects the value of its securities and the ability to assess future cash flow is equally important for the investment community, both shareholders and creditors.

Equity Ratio

Firms with higher leverage seek to avoid higher costs of financial distress and are more likely to issue equity. If firms seek to maintain a target leverage ratio then high leverage is likely to be associated with a desire to issue equity (McLaughlin et al., 1996). Dagon (2013) examined the impact of size, age, liquidity and leverage on profitability for 200 companies listed in Istanbul Stock Exchange for the years 2008 to 2011.

The results indicated a positive relationship. Luper and Isaac (2012) examined the impact of capital structure on the performance of manufacturing companies in Nigeria. The annual financial statements of manufacturing companies listed on the Nigerian Stock Exchange were used for this study which covers a period of five years from 2005-2009. Multiple regression analysis was applied on performance indicators that included return on asset (ROA) and profit margin. Short-term debt to total assets, long term debt to total assets and total debt to equity were used as capital structure variables. The results show that there was a negative and insignificant relationship between short-term debt to total assets and long term debt to total assets on ROA and profit margin respectively; while total debt to equity is positively related with ROA and negatively related with profit margin. Leverage will be measured by the ratio of total debt to total equity.

The LongTerm Debt Benefits

Long term debt is financing that has a repayment or maturity term of more than one year or that companies use between 20 and 30 years to buy assets, such as equipment and buildings, which are mostly considered as loan guarantees.

The guarantee against debt or long-term loans is made through assets and is often associated with the low cost of loans, especially through central banks or Federal Reserves, which they maintain low loan rates to support the housing market and the growth of businesses. It also has relatively low financing costs, that is, the interest paid for the assets acquired for the business is generally tax deductible and further reduces the total cost of loans with longterm debt. Capital financing involves financing by investors in exchange for partial ownership of the companies, where shareholders and owners often prefer to maintain ownership and control of the company through the support of the company. After paying the debt with interest, they still have their ownership or control of the bank and, in general, they are considered an alternative to debt as a long-term source of capital funds for business growth. Stability rate: the long-term debt is

mostly structured and stable over time, with the payment time of the loan and the interest rate often remains constant during the repayment of the loan or before maturity in comparison with shortterm credit accounts or capital investment. The financing must consider the interests of the investors and maintain records of the distributions of income, as well as of the shareholders, before changes can be made.

Short Term Debt

The matching principle of finance is the standard theory used to explain the amount of short-term debt financing and other current liabilities that a firm has on its balance sheet. Briefly, the theory states that firms should finance their short-term assets with short-term liabilities (Guin (2011)). This implies that the amount of short-term debt financing that a firm uses depends on the amount of the firm's short-term assets and its other sources of shortterm financing. However, since short-term debt has characteristics that are similar to the characteristics of long-term debt, the factors that have been shown to affect the amount of longterm debt financing that a firm uses may also affect the amount of shortterm debt financing a firm employs. These factors include firm size, profitability and market-to-book ratio. The purpose of this study is to determine whether the matching principle fully explains the amount of short-term debt financing that a firm employs or if factors that affect the amount of long-term debt financing that a firm uses also affect the amount of short-term debt financing that a firm employs.

Long- Term Debt and Firms' Value

Leland and Toft (1991) states that, the value of a firm is the value of its assets plus the value of tax benefits enjoyed as a result of debt minus the value of bankruptcy cost associated with debt. Modigliani (1980) points out that, the value of the firm is the sum of its debt and equity and this depends only on the income stream generated by its assets. The value of the firm's equity is the discounted value of its shareholders earnings called net income. That is, the net income divided by the equity capitalization rate or expected rate of return on equity.

The net income is obtained by subtracting interest on debt from net operating income. On the other hand, the value of debt is the discounted value of interest on debt. Jensen (1986) suggests that, when firms have more internally generated funds than positive net present value (NPV) projects, debt forces the managers to pay out funds that might otherwise have been invested in negative net present value projects. This over-investment problem can be lessened if managers are forced to pay out excess funds for servicing debt, therefore enhancing the firms' value. Myers (1993) suggests that, a firm with outstanding debt may have the incentive to reject projects that have positive NPV if the benefits from accepting the project accrue to the bondholders without also increasing shareholders wealth. McConnell and Servas (1995) posit that, seeds of under-investment problem lie in the solution of over- investment of U.S firms.

Measures of Firm Value

Corporate values are measured differently by different authors, however, this study examine the following measures of corporate value.

Capitalized Value Measure

The capitalization rate as used in the real estate literature refers to the ratio of net operating income to property value. The cap rate bears a close relation to the weighted average cost of capital (WACC) as defined in the corporate finance literature (Copeland and Weston, 1988). The WACC is the rate of discount that reflects the average costs of debt and equity capital employed by a firm. Discounting the cash flows from corporate assets at the WACC reveals the value of the firm. The relation between the WACC and firm valuation has extensive theoretical underpinnings extending from the firm valuation work of Modigliani and Miller (1958). Sharpe's (1964) development of the capital asset pricing model (CAPM) revolutionized stock portfolio theory and provided a widely accepted method to empirically estimate the cost of equity, which as this paper shows, is an embedded component in the cap rate.

Ambrose and Nourse (1993) developed an investment approach based on the WACC; however, they do not incorporate the CAPM in their model. Instead, they rely on the intuitive argument that debt rates on mortgages should be related to government debt rates and that the cap rate should be related to the earnings-price ratio.

Early research by Ricks (1969) and Sirmans and Webb (1978, 1980) estimated imputed equity yields, variances and tax rates. These studies assumed various holding periods and no appreciation in price. Fisher, Lentz and Stern (1984)

and Nourse (1987) investigated the effects of income tax changes on income property using data from the American Council on Life Insurance (ACLI). These studies examined the effect on cap rates brought about by major tax law changes. Fisher, Lentz and Stern (FLS) found that the 1976 tax law, which required amortization of construction taxes and interest (effectively increasing construction costs), raised the cap rate for new properties and while leaving existing property cap rates unchanged. The 1981 tax law change increased allowable depreciation, which decreased the cap rate for both new and existing properties. Nourse (1987) reexamined the FLS study, reported no change in cap rates for the 1976 tax law change and a much smaller decrease in cap rates for the 1981 tax law change.

Thus, if V_0 is the value of the firm at time 0, if F_1 is the net cash inflow from the firm to its owners at time 1, if V_1 is the value of the firm at time 1, and if r is the cost of capital between time 0, and time 1, then

$$V_0 = \frac{F_1 + V_1}{1 + r} \quad (1)$$

Likewise, expressing V_1 in terms of F_2 and V_2 , V_2 in terms of F_3 and V_3 , and so forth, and then successively substituting these latter expressions into Equation 1, the value of a firm can be express as follow:

$$V_0 = \frac{F_1}{1 + r} + \frac{F_2}{(1 + r)^2} + \frac{F_3}{(1 + r)^3} + \dots + \frac{F_n}{(1 + r)^n} + \frac{V_n}{(1 + r)^n} \quad (2)$$

Inasmuch as the last term of Equation 2 approaches zero as the number of future periods, n , approaches infinity, Equation 3 can be written concisely as follows:

$$V_0 = \sum_{t=1}^{\infty} \frac{F_t}{(1 + r)^t} \quad (3)$$

Net cash inflow to owners, F_t , is the difference between the dividend paid to owners, D_t , and the additional capital supplied by owners, K_t , thus,

$$F_t = D_t - K_t \quad (4)$$

Furthermore, the additional capital supplied by owners is the difference between the firm's investment net of depreciation, I_t , and its undistributed earnings, which in turn is the difference between its profit, X_t , and its dividend. Thus,

$$F_t = D_t = [I_t - (X_t - D_t)] = X_t - I_t \quad (5)$$

Substituting Equation 6 into Equation 3, the value of a firm therefore is as follows:

$$V_0 = \sum_{t=1}^{\infty} \frac{X_t - I_t}{(1 + r)^t} \quad (6)$$

$$MVPS = \frac{NIPS + DINIPS}{ECC} = \frac{NIPS + \frac{NIPS(1 + GR)^{FP} - NIPS}{(1 + ECC)^{FP}}}{ECC} \quad (7)$$

Equation 7 reduces to

$$MVPS = \frac{NIPS \left(1 + \frac{(1 + GR)^{FP} - 1}{(1 + ECC)^{FP}} \right)}{ECC} \quad (8)$$

Considering that $MVPS$ corresponds with V_0 , $NIPS$ with X_0 , GR with g , ECC with r , and FP with m , it follows that the collection within the parentheses of Equation 11 is w .

Goosen et al. (1994) also suggested that the profit growth rate, g , should be based on the profits of the last three time periods, but they suggested no objective means of deriving m , “the number of future periods that stockholders are willing to extend growth” (p. 66). Critiquing the method, Gold (2003) suggested exponentially smoothing recent profit figures so that a practical valuation formula cannot depend upon an infinite number of forecasts into the future, so Equation 6 must be simplified. If net investment is set to zero for all periods and if profit is likewise set to a constant, X^* , then Equation 6 reduces to the following:

$$V_o = \frac{X^*}{r} \quad (9)$$

Goosen, Foote, and Terry (1994) suggested computing the constant profit term, X , by multiplying the most recent profit figure, K_0 , by a growth factor, w , which is derived from a forecast of the profit growth rate, g , projected to an arbitrary future time, m , as follows:

$$w = 1 + \frac{(1+g)^m - 1}{(1+r)^m} \quad (10)$$

The computed value of a firm would then be as follows:

$$V_o = \frac{X_0 w}{r} \quad (11)$$

Goosen et al. (1994) did not present the growth factor, as given in Equation 8, but it can be derived from their work. The computed measure would be less sensitive to the possibly unrepresentative profit of the last period. Nevertheless, the model remains dependent upon m , an arbitrary parameter.

THEORETICAL REVIEW

The section discusses the irrelevance theory, free cash flow theory the trade-off theory, the pecking order theory and market timing theory. The section focus on the assumptions, the prepositions and the critics of each of the theories

MM (1958) Irrelevance Theory

Modigliani and Miller (1958) proposition concluded that the value of the firm, that is, its stock price, does not depend on the capital structure of the firm. The main idea behind Modigliani and Miller’s theory is that, a rational investor can create any capital structure on his/her own through homemade leverage substitution. Capital structure irrelevance” is based on assumptions that include perfect capital markets, homogenous expectations, no taxes, and no transaction costs; all earnings are paid out as dividend. Modigliani and Miller (1963) stated that borrowing will only cause the value of the firm to rise by the amount of the capitalized value of the tax subsidy. The introduction of tax deductibility of interest payments has an implication on the choice of capital structure. Profitability increases, non-debt tax shields reduce and liquidity increases. Modigliani and Miller’s capital structure theory is not completely right in its assumption that a firm’s value is independent of its capital structure in a perfect capital market (Xiaodong & Birge, 2008).

A firm’s capital structure plays a crucial role in the ability of the firm to generate value for the company and for stockholders. Without financing activities and the acquisition of debt, the firm cannot operate if it lacks the necessary cash. Firms in an imperfect and perfect market do require equity and debt. Making efficient use of debt and equity can help a firm generate value and increase stockholders’ wealth. (Xiaodong & Birge, 2008) different view to MM theory on importance of equity a firms financing makes theory relevant to the study. Elements contributing to MMs’ failure include consideration of taxes, transaction costs, bankruptcy costs, and agency conflicts. Different theories have been proposed to address these limitations of Modigliani and miller (Luigi & Sorin, 2009).

Pecking Order Theory

Donaldson (1961) followed by Myers (1984) suggests that management follows a preference ordering when it comes to financing. His work suggests that the costs of issuing risky debt or equity overwhelm the forces that determine optimal leverage in the trade-off model; the result is the pecking order. He also argued that the trade-off theory fails to

predict the wide degree of cross-sectional and time variation of observed debt ratios. The pecking order theory is mainly a behavioral explanation of why certain companies finance the way they do. It is consistent with some rationale arguments, such as asymmetric information and signaling, as well as with flotation costs.

Moreover, it is consistent with the observation that the most profitable companies within an industry tend to have the least amount of leverage and more of equity (Khan & Jain, 2004). This observation that profitable firms mostly adopt equity financing by using least debt amounts makes this theory relevant to the study. The pecking order theory explains why the bulk of external financing comes from debt; why more profitable firms borrow less: not because their target debt ratio is low. The order followed is that firms prefer internal finance and if external finance is required, firms issue the safest security first. They start with debt, then possible hybrid securities such as convertible bonds then perhaps equity as a last resort (Pandey, 2009).

Trade- off Theory

Myers (2001) noted that a company would borrow up to the point where the marginal value of tax shields on additional debt is offset by the increase in the present value of possible costs of financial distress. Trade off theory explains the friction between costs of financial distress and tax deductibility of the costs of finance, Chirinko & Singha (2000). It suggests that firms tradeoff several aspects, including the exposure of the firm to bankruptcy and agency costs against the tax benefits associated with debt usage, offsetting these considerations is the tax benefits encourage debt use by firms (tax deductibility interest) and the final capital structure adopted by a firm will be a trade-off between these tax benefits and costs associated with bankruptcy and agency.

The theory is relevant to the study as it implies that there is target or optimal debt-equity ratio for a firm (Rotnanao et al. 2000) that changes only as benefits and costs alter over time. The main benefit of debt is the tax advantage of interest deductibility (Modigliani & Miller 1963). The primary costs are those associated with financial distress and the personal tax expense bondholders incur when they receive interest income (Miller, 1977). The trade-off theory of capital structure therefore predicts that firms will choose their mix of debt and equity financing to balance costs and benefits of debt. The tax benefit of debt and control of free cash flows problems push firms to use more debt financing while bankruptcy costs and other agency problems provide firms with incentives to use less. The trade-off theory has been criticized on the basis that it is not adequately descriptive of observed capital structures (Myers, 1984).

Application of Theory

Pecking Order Theory

This study is built on pecking order theory, the theory suggested that the costs of issuing risky debt or equity overwhelm the forces that determine optimal leverage in the trade-off model; the result is the pecking order. Donaldson (1961) followed by Myers (1984) suggests that management follows a preference ordering when it comes to financing.

EMPIRICAL REVIEW

Handoko (2016) examined the influence which firm characteristics (size, liquidity, growth, profitability and tangibility) would have on capital structure and possibly firm value was conducted. Secondary data were practically sourced from the financials of 10 listed insurance companies in Indonesia (IDX) covering a 6year period (2008-2013). Again, the panel regression approach was employed, combining both time series and cross-sectional data. The results indicated that firm characteristics had significant effect on firm value. Specifically, company size, growth potentials of firms and tangibility were found to exert negative influence on firm value while liquidity and profitability measures were found to be positively linked with firm value.

Adenugba et al. (2017) evaluated the relationship between leverage and firm value by obtaining empirical evidence from selected Nigerian listed firms. Data were drawn from a sample of 5 firms over a 6-year period which spanned from 2007-2012. Relying on the multiple regression technique, the study add Indonesia (IDX) covering a 6 year period opts the OLS in its test for the formulated hypotheses. Findings indicate that financial leverage had significant influence on firm value, thus leading to the conclusion that financial leverage assumes a better source of financing businesses and investments as compared to equity.

Jubaedah et al., (2016) analyzed the influence which the combination of macroeconomic factors, capital structure, and financial performance would have on firm value. The study focused on listed textile companies in Indonesia and secondary data were obtained from a sample of 20 companies in IDX. The panel regression approach was adopted and the data were subjected to descriptive, diagnostic and inferential statistical tests. Evidence from the analysis indicate that the combination of financial performance (ROA), macroeconomic factors (exchange, interest and inflation rates respectively), and capital structure measures (long term debts to total assets) had significant influence on firm value (PBV); although the ratio of short term debt to total asset exhibited no significant influence on PBV. The study concludes that better levels of performance are indications of higher firm values.

Anton (2016) specifically analysed the influence which dividend policy may have on firm value by obtaining evidence from listed Romanian firms. Data were gathered from 63 non-financial firms over an 11 year period (2001 -2011). The panel regression approach was employed with emphasis on the results from the fixed effect model. Prior to the test of hypotheses, the data were subjected to descriptive and diagnostic tests. On the whole, evidence obtained showed that dividend policy as measured by the dividend pay-out ratios of firms had positive and significant influence on firm value. The study also found that leverage and the size of firms had significant and positive influence on firm value.

Aveh & Awunyo-Vitor (2017) sets out to ascertain the endogenous measures of firms that determine stock prices in emerging markets. Secondary data were garnered from all the listed firms in Ghana between 2008-2014 and the panel regression model was the basis of data analysis. Evidence from the study showed that after the adoption of IFRS, firm attributes like EPS, ROE, book value and market capitalization were value relevant in explaining share price movements.

Ayuba et al. (2018) analysed how firm level data affects stock returns of Nigerian firms. Evidence was drawn from 21, out of the top 25 most-capitalized listed equities/firms and data were sourced for the size, PBV and the PE ratio respectively for the period, 2007-2016. Analysis was done using the panel regression technique based on the *ex-post facto* design. Discussions were based on the results from the descriptive, inferential, post-residual diagnostic tests along with the fixed effect, random effect and hausman specification tests. The result suggests that PBV had a significant positive effect on stock returns whereas; firm size had an insignificant negative effect on stock returns of the sampled firms. Additionally, PE ratio was found to have a positive, though insignificant effect on stock returns of the sampled Nigerian companies.

Githira, Muturi and Nasieku (2019) obtained data on the financial characteristics of firms and examined their respective influence on stock returns of listed firms in Nairobi, Kenya. Specifically, 10-year (2007-2016) panel data on liquidity financial health, leverage, firm value and shareholders' concentration were obtained and used as proxy for the financial characteristics of firms. The study was anchored on the information asymmetry theory while analysis was based on the OLS regression technique. Results indicate that all the measures of the financial characteristics of firms had significant and positive influence on stock returns of the listed firms in the Nairobi Stock Exchange.

Hirdinis (2019) examined the effect which firm size and capital structure (as moderated by profitability measures) would have on firm value. The study adopts the causal comparative design and analysed secondary data sourced from the financials of 7, out of the 41 listed mining firms in Indonesia. The study covered a time period of 5 years (2011 – 2015). Analysis and discussions were based on the results of the descriptive and classical assumption tests respectively. The test of hypotheses was based on the t-test in the regression models and analyses. The study's result indicates amongst others that capital structure significantly affects firm value positively whereas, firm size was found to have a significant negative effect on firm value.

Hoque, Sultana, and Thalil (2016) examined the credit rationing of SMEs in the city of Chittagong, Bangladesh using a sample of 200 SMEs. The Bangladesh government established an SME Foundation (SMEF) in 2007, to support in promoting the financing of SMEs to grow to their full potential (Hoque *et al.*, 2016). The Central Bank of Bangladesh encourages lending to SMEs through a refinancing window for business directly involved in the SME sector (Hoque *et al.*, 2016). The outcome of the study revealed that 89% of the SMEs obtained loans from microfinance institutions, while 60 % obtained credits from the banks, and 48% obtained less than desired to obtain (Hoque *et al.*, 2016). Taiwo, Yewande, Edwin, and Benson (2016) explored the roles of microfinance banks on SMEs and the benefit derived from the credit scheme of microfinance banks.

Taiwo *et al.* (2016) interviewed 15 SMEs leaders across Lagos state in Nigeria. They indicated that the recapitalization of microfinance banks in Nigeria would improve the capacity to granting credit to SME for growth and development. Hoque *et al.* (2016) noted that improving the accessibility of credit facility to SMEs was significant to the development of SMEs in Bangladesh.

Literature Gap

In general, the market value of a firm is positively significantly influenced by its choice of capital structure. More specifically, there is a significant positive effect of long-term financial leverage on the market value of a firm as suggested by other research studies as in Modigliani and Miller, 1963 and Mollik, 2008 among others, but in sharp contrast to the pecking order theory as propounded by Donaldson (1961), which assumes a firm's corporate funding as irrelevant to its market value and that a firm's choice of capital structure should follow a well-defined order, starting with internal funds, then debt and finally equity capital. Existing studies are foreign studies with little focus on Nigeria. This study focus on the relationship between corporate funding and value of quoted firms in Nigeria.

METHODOLOGY

Quasi-experimental research design was used to study whether this relationship exists between corporate funding and value of industrial goods manufacturing firms listed on the Nigeria Stock Exchange. The population of interest in these study constitute 15 industrial goods manufacturing firms quoted on the Nigeria Stock Exchange for the period of ten years from 2010 to 2019. Due to the small nature of the population, the study adopted purposive sampling method; therefore the 15 quoted industrial goods manufacturing firms form the sample size. The study used Secondary data extracted from annual financial reports of the listed industrial goods manufacturing firms for the period of 2010 to 2019. The Financial reports were obtained from the Nigeria Stock Exchange Reports firm's publications and websites.

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;

Pooled regression model specification

$$MCV = \beta_0 + \beta_1 RE_{it} + \beta_2 SHC_{it} + \beta_3 LTD_{it} + \beta_4 STD_{it} + \beta_5 DER_{it} + \mu_{it} \quad (12)$$

Fixed Effect Model Specification

$$MCV = \alpha_0 + \alpha_1 RE + \alpha_2 SHC + \alpha_3 LTD + \alpha_4 STD + \alpha_5 DER + \sum_i^9 = 1 \alpha_i idum \varepsilon 1_{it} \quad (13)$$

Random effect model specification

$$MV = \alpha_0 + \alpha_1 RE + \alpha_2 SHC + \alpha_3 LTD + \alpha_4 STD + \alpha_5 DER + \mu_i + \varepsilon 1_{it} \quad (14)$$

Where

MCV= Market capitalization value proxy capitalized value of the firms proxy by equity

Capitalization value

RE	=	Retained earnings proxy by log of undistributed profits
SHC	=	Share capital proxy by ordinary share capital of the firms
LTD	=	Long term debt proxy by term loans bank of the firms
STD	=	Short term debt proxy inventory financing
DER	=	Debt to equity ratio proxy by percentage of debt to total equity
$\varepsilon 1$	=	Stochastic or disturbance/error term.
t	=	Time dimension of the variables
$\alpha 0$	=	Constant or intercept.

Prior Expectation of the Result

The a-priori expectation of the variables that an increase in the explanatory variables lead to increase in the dependent variables corporate value, therefore it can be mathematical stated as follows:- $a_1, a_2, a_3, a_4 > 0$.

Technique for Data Analysis

In order to determine the best choice of analysis technique, the study run three types of regression; Ordinary Least Square (OLS), Fixed Effect and Random Effect regression. All these method have various assumptions and conditions that must be fulfilled in order to achieve efficient estimates. However, the best technique was decided by the Hausman Specification test (either fixed effect or random effect regression) and Lagrangian Multiplier Test (either random effect or OLS). The random effect has the advantage of accounting for the panel effect in the data as opposed to OLS, which pools the data and treats it as if it were obtained from a single entity.

In order to achieve reliability of the result, robustness tests like Multicollinearity test, Hausman test, Lagrangian multiplier test for random effect and Heteroscedasticity test will be conducted (Gujarati, 2003).

T-test The t-test was used to test the hypothesis that a particular coefficient is significantly different from zero or whether the estimated coefficient value occurred by chance in equation (2). The tests were performed at both 95% and 99% levels of confidence.

F-test The F-statistic is important to test the hypothesis that the whole relationship provided by the equation (2) is significantly different from zero, i.e. whether the independent variables' characteristics scores explain the variation in growth indicators for each of the individual firms. The test will be performed at both 95% and 99% levels of confidence.

R2 - Change The R-squared (R^2) value ranging from '0' to '1' or the 'corrected R-squared' (R^2) which is adjusted for degrees of freedom indicates the explanatory power (goodness of fit) of the model.

Unit Root Test for Stationarity of Series

The tests are to be conducted with and without a deterministic trend (t) for each of the series. For the purpose of this study, the ADF unit root will be adopted and the general form of ADF test to be estimated by the following regression:

$$y_t = \alpha^0 + \alpha^1 y_{t-1} + \sum_{i=1}^n \alpha \Delta y_i + e^t \quad (15)$$

$$\Delta y_t = \alpha_0 + \alpha_1 y_{t-1} + \sum_{i=1}^n \alpha_1 \Delta y_i + \delta_t + e^t \quad (16)$$

Where Y is the time series, t is the linear time trend, Δ is the first differential operator, α is the constant, n is the number of lags in the dependent variable and e is the random error term.

Cointegration Test

For the cointegration test, the maximum likelihood test procedure established by Johansen and Juselius (1990) and Johansen (1991) will be used. In the test, if Y_t is a vector of n stochastic variable then there exist a P-lag vector auto regression with Gaussian errors. Johansen methodology takes its starting point in the Vector Auto Regression (VAR) of order of P given by;

$$Y_t = \alpha + \sum_{i=1}^p \beta_i Y_{t-i} + e_t \quad (17)$$

Where y_t is an (nX1) vector of variables that are integrated of order commonly denoted (1) and is an e_t (nx1) vector of innovations. In order to determine number of co-integration vectors, Johansen (1989) and Johansen and Juselius (1990)

suggested two statistic tests, the first one is the trace test (trace). It tests the null hypothesis that the number of distinct cointegrating vector is less than or equal to q against a general unrestricted alternatives $q=r$ the test calculated as follows:

$$-\ln \left(\frac{|\lambda|}{|\lambda| + 1} \right) \quad (18)$$

T is the number of usable observations, and the β_i is the estimated eigenvalue from the matrix. The second statistical test is the maximum eigenvalue test (β max) that is, calculated according to the following formula; $\max(r, r+1) = T \ln(1 - \beta_r + 1)$. The test concerns a test of the null hypothesis that there is r of co-integrating vectors against the alternative that $r+1$ co-integrating vector.

Granger Causality Test

The test of cointegration ignores the effect of the past values of one variable on the current value of the other variable. So, the study will try the Granger causality test to examine such possibilities. Granger causality test whether lagged values of one variable predict changes in another, or whether one variable in the system explains the time path of the other variables (Granger, 1969). The test for Granger causality is performed by estimating equations of the following form;

$$y_t = \alpha_0 + \alpha_1 y_{t-1} + \alpha_2 y_{t-2} + \dots + \alpha_m y_{t-m} + \mu_t \quad (19)$$

$$x_t = \beta_0 + \beta_1 x_{t-1} + \beta_2 x_{t-2} + \dots + \beta_m x_{t-m} + e_t \quad (20)$$

Where e_t and μ_t are white noise disturbance terms (normally and independently distributed), m is the number of lags necessary to induce white noise in the residuals, and ECM_{t-1} , is the error correction term from the long-run

relationship. x_t is said to Granger-cause y_t , if one or more $\alpha_{2,i}$ ($i = 1, \dots, m$) and δ are statistically different from zero. Similarly, y_t is said to Granger cause x_t , if one or more $\beta_{2,i}$ ($i=1,m$) and δ are statistically different from zero. A feedback or bi—directional causality is said to exist if at least $\alpha_{2,1}$ and $\beta_{2,1}$ ($i=1,m$) or δ and β are significantly different from zero. If on the other hand, $\alpha_{2,0}$ and $\beta_{2,0}$ are statistically significant.

ANALYSIS AND DISCUSSION OF FINDINGS

Table 1: Analysis of Panel Unit Root at first difference

Method : Series: D(MCV,2)	Statistic	Prob.**	Cross-sections	Obs
Levin, Lin & Chu t*	-3.23945	0.0006	15	90
Im, Pesaran and Shin W-stat	-2.07291	0.0191	15	90
ADF - Fisher Chi-square	53.5750	0.0051	15	90
PP - Fisher Chi-square	172.570	0.0000	15	105
Series: D(LTD,2)				
Levin, Lin & Chu t*	-40.9445	0.0000	15	90
Im, Pesaran and Shin W-stat	-18.0202	0.0000	15	90
ADF - Fisher Chi-square	220.685	0.0000	15	90
PP - Fisher Chi-square	227.811	0.0000	15	105
Series: D(DER,2)				
Levin, Lin & Chu t*	-3.27084	0.0005	15	90
Im, Pesaran and Shin W-stat	-2.24731	0.0123	15	90
ADF - Fisher Chi-square	52.2241	0.0072	15	90
PP - Fisher Chi-square	296.248	0.0000	15	105
Series: D(RE,2)				
Levin, Lin & Chu t*	-13.1287	0.0000	15	90
ADF - Fisher Chi-square	71.1459	0.0000	15	90
PP - Fisher Chi-square	65.4142	0.0002	15	105
Series: D(SHC,2)				
Levin, Lin & Chu t*	-19.4308	0.0000	15	90

Im, Pesaran and Shin W-stat	-11.4839	0.0000	15	90
ADF - Fisher Chi-square	104.336	0.0000	15	90
PP - Fisher Chi-square	217.444	0.0000	15	105
Series: D(STD,2)				
Levin, Lin & Chu t*	-9.37153	0.0000	15	90
Im, Pesaran and Shin W-stat	-2.99692	0.0014	15	90
ADF - Fisher Chi-square	63.3764	0.0004	15	90
PP - Fisher Chi-square	254.389	0.0000	15	105

Source: Computed by Researchers from E-view 9.0

The panel unit result is presented in table 1. Unit root test is often used when the research aims at the establishment to know whether variables of the study in the data set are stationary or not. In this study, there is an application of unit root test before regression analysis. In most researches where unit root test has been applied, it has had a greater impact which is the elimination of spurious results produce that is also harmful. This shows the importance of stationary data where the presence of a constant trend, regardless of its positivity or a negativity, helps in elimination of spurious results. The study accepted the alternative hypothesis and rejects the null hypothesis for the following reasons. First and foremost, the output file of the results indicates that all the variables are stationary at first difference. This has an implication of the rejection of the null hypothesis and acceptance of the alternative hypothesis because of no significant trend yet availability of stationary data.

Table 2: Presentation of Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Fixed Effect Results				
RE	-0.108721	0.281708	-0.385937	0.7002
SHC	0.040402	0.074172	0.544711	0.5869
STD	0.016960	0.251641	0.067399	0.9464
LTD	0.083544	0.164925	0.506558	0.6133
DER	0.158521	0.211544	0.749352	0.4550
C	0.389963	0.442023	0.882224	0.3793
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.664725	Mean dependent var		0.760241
Adjusted R-squared	0.615724	S.D. dependent var		0.210433
S.E. of regression	0.130448	Akaike info criterion		-1.112124
Sum squared resid	2.212156	Schwarz criterion		-0.710706
Log likelihood	103.4093	Hannan-Quinn criter.		-0.949040
F-statistic	13.56536	Durbin-Watson stat		1.995627
Prob(F-statistic)	0.000000			
Random Effect Results				
RE	-0.097577	0.281186	-0.347019	0.7291
SHC	0.055089	0.071356	0.772029	0.4414
STD	0.012248	0.250202	0.048954	0.9610
LTD	0.085646	0.164828	0.519607	0.6041
DER	0.157579	0.209307	0.752862	0.4528
C	0.363235	0.442944	0.820049	0.4135
Effects Specification				
			S.D.	Rho
Cross-section random			0.178862	0.6528
Idiosyncratic random			0.130448	0.3472
Weighted Statistics				
R-squared	0.322017	Mean dependent var		0.170850
Adjusted R-squared	0.211941	S.D. dependent var		0.129041
S.E. of regression	0.129809	Sum squared resid		2.426467
F-statistic	0.648371	Durbin-Watson stat		1.740432
Prob(F-statistic)	0.663178			
Unweighted Statistics				

R-squared	0.223500	Mean dependent var	0.760241
Sum squared resid	6.442992	Durbin-Watson stat	0.673671
Correlated Random Effects - Hausman Test			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	12.89842	5	0.0000

Source: Computed by Researchers from E-view 9.0

Table 2 presents the result of Hausman test. Meanwhile, the result shows the chi-square value of 12.89582 alongside the probability value of 0.0000 which implies that there is enough evidence to reject the null hypothesis and accept the alternative hypothesis of fixed effect model as 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, fixed effect estimates presented is most efficient and consistent estimate that can track the true nature of the nexus between corporate funding and value of the quoted industrial goods manufacturing firms.

The result of fixed effect estimation reveals that the adjusted R-squared (R^2) value is 0.615724 that is 61.5 percent implying that the independent variables such as retained earnings, share capital, short term debt, long term debt and debt equity ratio account for 61.5 percent variation in the market capitalization value of the quoted industrial goods manufacturing firms. However, the F-statistic value is 13.56536 and its p-value is 0.000000 indicating that the independent variables jointly can impact significantly in the market value of the quoted industrial goods manufacturing firms, the Durbin-Watson of 1.995627 reveals that there is serial correlation in the variables.

Furthermore, the results in the table also revealed that retained earnings of the quoted industrial goods manufacturing firms have negative but no significant effect on the market capitalization value of the quoted industrial goods manufacturing firms, share capital of the quoted industrial goods manufacturing firms have positive but no significant effect on the market capitalization value of the quoted industrial goods manufacturing firms, short term debt of the quoted industrial goods manufacturing firms have positive but no significant effect on the market capitalization value of the quoted industrial goods manufacturing firms, long term debt of the quoted industrial goods manufacturing firms have positive but no significant effect on the market capitalization value of the quoted industrial goods manufacturing firms while debt equity ratio of the quoted industrial goods manufacturing firms have positive and no significant effect on the market capitalization value of the quoted industrial goods manufacturing firms.

Table 3: Presentation of Cointegration Test

	<u>Statistic</u>	<u>Prob.</u>	<u>Weighted Statistic</u>	<u>Prob.</u>
Panel v-Statistic	-4.037795	0.0051	-0.824074	0.7951
Panel rho-Statistic	3.067890	0.0089	3.544771	0.0298
Panel PP-Statistic	-8.647667	0.0000	-6.416502	0.0000
Panel ADF-Statistic	0.094663	0.5377	-1.388283	0.0825
	<u>Statistic</u>	<u>Prob.</u>		
Group rho-Statistic	5.284156	0.0000		
Group PP-Statistic	-8.954495	0.0000		
Group ADF-Statistic	-2.100968	0.0178		

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 Co-integration tests model using market capitalization value (Dependent variable) and the independent variables with individual intercept and individual trend. There are seven test results (panel v-Statistic, Panel rho-Statistic, Panel PP-Statistic, Panel ADF-Statistic, Group rho-Statistic, Group PP-Statistic, Group ADF-Statistic). In this seven test, there are eleven outcomes. From the table 2 above, we reject the null hypothesis of no co-integration and accept the alternative and conclude that there is cointegration between the corporate funding variables and market capitalization value.

Table 4: Pairwise Granger Causality Tests

Null Hypothesis:	Obs	F-Statistic	Prob.
RE does not Granger Cause MCV	120	0.56337	0.5708
MCV does not Granger Cause RE		0.32781	0.7212
SHC does not Granger Cause MCV	120	0.96751	0.3831
MCV does not Granger Cause SHC		0.11588	0.8907
STD does not Granger Cause MCV	120	1.15680	0.3181
MCV does not Granger Cause STD		0.01934	0.9809
LTD does not Granger Cause MCV	120	0.32251	0.7250
MCV does not Granger Cause LTD		0.75117	0.4741
DER does not Granger Cause MCV	120	0.68566	0.5058
MCV does not Granger Cause DER		0.00900	0.9910

Source: Computed by Researcher from E-view 9.0

As summarized in Table 4 the variables in the model have no causal relationship. There is no presence of causal relationship confirmed, these contradict a-priori expectation and can be blamed on market volatility and other factors that affect corporate funding and value of the quoted industrial goods manufacturing firms.

DISCUSSION OF FINDINGS

The study found that retained earnings have negative and no significant effect on the market capitalization value of the quoted industrial goods manufacturing firms such a unit increase negatively affect market capitalization value of the firms by 0.11 percent within the periods covered in this study. The negative effect of retained earnings on the market capitalization value of the firm contradict the a-priori expectation of this study and in line with opinions of Modigliani and Miller (1958) that capital structure is irrelevant. The finding also contradicts the pecking order theory that advocated for internal findings. Empirically the findings of the study contradict the findings of Ahmad, Fida and Zakaria (2013) that stock values and leverage affect each other, but, the effect of leverage (positive effect) on stock values is greater than the effect of stock values (negative effect) on leverage and Ayako and Wamalwa (2015) that although the relationship between leverage and firm value is positive, it was not significant. However, other variables in the model have positive effect on the market capitalization value of the quoted industrial goods manufacturing firms such that a unit increase on the variables will lead to 0.04, 0.01, 0.08 and 0.15 percent increase on the market capitalization value of the quoted firms. The positive effect of the variables confirms our a-priori expectations and validates the capital structure relevance theory of Gordon in 1962. Empirically the positive effect of the variables shows that capital structure is relevant which is in line with the argument of Gordon (1956). The finding also contradicts the pecking order theory that advocated for internal fundings. Empirically the findings of the study contradict the findings of Ahmad, Fida and Zakaria (2013) that stock values and leverage affect each other, but, the effect of leverage (positive effect) on stock values is greater than the effect of stock values (negative effect) on leverage and Ayako and Wamalwa (2015) that although the relationship between leverage and firm value is positive, it was not significant.

CONCLUSION

The result of fixed effect estimation reveals Adjusted R-square of 61.5 percent, implying that the independent variables such as retained earnings, share capital, short term debt, long term debt and debt equity ratio account for 61.5 percent variation in the market capitalization value of the quoted industrial goods manufacturing firms. Results in the table also revealed that retained earnings of the quoted industrial goods manufacturing firms have negative but no significant effect on the market capitalization value of the quoted industrial goods manufacturing firms, share capital of the quoted industrial goods manufacturing firms have positive but no significant effect on the market capitalization value of the quoted industrial goods manufacturing firms, short term debt of the quoted industrial goods manufacturing firms have positive but no significant effect on the market capitalization value of the quoted industrial goods manufacturing firms, long term debt of the quoted industrial goods manufacturing firms have positive but no significant effect on the market capitalization value of the quoted industrial goods manufacturing firms while debt equity ratio of the quoted industrial

goods manufacturing firms have positive and no significant effect on the market capitalization value of the quoted industrial goods manufacturing firms.

RECOMMENDATIONS

From the findings, the study makes the following recommendations:

1. The management of Nigerian quoted firms should work very hard to optimize and prioritize the use of retained earnings. They can achieve this by ensuring that their capital structure is combined in such a way to maximize the value of firms and minimize the cost of capital in these firms. The management of Nigerian firms should increase their commitments into financing investment through retained earnings in order to improve share prices of the quoted firms in Nigeria.
2. The study has established that share capital has positive but no significant relationship with value of quoted firms. To this end, the study recommends that it is necessary to increase the value of share capital; proper policy should be formulated to cushion the effect of the variable on market capitalization value.
3. The study recommends that corporate managers should endeavor to manage long term debt of the firms. The management of the quoted manufacturing firms should appraise long term debt of the firms properly before contracting the debt. There is need for the quoted manufacturing firms optimize financing decision in line with dividend policy.

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CORPORATE DIVERSIFICATION AND RETURN ON EQUITY OF QUOTED FOOD AND BEVERAGE FIRMS IN NIGERIA

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ABSTRACT

This study examined the effect of corporate diversification on the return on equity of quoted food and beverage firms in Nigeria. The objective was to examine the extent to which corporate diversification relate to corporate performance. Cross sectional data were sourced from financial statement and annual reports of 20 quoted food and beverage firms from 2010 to 2019. Return on equity was proxy for dependent variables while product diversification, investment diversification, business diversification and risk were proxy for independent variables. R-square, regression co-efficient, Durbin Watson statistics, F-probability and T-statistics was used to examine the extent to corporate strategy affect the performance of food and beverage manufacturing firms. Findings revealed that relationship while that business diversification has positive and significant relationship with profit after tax. 33.6 percent variation on return on equity of the food and beverage manufacturing firms is traceable to variation on corporate diversification. risk diversification have negative and significant relationship, product diversification have positive but no significant relationship investment diversification have negative and significant relationship while business diversification have positive but significant relationship with return on equity of the quoted food and beverage firms. From the findings the study concludes that corporate diversification does not significantly explained variation on the financial performance of the quoted food and beverage manufacturing firms. We recommend that corporate strategies such as product diversification should be integrated with the objective of increasing performance of the oil and gas firms. Product diversification should be directed toward achieving performance. The findings, the food and beverage firms management decision should formulate policies toward business diversification rather emphasize more on investment diversification but against multi product strategy and policies of the food and beverage firms should be directed toward reducing investment diversification and directed toward product and business diversification among the food and beverage firms.

Keywords: Corporate Diversification, Return on Equity, Quoted Food and Beverage Firms, Nigeria

INTRODUCTION

The business environment today is dynamic and characterized with uncertainties that threaten the survival of corporate organizations. The market is characterized with high rate of competition beyond national boarder; there is increase innovation in technology to meet modern work methods. These dynamic factors within the operating environment required managers to device tactical and strategic measures to absorb and adapt to uncertain environments.

Companies involved in efforts to diversify their product offerings and their geographic markets through many years. Scholars have documented the studies of diversification strategies and their effect on firms' performance. They have documented the benefits and costs of diversification in connection with overall firm performance, contingency factors that affect the benefits and costs of diversification. Corporate diversification is beneficial for the organizations when it is defined within the scope of firm's current resources and capabilities (Mwangi, 2015). Due to overcapacity problems; however, diversification strategy can cause greater marginal cost of production beyond a certain point (Anil & Yigit, 2011; Boz et al., 2013).

Moreover, corporate diversification also causes additional management costs (Jones & Hill, 1988). Highly diversified companies also have to face several other costs such as inefficiency of internal capital allocation and increased bureaucracy (Ondari, Awino and Machuki, 2016). Therefore, all such costs increase due to increase in complexity of managing diverse business operations and information processing requirement (Grant & Jammie, 1988). The relationship between diversification and firm performance continues to remain an important question for scholars and theorists. Factors such as increasing the trends of globalization, privatization, homogenization, and reducing trade barriers have made it easier as well as necessary for many organizations to expand into international market (Khanna

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and Palepu, 2006). As a result, in recent era there has been a surge in the use of globalization activities in the companies of developing countries.

Several empirical studies have been conducted to check the impact of corporate diversification and firm performance; for instance, some researchers have found out the positive impact of diversification on company performance because highly diversified firms have lower risk and better performance (Pandya & Rao, 1998). Palich, Cardinal, and Miller (2000) investigated the positive impact of product and geographic diversification on company performance. They further argued that diversification increased the costs when companies moved away from their core business. Rumelt (1982) also confirmed that the related corporate diversification was better for company performance while unrelated diversification was not.

Moreover, unrelated diversification was found to be more profitable than related diversification because unrelated diversifiers outperformed related diversifiers due to spread of business risk portfolios (Boz et al., 2013; Cariola et al., 2010). There are several other studies that investigated the negative impact of the diversification on company's performance (Lee, Hooy, & Hooy, 2012; Park & Jang, 2013). Based on the agency theory, corporate diversification has a negative or inverse relationship between diversification and firm performance. On the other hand, resource-based theory of the company compared to agency theory has contradictory view. Penrose (1959) developed the notion of resource-based view which called the organization as a collection of resources that could be used to create competitive advantages.

These mixed results show that diversification involves trade-off between costs and the resulting benefits and there may exist U-shaped relationship between corporate diversification and firm performance (Kang et al., 2011; Mathur, Singh, & Gleason, 2001; Palich, Cardinal, & Miller, 2000; Singh et al., 2010; Tallman & Li, 1996). Their findings implied that diversification provided economies of scales and scopes up to a specific limit and then performance declined when marginal cost exceeded its marginal benefits of diversification due to internal inefficiency levels and agency problems (Aleson & Escuer, 2002; Anil & Yigit, 2011; Boz, Yigit, & Anil, 2013; Kang et al., 2011; Nayyar, 1992; Palich et al., 2000; Qian, 2002; Singh et al., 2010; Tallman & Li, 1996).

The relationship between diversification strategies and organizational performance of developed countries differ from developing ones due to influence of business relation, market production, and labor factors and government, political, and economic conditions. Yigit and Tur (2012) suggested some other factors such as privatization policies, working conditions, product life cycles, and competitions. There are many studies on the effect of corporate diversification on financial performance of quoted firms; however most of these studies are foreign studies with few studies of citable significant that dealt with corporate diversification and financial performance of quoted firms in Nigeria. Therefore this study examined the effect of corporate diversification on the financial performance of quoted food and beverage firms in Nigeria.

LITERATURE REVIEW

Corporate Diversification

Corporate diversification refers to a firm's strategy of entering and competing in new product markets. Diversification allows firms to maximize value by enhancing the scope of markets and industries in which they compete and supply product offerings to newer customers (Purkayastha, Manolova, & Edelman, 2012). In the Rumelt framework, the extent of diversification is defined according to a fourfold taxonomy based on the percentage of revenue derived from various products. These include single-product firms, dominant-product firms, related product firms and unrelated product firms. The two types of diversification strategies that are of interest to us in this study are related product diversification and unrelated-product diversification. According to Rumelt (1977), related product firms derive less than 70 percent of their revenues from a single product domain and the remainder of their revenues is from a related product domain. These firms are characterized by medium heterogeneity of customers, same product similarity, medium unit interdependence, both internal and external acquisitive diversification modes and a fast rate of diversification growth.

Product Diversification

Research on product diversification performance linkage has recently gone beyond an examination of product diversity at the corporate level, to a more micro level of study, such as within-industry and within-business (Li & Greenwood, 2004; Stern & Henderson, 2004). A need to better understand the value-creation mechanisms of product diversification strategy prompted this refocus. In contrast, research on the product line diversification strategy of multinational firms has tended to remain at the corporate level, focusing only on its impact on corporate performance without considering the possible variations of such a strategy in a firm's individual host-country markets. Although multinational firms enjoy a competitive advantage in integrating a global value chain, national environments and institutions remain as powerful constraints on a concerted global strategy, and exert strong influences on the survival of foreign subsidiaries (Kostova & Zaheer, 1999).

Business Diversification

Another stream of literature emphasizes the strategic role of the business subsidiary as an influence of performance (Anderson & Anders, 2002). The greater the strategic interdependency between subsidiary and parent, the more likely the subsidiary will be to receive support and resources from the parent to maintain high performance. Subsidiaries that play key strategic roles for their parents, as having regional, product or functional mandates, will have a direct claim to resources within the multinational company, whereas subsidiaries that are auxiliary portfolio investments have fewer opportunities of gaining additional resources from headquarters should a crises erupt (Subramaniam & Watson 2006). Also the strategic intent/ investment motive behind establishing the subsidiary may influence performance. Some subsidiaries may have a strategic intent of accessing local markets, while others may have as their strategic intent to supply export markets and/or other subsidiaries with components (Dunning & Sarianna, 2008). As the latter type of investment impacts the global operation of the multinational company directly it can be expected to have higher performance than e.g. market seeking investments.

Investment Diversification

Investment diversification is actually a risk management technique which reduces risk of investment by investing in different investment tools (stocks, bonds, mutual funds, real estate, and so on) and increases the chance of making profit. According to Modern portfolio theory, investor can lessen the exposure to risk by holding more and more stocks. The specific risk of holding individual stock is reduced in this case. Only the market risk cannot be avoided. Since 1960 the world market is being globalized, so International diversification started gaining attention. Investors attempt to reduce risk by investing in more than one nation whose economic cycles are not perfectly correlated. As the economic development and timing of business cycles various among countries, it can be used as a technique to reduce risk (Yavas & Rezayat 2006).

Firm Financial Performance

Since economic performance is the basic goal of every firm, its measurement is one of the most interesting and challenging areas of inquiry. Due to the complexity of the issue, it is unlikely to ever measure performance perfectly. Given the multitude of concepts in literature, the objective of discussion presented in the following section is not to give a comprehensive picture of the literature but to focus on the performance measures common for the ownership literature. The performance measures discussed in this section are divided into two general groups, market based and accounting-based measures, with the first relying on market data and the latter on accounting information. A third group is hybrid measures using both types of data.

Three indicators, namely: Return on Assets (ROA) Return on Equity (ROE) and Net Interest Margin (NIM), were identified by Ahmed (2003) to be mostly employed in the literature to measure profitability. However, there are divergent views among scholars on the superiority of one indicator over the others as a good measure of profitability. For instance, Goudreau and Whitehead (1989) and Uchendu (1995) believed that the three indicators are all good. Hancock (1989) used only ROE to measure profitability in his study. Also, Odufulu (1994) used only the gross profit margin in measuring profitability. Ogunleye (1995) did not believe that gross profit margin could constitute good Measure of profitability and therefore used ROA and ROE. Profitability measures, according to Akinola (2008) include

Profit before Tax (PBT), Profit after Tax (PAT), Return on Equity (ROE), Rate of Return on Capital (ROC) and Return on Assets (ROA). Sanni (2009) used Earnings PerShare (EPS).

The accounting-based performance measures most common in the ownership literature are return on equity (ROE) and return on assets (ROA). They are defined as:

$$ROE = \frac{\text{Earnings after interest expenses and taxes}}{\text{Shareholders' equity}} \quad (1)$$

The ROE measures only the return on assets of the equity owners, whereas the ROA aggregates the return of equity-holders and debt-holders. This fact leads to three arguments militating in favor for a preference of ROE over ROA in equity ownership and performance studies. First, generally financial performance is based on the shareholder value concept, which is stronger reflected in the pure equity focus of the ROE than by the diluted equity returns of the ROA. Second, regarding the effect of performance on equity ownership the pecuniary benefits of shareholders play an important role.

Theoretical Review

There are a number of theories that explain corporate firm performance diversification and financial performance. These theories are explained in details below:

The Keynesian Theory of Investment

In the General Theory, Keynes (1936) emphasized the central role of investment as the driving force of influencing aggregate output, employment, and short run fluctuations in economic activity. The theory emphasizes that investment is the result of firms harmonizing the expected return on new capital, referred to as the marginal efficiency of capital (MEC), and with the cost of capital, which depends primarily on the real interest rate. To the Keynes since investment is volatile and dependent on firms expectations of the profitability of investment, so long as the expected yield on their investment exceeds the real interest rate, new investment will take place. Keynes rejected the notion that investment was based exclusively on technological conditions of capital productivity, but emphasized monetary factors and finance and uncertainty as the basic determinants of investment (Fazzari, 1989).

Rigid Accelerator Theory

The simplest theory of investment demand is the rigid accelerator model formulated by Clark (1917). In its simplest form, the rigid accelerator theory of investment states that investment is proportional to the increase in output which is proxy by changes in demand in the coming period. Thus, the accelerator model relates investment to changes in demand and proposes that an increase in a firm's output will require a proportionate increase in its stock of capital. The theory basically assumes that firms desired capital-output ratio is roughly constant and net investment takes place when output is expected to increase. In effect, the theory implies that the level of output or the changes in aggregate demand determines investment or the change in capital stock. Mathematically, this proposition of the theory is expressed as $K_t^* = \sigma Y_t$, where σ is the desired capital-output ratio which is assumed to be constant, K_t^* is the desired capital stock in period t , and Y_t is the level of output in the same period.

Schumpeter Theory of Profitability

Schumpeter developed a circular model patterned after Clark's profitless economy but differs in detail from the static state model proposed by Clark. He postulated that departures from an ideally competitive environment and actual environment yields profit. Schumpeter selectively identifies the single notion of innovation as paramount, so that changes based upon innovation are the cause of profit. According to Schumpeter every business man is an innovator and breaking from competition to acquire monopoly which accrues profit until competitors catch up but before that is achieved he moves on to innovate more in other fields. Schumpeter did not see the entrepreneur's reward as a surplus value but rather as a functional reward linked to his innovative ability (Siddiqi, 1971). The impact of innovation was huge, leading to gales of creative destruction as innovations caused old inventories, ideas, technologies, skills, and equipment to become obsolete. Schumpeter saw the model of perfect competition in which different companies sold similar goods at similar prices produced through similar techniques as immaterial to progress (Owolabi; 2004)

EMPIRICAL REVIEW

Arawomo, Oyelade and Tella (2014) contributed to the evolving literature by examining the extent of export diversification in Nigeria and also analyzed the impact of foreign direct investment on it. Two major methods of export diversification: export count (horizontal) and Herfindahl Index were used. Nigeria's exports flows based on 4-digit SICT product classification were used. The Generalized Moment Methods (GMM) was used to analyze our specified model. Empirical analysis showed that foreign direct investment discourages export diversification in Nigeria, while domestic investment promotes it.

Ayobola, Ekundayo, Muibi (2018) examined the relationship between resource endowment and export diversification and its implication for economic growth in Nigeria based on data from 1981 to 2015. The study concludes that specialization is preferred to diversification for Nigeria

in the current circumstance. Because of the contradictory results concerning the relationship between diversification and performance, the question of whether diversification improves or worsens firm performance is still worthy of further research such as the one being undertaken in this study. In addition, despite the existence of these studies, very little attention has been given to the developing countries. Besides, the impact of diversification on firm performance has not received adequate research attention in Nigeria. Hence, the key issue to sustain growth in Nigeria is not in the number of productive sectors but in their efficiency.

Caroline, Ireen and Cleopas (2014) examined the role of export diversification on economic growth in South Africa. The study employed vector error correction model to determine the effect of export diversification and possible factors on economic growth. However, the authors revealed that export diversification and trade openness are positively related to economic growth, while real effective exchange rate, capital formation and human capital have negative long-run relationship with economic growth.

Godwin and Ubong (2015) using the error correction mechanism (ECM) revealed the extent to which export diversification can influence economic growth in Nigeria. The results further indicate that by diversifying the economy, encouraging large scale industrialization of the nonoil sector, emphasizing deepening technology in trade and investment and an improvement in agricultural sub-sector among other factor, will further enhance sustainability in growth. Humera, Rohail and Maran (2017) examined the relationship between gender diversity among corporate board and firms' financial performance using 100 non-financial companies in Malaysia. This study uses data from 2009 to 2013. Return on equity measures the financial performance. Gender diversity measured by the number of females on board. This study incorporates descriptive statistics, correlation testing, and regression analysis. However, the results of gender diversity have a positive impact on performance (ROE).

Iqbal, Hameed and Qadeer (2012) examined the impact of diversification on firms' performance in Pakistan. The data was collected through secondary research and Stock Exchanges sites were the source of information to collect the data of the companies. Total of 40 companies were selected on the basis of Specialization Ratio (SR). Companies whose information were available and remained in the same category for the entire 5 years (2005-2009) were included in the sample. The results of this study showed that there is no positive relationship between diversification and firms' performance.

Li et al. (2016) studied diversification and corporate performance evidence from China's listed energy companies. The study focused on the within firm correlation between changes in performance and changes in diversification as well as differences in the correlation between business strategies and corporate performance among conventional and renewable energy companies. The research adopted an ex-post facto research design using secondary data from Chinese Academy of Sciences. Sample of 102 firms was drawn from listed firms in "coal", "oil and refinery wind power and solar power sectors. The study used regression analysis to test the hypothesis. The result showed that industrial diversification has negative effects on corporate performance.

Makhoha, Namusonge and Sakwa (2016) examined portfolio diversification on financial performance of banks. Mixed research design was used and data collected using questionnaires and interviews on 43 commercial banks in Kenya and 133 managers randomly selected. It was established that portfolio diversification significantly and positively influenced

financial performance of commercial banks in Kenya and that diversification of investments had enabled increase in profits and performance in the past years.

Manyuru, Wachira and Amata (2017) investigated the impact of corporate diversification on the value of firms listed at the Nairobi Securities Exchange (NSE). Panel regression techniques were used as the estimation methods. The study finds that industrial diversification reduces firm value, but geographical diversification does not have a significant impact on firm value. When examining each industry individually, the study established that industrial diversification enhanced firm value in the agricultural industry but did not significantly influence firm value in the other industries. Msoo, Akaakohol and Goodness (2014) examined the socioeconomic characteristics that influence the decision to diversify and also the welfare effect of diversification on farm households in Makurdi, Benue State. A total of 120 farm households were sampled using a simple random technique. Structured questionnaires were used in collecting the data. The ordinary least square (OLS) model was used to analyze the welfare effect of diversification while the Logit model was used to analyze the determinants of diversification. These results have important implications for policy, economic growth and development.

Kuppuswamy & Villalonga (2010) were one of the first to document the impact of the financial crisis on diversification. They report a significant increase on the value of corporate diversification in the U.S. during the recent global financial crisis. A vital concept in their study is that they made a difference between related and unrelated diversified firms. Relatedness among diversified firm's segments can be viewed as proxies for both quality and quantity of the firm's diversification strategy. Unrelated diversification (pure conglomerates) implies a higher degree of diversification than related diversifiers in that their business lines are expanding into business activities different from each other. Kuppuswamy & Villalonga (2010) theorize that when diversified firms increase their value more relative to single segment firms during the crisis, a greater effect of the crisis is expected on the value of pure conglomerates than on the value of related diversified firms. There are two fundamental reasons for the difference between related and unrelated diversification.

Mulwa and Kosgei (2016) used an ex post facto design to investigate the impact of diversification, solvency and credit risk on financial performance on banks using panel data from 43 banks in Kenya over nine years. The findings of the study indicate that income and asset diversification negatively and significantly affects the commercial banks ROA while geographical diversification positively and significantly affects ROA and ROE. Also, a significant positive moderation impact was found between geographical diversification and ROE.

Musembi and Jagongo (2017) determined the relationship between diversification and firm performance has formed the subject of many researches but many researchers have disagreed on the nature of the relationship between diversification and performance. Maurizio, Tiziana and Javier (2018) evaluated the effect of diversification strategy on corporate value for a sample of Italian companies. It accounts for both the level of diversification and relatedness components. Empirical analyses show a U-shaped curvilinear relationship between diversification and value. In contrast to the main-stream literature, our results highlight that related diversification has a negative effect, while unrelated diversification is a value-creating strategy.

Nwakoby and Ihediwa (2018) studied the effect of diversification on the financial performance of selected firms in Nigeria. The specific objectives of the study were to ascertain the effects of product diversification on financial performance of selected Nigerian firms and to determine the effects of business subsidiary diversification on financial performance of non-financial firms quoted on the Nigerian Stock Exchange. The study adopted ex-post facto research design based on secondary data collected from annual financial reports and accounts of 20 selected manufacturing firms listed on the Nigeria Stock Exchange. Simple regression analysis with the aid of Statistical Package for Social Sciences (SPSS) version 20.0 was used to test the hypothesis. The study concluded that the financial performance of Nigerian firms is significantly affected by the product, hence there was a relatively statistically significant correlation between financial performance and related diversification but business diversification was not statistically significant.

Odeleye and Olunkwa (2016) examined the relationship between export diversification and economic growth in Nigeria. The study used an annual time series data for the period 1981-2015 and employed Ordinary Least Square (OLS) methods involving Error Correction Mechanism (ECM), Co-Integration, and Over-Parametrization and

Parsimonious model. The results of the study revealed that contributions of agriculture and manufacturing sectors to export is negative; signifying that export diversification has negative effects on Nigeria's economic growth.

Onur and Ihsan (2016) ascertained whether there is a difference between types of diversification and performance comparing Turkey, Italy and Netherlands. The data of 166 firms in Netherlands, 265 firms in Italy and 128 firms in Turkey were analyzed. The data of 2007-2011 was used in the research. Return on Assets (ROA) and Return on Sales (ROS) for financial performance and Entropy Index for diversification were used. According to the results, there is no correlation between total entropy and a performance criterion ROA and ROS in Italy and Netherlands. On the other hand, in Turkey, it is understood that there is a low-level positive correlation between total entropy and firm performance.

Oyedijo (2012) studied the effects of product-market diversification strategy on corporate financial performance and growth: an empirical study of some companies in Nigeria. The aims of the study were to examine the performance of a sample of large Nigerian companies in relation to specialization, related diversification, unrelated diversification and mixed product-market diversification strategies. Questionnaires were distributed to top level managers in the 48 companies used made up of 18 specialized, 13 related and 17 unrelated firms. The firms were selected using a convenience sampling method from a list of companies maintained by the Nigerian Stock Exchange (NSE). The combined data set for five years (2006-2010) were analyzed using panel data regression analysis. The study concludes that the financial performance and growth of firms in Nigeria are significantly affected by the mode of diversification used.

Ranka, Vladimir and Dragan (2017) provided empirical evidence on the relation between line-of-business diversification and performance for the insurance companies that operated in the republic of Serbia in the period 2004–2014. The research results show that the relation between risk-adjusted returns measured both by return on assets and return on equity and line-of-business diversification and performance measured by entropy is significant and positive, which means that diversified insurers outperform undiversified insurers.

Rop, kibet and Bokongo (2016) investigated the impact of portfolio diversification on financial performance of commercial banks in Kenya. The study employed an exploratory research design whereby secondary data was collected using data collection sheets for secondary data and interviews were conducted to collect primary data from a sample of 40 banks. The study concluded that much work was needed to promote diversification of bank portfolios. Rudolph and Schwetzler (2013) studied the impact of the financial crisis on the diversification discount. They suggest that there is a positive relationship between the health of the capital market and the interaction of financial crisis and diversification. In addition, their sample showed that diversified firms traded at a discount compared to non-diversified firms in non-crisis years. In contrast, the crisis years indicated a reduction in their diversification discount.

Sajid, Shujahat and Tahir (2016) investigated the relationship between corporate diversification and firm performance in a developing country. Previous studies have found that the mixed results have been established between these two constructs in developed countries such as linear, u-shaped or inverted u-shaped relationship. To this end, a sample of 141 non-financial companies over the period of 2003 to 2013 listed on Pakistani stock market was used to analyze the impact of diversification strategy on the performance of firm. Corporate diversification is divided into two types including product and geographic diversification. The findings of the study demonstrated that an inverted u-shaped relationship existed as performance increased up to a certain level due to the related diversification strategy and then it fell down drastically. It showed that too much diversification creates agency problems and internal inefficiencies. It has implications for agency problems, weak corporate governance structures, and family relationships.

Owies (2012) looked at the relationship between corporate diversification and financial performance of firms. The focus of the study analyzed was on how revenue diversification relate with firm profitability. The findings indicated that there existed a negative insignificant relationship between revenue diversification and profitability. The study was conducted through an event methodology by looking at the response of stock markets to mergers and acquisitions.

In general, study findings indicated that the cumulative abnormal returns (CARs) to acquirers and targets show that M&A that are non-diversifying and/or diversifying within closely-related credit intermediation activities increase the value of the merged firms.

Doaei, Anuar, and Ismail (2014) conducted a study on corporate diversification and financial performance examining the relationship between product diversification and international diversification among manufacturing in Malaysia. The scope of the study comprised 102 for the period 2006 to 2010. The study variables included Return on Assets (ROA) combined with various forms of diversification including: total product diversification (TPD), related product diversification (RPD), unrelated product diversification (UPD), and international diversification (ID). The results indicated no significant relationship existed between diversification. Mwangi (2015) in another study sought to establish how corporate diversification affected financial performance of listed manufacturing firms in Kenya. The population of his study constituted all of the 19 manufacturing firms listed at NSE. A census approach was used and secondary data was used for five years (2010-2014). The data was gathered from financial statements records. Regression model was used in the analysis of data collected. The findings indicate that corporate diversification had a positive relationship to the financial performance of listed manufacturing firms in Kenya. The size of a firm and its growth were found to have a negative relationship to the financial performance of listed manufacturing firms. The correlation analysis results were found to be weak but moderate between corporate diversification and financial performance of the manufacturing firm listed at NSE.

Ondari, Awino and Machuki (2016) conducted a study to determine the effects of diversification on non-financial performance of firms at the NSE and established that diversification influenced non-financial measures of organizational performance and insignificant to financial performance. The target population of the study was all the 59 publicly quoted companies. Of the 59 companies only 35 responded and this indicated a response rate of approximately 60%. The findings of the study revealed a statistically significant results on the influence of diversification strategy on the nonfinancial measures of organizational performance and statistically non-significant results on financial performance. The findings also show that diversification relatedness had a statistically significant effect on organizational performance while the mode of entry into diversification did not have a statistically significant effect.

Literature Gap

Corporate diversification is an internal factor that determines financial performance; firms can adopt numerous growth strategies, one of which is divestiture. One recent trend has seen diversified firms exhibit a diversification discount compared to stand-alone firms. Rajan, Servaes and Zingales (2000) think that with increased diversity in resources and opportunities, resources flow towards the least efficient division, resulting in less efficient investment and lower performance.

METHODOLOGY

Ex-facto research design was applied which is used to build a profile on a phenomenon under study (Cooper and Schindler, 2003). Ex-facto design is concerned with the role played by independent variables in explaining the variations in the dependent variable (Mouton & Marais, 1992). This design was adopted because the study sought to establish the effects of corporate diversification on financial performance of quoted food and beverage firms in Nigeria. Data available at the Nigeria Stock Exchange shows that there are 22 quoted food and beverage Companies listed at the NSE as at 31st December 2019. The study collected secondary data. According to Bryman (2001), secondary data is efficient because it reduces time and costs of undertaking a study. The study used panel data for a period of 10 years from 2010 to 2019.

Data Analysis Method

The method of data analysis used in this study was the panel data multiple linear regressions using Ordinary Least Square (OLS) method. Moreover, in order to undertake a statistical evaluation of our analytical model, so as to determine the reliability of the results obtained and the coefficient of correlation (r) of the regression, the coefficient of determination (r^2), the student T-test and F-test will be employed.

Coefficient of Determination (r^2) Test –This measures the explanatory power of the independent variables on the dependent variables. For example, to determine the proportion of economic growth in our model, we used the coefficient of determination. The coefficient of determination varies between 0.0 and 1.0. A coefficient of determination says 0.20 means that 20% of changes in the dependent variable is explained by the independent variable(s).

F-Test: This measures the overall significance. The extent to which the statistic of the coefficient of determination is statistically significant is measured by the F-test. The F-test can be done using the F-statistic or by the probability estimate. We use the F-statistic estimate for this analysis.

Student T-test: measures the individual statistical significance of the estimated independent variables at 5% level of significance.

Durbin Watson Statistics: This measures the colinearity and autocorrelation between the variables in the time series. It is expected that a ratio close to 2.00 is not auto correlated while ratio above 2.00 assumed the presence of autocorrelation.

Regression coefficient: This measures the extent in which the predictor variables affect the dependent variables in the study.

Probability Ratio: It measures also the extent in which the predictor variables can explain change to the dependent variables given a percentage level of significant.

Model Specification

The study adopts the panel data method of data analyses which involve the fixed effect, the random effect and the Hausman Test.

Pooled Effect Model

$$ROE_{it} = f(\beta_1 LPD + \beta_2 LID + \beta_3 LBD + \beta_3 RD + \varepsilon_{it}) \quad (2)$$

Fixed Effects

The fixed effects focus on whether there are differences by using a fixed intercept for each of the different cross-sectional structures. If we assume that the dummy variable for food and beverage manufacturing firms is 1 or 0, then D_i , which is the dummy variable for firm i , can be expressed. To further investigate and analyzed whether the independent variables affect the dependent variable, this regress the effect of the independent variables on the dependent variables.

$$ROE_{it} = f(\beta_1 LPD + \beta_2 LID + \beta_3 LBD + \beta_3 RD + \varepsilon_{it}) \quad (3)$$

Because the fixed effects account for both cross-sectional and time-series data, the increased covariance caused by individual-firms differences is eliminated, thereby increasing estimation-result efficiency.

Random Effects

Random effects focus on the relationship with the study sample as a whole; thus, the samples are randomly selected, as opposed to using the entire population. The total sample regression (a function of the random effect) can be expressed as:

$$ROE_{it} = \sum_{j=1}^N \beta_0 + f(\beta_1 LPD + \beta_2 LID + \beta_3 LBD + \beta_2 RD + U) \quad (4)$$

If this is represented with random variables, then $\beta_{oj} = \bar{\beta}_0 + \mu_j$, which indicates that the difference occurs randomly, and the expectation value of β_{oi} is $\bar{\beta}_0$.⁵

(5)

Where

ROE = Return on equity of the quoted food and beverage firms

LPD = Log of product diversification measured as net sales

LID = Log of investment diversification measured as investment in other assets

LBD = Log of business diversification measured as income from subsidiaries

RD = Risk diversification measured as log of portfolio investment.

Hausman Test

The Hausman test YairMundlak,(1978) is the most commonly used method for evaluating fixed and random effects. If variables are statistically correlated, then the fixed-effects estimation is consistent and efficient, whereas the random-effects estimation is inconsistent, and the fixed-effects model should be adopted. Conversely, if the variables are statistically uncorrelated, then the random-effects estimation is consistent and efficient, whereas the fixed-effects estimation is consistent but inefficient, and the random-effects model should be adopted.

A-prior Expectation of the Result

The explanatory variables are expected to have positive and direct effects on the dependent variables. That is a unit increase in any of the variables is expected to increase performance of the oil and gas firms. This can be express mathematically as $a_1, a_2, a_3 > 0$

ANALYSIS AND DISCUSSION OF FINDINGS

Table 1: **Presentation of Pretest Analysis of the Variables at Difference**

Method: ROE	Statistic	Prob.**	Remark
Levin, Lin & Chu t*	-11.2679	0.0000	Stationary
Im, Pesaran and Shin W-stat	-5.00578	0.0000	Stationary
ADF - Fisher Chi-square	104.320	0.0000	Stationary
PP - Fisher Chi-square	276.643	0.0000	Stationary
RD			
Levin, Lin & Chu t*	-11.8495	0.0000	Stationary
Im, Pesaran and Shin W-stat	-4.26265	0.0000	Stationary
ADF - Fisher Chi-square	91.3392	0.0000	Stationary
PP - Fisher Chi-square	246.659	0.0000	Stationary
PD			
Levin, Lin & Chu t*	-13.4941	0.0000	Stationary
Im, Pesaran and Shin W-stat	-5.28724	0.0000	Stationary
ADF - Fisher Chi-square	109.158	0.0000	Stationary
PP - Fisher Chi-square	247.045	0.0000	Stationary
ID			
Levin, Lin & Chu t*	-2.28319	0.0112	Stationary
Im, Pesaran and Shin W-stat	-4.37270	0.0000	Stationary
ADF - Fisher Chi-square	91.5215	0.0000	Stationary
PP - Fisher Chi-square	271.002	0.0000	Stationary
BD			
Levin, Lin & Chu t*	-5.04724	0.0000	Stationary
Im, Pesaran and Shin W-stat	-5.45586	0.0000	Stationary
ADF - Fisher Chi-square	107.926	0.0000	Stationary
PP - Fisher Chi-square	292.832	0.0000	Stationary

Source: Computed from E-view 9.0, 2020

At first difference, we reject null hypothesis and conclude that the variables are stationary at 5 percent level of significance, this implies that at first difference of the series at 5% level of significance in all case reject null hypothesis.

Table 2: **Regression Results on the Effect of Corporate Diversification on Return on Equity**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Fixed Effect Model and the Results				
RD	-0.016089	0.012317	-1.906246	0.0332
PD	0.005731	0.010781	0.531539	0.5957
ID	-0.006028	0.011046	-2.545707	0.0060

BD	0.009976	0.010511	0.949143	0.3439
C	1.052090	0.123207	8.539174	0.0000
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.413624	Mean dependent var		1.004115
Adjusted R-squared	0.336557	S.D. dependent var		0.189852
S.E. of regression	0.154638	Akaike info criterion		-0.782770
Sum squared resid	4.184772	Schwarz criterion		-0.385587
Log likelihood	101.8856	Hannan-Quinn criter.		-0.622020
F-statistic	5.367100	Durbin-Watson stat		0.986755
Prob(F-statistic)	0.000000			
Random Effect Model and the Results				
RD	-0.014906	0.011861	-1.256688	0.2104
PD	0.007191	0.010458	0.687617	0.4925
ID	-0.008134	0.010516	-0.773513	0.4402
BD	0.012616	0.009930	1.270482	0.2054
C	1.033688	0.121124	8.534109	0.0000
Effects Specification				
			S.D.	Rho
Cross-section random			0.122121	0.3841
Idiosyncratic random			0.154638	0.6159
Weighted Statistics				
R-squared	0.221492	Mean dependent var		0.374082
Adjusted R-squared	0.201317	S.D. dependent var		0.153559
S.E. of regression	0.153313	Sum squared resid		4.559952
F-statistic	1.065260	Durbin-Watson stat		0.906156
Prob(F-statistic)	0.374938			
Unweighted Statistics				
R-squared	0.035953	Mean dependent var		1.004115
Sum squared resid	6.880082	Durbin-Watson stat		0.638525
Correlated Random Effects - Hausman Test				
Equation: Untitled				
Test cross-section random effects				
Test Summary		Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random		11.75793	4	0.0043
Cross-section random effects test comparisons:				
Variable	Fixed	Random	Var(Diff.)	Prob.
RD	-0.016089	-0.014906	0.000011	0.7215
PD	0.005731	0.007191	0.000007	0.5769
ID	-0.006028	-0.008134	0.000011	0.5334
BD	0.009976	0.012616	0.000012	0.4438

Source: Computed from E-view 9.0, 2020

As the result found that the results of this test were significant (p-value = 0.0043). Hence, we reject the null hypothesis and conclude that the fixed effects model is the most appropriate of the three models. Based on the validity of fixed effect model from the Hausman test result, the analysis of result is drawn from the fixed effect result. Evident from the result proved that 33.6 percent variation on return on equity of the food and beverage manufacturing firms is traceable to variation on the independent variables in the study. The f-statistic and probability validate the reliability of the model. The Durbin-Watson statistic proved the presence of negative serial autocorrelation. The regression coefficient found that risk diversification have negative and significant relationship with return on equity, that product diversification have positive but no significant relationship with return on equity, that investment diversification negative and significant relationship with return on equity while that business diversification have positive but significant relationship with return on equity of the quoted food and beverage firms. The cross sectional differences between random and fixed effect models. Results of proved that there are significant difference between the random effect and the fixed effect models.

Table 3: Pedroni Residual Cointegration Test

Series: PF RD PD ID BD

	<u>Statistic</u>	<u>Prob.</u>	<u>Weighted Statistic</u>	<u>Prob.</u>
Pedroni Residual Cointegration Test				
Series: ROE RD PD ID BD				
	<u>Statistic</u>	<u>Prob.</u>	<u>Weighted Statistic</u>	<u>Prob.</u>
Panel v-Statistic	-1.124053	0.8695	-3.369499	0.0096
Panel rho-Statistic	2.646243	0.0059	3.657127	0.0009
Panel PP-Statistic	-3.890022	0.0001	-8.185171	0.0000
Panel ADF-Statistic	1.838665	0.9670	-3.249159	0.0006
Alternative hypothesis: individual AR coefs. (between-dimension)				
	<u>Statistic</u>	<u>Prob.</u>		
Group rho-Statistic	5.305831	0.0000		
Group PP-Statistic	-10.36305	0.0000		
Group ADF-Statistic	-1.389882	0.0823		

Source: Computed from E-view 9.0, 2020

The results of the cointegration test proved that the variables are cointegrated as the probability coefficient of the variables are less than 0.05, we accept the alternate hypotheses that there is presence of long run relationship between the dependent and the independent variables.

Table 4: Pairwise Granger Causality Tests

Null Hypothesis:	Obs	F-Statistic	Prob.
RD does not Granger Cause ROE	160	0.03643	0.9642
ROE does not Granger Cause RD		0.09229	0.9119
PD does not Granger Cause ROE	160	1.21513	0.2995
ROE does not Granger Cause PD		0.27647	0.7588
ID does not Granger Cause ROE	157	0.11217	0.8940
ROE does not Granger Cause ID		0.34288	0.7103
BD does not Granger Cause ROE	160	2.46248	0.0886
ROE does not Granger Cause BD		0.16262	0.8501

Source: Computed from E-view 9.0, 2020

From the table the result found that there is unidirectional causality from profitability to risk diversification. The causal relationship between the variables confirms the expectation of the result as corporate diversification variable is expected to granger cause financial performance of the quoted food and beverage firms.

DISCUSSION OF FINDINGS

The regression results of the models formulated in chapter three of this study found that 33.6 percent variation on return on equity of the quoted food and beverage firms can be explained by variation on corporate diversification variables modeled in the study. This implies that corporate diversification does not explain much of the variations on return on equity of the quoted food and beverage manufacturing firms. From the model formulated the study found that there is positive but no significant relationship between product diversification and return on equity of the quoted food and beverage firms. The results shows that a unit increases on product diversification can lead to 0.005 percent increase on return on equity of the quoted food and beverage firms. The positive effect of product diversification on the profitability of the quoted firms confirms our a-priori expectation and justifies the objectives for corporate diversifications. The positive effect of product diversification on return on equity of the quoted firms confirm the findings of Sajid, Shujahat and Tahir (2016) that an inverted u-shaped relationship existed as performance increased up to a certain level due to the related diversification strategy and then it fell down drastically but contradict the findings of Owies (2012) that there existed a negative insignificant relationship between revenue diversification and return on equity

The results shows that a unit increases on investment diversification can lead to 0.006 percent decrease on return on equity of the quoted food and beverage firms. The negative and significant effect of investment diversification on the turn on equity of the quoted firms contradicts our a-priori expectation and justifies the objectives for corporate diversifications. The negative effect of investment diversification on return on equity of the quoted firms contradict the findings of Sajid, Shujahat and Tahir (2016) that an inverted u-shaped relationship existed as performance increased up to a certain level due to the related diversification strategy and then it fell down drastically but contradict the findings of Owies (2012) that there existed a negative insignificant relationship between revenue diversification and profitability.

From the model formulated the study found that there is positive but no significant relationship between business diversification and return on equity of the quoted food and beverage firms. The results shows that a unit increases on investment diversification can lead to 0.009 percent decrease on return on equity of the quoted food and beverage firms. The positive and no significant effect of business diversification on the turn on equity of the quoted firms contradicts our a-priori expectation and justifies the objectives for corporate diversifications. The positive effect of business diversification on return on equity of the quoted firms contradict the findings of Oyedijo (2012) that the financial performance and growth of firms in Nigeria are significantly affected by the mode of diversification used, the findings of Ranka, Vladimir and Dragan (2017) that the relation between risk-adjusted returns measured both by return on assets and return on equity and line-of-business diversification and performance.

The results shows that a unit increases on risk diversification can lead to 0.01 percent decrease on return on equity of the quoted food and beverage firms. The negative and no significant effect of risk diversification on the turn on equity of the quoted firms contradicts our a-priori expectation and justifies the objectives for corporate diversifications. The negative effect of risk diversification on return on equity of the quoted firms contradict the findings of Oyedijo(2012) that the financial performance and growth of firms in Nigeria are significantly affected by the mode of diversification used, the findings of Ranka, Vladimir and Dragan (2017) that the relation between risk-adjusted returns measured both by return on assets and return on equity and line-of-business diversification and performance.

CONCLUSION

The result proved that 33.6 percent variation on return on equity of the food and beverage manufacturing firms is traceable to variation on the independent variables in the study. The f-statistic and probability validate the reliability of the model. the study found that risk diversification have negative and significant relationship with return on equity,that product diversification have positive but no significant relationship with return on equity,that investment diversification negative and significant relationship with return on equity while that business diversification have positive but significant relationship with return on equity of the quoted food and beverage firms. From the results of the study, we conclude that product diversification does not significant relate to return on equity of quoted food and beverage firms in Nigeria, there is no significant relationship between business diversification and the return on equity of quoted food and beverage firms in Nigeria, there is significant relationship between investment diversification and the return on equity of quoted food and beverage firms in Nigeria. That there is significant relationship between risk diversification and the return on equity of quoted food and beverage firms in Nigeria.

RECOMMENDATIONS

1. From the findings, food and beverage manufacturing firms management decision should formulate policies toward business diversification rather emphasize more on investment diversification but against multi product strategy.
2. Policies of the food and beverage manufacturing firms should be directed toward reducing investment diversification and directed toward product and business diversification among the oil and gas firms.
3. From the negative effect of the variables, we recommend that the management should implement the corporate diversification with the objective of achieving increase profitability firms in Nigeria and proper and timely implementation of corporate diversification policy is needed to increase financial performance.

4. There need for the food and beverage manufacturing firms to diversify its investment in form of product and business diversification have to properly implement, appraise policies of divestiture. The objectives harmonized with the objective of profitability of the food and beverage manufacturing firms in Nigeria.

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DYNAMIC ANALYSIS OF FINANCIAL INCLUSION POLICY AND SIZE OF MONEY SUPPLY: A MULTI-DIMENSIONAL STUDY FROM NIGERIA.

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ABSTRACT

This study investigated the relationship between financial inclusion policy and the size of money supply in Nigeria from 1981 to 2019. The study sourced its data from the Central Bank of Nigeria Statistical Bulletin and the World Bank Development Indicators. The Auto Regression Distributive Lag (ARDL) method was employed to develop the econometric model; ARDL Bounds Test confirmed the long-run equilibrium relationship, while the techniques of Phillips-Perron Unit Root, Johansen Co-integration and Granger Causality tests were employed respectively to determine the properties of the data sets. Broad money supply was the proxies for commercial bank intermediation while the rural commercial banks loan, rural commercial banks deposits, microfinance bank total assets, number of micro-finance bank branches and commercial bank loan to small and medium scale enterprises are the explanatory variables. The study revealed that rural commercial bank loans, rural commercial bank deposits, microfinance bank total assets, commercial bank loans to small and medium scale enterprises, and one period lagged variables of: rural commercial bank loan, rural commercial bank deposits, and commercial bank loan to small and medium scale enterprises are significantly related to broad money supply (size of the financial sector). The study found that rural commercial bank loan, commercial bank loan to small and medium scale enterprises and one period lagged variables of microfinance bank total assets are significantly related to facilitation of flow of funds. Rural commercial bank deposits, commercial bank loan to small and medium scale enterprises and one period lagged variable of small and medium scale enterprises have significant impact on the money creation function of commercial banks. it recommend that a robust awareness and sensitization should be carried out by the commercial and central banks on the usage and applications of electronic banking channels which is very elusive among the rural dwellers and low income earners. The cashless policy of the CBN will not be implemented partially but holistically if it will achieve the desired results. Special arrangement should be made for small income earner and rural dwellers who find it difficult to cope with the stringent conditions of commercial bank for granting credit. Some of these conditions should be relaxed for this group while continuously monitoring them. This will encourage them to embrace the formal financial sector services.

Keywords: Financial Inclusion Policy, Size of Money Supply, Time Series Study, Nigeria

INTRODUCTION

Economic theory suggests that the financial sector of any economy is an engine of growth. The argument is that, as the financial sector extends credit to the productive sectors of the economy at affordable costs, the overall economy grows inclusively (Mitsuhiro, 2016). Government has in the past initiated series of publicly financed micro and rural schemes and policies targeted at the poor. Notable among such schemes were the rural banking program, sectorial allocation of credits, concessionary interest rate and agricultural credit guarantee funds scheme (Otiwu, Okere & Uzowuru, 2018). The objective of these programs and policies is to mobilize savings as to channel such into more productive use (investments) that will at the long run enhance economic growth and development. Nigeria made significant progress in this area, yet a larger part of Nigeria's adult population remained financially excluded. Umaru (2014) explains that about 39.5percent were financially excluded while 11.9 percent were informally included (relied on the traditional, unorganized and costly financial services).

Financial inclusion policy was later on introduced to mitigate the problem of exclusion. The policy aimed at increasing and improving financial services and products, and the ability of individuals and private firms/enterprises to access such services at low costs (Hariharan&Marktanner, 2012). Given that low-income earners constitute a significant portion of the population, and have a huge chunk of the economy's idle funds, their increased access to financial services should promote capital accumulation, credit creation, increased economic activities and increased investment.

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As a thick populated country with large adult population of men, women and youths, Nigeria's prospect of economic activities that should translate to financial leverage is huge. The financial inclusion status fell from 60.5 percent in 2014 to 58.4 percent in 2016 (CBN, 2016; CBN, 2018 annual reports), while a survey by the Enhancing Financial Innovation and Access (EFInA) estimated that the financially included increased from 38.3 percent in 2016 to 39.5 percent in 2018. Although there seems to be conflicting data regarding the size of inclusion and resultant excluded population, the trend in the movements seems to be in concurrence. With the large number of financially included population, it is expected that the economy should be geared to the path of inclusive growth and development by the use of financial resources (Demirgu C. Kunt & Wapper, 2012). As an effective tool of intermediation, financial inclusion is a mechanism that ensures access to appropriate financial products and services needed by all sections of the society (Isuku & Dagogo, 2018).

Unfortunately, reality is far from the expectations in Nigeria. The poor participation of the private sector in manufacturing, oil and gas, banking industry and other sectors of the economy has resulted in the importation of virtually all household and industrial goods in the country. This situation has given rise to some doubts as to whether the financial inclusion activities (increased financial services and products) have actually impacted on the intermediation objective of the commercial bank, especially in the area of credit mobilization to the private sector. Nigerian banking sector has remained largely oligopolistic and uncompetitive, as few large banks control greater segment of the market in terms of total assets, and this fails to induce effective intermediation and economic growth (Torruam, Chiawa & Abur, 2013).

Financial Inclusion Policy and its connections have been investigated by several scholars in different climes and at different times and dimensions, but there still exist some empirical gaps in this regard. For instance, apart from growth and development inclined financial inclusion

studies, other emerging dimensions of the study nexus include; gender (Fanta & Mutsonziwa, 2016), system stability (Morgan & Pointines, 2016), digital finance (Ozili, 2018), poverty reduction (Amadou, 2018), income inequality (Tita, 2017) and Park et al (2015) among others. Little or no attention has been given to address the issue of its role or contribution in bank intermediation function. Hence with a view to complimenting the body of knowledge on financial inclusion, this study seeks to empirically investigate financial inclusion policy and the size of money supply in Nigeria.

LITERATURE REVIEW

Theoretical Foundation

Theory of Financial Dualism

Financial dualism theory entails the co-existence of formal and informal financial sectors in an economy. It describes the financial sectors of low income countries (LICs) as explained by the strands of arguments under financial repression, dualism of their economies and other factors. Myint (1964) revealed the need to strengthen the unorganized money markets in the low income countries having confirmed the preferences of users of the services/products of these markets.

Demands Follow and Supply Leading

The demand following referred to the role of financial development in the process of development as being passive and financial structure develops out of the market needs. Patrick (1966), Greenwood and Jovanovic (1990) supported this view. The scholars note that financial institutions merely react to the demand of financial services. This argument differs from the reasoning of Ryan and Zingales (1998) who argue that financial structure development may predict economic performance because financial market anticipate growth, and hence the dynamics of financial structure development could be a supply leading where financial institutions are positively active in devising and providing financial service for the real sector in anticipation of demand.

The theory of imperfect or asymmetric information

Leland and Pyle (1977) suggest that information asymmetries can be of an ex ante nature, generating adverse selection, they can be interim, generating moral hazard, and they can be of an ex post nature, resulting in auditing or costly state verification and enforcement. These generate market imperfections, i.e. deviations from the neoclassical framework. Financial intermediaries appear to overcome these costs, at least partially.

Loanable Funds Theory

Froyen (1996) considered the determinants of the rate of interest in relation to the supply of securities and the demand for them. The loanable funds theory states therefore that the rate of interest at which loans and advances or securities are given out is determined at the point where the supply of securities/funds equates the demand for them. The theory projects the availability

of loanable funds as the essential determinant of interest rate. Factors such as net increase in deposit, the size of savings, mode and the availability of opportunities to create fresh capitals among others influence the availability of loanable funds.

CONCEPTUAL FRAMEWORK

Concept of Financial Inclusion

Morgan & Pontines (2016) identified the fact that financial inclusion is much easier to define in terms of financial stability but there still remains certain definitional issues as it generally tends to range from implying the “banked” population (IMF, 2016) to the population captured in the financial system (CBN, 2018). This, no doubt implies that among the varieties, there are clear broad and narrow categories regarding financial inclusion. Gadanecz & Tissot (2016) agreed with this position by asserting that there is neither a widespread nor generally agreed definition of the concept, thus 20 percent of central banks rely on their definitions for measurement. Sequel to this, Khan (2011) considered it as the provision of access to affordable bank accounts and credit and payment system.

Financial inclusion aims at drawing the financially excluded or the “unbanked” population into the formal financial system with the consequential benefit of having the opportunity to access financial services ranging from savings, payments, and transfers to credit and insurance (Hannig and Jansen 2010). Various central banks have many angles from which they view the workings of financial inclusion, but it is most commonly thought of in terms of access to credit from a formal financial institution, while the concept has more dimensions. Official accounts involve both loans and deposits, and can be considered from the point of view of their frequency of use, mode of access, and the purposes of the accounts. Mobile money via mobile telephones constitute alternatives to former accounts. Demircuc-Kunt and Klapper (2012) identified insurance as another main financial service besides banking especially when the need for agriculture and health comes. Financial inclusion therefore refers to easy access by enterprises and households to reasonably priced and appropriate financial services that meet their needs.

Access to financial services as the first step of financial inclusion can be viewed from two major dimensions including geographic access (i.e. nearness to a financial service provider) and socio-economic access (i.e. absence of too many fees and documentation requirements). Gadanecz & Tissot (2016) opined that access and effective use of financial services constitute vital elements in the definition of financial inclusion. However, in addition to “access” as highlighted above, the availability and quality of financial services are another important elements to be considered. On the contrary, large number of the world’s central banks that rely on formal financial inclusion concept take into consideration the quality of financial infrastructure in place. By implication, this underscores the CBN (2018) definition that “financial inclusion is achieved when adult Nigerians have easy access to a broad range of formal financial services and products that meet their needs at affordable costs.”

Objectives of Financial Inclusion

One of the aims of increasing the provision and quality of financial services is to get the unbanked and under-banked to have unhindered access to financial services (Kama & Adigun, 2013), hence the availability of affordable financial services that meet the specific needs of users without discrimination is a key objective of financial inclusion. It intends to help people secure financial services and products at economical prices, such services include: deposits, fund transfer services, loans, insurance, payment services etc. It seeks to establish and sustain suitable financial institutions to take care of the needs of the poor people. The centre for inclusion (CFI) considered the following as financial inclusion objectives;

- i. **Participation:** Recent evidences generally confirm that before now, large percentage of world's population did not participate in official financial services. The 2010 financial survey by the Consultative Group to Assist

the Poor (CGAP/World Bank) shows that 54 percent of adult population worldwide are being financially excluded (without access to financial services). The situation is even worst in developing countries where some have as much as 60 percent financial exclusion levels. Much effort need be put in place in order to involve larger percentage of the population in productive financial services. Central Bank of Nigeria in collaboration with other financial inclusion stakeholders has come out with some awareness campaign programmes aiming at sensitizing people on the workings and benefits of financial inclusion and, the expectant participation in response from people.

- ii. **Target:** Financial inclusion aims at bringing lasting financial solutions to the economically underprivileged people of the nation, especially the rural poor. Its utmost target comprises women, youths, households and small and medium scale enterprises. Bringing the appropriate financial services/products to the active rural poor at affordable costs will enhance savings and investment which will in turn boost output and enlarge the size of the financial system and the economy at large (Kim,2016). Financial inclusion simply assists people/businesses to secure financial services and products at affordable cost. Such services include: funds transfer services, loans, insurance payment services, deposits, etc. Sanusi (2011) has attributed the rise in poverty level in Nigeria to the challenges of financial exclusion which has negative impact on their consumption, savings and investment pattern.

However, Kempson et al (2000) and Kin (2016) have mapped out the following as the core objectives of financial inclusion:

- i. promoting financial savings culture: Realizing that huge chunk of the economy's idle funds are in the hands of the rural poor that do not have access to formal financial services, efforts are made to encourage them to cultivate savings habit and build trust in the services/ products they are offered.
- ii. Financial liberalization: One of the objectives of financial inclusion policy us to reduce the barriers of strict regulation from government.
- iii. Improvement of payment process: By the cashless policy of the CBN and through the use of the e- payment platforms, financial inclusion enhances payments and facilitate flow of funds in the economy.
- iv. To strengthen existing banks in their capacity to introduce products and services that will meet the needs of various groups of people that constitute the excluded population.
- v. To provide appropriate financial intermediation channels for borrowers and lenders.

Importance of Financial Inclusion

The velocity of economic transformation is influenced by the degree or level of services offered by the financial sector of such an economy. Being financially excluded has its unwelcome effect on the affected persons and on society at large. Oji (2015) in his bid to e-xray the cause of being financially excluded suggests that those excluded from the mainstream financial services will end up paying more for their basic needs. This is another form of hardship in the life of those who are already disadvantaged and prone to vulnerability in the society. Accessibility / affordability of appropriate financial services opens door for families, allowing them to smoothen out their pattern of consumption and encourage investment in their future through quality education and health (Siddik, Alam and Kabiraj, 20180). It enables businesses to expand, create jobs and reduces income inequality.

EMPIRICAL REVIEW

Obafemi, Oburota and Amoke (2016) in their study assessed the relationship between financial deepening and investment in Nigeria, employing time series data from 1970 to 2013 for the empirical analysis. The study adopted the Gregor-Hansen Endogenous structural break methodology and the supply-leading hypothesis in building the model. A unidirectional causality relationship was found from financial deepening to investment and financial deepening has a statistically significant impact on domestic investment.

Harley, Adetosio and Adegbola (2017) investigated the role of financial inclusion in poverty reduction and economic growth in a developing economy using panel data analysis ranges from 2006 to 2015 with a log linear model

specification framework. Results from the regression analysis revealed that the numbers of active ATM, bank branches and government expenditures selected from three African countries were the most robust predictors for financial inclusion on poverty reduction.

Omojolaibi (2017) on the impact of financial inclusion and governance characteristics on economic progress via three major channels: Investment in infrastructure, per capita GDP and income inequality employed the Generalized Method of Moment (GMM) estimation technique for the analysis. The findings revealed that financial inclusion and governance indices have statistical relevance in determining infrastructural investment in Nigeria, Governance indices and commercial bank deposit significantly increase per capita GDP and financial inclusion has the tendency to bridge the gap between the rich and the poor and reduce the prevalence of poverty in the economy. The study suggests that to reduce income inequality and increase per capita GDP, more measures must be taken to address financial exclusion of low-income groups from financial services.

Otiwu, Okere and Uzowuru, (2018) established the relationship between financial inclusion and economic growth with particular reference of microfinance for the period 1992 to 2013 using the techniques of ordinary Least Square method and Johansen Co-integration tests. The study revealed that the activities of microfinance as one of the financial inclusion strategy and total loans and advances of microfinance banks significantly contribute to economic growth, whereas total deposits inversely affect economic growth. It was further discovered that the growth and development of a nation is significantly dependent on the expansion of banking and financial services to the currently financially-excluded class of citizens of the country, as they possess untapped and unexplored valuable potentials that will be of tremendous value to the country.

Fanta & Mutsonziwa (2016) investigated gender and financial inclusion in South African countries using data from Finscope surveys for different years. The data were analysed using descriptive and econometric tools to reveal that the female gender has a lower chance of being “banked”. It further provided evidence on positive effect of age, marital status, residence, education and income on access.

Sakarombe (2018) investigated financial inclusion and bank stability in Zimbabwe by using secondary time series data that include loan to deposit ratio, ratio of non-interest income to interest income, inflation rate, etc. An array of econometric analyses that include regression were utilised to show that financial inclusion engenders banks’ financial stability.

Al-Smadi (2018) examined the role of financial inclusion in fostering financial stability by using secondary time series data from 2006 to 2017. The data include stability index, inclusion index, gross domestic product, ratio of foreign direct investment to GDP, etc which were analysed using Augmented Dicky-Fuller statistics and Cointegration to show a significant positive relationship between financial inclusion and financial stability in Jordan.

Morgan & Pontines (2016) empirically investigated financial stability and financial inclusion. The study employed panel data from 2005 to 2011 on relevant data obtained from the World Bank and IMF’s databases. Descriptive and econometric models were used to analyse the data to provide evidence that an increased share of lending to small and medium-sized enterprises supports financial stability, primarily by reducing non-performing loans and the probability of default by financial institutions.

Neaime & Gaysset (2017) by using data that spans from 2002 – 2015 for eight countries. The data include availability of Automated Teller Machines (ATM) per 100,000; number of commercial banks per 100,000, etc. was obtained from the IMF’s Financial Access Survey database. A number of econometric models (including Ordinary Least Square) were used for analysis to reveal that greater access to financial services contributes to the resilience of the banking system’s deposit funding base.

Rousseau and Wachtelb (1996) conducted causality tests between financial development and real GDP using recently developed time series techniques. Their results provided little support to the view that finance is a leading sector in the process of economic development and stability. They found however, considerable evidence of bi-directionality and some evidence of reverse causation. Their findings also clearly demonstrated that causality patterns vary across countries and, therefore, highlighted the dangers of statistical inference based on cross-section country studies which implicitly treat different economies as homogenous entities.

Demirgüç-Kunt and Levine (2007) used cross-country data to show that financial development disproportionately raised incomes of the poorest quartile, both by directly reducing income inequality and more strongly through impacts on aggregate economic growth. Countries with higher levels of financial development also experienced swifter reductions in the share of the population living on less than \$1 per day. Controlling for other relevant variables; almost 30 percent of the variation across countries in rates of poverty reduction could be attributed to cross-country variation in financial development.

Agbada and Osuji (2013) analyze empirically the trends in Financial Intermediation and Output (GDP) in Nigeria from the banking crises period beginning from 1981 to 2011. In doing so, he used the endogenous components of financial intermediation such as Demand Deposits (DD), Time/Savings deposits (T/Sav) and Credits (Loans and Overdraft) as explanatory variables to predict the outcome of our dependent variable Output (GDP). Data were sourced from CBN statistical Bulletin, 2011 and regression estimation was carried out using IBM SPSS statistics 20. The findings suggest that though there exists a positive growth relationship between financial intermediation and output in Nigeria, there also exist elements of negative short-run growth relationship, especially for the periods that suffered financial shocks resulting from the global financial crisis and perhaps, numerous bank failures.

Acha (2011) investigated the role banks play in economic growth. It used bank deposits and bank credit to the private sector as variables for bank intermediation and real gross domestic product (RGDP) to proxy economic growth. The Regression of RGDP as dependent variable against bank deposit and credit confirmed that banks through their intermediation function contribute to economic growth in Nigeria. Nwaeze, Micheal and Nwabeke (2014) explored in the light of past trends, the extent to which financial intermediation impacts on the economic growth of Nigeria between the period of 1992 – 2011. The study adopted the ex-post facto research design. Time series data for the twenty years period 1992 – 2011 were collated from secondary sources and the Ordinary Least Squares (OLS) regression technique was used to estimate the hypotheses formulated in line with the objectives of the study. Real Gross Domestic Product, proxy for economic growth was adopted as the dependent variable while the independent variables included total bank deposit and total bank credit. The empirical results of this study shows that both total bank deposit and total bank credit exert a positive and significant impact on the economic growth of Nigeria for the period 1992-2011.

Onye and Andabai (2014) examined the relationship between financial intermediation and economic growth in Nigeria using data spanning (1988-2013). Secondary data was collected from the CBN statistical bulletin and national bureau of Statistics. Hypotheses were formulated and tested using vector error correction model and the test for stationarity proves that the variables are integrated in the order which implies that unit roots do not exist among the variables. There is also long-run equilibrium relationship between economic growth and financial intermediation and the result also confirms about 96% short-run adjustment speed from long-run disequilibrium. The coefficient of determination indicates that about 89 percent of the variations in economic growth are explained by changes in financial intermediation variables in Nigeria.

Hao (2006) in a different research, seeks to establish the relationship between financial intermediation and economic growth, using a country-specific data from China. The study focused on the post-1978 reform period, using provincial data (28 Provinces) over the period 1985 to 1999. The study employed the use of linear model, which expresses economic growth as a function lagged economic growth, financial development indicators (banks, savings, and loan-budget ratio), as well as a set of traditional growth determinants (population growth, education, and infrastructural development). The study uses the one-step parameter estimates for the Generalized Method of Moments (GMM) estimation and finds that financial intermediation has a causal effect and positive impact on growth through the channels of house-holds' savings mobilization and the substitution of loans for state budget appropriations. However, the study reveals that bank, as an indicator of financial development, is significant but negatively related to growth. This was attributed to the inefficiency in loan distribution and the self-financing ability of the provincial governments. Romeo-Avila (2007) also confirms the positive impact of finance on growth. He investigated the relationship between finance and growth, with emphasis on the effect of financial deregulation and banking law harmonisation on economic growth in the European Union. The study establishes that financial intermediation impacts positively on economic growth through three channels.

Ali (2013) investigated empirically the long-run relationship and short-run dynamic linkages between financial development and economic growth in Sudan during the period 1970- 2011. The study employed the autoregressive

distributed lag (ARDL) approach to co-integration. The analysis is carried out using three indicators to measure the level of financial developments which are the ratio of the credit provided to private sector by commercial banks as a percentage of GDP, the ratio of liquid liabilities of commercial banks to nominal GDP and the broad money supply as a percentage of GDP. He also included four control variables in his analysis. These variables are inflation rate, trade openness, gross investment and government expenditures. As financial development indicators concerned, the result of the long run analysis indicates that credit to the private sector and the liquid liabilities exert positive effect while money supply affect real per capita GDP negatively. The credit to the private sector and the liquid liabilities coefficients has expected signs. Although the relation between financial development indicators and real per capita GDP is low and insignificant especially in the case of liquid liabilities and money supply, credit to the private sector is the only indicator that affects the economy in Sudan in the long-run. Although they could not find any short-run relationship between the explanatory variables and real per capita GDP in Sudan, these variables are found to be related in the long-run. The results indicate that government expenditure, inflation, money supply and trade openness exert negative effects, while investment, private credit and liquidity have positive effect on real per capita GDP. These findings may be attributed to the weak capital base of Sudanese banks, the high cost of borrowing due to insufficient inter-bank competition, the risk of extending credit to sectors other than trade, which is considered by banks as unjustifiably high and the absence of an appropriate investment. Abu-Bader and Abu-Qarn (2008) examined the causal relationship between financial development and economic growth. The study focuses on Egypt over the period, 1960 to 2001. Using the trivariate VAR model, this study concludes that two-way directional causality exists in Egypt. In other words, finance leads growth, and economic growth induces financial development. Conversely, Odhiambo (2011) argues that economic growth granger causes financial development in South Africa. This study examined the dynamic causal relationship between financial development, economic growth, and poverty reduction. Using a trivariate causality model and the ECM modelling to analyze the data collected from 1960 to 2006, it concludes that the hypothesis of finance-led growth does not hold in South Africa.

Okoye, Adetiloye, Erim & Modebe (2017) examined the effectiveness of financial inclusion as a strategy for enhancing economic growth and development over the period 1986-2015. The study employed the ordinary least square technique and used loan- to deposit ratio, loan to rural areas and branch network as financial inclusion measures. It also adopted ratio of private sector credit to GDP and broad money supply as deepening measures, using GDP as a measure of economic growth. The study revealed that credit delivery to the private sector is not significant and so cannot significantly support economic growth in Nigeria. The study therefore recommended that the monetary authorities should increase their efforts in deepening financial inclusion, especially in the area of enhancing credit delivery to the private sector, as well as effective allocation and utilization of resources.

In general, the literature shows that, financial inclusion is an engine towards financial system growth and stability, and general economic growth in several dimensions with various methods used to assess the link. The optimistic views for financial inclusion on growth, based on the accessibility of financial services include; expansion of bank branches, minimizing a barrier in access to finance and contribution of banking sector. However, it would be worthwhile to the policy makers to play their part in increasing the network branches, penetration of financial services and also eradicate all barriers toward accessing financial services in order to ensure economic sustainability derived from financial inclusion in the intermediation objective.

Summarily, financial inclusion has been adjudged to be an effective intermediation catalyst and has been viewed to be essentially linked to high level of monetization of an economy and its financial system development. This is particularly true in less developed economies like Nigeria where it is believed that the provision of adequate financial resources is a prerequisite for economic transformation. The velocity of this transformation is affected by the degree of financial service industries that are prevalent in the economy. Hence, financial institutions contribute to the real productivity of the economy and to the overall standard of living given their capacity to satisfy the needs and preferences of surplus and deficit units of the economy (Ogbuagu and Ewubare, 2016). In order to enhance the flow of financial services to Nigeria's financially excluded rural areas, government has, in the past, initiated a series of publicly financed micro and rural credit schemes and policies targeted at the poor. Notable among such schemes were the rural banking programme, sectoral allocation of credit, a concessionary interest rate, and the agricultural credit guarantee funds scheme (Otiwu, Okere and Uzowuru, 2018). Given that low-income earners constitute a significant portion of the population and have a huge chunk of the economy's idle funds, their increased access to financial services promotes capital accumulation,

credit creation, increased economic activity, and increased investment. Analysts estimated that Nigeria could even have a growth potential of 374% if 100% financial inclusion could be achieved (political and socio-economic factors kept constant).

METHODOLOGY

Research Design

The study adopted the causal research design, which aims at explaining the existence or non-existence of a cause and effect relationship. The variables studied in this research are financial inclusion measures being the (explanatory variables/cause) and bank intermediation parameters which are the dependent variables/effect. The causal research determines the extent to which financial inclusion activities explain or predict the variations in the size of the dependent variable.

Population of the Study

The population of a study is also known as a well-defined collection of individuals or objects known to have similar characteristics (Tochim, 2006). Following this assertion, the population of this study comprises banks and non-bank financial institutions that are involved in financial inclusion in Nigerian financial system and the intermediation effects of commercial banks in Nigeria.

Sample Size and Sampling procedure

A sample size is the number of people or objects in a selected sample (Manheim and Rich, 1999). This study is narrowed down to some selected financial institutions as the sample size. They include commercial banks and microfinance banks that translate financial inclusion policy in the Nigerian financial system while their intermediation parameters include rural commercial bank loans, rural commercial bank deposits, micro-finance bank total assets, number of micro-finance banks and commercial banks loan to small and medium scale enterprises.

Method of Data Collection

The study made use of documented data on financial inclusion and bank intermediation. The sources include Statistical Bulletin of the Central Bank of Nigeria and World Bank Development Indicators. The data spread from 1981 to 2019 covering 39 years.

Method of Data Analysis

Data Characteristic Test

i. Stationarity of Time Series Data

Unit root is conducted mainly to determine whether or not variables are stationary at zero order $I(0)$, first order $I(1)$ or second order $I(2)$. If a variable is stationary in its raw state, it is said to be stationary at levels, $I(0)$; at first differencing, it is said to be stationary at first order $I(1)$; at second differencing, it is said to be stationary at second order $I(2)$. The unit root test techniques adopted in this study is Philip-Perron (Phillips and Perron, 1988).

Decision Rule

$H_0: = 0$: there is presence of unit root in the time series data.

$H_1: (0)$: there is absence of unit root in the time series data.

The decision rule is that Phillip-Perron (PP) test statistics must be greater than Mackinnon Critical Value at 1 or 5% and in absolute term, i.e. ignoring the negative value of both the PP test statistics and Mackinnon critical values, we accept H_0 and conclude that there is presence of unit root. Otherwise we reject the H_0 and conclude that the variable is stationary or integrated at zero order $I(0)$. Failure to accept the alternative hypothesis leads to conducting further test by differencing the time series data in first or second order until stationarity is attained.

Co-integration Test

The concept of co- integration is the statistical implication of the existence of a long-run equilibrium relationship

between variables. There are two methods of examining co integration relationship; Engle and Granger two-step procedure (1987) and Johansen and Juselius (1990) based on Vector Auto Regression (VAR). The Johansen procedure to test for cointegration among the variables was adopted in this study. Two likelihood ratio tests (trace and maximum eigenvalue) were used to test the hypotheses regarding the number of cointegrating vectors.

H0: $r = 0$: there is no cointegration in the series

H1: $r > 0$: there is cointegration in the series

The statistic test the null hypothesis that the number of co integrating vectors is r against the specific alternative of $r+1$ co-integrating vectors. The condition for a long-run co-integrating vector is that the trace statistics (likelihood ratio) must be greater than 5% critical value.

Granger Causality Test

Causality test is employed to know the causal relationship between liberalized financial services and intermediation efficiency indicators in Nigeria. The underlying principle for carrying out this test is that it enables us to know whether the independent variables can cause variations in the dependent variable and vice versa. Given variables X and Y ;

H0: X does not granger cause Y

H1: X does not granger cause Y

If the probability value of F-statistic is less than 0.05, we reject H_0 and conclude that X granger cause Y , a unidirectional and short-run effect occurs if X granger cause Y but Y does not granger cause X . a feedback, bi-directional or long-run relationship exist if X granger cause Y and Y granger cause X respectively. However, independent causation is reached when X does not granger cause Y and Y does not granger cause X .

Regression Model Test

T-Statistic Test

The *t*-statistic tests whether any of the coefficients of the explanatory variables might be equal to zero. The *t*-statistic is calculated simply as $t_{\alpha/2}$. If the errors follow a normal distribution, t follows a Student-*t* distribution. On the other hand, when it is negative, it entails that there is an inverse relationship between the exogenous and the endogenous variable (Nworuh, 2004).

Decision Rule

There are two method of making decision in this test. First if the t_{tab} is greater than t_{cal} ($t_{tab} > t_{cal}$) at 5% level of significance, it means that the variable has no significant relationship on the financial inclusion policy of Nigeria. This will necessitate the acceptance of the null hypothesis. On the other hand, if the probability value of the *t*-statistic is less than the critical probability of 0.05, it requires the acceptance of null hypothesis and conclude that there is no significant of relationship between the dependent and independent variable.

F- Statistic Test (F-Test)

F-statistics is used to the overall significance of all the explanatory variables and the dependent variable in a bid to investigate the overall interactions of the parameters. In this study, F-statistics is used to test significance of the financial inclusion indices on the intermediation function of commercial banks.

Decision Rule

To make decision in F-test, we either compare the F-calculated simple put F_{cal} and F-tabulated simple put F_{tab} . The decision rule therefore state that if F_{tab} is greater than the F_{cal} at 1% or 5%, (i.e. $F_{tab} > F_{cal}$ at 0.01 or 0.05), we accept the null hypothesis and conclude that there is no statistical significant among the overall parameter, otherwise we invalidate the decision.

Coefficient of Determination (R^2)

This statistic is used to determine how reliable and fit a model is. In order words, it is the extent in percentage form that the past variations of the explanatory variable can explain the dependent variable. its value ranges from 0 to 1. An R^2

of close to 1 is an indication of a reliable and fit model while that closer to 0 means a weak model. The R^2 statistic can be positive or negative. When it is positive, it means that the dependent and the independent variable are positively associated but if negatively signed, it means a negative association between both variables.

Adjusted R^2

The adjusted R^2 statistic is a close of R^2 but with slight difference in measurement. It is most time lower in value than R^2 and also a better statistic. The difference is due to degree of freedom adjustment. It explains the degree of change or variation in dependent variable that is accounted for the dependent variable and other unexplained factors due to unexplained interferences outside the scope of the study.

Model Specification

$$MS = f(FIP_t, e_{t2}) \quad (1)$$

Where $FIP = RCBL, RCBD, MFBTA, NMFB, CBLSE$

In its econometric form, the equation (3.5) above is represented thus:

$$MS_t = \beta_{02} + \beta_1 RCBL_t + \beta_2 RCBD_t + \beta_3 MFBTA_t + \beta_4 NMFB_t + \beta_5 CBLSE_t + e_{t2} \quad (2)$$

To remove the problem of time-invariant characteristics inherent in time series data, we take the natural logarithms equivalent of each variable in the model, thus:

$$\ln MS_t = \beta_{02} + \beta_1 \ln RCBL_t + \beta_2 \ln RCBD_t + \beta_3 \ln MFBTA_t + \beta_4 \ln NMFB_t + \beta_5 \ln CBLSE_t + e_{t2} \quad (3)$$

ARDL for Model II (Money Supply, MS):

$$\ln MS_t = \beta_{02} + \beta_1 \ln RCBL_{t-1} + \beta_2 \ln RCBD_{t-1} + \beta_3 \ln MFBTA_{t-1} + \beta_4 \ln NMFB_{t-1} + \beta_5 \ln CBLSE_{t-1} + e_{t2} \quad (4)$$

Auto Regressive Distributive Lag (ARDL) Model

Auto Regressive Distributive Lag Model plays a vital role when comes the need to analyze an economic scenario. the effect of economic decision taken by a country in a year may have influence on the economic growth of the country in the time t along with future periods such as $t+1, t+2, \dots t+n$. Thus the long and short-run behavioral consequences of a variable on other variable bring the role of distributed lag model in the scenario (Gujarati, Porter and Gunasekar, 2017). The below function represents the lag effect of a variable on the variables and its own lags as well.

$$Y_t = f(X_t, X_{t-1}, X_{t-2}, \dots X_{t-n}), \text{ where } t-1 \text{ represents the number of lags.} \quad (5)$$

An ARDL is parsimonious infinite lag distributed model. The term autoregressive shows that along with getting explained by the X_t , Y_t also get explained by its own lag also.

$$Y_t = \dots + Y_{t-1} + \dots + \pi_1 Y_{t-1} + \dots + \pi_m Y_{t-m} + \dots + \alpha_1 X_t + \dots + \alpha_n X_{t-n} + \dots + \epsilon_t \quad (6)$$

Where m and n are number of years for lag, $\dots$ is the disturbance term and π_i s are coefficient for short-run and α_i s are coefficients for long-run relationship.

Condition for ARDL Model to Hold

- i. The model requires that the errors should have no autocorrelation with each other.
- ii. There should not occur any heteroscedasticity in the data i.e. the mean and variance should remain constant throughout the model.
- iii. The data should follow normal distribution.
- iv. Data should have stationary either on $I(0)$ or $I(1)$ or both. If any of the variable in the data has stationary at $I(2)$, ARDL model cannot run.

Dependent Variables (Intermediation measures):

Money Supply (MS): This simply means an increase in the supply of financial assets in the economy. Economic growth and development of a country depends greatly on the size of the financial sector. This means that the larger the

size of financial intermediation, the wider the range of such money supply. Central Bank of Nigeria in 2012 in a publication on “Understanding Monetary Policy Series 15: Financial Inclusion” affirmed that money supply can be used as a proxy or measure of financial intermediation. Accordingly, the apex bank states that a decrease in money supply denotes a decrease in total deposits and available loans, which is a major indicator of the level of financial intermediation. In addition, the volume of currency outside bank is an indicator of the level of sophistication of the payment infrastructure in an economy, which is an indication of the robustness of financial intermediation in the economy. This assertion is supported by the empirical works of Hao (2006), Gezer (2018) and Deidda (2006) that made use of broad money supply to quantify financial intermediation.

Measurement of Independent Variables (Financial Inclusion measures)

- i. **RuralCommercial Bank Loans:** This is the total credit to the small and medium scale enterprises from all the commercial banks located in the rural areas in Nigeria.
- ii. **Rural Commercial Bank Deposits:** This is the demand deposit in all the commercial banks located in the rural areas in Nigeria.
- iii. **Microfinance Bank Total Assets:** This is the total worth or capitalization of all the Micro Finance Banks in Nigeria. It represents their capacity and effectiveness to mobilize credits to small and medium scale enterprises.
- iv. **Number of Micro- Finance Banks:** This is the total number of Micro Finance Bank in Nigeria. It represents the spread of Micro Finance Banks across the country.
- v. **Credit to Private Sector (CPS):** Credit to private sector is the total of credit given to the private sector often referred as the banks’ intermediation effectiveness. It has been used in several studies as a proxy for financial inclusion.

A- Priori expectations

By the rule of thumb, and assuming every other thing remains constant, since Nigerian financial sector is going through a lot of transformations and with increasing level of financial education, it is expected that rural commercial bank loans, rural commercial bank deposits, microfinance bank total assets, number of micro-finance banks and commercial bank loan to small and medium scale enterprises will positively contribute to the size, depth and efficiency of bank intermediation function in Nigeria. Thus, the above listed parameters of financial inclusion policy will positively and significantly relate with: credit to the private sector, money creation, money supply, monetary policy function, facilitation of flow of funds and capital formation in Nigeria. Hence, this can be expressed in the equation below:

$$\beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6 > 1 \quad (7)$$

RESULTS AND DISCUSSION OF FINDINGS

Table 1: Augmented Phillips-Perron Unit Root Test

Variables	Stages	PP Test Statistics	Critical Values @ 1%	Order of Integration	Decision
MS	Level	-1.355110	-3.615588		None Stationary
	First Differencing	-6.318264	-3.621023	I(1)	Stationary
	First Differencing	-6.461466	-3.621023	I(1)	Stationary
RCBL	Level	-2.863683	-3.615588		None Stationary
	First Differencing	-8.170088	-3.621023	I(1)	Stationary
RCBD	Level	-1.693787	-3.615588		None Stationary
	First Differencing	-4.638960	-3.621023	I(1)	Stationary
MFBTA	Level	-4.329060	-3.615588	I(0)	Stationary
NMFB	Level	-1.633137	-3.615588		None Stationary
	First Differencing	-4.670262	-3.621023	I(1)	Stationary
CBLSE	Level	-1.369393	-3.615588		None Stationary
	First Differencing	-6.586678	-3.621023	I(1)	Stationary

Source: Researcher’s Summary from E-view Statistical Package Ver. 9.0.

The results of the Phillips-Perron stationarity test in Table 1 above revealed that except microfinance bank total assets that is stationary at levels, every other variables exhibited absence of unit root characteristics at first order of integration. This reality qualifies the employment of auto regressive distributive lag in fitting the models in the study. Sequel to this,

various analyses carried out in each of the six models include: Johansen Cointegration Test, Granger Causality Test, diagnostics tests comprising Breusch-Godfrey Serial Correlation LM Test, Heteroskedasticity Test, Breusch-Pagan-Godfrey, Ramsey RESET Test. Also the Auto Regressive Distributive Lag estimation model was also analyzed here to fit the equation. The results of various techniques of statistical data analyses in **each** model are presented as follows:

Table 2: Results of Cointegration Test

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.770984	147.8045	95.75366	0.0000
At most 1 *	0.653732	93.26782	69.81889	0.0002
At most 2 *	0.555212	54.02775	47.85613	0.0118
At most 3	0.353181	24.05188	29.79707	0.1982
At most 4	0.166436	7.931394	15.49471	0.4728
At most 5	0.031800	1.195730	3.841466	0.2742

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

None *	0.770984	54.53672	40.07757	0.0006
At most 1 *	0.653732	39.24007	33.87687	0.0104
At most 2 *	0.555212	29.97586	27.58434	0.0242
At most 3	0.353181	16.12049	21.13162	0.2179
At most 4	0.166436	6.735664	14.26460	0.5209
At most 5	0.031800	1.195730	3.841466	0.2742

Source: E-Views output based on Research Data

The result of the cointegration test presented in Table 4.9 revealed that at 5% Critical Value, three cointegrating equations are present both in the Trace Statistics and in the Maximum Eigenvalue Statistics. This is a strong indication that long-run equilibrium relationship may exist among the variables; hence we reject the null hypothesis of no cointegration.

Table 3: Auto Regressive Distributive Lag Bounds Test

Test Statistic	Value	k
F-statistic	6.635006	5
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	2.26	3.35
5%	2.62	3.79
2.5%	2.96	4.18
1%	3.41	4.68

Source: E-Views output based on Research Data

The result revealed an F-statistic of 6.635006 which is greater than 10%, 5%, 2.5% and 1% Critical Values in I(0) and I(1) bounds respectively. The import of the result is the rejection of the null hypothesis that no long-run relationship exist between the dependent and explanatory variables. That is, a long-run relationship is found among the variables under investigation.

Table 3: Results of Granger Causality Test

Null Hypothesis:	Obs	F-Statistic	Prob.
RCBL does not Granger Cause MS	37	1.22974	0.3058
MS does not Granger Cause RCBL		11.9479	0.0001
RCBD does not Granger Cause MS	37	6.21261	0.0053
MS does not Granger Cause RCBD		13.1356	7.E-05
NMFB does not Granger Cause MS	37	0.28774	0.7519
MS does not Granger Cause NMFB		0.20493	0.8158

MFBTA does not Granger Cause MS	37	3.22985	0.0528
MS does not Granger Cause MFBTA		7.38534	0.0023
CBLSE does not Granger Cause MS	37	6.43022	0.0045
MS does not Granger Cause CBLSE		5.56194	0.0085

Source: E-Views output based on Research Data

The results of Granger Causality Test presented in Table 4 revealed that at 5% critical value, one-directional causal relationships exist from Broad Money Supply to Rural Commercial Bank Loan with probability value of 0.0001 and Microfinance Bank Total Assets with probability value of 0.0023. Result further revealed a bi-directional causal relationship between Broad Money Supply and Rural Commercial Bank Deposits with probability values of 0.0053 and 0.00007 respectively. The import of these statistics is that past variations of Broad Money Supply significantly influences the values of Rural Commercial Bank Loan and Micro Finance Bank Total Assets in Nigeria. It also entails that past variations of Broad Money Supply and Rural Commercial Bank Deposits significantly affects each other. The results therefore provide that the size of the financial sector significantly drives the financial inclusion in Nigeria.

Table 5: Auto Regressive Distributive Lag (ARDL)

Dependent Variable: D(MS)

Fixed regressors: C

Variable	Coefficient	Std. Error	t-Statistic	Prob
D(MS(-1))	0.196702	0.197672	0.995093	0.3211
D(RCBL)	-1.192143	0.517251	-2.304764	0.0223
D(RCBL(-1))	-1.852319	0.458046	-4.043961	0.0001
D(RCBD)	-5.348176	2.787127	-1.918885	0.0553
D(RCBD(-1))	-5.830313	2.220161	-2.626077	0.0085
MFBTA	8.042048	2.855125	2.816706	0.0045
MFBTA(-1)	0.526460	3.175525	0.165787	0.8711
D(NMFB)	-0.206303	0.509892	-0.404602	0.6931
D(NMFB(-1))	-0.212678	0.514398	-0.413450	0.6828
D(CBLSE)	-0.023642	0.006371	-3.710688	0.0000
D(CBLSE(-1))	0.008708	0.012271	0.709638	0.4845
C	89.61132	86.06465	1.041209	0.3077
R-squared	0.870915	Mean dependent var		693.12
Adjusted R-squared	0.814117	S.D. dependent var		900.12
S.E. of regression	388.0429	Akaike info criterion		15.04
Sum squared resid	3764433.	Schwarz criterion		15.54
Log likelihood	-265.8092	Hannan-Quinn criter.		15.24
F-statistic	15.33368	Durbin-Watson stat		2.0911
Prob(F-statistic)	0.000000			

Source: E-Views output based on Research Data

From the ARDL regression analysis in Table 5 above, the econometrics of the relationship between Broad Money Supply (Size of the Financial Sector) and Financial Inclusion policy in Nigeria is stated in equation 4.3 below:

$$MS = 89.61 - 1.19RCBL - 5.35RCBD + 8.04MFBTA - 0.21NMFB - 0.02CBLSE \quad (8)$$

$$(0.3077) \quad (0.0298) \quad (0.0665) \quad (0.0093) \quad (0.6892) \quad (0.0010)$$

The model for the lagged variables is also presented in equation 4.4

$$MS = 89.61 - 1.85RCBL - 5.83RCBD + 0.53MFBTA - 0.21NMFB + 0.0087CBLSE + 0.20MS \quad (9)$$

$$(0.3077) \quad (0.0004) \quad (0.0145) \quad (0.8697) \quad (0.6828) \quad (0.4845) \quad (0.3292)$$

NB: probability values are in parentheses

The Constant Value

From the model in equation 3 above, it is apparent that the constant parameter (β_0) has positive coefficient (89.61). This is a signal that broad money supply will increase by 89.61 billion naira when the explanatory variables as used in the study were kept constant.

The *a priori* Expectation

The coefficients of the explanatory variables revealed that Microfinance Bank Total Assets, one period Lagged variables of Microfinance Bank Total Assets, Broad Money Supply and Commercial Bank Loan to Small and Medium Scale Enterprises are positive which is in conformity with the *a priori* expectations of study. However, the coefficients of Rural Commercial Bank Loan, Rural Commercial Bank Deposits, Number of Microfinance Bank, Commercial Bank Loan to Small and Medium Scale Enterprises are negative. In addition, one period Lagged variables of Rural Commercial Bank Loan, Rural Commercial Bank Deposits, Number of Microfinance Bank and Commercial Bank Loan to Small and Medium Scale Enterprises are also negative which is in contradiction to the *a priori* expectations of the study. Overall implications of the signs of variables are as follows; a unit increase in Microfinance Bank Total Assets, one period lagged variables of Broad Money Supply and Commercial Bank Loan to Small and Medium Scale Enterprises increase Broad Money Supply by 8.04, 0.20 and 0.0087 billion naira respectively. Conversely, Rural Commercial Bank Loan, Rural Commercial Bank Deposits, Number of Microfinance Bank, Commercial Bank Loan to Small and Medium Scale Enterprises and one period Lagged variables of Rural Commercial Bank Loan, Rural Commercial Bank Deposits, Number of Microfinance Bank decreased of Broad Money Supply by 1.19, 5.35, 0.21, 0.024, 1.85, 5.83 and 0.21 billion naira in that order.

Model Two Fitness (R^2)

R-squared value of 0.8709 as seen in Table 4.15 implies that the model explained about 87.09% variations in the Broad Money Supply while the residue of 12.91% is explained by the white noise variables. Additionally, the degree of freedom adjusted R-square of 81.41% notwithstanding indicates a well fitted and robust model. These statistics signify that the model is well fitted and stable in making informed decisions.

Joint Significance Testing, F-test

Hypothesis H_{01} : (the overall financial inclusion variables have no significant effect on the broad Money supply in Nigeria).

Hypothesis H_{A1} : (the overall financial inclusion variables have significant effect on the broad Money supply in Nigeria)

Decision Rule: Reject H_0 if F-statistic is greater than F-critical at 5% significance level.

Statistics: F-Statistic = 15.33368

Probability (F-Statistic) = 0.000000

$F_{5\%}(5, 34) = 2.494$

F-statistic value of 15.33368 and its probability value of 0.000000 which is less than the F-Critical of 2.494 at 5% critical probability standard as shown in Table 5 revealed that the model is statistically significant. We therefore reject the null hypothesis and conclude that Rural Commercial Bank Loan, Rural Commercial Bank Deposits, Number of Microfinance Bank in Nigeria, Microfinance Bank Total Assets and Commercial Bank Loan to Small and Medium Scale Enterprises as a whole have significant effect on Broad Money Supply in Nigeria.

DISCUSSION OF FINDINGS

Our findings however are that financial inclusion measures- rural commercial bank loans, rural commercial bank deposits, microfinance bank total assets, number of microfinance banks and commercial bank loans to small and medium scale enterprises jointly have significant influence on broad money supply in Nigeria. Our results revealed a one -directional causal effect from broad money supply to rural commercial bank loan and microfinance bank total assets, and a bi-directional causal effect between broad money supply and rural commercial bank deposit. Hence, past

variations of broad money supply and rural commercial bank deposits strongly affects each other. The import of this result is that in Nigerian financial system, financial inclusion significantly drives the size of the financial sector (money supply) and therefore smoothen intermediation. But considering their individual impacts, only microfinance bank total assets, one period lagged variables of microfinance bank total assets and commercial bank loans to small and medium scale enterprises have positive coefficients, making positive impact on broad money supply as expressed in equations 3 and 4. All other financial inclusion measures displayed negative impact on money supply against the *a priori* expectation of the study. The implication of this economic reality is that the size of money in circulation within the domestic economy is dwindling even as the campaign and activities of inclusive financing assume dominant position in Nigerian financial sector. Hence paucity of short/medium term funds still remains a challenge in the financial sector as large part of the domestic currency is held outside the banking sector and cannot be accounted for by the Central Bank of Nigeria (Ogbuagu et al, 2017).

This is a bad news for the Nigerian financial system. Financial inclusion is yet to yield the required fruit which may be the resultant effect of unfavorable business environment and conditions upon which these credits were granted. Majority of small businesses hardly thrive in Nigeria because of issues relating to capital and repayment of loans. This has a significant multiplier effect on the industrialization of the Nigerian economy. Microfinance banking so far remains formidable in discharging its duties of financing small businesses in Nigeria. The effectiveness of micro financing as an instrument of financial inclusion as suggested in this study is supportive of the findings of Otiwu, Okere and Uzouru (2018). The intervention of the Central Bank of Nigeria in consolidating the microfinance banks for effective performance is actually paying off.

CONCLUSION

This study examined the effect of financial inclusion policy on the size of Nigerian money supply using time series data. The study established the 81.4 percent changes on money supply within the periods covered in this study could be traced to variation in financial inclusion measures in the study. The study revealed that Microfinance Bank Total Assets, one period Lagged variables of Microfinance Bank Total Assets, Broad Money Supply and Commercial Bank Loan to Small and Medium Scale Enterprises are positive which is in conformity with the *a priori* expectations of study. Coefficients of Rural Commercial Bank Loan, Rural Commercial Bank Deposits, Number of Microfinance Bank, Commercial Bank Loan to Small and Medium Scale Enterprises are negative. In addition, one period Lagged variables of Rural Commercial Bank Loan, Rural Commercial Bank Deposits, Number of Microfinance Bank and Commercial Bank Loan to Small and Medium Scale Enterprises are also negative which is in contradiction to the *a priori* expectations of the study. From the findings, it concludes that financial inclusion policy significantly affects the size of money supply.

RECOMMENDATIONS

1. A robust awareness and sensitization should be carried out by the commercial and central banks on the usage and applications of electronic banking channels which is very elusive among the rural dwellers and low income earners. The cashless policy of the CBN will not be implemented partially but holistically if it will achieve the desired results.
2. Special arrangement should be made for small income earner and rural dwellers who find it difficult to cope with the stringent conditions of commercial bank for granting credit. Some of these conditions should be relaxed for this group while continuously monitoring them. This will encourage them to embrace the formal financial sector services.
3. Strengthening the microfinance banks as well as other existing banks for wider coverage is very imperative. The microfinance banks have contributed significantly to the implementation of the financial inclusion policy. Most low income earners and small business owners who need access to credits and services of the banking sector appear to be at home with the micro finance banks because of their type of services.

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INVESTMENT POLICY AND STOCK PRICES OF QUOTED MANUFACTURING FIRMS: DYNAMIC PANEL DATA EVIDENCE FROM NIGERIA.

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ABSTRACT

This study examined the relationship between investment policy and dynamic of stock prices of quoted manufacturing firms in Nigeria. Panel data of 15 quoted manufacturing firms was collected from the annual reports of the manufacturing firms from 2010-2019. Stock prices of the quoted firms was modeled as the function of short term portfolio investment, subsidiary investment, long term portfolio investment and long term investment. Multiple regressions were formulated. 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 co integration analyses were conducted on the study, evidence from the findings shows that explained 60.2 percent of the systematic variation in the stock prices. The beta coefficient informed that short term portfolio investment, long term portfolio investment and long-term investment have positive relationship with the stock prices of the quoted manufacturing firms while subsidiary investment have negative relationship with stock prices of the manufacturing firms. The probability coefficient of the variables informed us that short term portfolio investment and long-term portfolio investment are statistically significant while long term and subsidiary investment are statistically not significant. From the findings, the study concludes that there is significant relationship between investment policy and stock prices of quoted manufacturing firms. The recommend that Managers of the manufacturing firms should devote adequate time in designing long term and portfolio investment policy that enhances firm's shareholder value, the company should review its long term and portfolio investment strategies in order to reduce volatility in market prices and maximize the value of the company.

Keywords: *Investment Policy, Stock Prices, Quoted Manufacturing Firms, Dynamic Panel Data, Nigeria.*

INTRODUCTION

An investment is the allocation and substantial consumption of resources, material and human in addition to financial one (Aryal, 1997). It is important to utilize the resources on activities that add value to the entity's current position. Many investments are not only aimed at increasing the stakeholder's value but at adding value to the communities and the economy. Poor investment decision can cause major loss to the investing economic entity and its stakeholders (Van Horne, 2002).

Investment policy by their nature usually involves the allocation of huge funds to investment proposals to yield future benefits. Investment policy making improved significantly if the emphasis are placed on asking the appropriate strategic questions and providing better assumptions rather than on increasing the sophistication of measurement techniques. Investment policy of the three major types of policies (investment, financing and dividend), theory predicts that corporate managers considers the investment policy as the most important policy because it forms the basis for the firm's business operations and growth. Toby (2014) posited that the greater the firm's investment in current assets, the greater is its liquidity. As a means of increasing its liquidity the firm may choose to invest additional funds in cash and/or marketable securities. Such action involves a tradeoff, however, since such assets can earn little or no return. The firm finds that it can reduce its risks of illiquidity only by reducing its overall return in invested funds and vice versa.

The risk-return trade-off involved in holding more cash and marketable securities, therefore, is one of added liquidity versus reduced profitability. It is also hypothesized that other things remaining the same, the greater a firm's reliance upon short-term debt or current liabilities in financing its asset investments, the lower will be its liquidity (Egbiide,

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Uwalomwa&Agbude, 2013). On the other hand, the use of current liabilities offers some very real advantages to the user in that they can be less costly than long-term financing and they provide the firm with a flexible means of financing its fluctuating needs for assets. It is also hypothesized that the risk-return tradeoff here involves an increased risk of illiquidity versus increased profitability.

The market price is a mirror of the company's performance. It indicates the firm's earnings potential. The market value of a firm is determined by investment as well as speculative factors. However, market value provides a close approximation of the true value of a firm. Declining rate of common stock prices of quoted firms in Nigeria capital market has been a major concern to policy makers, investor and other relevant stakeholders. Stock prices of quoted firms in the capital market do not reflect the intrinsic value and investors are more concerned with the returns on their investment (Egbide, Uwalomwa & Agbude, 2013).

Factors that determine stock prices remain a matter of controversies among scholars; however most of the controversies have been directed to the argument of Modigliani and Miller on the capital structure and dividend policy relevance. The effect of investment policy on stock prices of quoted in Nigeria is limited; therefore this study examined the effect of investment policy on the stock prices of quoted manufacturing firms in Nigeria.

LITERATURE REVIEW

Investment Policy

Investment is the activity of delaying consumption to get the value of greater consumption in the future. An investment decision is said to be optimal if such consumption time settings can maximize utility expectations. To maximize utility, a person or firm will only invest if the expected benefits of a consumption delay are greater than if the money is spent now (Fama and Miller, 1972). One of the factors that can increase firm value is an investment decision. The firm value is solely determined by investment decisions (Fama, 1974). The opinion can be interpreted that the investment decision is important. It is because increasing the firm value, as the firm's goal, also means increasing the wealth of the owners generated through the firm's investment activities. The purpose of firm investment decisions is to obtain a high level of profit and minimize the risk level.

A high level of profit with manageable risks is expected to increase the firm value. In this case, if the firm in investing is able to maximize its profits by using own assets efficiently, it will increase investor trust to invest in the firm's stock, which will have a good impact on increasing the value of the firm. Investment decisions used by the firms, in this study, are investments in fixed assets or commonly referred to as capital expenditure such as land or property, buildings, and equipment. Capital expenditures are funds spent by the firms to get benefit from those investments for more than one year (Brigham and Ehrhardt, 2013).

At the time the firm will invest a fixed asset, it should have to analyze the assets to invest. Investment in fixed assets submitted must be aligned with the overall planning and the firm objectives. In analyzing an investment in a fixed asset, it should pay attention to the benefits, estimated costs, and risks so that it will know whether the investment is feasible or not to increase the firm value. If the investment is considered feasible by the firm, it should really focus to run it so that the investments can increase the value of the firm. The success of investments made by the firm will also be assessed by the investors. The investors will respond positively if the investments made by the firm succeed.

Likewise, if the investment actually results in losses, the investors will respond negatively. This is in accordance with the results of Dewenter et al. (2010), Hua, Yew & Shaikh, (2011) ; Chang et al. (2013), Golec and Gupta (2014), Aktas et al. (2015). They found evidence that investment decisions have a positive effect on firm value. Based on the description, the hypothesis proposed is an investment decision positively influences the firm value, both on the sample firm as a whole and on firms with low and high value.

Firm Value

Firm's value can be measured by the earnings generated by the company in terms of profitability (Berk, 2005).). Firm's performance is the measurement of what has been attained by the firm, which is an indicator of the good conditions for a period of time. The objectives of measuring firm value are to obtain very useful information about flow of funds, the uses of firm finances, their efficiency and effectiveness. Besides, the managers are able to make best decisions from

the information on firm's performance (Almajali, 2012). Investors are more willing to buy shares in firms whose value are high due to enhanced reputation, and if the demand for its shares increases the shares prices increases hence an increase in the firm's value. Profitability enables a firm to withstand negative economic shocks and enhances stability of the firm. Increased firm value maximizes the utility for shareholders through dividend and stakeholders' interest through corporate social responsibility (Bhutta&Hasan, 2013).

Stock Price

Market share price is defined as the price which the market assigns to the company's stocks. Stock price volatility represents the variability of stock price changes could be perceived as a measure of risk faced by investors. Shian and Tam Vo, Hong (2010) argued that stock prices are more volatile than what is justified by time variation in dividends. Numerous studies have documented evidence showing that stock returns exhibit phenomenon of volatility clustering, leptokurtosis and asymmetry. Volatility clustering occurs when large stock price changes are followed by large price changes, of both signs, and small price changes are followed by periods of small price changes (Martikarini, 2010; Fang, Noe and Tice, 2009; Black, 1976). Ajao (2012) noted that a number of recent studies have sought to characterize the nature of financial market return process, which has always been described as a combination of drift and volatility.

Volatility may impair the smooth functioning of the financial system and adversely affect economic performance (Rajni, 2012). Stock price volatility is an indicator that is most often used to find changes in trends in the market place. Stock price volatility tends to rise when new information is released into the market, however the extent to which it rises is determined by the relevance of that new information as well as the degree in which the news surprise investors. However, economists and financial experts have propounded theories on what causes volatility. Some financial economists see the causes of volatility embedded in the arrival of new, unanticipated information that alter expected returns on a stock (Enekwe, Nweze and Agu, 2015). Others claim that volatility is caused mainly by changes in trading volume, practices or patterns which in turn are driven by factors such as modifications in macroeconomic policies shift in investors' tolerance of risk and increased uncertainty.

THEORETICAL FRAMEWORK

The Keynesian Theory of Investment

In the General Theory, Keynes (1936) emphasized the central role of investment as the driving force of influencing aggregate output, employment, and short run fluctuations in economic activity. The theory emphasizes that investment is the result of firms harmonizing the expected return on new capital, referred to as the marginal efficiency of capital (MEC), and with the cost of capital, which depends primarily on the real interest rate.

The financially viable while higher interest rates lead to some projects being postponed or cancelled since the cost of borrowing to finance investment become higher. To the Keynes since investment is volatile and dependent on firms expectations of the profitability of investment, so long as the expected yield on their investment exceeds the real interest rate, new investment will take place. Keynes rejected the notion that investment was based exclusively on technological conditions of capital productivity, but emphasized monetary factors and finance and uncertainty as the basic determinants of investment.

Rigid Accelerator Theory

The simplest theory of investment demand is the rigid accelerator model formulated by Clark (1917). In its simplest form, the rigid accelerator theory of investment states that investment is proportional to the increase in output which is proxy by changes in demand in the coming period. Thus, the accelerator model relates investment to changes in demand and proposes that an increase in a firm's output will require a proportionate increase in its stock of capital. The theory basically assumes that firms desired capital-output ratio is roughly constant and net investment takes place when output is expected to increase. In effect, the theory implies that the level of output or the changes in aggregate demand determines investment or the change in capital stock. Mathematically, this proposition of the theory is expressed as $K_t^* = \sigma Y_t$, where σ is the desired capital-output ratio which is assumed to be constant, K_t^* is the desired capital stock in period t , and Y_t is the level of output in the same period.

McKinnon-Shaw Hypothesis

The neoliberal view by emphasizes the importance of financial deepening and high interest rates in stimulating growth through investment. According the work of McKinnon and Shaw (1973), which offered a theoretical and empirical foundation for the relationship between financial factors and investment in developing countries, developing countries suffer from financial repression and that their liberation from these repressive conditions, investment, savings and growth would be induced to increase.

The important assumption of the model is that saving is responsive to interest rates, thus a higher saving rates would finance a higher level of investment, leading to higher growth (Gemech and Struthers, 2003). According to their argument, a repressed financial sector discourages both saving and investment because the rates of return are lower than what could be obtained in a competitive market. As a result, financial intermediaries do not function at their full capacity and fail to channel saving into investment efficiently, thereby hampering the development of the whole economic system.

Modern Portfolio Theory

Any investment firm should have a portfolio of investments in different types of investment to maximize returns and minimize risks. Its standard practice for PE firms to invest in a diversified portfolio to minimize risk and harness the returns of the various investment options on offer. The modern portfolio theory (MPT) is a theory of finance that attempts to maximize expected portfolio returns for a given amount of portfolio risk, or equivalently minimize risk for a given level of return by carefully choosing the proportions of various assets. MPT models a portfolio as weighted combination of assets, so that the return of a portfolio is the weighted combination of the assets return.

The process of selecting a portfolio may be divided into two stages. The first stage starts with observation and experience and ends with beliefs about the future performances of available securities. The second stage starts with the relevant beliefs about future performances and ends with the choice of portfolio. One type of rule concerning choice of portfolio is that the investor does (or should) maximize the discounted (or capitalized) value of future returns. Since the future is not known with certainty, it must be "expected" or "anticipated" returns which are discounted. Through combining different assets whose returns are not perfectly positively correlated, MPT seeks to reduce the total variance of the portfolio return. MPT also assumes that investors are rational and the markets are efficient (Markowitz, 1952).

EMPIRICAL REVIEW

Okwo, Ugwunta and Nweze (2012) assessed the impact of a company's investment in fixed assets on its operating profit margin. The study is based on a sample four companies in the Nigerian brewery sector over an eleven year period from 1999 to 2009. We used regression statistical method to ascertain the relationship between level of investment in fixed assets and its impact on the operating profit reported by Nigerian brewery firms. Though the relationship is positive, but the result is not statistically significant. Therefore, the result did not suggest any strong positive impact of investment in fixed assets on the operating profit of brewery firms in Nigeria. This finding is in which is in line with past academic researches show that investment in fixed asset does not have any strong and statistical impact on the profitability of brewery firms in Nigeria.

Mwaniki and Job Omagwa (2017) studied the relationship between the asset structure and the financial performance of the firms quoted under the commercial and service sector at the NSE, Kenya. The target population by the study was the secondary data from the annual reports of the firms. The asset structure is analysed in term of: Property, Plants and Equipment; current assets; intangible assets; and long term investments and funds, which formed the independent variables. The dependent variable of interest was the financial performance of the firms, and was measured in terms of: earning per share; return on assets; return on equity, profit margin (return on sales); and current ratio, by aid of a composite index. A census was done on the entire firms listed under this sector by the year 2014, for a five year period, 2010 to 2014. A document review guide was used to collect the secondary data from the financial statements of the firms under study. A multiple regression analysis (standard) was conducted with the aid of statistical programs SPSS version. The results of the study indicate that asset structure had a significant statistical effect on the financial performance. In particular, the study found that: Property, Plants and Equipment, and long-term investments and funds have a statistically significant effect on financial performance, while current assets and intangible assets do not have statistical significance on financial performance sectors.

Olatunji et al. (2014) examined the effect of investment in fixed assets on profitability of selected Nigerian banks. Data were obtained from annual reports and accounts of thirteen selected Nigerian commercial Banks for the period from 2000-2012. The relationship between the dependent variable (Net profit) and independent variables (Building, Land, Leasehold premises, fixtures and fitting, and investment in computers.) indicated that there was a significant relationship between them. The study concluded that investments in fixed assets had strong and positive statistical impact on the profitability of banking sector in Nigeria.

Martina (2015) investigated the relationship between tangible assets and the capital structure of Croatian small and medium-sized enterprises. The study was conducted on a sample of 500 Croatian SMEs for the period between 2005 and 2010. The data used for the empirical analysis were taken from companies' annual reports. The results of the research found that tangible assets are differently correlated with short-term and long-term leverage. The relationship between tangible assets and short-term leverage was negative and statistically significant in all observed years. The relationship between tangible assets and long-term leverage was positive in all observed years and statistically significant. The results showed that small and medium-sized companies use their collateral to attract long-term debt, which means that small and medium-sized companies use lower costs and the interest rate of long-term debt in relation to short-term debt. These findings are consistent with the trade-off theory which predicts a positive relation between leverage and tangibility, and also with the pecking order theory, which is generally interpreted as predicting a negative relation between leverage and tangibility.

Mawih (2014) examined the effects of assets structure (fixed assets and current assets) on the financial performance of some manufacturing companies listed on Muscat Securities Market (MSM), for the period 2008-2012. The assets structure was measured by fixed assets turnover and current assets turnover while the financial performance was measured by ROA and ROE. The overall result of the study was that the structure of assets does not have a strong impact on profitability in terms of ROE. Another result of the study indicated that only the fixed assets had impact on ROE unlike ROA. Further, the result suggested that the effect of asset structure had an impact on ROE only in petro-chemical sector. It also concluded that there was no impact for current assets on ROE and ROA. Nwala, Gimba and Oyedokun (2020) examined the impact of corporate financial policy on firm value of insurance firms in Nigeria for the period 2011 to 2017. In carrying out this study, ex-post-facto research design was employed, and secondary data sourced from 25 insurance annual report and Nigeria Stock Exchange factbook for the period of 7 years. Pool time series data were extracted related to dividend payout, equity issuance, debt asset, equity asset, return on asset and Tobin Q was used as proxies for firm value in this study. The findings indicate that dividend payout and equity issuance have significantly impacted on firm performance (Tobin Q), the study also stated that ROA has no significant relationship with dividend payout, equity asset, debt assets and equity issuance during the period under study. It was recommended that insurance managers should devote adequate time in designing a dividend policy that will enhance firm's performance (ROA) and shareholder value. Again, the company should review its dividend policy in order to reduce agency cost and maximize the value of the company.

Okeke (2019) examined the effect of capital structure on firm value of selected quoted firms in Nigeria. It adopted long term debt, equity capital, as independent (x) variables of capital structure while Tobin Q was used as proxy for firm value the dependent variable. It adopted ex-post facto research design. The statistical package used for the analysis was e-view version 8.0. The population of the study was firms drawn from conglomerate and consumer goods sectors of Nigeria Stock exchange for a period of nine (9) years 2007-2015. Descriptive statistics, correlation and ordinary least square (OLS) of multiple regression analysis were used to test the hypotheses formulated to guide the study. The coefficient of determination R^2 showed that 65% systematic variations in firm value could be explained by the independent variables. The F value (62.44647) was significant at 1% which means that the parameters estimated were statistically significant in explaining the effect of the independent variables on the dependent variable. The study, therefore, concluded that capital structure with regard to long term debt was negatively but statistically significant to firm value, while equity capital was positively insignificant to firm value. The study recommended that firms should be more concerned with management of equity capital in business financing since it is more related to the value of the firm.

Shourvarzi and Azadvar (2008) examined the relationship between investment opportunity and performances. Their results showed a positive relationship between investment opportunity and performance. Kordestani and Najafi (2009)

examined the determinants of capital structure based on data from 93 companies listed in TSE during 2000-2007. Their findings indicate a positive significant relationship between firm size and liability ratio on book value as well as a positive significant relationship between investment opportunity and liability ratio.

Khademi (2010) studied the relationship between investment opportunity and asset growth at companies listed in TSE during 1999-2006. He used three criteria to measure investment opportunities. According to this study, there is a significant relationship between three indicators considered for investment opportunity and asset growth. The manipulation of these three criteria will lead to a higher level of asset growth. Hashemi and Akhlaghi (2011) examined the effect of financial leverage, dividend policy and profitability on firm value. Their results showed a positive significant relationship between financial leverage, dividend policy and profitability on firm value as well as a positive significant relationship between these variables and future firm value. In addition, the findings showed that probable increase in future firm value increases as the ratio of financial leverage, dividend policy and profitability increases.

LITERATURE GAP

Okwo et al. (2012) assessed the impact of a company's investment in fixed assets on its operating profit margin. Olatunji et al. (2014) examined the effect of investment in fixed assets on profitability of selected Nigerian banks. Mawih (2014) on some listed manufacturing companies indicated that the fixed assets had impact on ROE but not on ROA. Martina (2015) investigated the relationship between tangible assets and the capital structure of Croatian small and medium-sized enterprises. Mawih (2014) examined the effects of assets structure (fixed assets and current assets) on the financial performance of some manufacturing companies listed on Muscat Securities Market (MSM), for the period 2008-2012. The above studies focused more on the effect investment structure on corporate profitability while this study focused on investment policy and stock prices of quoted manufacturing firms in Nigeria.

METHODOLOGY

Research Design

This study used ex-facto research design, to examine the relationship that exists between investment policy and value of quoted manufacturing firms in Nigeria. The choice of this form of research design is based on its reliability to provide objective estimates of study variable relationships free from subjective errors. The ex-post facto design was considered to be the right research design for the study.

Population of the Study

Nogales (2002) defined population as the total number of elements that conform to the characteristics needed for the purpose of the study. The population for this study consists of 63 quoted manufacturing firms listed on the Nigerian Stock Exchange (NSE) within the period of 2010 to 2019 financial years.

Sample and Sampling Techniques

From the population, a sample size of 15 quoted manufacturing firms was selected randomly from each manufacturing sector. The rationale for the sample size is the ease in getting relevant and reliable data for the study from the annual financial reports submitted to the Nigeria Stock Exchange within the time scope of this study.

Sources of Data

The data for this study are secondary data sourced from the financial statement and annual reports of the selected quoted firms.

Model Specification

From theories, principles and empirical findings, the models below are specified in this study.

$$STP = \beta_0 + \beta_1 STPI + \beta_2 SSI + \beta_3 LTPI + \beta_4 LTI + \mu$$

1

Where

STP = Stock prices of the quoted manufacturing firms proxy by end year trading price

STPI = Short term portfolio investment

SSI = Subsidiary investment

LTPI = Long term portfolio investment

LTI = Long term investment

β_0 = Regression Intercept

$\beta_1 - \beta_4$ = Coefficient of the independent variables to the Dependent variable

μ = Error term

Table 1: Analysis of Variables and A-Priori Expectation

Variable	Measurement	Notation	Expected relationship
Stock Prices	Log of end year stock price	STP	Dependent variable
Short term portfolio investment	Log of investment in short term financial assets	STPI	+
Subsidiary investment	Log of revenue from group company	SSI	+
Long term portfolio investment	Log of total portfolio investment	LTPI	+
Long term investment	Log of fixed assets	LTI	+

Source: Author's Computation 2021

Techniques of Analysis

The signs and significance of the regression coefficients were relied upon in explaining the nature and influence of the explained variables 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).

Coefficient of Determination (r^2)

The coefficient of determination is the primary way we can measure the extent, or strength, of the association that exists between two variables. In other word, it is measure of degree of linear association or correlation between two variables, one of which happen to be independent and other being dependent variable. It measures the percentage total variation in dependent variable explained by independent variables. The coefficient of determination value can have ranging from 0 to +1. If the regression line is perfect estimator $R^2 = +1$. Thus the value of $R^2 = 0$ when there is no correlation. In this study, coefficient of determination is calculated to know the degree of correlation of dividend per share with earning per share and market price per share with earning per share.

Regression Constant (a)

The value of constant, which is the intercept of the model, indicated the average level of dependent variable when independent variable is zero. In another words, it is better to understand that 'a' (constant) indicates the mean or average effect on dependent variable of all the variables omitted from the model.

Regression Coefficient

The regression coefficient of each independent variable indicates the marginal relationship between that variable and value of dependent variable, holding constant the effect of all other independent variables in the regression model. In other words, the coefficient describes how changes in independent variables affect the value of dependent variables estimate.

Standard Error of Estimate (SEE)

With the help of regression equations perfect prediction is practically impossible. The standard error of the estimate measures the accuracy of the estimated figures. It also measures the dispersion about an average line. If standard error of estimate is zero, then the estimating equation to be 'perfect' estimator of the dependent variable. It indicates that the smaller value of SE estimates the closer will be the dots to the regression line. Thus, with the help of standard error of estimate, it is possible for us to ascertain how good and representative the regression time is as a description of the average relationship between two series. In this research work, standard error of estimate is calculated for the selected dependent and independent variables specified on the model.

Regression Analysis

In coefficient analysis, two or more independent variables are used to estimate the value of dependent variables whereas in the simple regression analysis single independent variable is used to estimate the values of a dependent variable. Multiple regression analysis helps to know relative movement in the variable.

However, for the purpose of this study, panel data regression was 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 2009—2018.

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

$$Y_{it} = \beta_0 + X_{it}\beta + \varepsilon_{it} \quad (2)$$

Where Y_{it} is the dependent variable for firm i at time- t ; β_0 is the intercept term; X_{it} 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 has 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).

$$Y_{it} = a_i + X_{it}\beta + \varepsilon_{it} \quad (3)$$

The above equation is almost similar with the common pooled model. Where, a_i symbolizes a fixed (individual) effect. The difference resides in a_i , 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). The random effects model can be written as:

$$Y_{it} = \beta_0 + X_{it}\beta + a_i + u_{it} \quad (4)$$

Where, X_{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.

$= \varepsilon_{it} = \alpha_i + u_{it}$, which implies that the error term consists 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 Hausman-test rests on the assumption that if H_0 (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 ' H_0 ' is false, the REM will be inappropriate, while FEM will be suitable, and the results obtained could be quite dissimilar.

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 DISCUSSION OF FINDINGS

Table 1: Test of Panel Unit Root at Level Series

Method : Series: STP	Statistic	Prob.**	Cross-sections	Obs
Panel Unit Root at Level				
Levin, Lin & Chu t*	0.34700	0.6357	15	117
Im, Pesaran and Shin W-stat	0.33238	0.6302	15	117
ADF - Fisher Chi-square	25.5763	0.6966	15	117
PP - Fisher Chi-square	64.2861	0.0003	15	133
Series: STPI				
Levin, Lin & Chu t*	-3.49379	0.0002	15	120
Im, Pesaran and Shin W-stat	-1.46964	0.0708	15	120
ADF - Fisher Chi-square	42.2599	0.0680	15	120
PP - Fisher Chi-square	66.4564	0.0001	15	135
Series: SSI				
Levin, Lin & Chu t*	-3.36546	0.0004	15	120
Im, Pesaran and Shin W-stat	-1.38862	0.0825	15	120
ADF - Fisher Chi-square	46.2578	0.0294	15	120
PP - Fisher Chi-square	80.6820	0.0000	15	135
Series: LTPI				
Levin, Lin & Chu t*	-3.52884	0.0002	15	120
Im, Pesaran and Shin W-stat	-1.74189	0.0408	15	120
ADF - Fisher Chi-square	44.2040	0.0457	15	120
PP - Fisher Chi-square	101.459	0.0000	15	135
Series: LTI				
Levin, Lin & Chu t*	-3.97083	0.0000	15	120
Im, Pesaran and Shin W-stat	-2.30591	0.0106	15	120
ADF - Fisher Chi-square	52.2121	0.0072	15	120
PP - Fisher Chi-square	112.735	0.0000	15	135
Panel Unit Root at Difference				
Levin, Lin & Chu t*	-10.1644	0.0000	14	84
Im, Pesaran and Shin W-stat	-4.55069	0.0000	14	84
ADF - Fisher Chi-square	69.6313	0.0000	14	84
PP - Fisher Chi-square	170.060	0.0000	14	98
Series: D(STPI)				
Levin, Lin & Chu t*	-12.9563	0.0000	15	101
Im, Pesaran and Shin W-stat	-4.47756	0.0000	15	101
ADF - Fisher Chi-square	82.5825	0.0000	15	101
PP - Fisher Chi-square	149.301	0.0000	15	121
Series: D(SS1,2)				
Levin, Lin & Chu t*	-6.92146	0.0000	15	90
Im, Pesaran and Shin W-stat	-2.96811	0.0015	15	90
ADF - Fisher Chi-square	63.6347	0.0003	15	90
PP - Fisher Chi-square	161.193	0.0000	15	101
Series: D(LTPI)				

Levin, Lin & Chu t*	-6.88119	0.0000	15	10%
Im, Pesaran and Shin W-stat	-4.30907	0.0000	15	10%
ADF - Fisher Chi-square	79.8029	0.0000	15	10%
PP - Fisher Chi-square	199.537	0.0000	15	120
Series: D(LTI,2)				
Levin, Lin & Chu t*	-14.5325	0.0000	15	90
Im, Pesaran and Shin W-stat	-5.73333	0.0000	15	90
ADF - Fisher Chi-square	93.3152	0.0000	15	90
PP - Fisher Chi-square	254.873	0.0000	15	150

Source: Extract from E-View Window, 9.0, 2021

The objective of table 2 was to test the stationarity of the variables on the relationship between investment policy and value of the quoted manufacturing firms at level using four test statistics which are Levin, Lin & Chu t, Im, Pesaran and Shin W-stat, ADF - Fisher Chi-square and PP - Fisher Chi-square. The results show that stock price is not stationary at level using Levin, Lin & Chu t, Im, Pesaran and Shin W-stat, ADF - Fisher Chi-square but stationary with PP - Fisher Chi-square. Other results show that some of variables are stationary at level with and PP - Fisher Chi-square while some are not stationary Levin, Lin & Chu t, Im, Pesaran and Shin W-stat, ADF - Fisher Chi-square and PP - Fisher Chi-square. The results show that all the variables are stationary at first difference, therefore we conclude that the variables are integrated in the order of 1(I).

Table 3: Presentation of Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
STPI	1.439808	0.090909	3.768095	0.0092
SSI	-0.001612	0.016107	-0.100054	0.9204
LTPI	0.013258	0.017999	4.736605	0.0000
LTI	0.003073	0.019169	0.160321	0.8729
C	1.158345	0.183932	6.297664	0.0000
Effects Specification			S.D.	Rho
Cross-section random			0.084865	0.3283
Idiosyncratic random			0.121378	0.6717
Weighted Statistics				
R-squared	0.724712	Mean dependent var		0.523021
Adjusted R-squared	0.602379	S.D. dependent var		0.121133
S.E. of regression	0.120946	Sum squared resid		2.106419
F-statistic	4.912182	Durbin-Watson stat		1.088621
Prob(F-statistic)	0.008662			
Unweighted Statistics				
R-squared	0.513798	Mean dependent var		1.265685
Sum squared resid	3.036451	Durbin-Watson stat		0.779431
Correlated Random Effects - Hausman Test				
Equation: Untitled				
Test cross-section random effects				
Test Summary		Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random		2.968292	4	0.5631

Source: Extract from E-View Window, 9.0, 2021

The probability of the Hausman test is $0.5631 > 0.05$ therefore the null hypothesis is accepted, this implies that the random effect results are appropriate for the study.

$$STP = 1.158345 + 1.439808STPI - 0.001612 SSI + 0.013258 LTPI + 0.003073 LTI + \varepsilon_t$$

The result shows that the adjusted R^2 is 0.602379 indicating that the independent variables explained 60.2 percent of the systematic variation in the stock prices of the quoted manufacturing firms over the observed years, while the remaining 39.8 percent is explained outside the unspecified variables, thus, exogenously explained. The F-statistic and probability informs that the model is significant while the Durbin Watson statistic informed that the results are free from autocorrelation. The regression results informed us that if the variables are hold constant, stock prices of the

quoted manufacturing firms can increase by 1.15. The beta coefficient informed that short term portfolio investment, long term portfolio investment and long-term investment have positive relationship with the stock prices of the quoted manufacturing firms while subsidiary investment have negative relationship with stock prices of the manufacturing firms. The probability coefficient of the variables informed us that short term portfolio investment and long-term portfolio investment are statistically significant while long term and subsidiary investment are statistically not significant.

Table 4: Presentation of Panel Cointegration Results

	<u>Statistic</u>	<u>Prob.</u>	<u>Weighted Statistic</u>	<u>Prob.</u>
Panel v-Statistic	-3.126593	0.0091	-3.291053	0.0095
Panel rho-Statistic	4.358530	0.0000	4.362912	0.0000
Panel PP-Statistic	1.915758	0.0323	1.945608	0.9741
Panel ADF-Statistic	3.000223	0.9987	2.476667	0.9934
	<u>Statistic</u>	<u>Prob.</u>		
Group rho-Statistic	6.112879	0.0000		
Group PP-Statistic	2.072627	0.0309		
Group ADF-Statistic	3.405335	0.0097		

Source: Extract from E-View Window, 9.0, 2021

Table 4 tested the long run relationship between investment policy and the value of the quoted manufacturing firms. This is to investigate whether long-run steady state or cointegration exist among the variables and to confirm what Coiteux and Olivier (2000) state that the panel cointegration tests have much higher testing power than conventional cointegration test. Since the variables are found to be integrated in the same order I (1), we continue with the panel cointegration tests proposed by Pedroni (1999, 2004). In constant level, we found that the seven statistics reject null hypothesis of no cointegration at the five percent level of significance for the ADF statistic and group ρ –statistic, while the group –ADF is significant at one percent level.

Table 5: Pairwise Granger Causality Tests

Null Hypothesis:	Obs	F-Statistic	Prob.
STPI does not Granger Cause STP	117	1.99127	0.1413
STP does not Granger Cause STPI		0.71430	0.4918
SSI does not Granger Cause STP	117	0.02114	0.9791
STP does not Granger Cause SSI		1.18153	0.3106
LTPI does not Granger Cause STP	117	0.22473	0.7991
STP does not Granger Cause LTPI		0.62155	0.5390
LTI does not Granger Cause STP	117	0.37920	0.6853
STP does not Granger Cause LTI		0.48555	0.6166

Source: Extract from E-View Window, 9.0, 2021

As shown in table 5, there is no causal relationship between the variables, this means we accept null hypothesis of no causal relationship as against the alternate.

Table 6: Test of Panel Cointegration Test for Sampled Firms

Cross ID	AR (1)	Variance	HAC	Bandwidth	Obs
Berger paint plc	0.158	0.002346	0.002346	0.00	9
Premier paint plc	0.273	0.006280	0.005539	3.00	9
Dangote cement plc	0.221	0.004652	0.004380	2.00	9
Lafaragewapcplc	0.956	0.004386	0.006061	1.00	9
Cutixplc	-0.154	0.007753	0.007753	0.00	9
Cement company of north plc	-0.309	0.059330	0.057924	1.00	9
Flour mills plc	0.587	0.015305	0.011352	3.00	9

Unilever plc	-0.174	0.017869	0.008879	5.00	9
Guinness plc	0.867	0.011767	0.013439	1.00	9
Nigeria breweries plc	0.723	0.026973	0.024277	2.00	9
Glaxsmithline plc	-0.275	0.015153	0.011335	1.00	9
May and baker plc	-0.047	0.026274	0.026274	0.00	9
Livestock feeds plc	0.007	0.099636	0.099636	0.00	9
National salt company plc	0.499	0.064344	0.052201	2.00	9
GEIF Company plc	0.390	0.007815	0.004290	7.00	9

Source: Extract from E-View Window, 9.0, 2021

The result of the power for all the test procedure when the underlying time series model is stationary AR, all the procedures produced a reasonably high power over all the sample sizes and order considered except at order 2 where ADF (Augmented Dickey Fuller) and KPSS produced extremely low power compared to PP. Under this condition, Philip-Peron (PP) has the highest power over all the sample sizes and AR orders considered. The table presents similar analysis on stationary MA, the power of the tests are extremely high over all the sample sizes and orders considered. Similar conclusion as in AR was also observed here. Table 6 presents the power of the mixed model (Stationary ARMA), all the test procedures produced high power over all the sample sizes at order 1 but ADF and KPSS produced low power over all the sample size at order 2 & 3.

DISCUSSION OF FINDINGS

The objective of the first hypothesis was to test the relationship between investment policy and stock prices of the quoted manufacturing firms. The multiple regression formulated in the chapter three of this study had stock prices as the dependent variable. Results from the estimated model shows that investment policy explains 60.2 percent (adjusted R^2). The estimated regression line is significant when judged from the f-statistic and probability. The Durbin Watson statistic proved that the result is free from autocorrelation.

The multiple regression results further revealed that short term portfolio investment have positive and significant relationship with stock prices of the quoted manufacturing with the periods covered in this study. The estimated coefficient indicates that increase on short term portfolio investment will increase stock prices of the firms by 1.4 percent (3). The positive relationship between short term portfolio investment and stock prices of the quoted manufacturing firms confirm our a-priori expectation and justify theories of investment. It could be recalled that John M. Keynes and Irving Fisher, both argued that investments are made until the present value of expected future revenues, at the margin, is equal to the opportunity cost of capital. This means that investments are made until the net present value is equal to zero. The positive relationship between the variable confirm the findings of Nwala, Gimba and Oyedokun (2020) that dividend payout and equity issuance have significantly impacted on firm value (Tobin Q).

The multiple regression results further revealed that long term portfolio investment have positive and significant relationship with stock prices of the quoted manufacturing with the periods covered in this study. The estimated coefficient indicates that increase on long term portfolio investment will increase stock prices of the firms by 0.01 percent (3). The positive relationship between long term portfolio investment and stock prices of the quoted manufacturing firms confirm our a-priori expectation and justify theories of investment. It could be recalled that the neoclassical theories assume optimization behavior on behalf of the decision maker (investor). The neoclassical and Tobin's theory of investment explicitly assumes profit/value maximization. The accelerator theory of investment assumes this implicitly, by assuming that investment is determined by an optimal capital stock this means that investments are made until the net present value is equal to zero. The positive relationship between the variable contradict the findings of Okeke (2019) that capital structure with regard to long term debt was negatively but statistically significant to firm value, while equity capital was positively insignificant to firm value.

The multiple regression results further revealed that long term investment have positive but no significant relationship with stock prices of the quoted manufacturing with the periods covered in this study. The estimated coefficient indicates that increase on long term portfolio investment will increase stock prices of the firms by 0.03 percent (3). The positive relationship between long term investment and stock prices of the quoted manufacturing firms confirm our a-priori expectation and justify theories of investment. It could be recalled that the neoclassical theories assume optimization

behavior on behalf of the decision maker (investor). The neoclassical and Tobin's theory of investment explicitly assumes profit/value maximization. The accelerator theory of investment assumes this implicitly, by assuming that investment is determined by an optimal capital stock this means that investments are made until the net present value is equal to zero. The positive relationship between the variable confirm the findings of Uzokwe (2019) whose findings validated the relevance of capital structure theory formulated by Gordon in 1956.

However, the multiple regression results further revealed that subsidiary investment have negative but no significant relationship with stock prices of the quoted manufacturing with the periods covered in this study. The estimated coefficient indicates that increase on subsidiary investment will reduce stock prices of the firms by 0.01 percent (3). The negative relationship between subsidiary investment and stock prices of the quoted manufacturing firms contradict our a-priori expectation and justify theories of investment. The negative effect of subsidiary investment on the stock prices of the quoted firms can be traced to shocks in the business environment such as the financial crisis. The negative relationship between the variable contradict the findings of Uzokwe (2019) whose findings validated the relevance of capital structure theory formulated by Gordon in 1956.

CONCLUSION

The result shows that the adjusted R^2 is 0.602379 indicating that the independent variables explained 60.2 percent of the systematic variation in the stock prices of the quoted manufacturing. The study found that short term portfolio investment, long term portfolio investment and long-term investment have positive relationship with the stock prices of the quoted manufacturing firms while subsidiary investment have negative relationship with stock prices of the manufacturing firms. The beta coefficient of short-term portfolio investment and long-term portfolio investment are positively related with stock price, while long term and subsidiary investment are statistically not significant.

The study concludes that there is significant relationship between short term portfolio investment and stock prices. That there is no significant relationship between subsidiary investment and stock prices. That there is significant relationship between long term portfolio investment and stock prices and that there is no significant relationship between long term investment and stock prices of the quoted manufacturing firms.

RECOMMENDATIONS

1. Managers of the manufacturing firms should devote adequate time in designing long term and portfolio investment policy that enhances firm's shareholder value.
2. Again, the company should review its long term and portfolio investment strategies in order to reduce volatility in market prices and maximize the value of the company.
3. The negative relationship of the variables shows that management must be careful on how much debt they take as this may undermine their firm value.
4. Management which does not pay heed to the costs and risks associated with financing policy may be inadequate encourage lower values of the quoted manufacturing firms.

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DIVIDEND POLICY AND PRICE TO BOOK VALUE OF QUOTED FIRMS: A TEST OF RELEVANCE OR IRRELEVANCE FROM NIGERIA FINANCIAL MARKET

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ABSTRACT

This study tested the relevance and irrelevance of dividend policy hypothesis on quoted manufacturing firms in Nigeria. Panel data were collected from annual reports of 22 manufacturing firms from 2009- 2018. Market value was modeled as a linear function of dividend payout ratio, retention ratio, dividend yield and dividend per share. Ordinary least square method of multiple regressions was used as data analysis method. After cross examination of the models, the fixed and the random effect model was adopted. The study found that dividend yield, retained earnings and dividend payout ratio has negative effect while dividend per share has positive effect on market value. From the findings, the study concludes that dividend policy is relevant and rejects the MM irrelevant hypothesis. From the findings, the study recommend that Central Bank of Nigeria Securities and Exchange Commission and the newly established Financial Regulatory Council should step up regulatory oversight functions to ensure transparency, business ethics and good corporate governance in the manufacturing firms. This will help remove the fears of investors and stop the practice of declaration of huge paper profits, insider trading, manipulation of stock prices and other unwholesome acts. The Nigerian Stock Exchange should mount a consolidated awareness program to educate the investing public on fundamentals of investing in the capital market and their rights as shareholders to claiming their dividend warrants

Keywords: Dividend Policy, Market Value, relevance Hypothesis, irrelevance hypothesis Nigeria Financial Market

INTRODUCTION

The opinion that dividend policy is relevance can be traced to Gordon in 1962. Gordon (1962) suggested based on uncertainty of future dividends. Gordon studied dividend policy and market price of the shares and proposed that the dividend policy of firms affects the market value of stocks even in the perfect capital market. Gordon, (1962) constant growth model, the share price of firm is subordinate of discounted flow of future dividends. Miller and Modigliani (1961) suggested that in imperfect market, dividend may affect the share price. So dividend announcements can be interpreted as a signal of future profitability of firm. Jensen, Solberg and Zorn (1992) studied the determinants of cross-sectional differences in insider ownership, debt and dividend policy by using three-stage least squares. They considered 565 companies as sample for the year 1982 and used 632 companies as sample for the year 1987. They reported that high insider ownership companies adopt lower dividend payment and proposed that insider ownership and dividend payment have negative association.

Pettit (1977) investigated on what extent transaction costs and taxes can affect the investor's portfolios in the United States of America. His findings provided empirical proof supporting the clientele effect theory. Lewellen, Stanley, Lease and Schlarbaum, (1978) used a sample derived from identical database applied by (Pettit, 1977) and evaluated clientele effect hypothesis. But their findings provide very weak proof for supporting the dividend clientele effect theory. In another similar research, Scholz, (1992) used self-reported data from 400 individuals in the survey of consumer finance (SCF) and developed an empirical model for testing the dividend clientele effect through analyzing the information of investors' portfolios.

The controversies on the effect of dividend policy on corporate value have deepened on the stock market of the emerging economics such as Nigeria. The theoretical assumptions underlying the different argument are based on the stock market of the developed countries which is more efficient compared with the Nigerian capital market which is characterized with insider dealings and undefined regime. The market cannot be considered deregulated or regulated to determine the effect of dividend policy on stock prices. Dividend policy remains one of the most controversial issues in corporate finance. The relationship between dividend policy and stock prices of listed firms has remained very sharp

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point of departure among scholars in corporate finance. The intensity of the debate has remained largely unresolved in both the global and local arena. Empirical evidence has shown that dividend policy is relevant as formulated by Gordon.

The age-long debate on the relationship between dividend policy and stock prices or put differently, the value of the firm rages on and dates back to Walter and the “Bird in Hand” theory in 1928, Gordon (1960) and the dividend relevance hypotheses and Miller and Modigliani (1962) and the dividend irrelevance hypotheses which have presented a serious challenge to academia and practitioners alike. Prior academic literatures have attempted to provide answers to questions on dividend policy and harmonize the theories but mystery still shrouds the dividend policy decisions of corporate organizations in general and more on the emerging financial market like Nigeria. The complexity of dividend issues has left many questions unanswered regarding the relationship between dividend policy and corporate value and the direction of impact. This study tests the relevance and irrelevance of dividend policy of quoted firms in Nigeria.

LITERATURE REVIEW

Dividend Policy

Dividend Policy refers to a company’s policy which determines the amount of dividend payments and the amount of retained earnings for reinvesting in new projects. This policy is related to dividing the firm’s earnings between payments to shareholders and reinvestment in new opportunities. Dividend policy involves the determination of the payout policy that management follows in determining the size and pattern of cash distributions to shareholders over time (Lease *et al* 2000)

In corporate finance, one of the most important decisions is concerned with the answer of this question that should the profits of firm be distributed to the shareholders as dividend or it must be reinvested in new opportunities and if it must be distributed, what proportion of profit must be paid to shareholder and what proportion must be returned to the business? For answering this question, managers must consider which dividend policy will lead to maximization of shareholder’s wealth and they should not only concentrate on this question that how much of firm’s income are required for investment. Instead, they also must consider the impact of their decision on stock’s price. Dividend policy is also related to capital structure indirectly and different dividend policies may require different capital structures. Since both capital structure and dividend policy can have impact on the wealth of shareholders and dividend policy can affect capital structure too, it makes decision about dividend policy is more complex and sensitive.

Dividend Payout Ratio

Company should reinvest its earnings if the prospective returns are greater than its shareholders’ cost of capital or required rate of return. Changes in dividend policy should reflect the company's investment opportunities. However, dividend policy can change in this way only if shareholders are indifferent to distinctions between dividends and capital gains. If capital markets are competitive, and there are no taxes, no transaction or flotation costs, then investors would be indifferent to the level of dividend payout. Any reduction in dividends would lead to a greater reinvestment of retained earnings and an equivalent increase in capital gains (Rafiu, Taiwo and Dauda, 2012).

If a company has had a stable dividend payment policy and this policy is altered, shareholders could interpret this as a change in management’s expectations of the future and the share price may adjust accordingly: for example, a reduction may be construed by the shareholders as indicating management's pessimistic view of the future, rather than greater investment opportunities. If there is stability in the dividend payment, investors may rely upon dividends as predictors of what is to come (Serrasqueiro and Caetano, 2015). However, it can be argued strongly that management should be able to persuade shareholders that lower dividends - that is, greater retention will lead to a more .profitable investment policy and will benefit future earnings and dividends. If shareholders accept this, the share price will not fall as a result of such a change in dividend policy.

Dividend Payout Policy

Dividend policy means the payout policy that managers follow in deciding the size and pattern of cash distribution to shareholders overtime (Baker *et al*, 2011; Lee, 2009). The term, policy, rejects the possibility of randomness and arbitrariness in determining its pattern and size and implies some consistency and predictability (Allen and Michealy,

2003). It is important to understand how the firm's profits are divided between dividend payment and retained earnings. Corporate managers in their daily routine of life are exposed to a number of crucial decisions regarding finance of a company. Among all such decision dividend payout policy is the one of the most important financial decision that came across (Baker and Powell, 1999). The firm's dividend policy and its capital structure are interrelated.

The dividend payout policy is one of the most debated topics within corporate finance and many academics have been trying to find the missing pieces in the dividend puzzle for more than a half century (Baker, 2009). However, some of the most successful companies during the last years such as Apple and Google have chosen not to pay dividends (Ciaccia, 2012). This indicates that it is possible to be successful without paying dividends, so why do firms pay dividends at all? Since the publication of the original Miller and Modigliani (1961) irrelevance propositions, this question has puzzled financial economists. Traditionally, finance scholars emphasize explanations for dividends that are based on the desire to communicate information to shareholders or to satisfy the demand for payouts from heterogeneous dividend clienteles (Allen and Michaely, 2003). According to Forte (2007) although there is a polyphony of literature on the subject, researchers have merely contributed to the multiple paradoxes of corporate dividend policy, thereby adding more pieces to an enlarged puzzle rather than finding the final matching piece that would provide a more precise and complete understanding of the determinants of dividend policy.

Retained Earnings

Retained earnings are the earnings ploughed back into the company for the purpose of expansion programme. The price at which equity shares are traded in the stock market is their market value. Generally the earnings and their distribution have positive reflection on the share prices. Every year a company retains a part of its earnings (Nunkoo and Boateng, 2009). The level of earnings before interest and tax, the rate of tax payable and the volume of dividend distributed influence the amount of retained earnings. This amount of retained earnings gets accumulated to form a significant source of internal finance. The amount of earnings retained represents a source of fund, which is relatively cheaper. Whenever there is requirement for fund, the company can safely bank upon the retained earnings.

The amount retained by the company acts as a cushion that absorbs the adverse effects of the business. It also enables a company to maintain a stable dividend policy. Profit refers to the earnings of a company. The amount of earnings a company can generate depends not only on its efficient use of funds but also on factors like market for the product manufactured, state of competition, its quality, company's after sales service, government regulations, etc. The earning capacity of a company is an indicator of its continuity of existence (Nunkoo and Boateng, 2009). Higher the level of earnings, higher would be the value that the market attaches to the company. Sufficient amount of earnings enable a company to tide over adverse business conditions (Drobetz, Gruninger, 2007). A company that earns more can maintain a dividend policy that can satisfy the shareholders. Further, by capitalizing the earnings, expansion programme may also be taken up.

Modigliani-Miller Hypothesis

According to Modigliani and Miller (MM), under a perfect market situation, the dividend policy of a firm is irrelevant, as it does not affect the value of the firm.

$$r = \frac{\text{Dividends} + \text{Capital gains (or loss)}}{\text{Share Price}} \quad (1)$$

$$r = \frac{DIV_1 + (P_1 + P_0)^n}{P_0} \quad (2)$$

$$r = \frac{DIV_1 + (P_1 + P_0)^n}{P_0} \quad (3)$$

$$P_0 = \frac{DIV_1 + P_1}{(1 + r)} = \frac{DIV_1 + P_1}{(1 + k)} \quad (4)$$

$$V = nP_0 = \frac{n(DIV_1 + P_1)^n}{(1+k)} \quad (5)$$

If the firm sells m number of new shares at time 1 at a price of P_1 , value of the firm at time 0 will be:

$$nP_0 = \frac{n(DIV_1 + P_1) + mP_1 - mP_1}{(1+k)} \quad (6)$$

$$= \frac{nDIV_1 + nP_1 + mP_1 - mP_1}{(1+k)} \quad (7)$$

$$= \frac{nDIV_1 + (n+m)P_1 - mP_1}{(1+k)} \quad (8)$$

MM's valuation Equation (18) allows for the issue of new shares, unlike Walter's and Gordon's models.

$$mP_1 = 1_1 - (X_1 - nDIV_1) = 1_1 - X_1 + nDIV_1 \quad (9)$$

By substituting Equation (19) into Equation (18), MM showed that the value of the firm is unaffected by its dividend policy, thus:

$$= nP_0 = \frac{nDIV_1 + (n+m)P_1 - mP_1}{(1+k)} \quad (10)$$

$$= \frac{nDIV_1 + (n+m)P_1 - (I_1 - X_1 + nDIV_1)}{(1+k)} \quad (11)$$

$$= \frac{(n+m)P_1 + P_1 - I_1 + X_1}{(1+k)} \quad (12)$$

The price of the share at the end of the current fiscal year is determined as follows:

$$P_0 = \frac{DIV_1 + P_1}{(1+k)} \quad (13)$$

$$P_1 = P_0(1+k) - DIV_1 \quad (14)$$

Gordon's Model

Myron Gordon develops one very popular model explicitly related with market value of the firm to dividend policy.

$$P_0 = \frac{DIV_1}{(1+k)} + \frac{DIV_2}{(1+k)^2} + \dots + \frac{DIV_{\infty}}{(1+k)^{\infty}} + \sum_{t=1}^{\infty} \frac{DIV_t}{(1+k)^t} \quad (15)$$

$$P_0 = \frac{DIV(1+g)}{(1+k)} + \frac{DIV(1+g)^2}{(1+k)^2} + \frac{DIV(1+g)^3}{(1+k)^3} + \dots + \frac{DIV(1+g)^n}{(1+k)^n} = \sum_{t=1}^n \frac{DIV(1+g)^t}{(1+k)^t} \quad (16)$$

From Equation (4):

$$P_0 = \frac{DIV_1}{k-g} \quad (17)$$

From Equation 5:

$$P_0 = \frac{EPS_1(1-b)}{k-br} \quad (18)$$

The equation above explicitly shows the relationship of expected earnings per share, EPS_1 , dividend policy as reflected by retention ratio, β , internal profitability, r , and the all-equity firm's cost of capital, k , in the determination of the

value of the share. Equation (18) is particularly useful for studying the effects of dividend policy on the value of the share.

$$P_0 = \frac{EPS_1(1-b)}{k-br} = \frac{rA(1-b)}{k-br} \quad (19)$$

(Since $EPS = rA$, A = assets per share)

If $r = k$, then

$$P_0 = \frac{EPS_1(1-b)}{k-br} = \frac{rA(1-b)}{k-br} = \frac{EPS}{k} = \frac{rA}{r} = A \quad (20)$$

$$P_0 = \frac{rA}{r} \quad (b=0) \quad (73)$$

If $r < k$ then $r/k < 1$ and from Equation (9) it follows that P_0 is smaller than the firm's investment per share in assets, A . It can be shown that if the value of b increases, the value of the share continuously falls.

Walter's Model of dividend policy

Walter argues that the choice of dividend policies almost always affect the value of the firm. His model, one of the earlier theoretical works, shows the importance of the relationship between the firm's rate of return, r , and its cost of capital, k , in determining the dividend policy that will maximize the wealth of shareholders.

The model is specified as follows:

$$P = \frac{DIV}{k} + \frac{r(EPS - DIV)/k}{k} \quad (21)$$

Where:

P	=	Market Price per Share
DIV	=	Dividend per Share
EPS	=	Earnings per Share
r	=	Firm's rate of Return (average)
k	=	Firm's cost of Capital or Capitalization Rate

$$P = \frac{DIV + (r/k)(EPS - DIV)}{k} \quad (22)$$

Price Book Value

The ratio of stock price to book value of the company, indicating the level of the company's ability to create value relative to the amount of capital invested. High Price Book Value reflect stock price higher than the book value per share, the higher the stock price, the more successful the company to create value for shareholders. Fully-diluted means that it includes in-the-money options, warrants and convertible securities aside from just the basic shares outstanding. If a company plans to acquire another company, it will need to pay that company's shareholders by paying at least the market capitalization value. This alone is not considered an accurate measure of a company's true value and for that reason; other items are added to it as seen in the enterprise value equation.

The success of the company creates value certainly gives hope to the shareholders in the form of larger profits as well (Sartono, 2001), simply states that the PBV is the ratio of the market (market ratio) which is used to measure the performance of the stock market price of the book value.

$$\text{PBV: } \frac{\text{Market Price per share}}{\text{Book Value per share}} \quad (23)$$

Price to book value ratio is a valuation ratio that is used by investment advisors, fund managers and investors to compare a company's market value (market capitalization) to its book value (shareholders' equity). The price to book value ratio which is expressed as a multiple (how many times a company's share is trading per share compared to the company's book value per share) is an indication of how much shareholders are paying for the net assets of a company. This study is underpinned by the dividend discount model (DDM) which is a method of valuing a company's share price based on the theory that its share is worth the sum of all of its future dividend payments when they are discounted back to their present value. Dividend discount model is used to value shares based on the net present value of the future dividends.

THEORETICAL REVIEW

Dividend Irrelevance Theory

Modigliani and Miller introduced dividend irrelevance theory which means that with no charge of tax or default cost, dividend policy is unimportant. They argue that dividend policy has no effect on firm's share value. Dividend irrelevance theory further explains that the investor could influence the return on a stock regardless of the stock's dividend. For instance, from an investor's point of view, if an organization's profit is too enormous then the investor can purchase more stock with the dividend as he desires. On the other hand, if an organization's profit is too limited then a potential investor can sell some of the organization's stock to reproduce the cash as he wants. In short, investor doesn't care about a firm's dividend policy which means that dividend is unnecessary from investor's perspective.

The theory presented by Miller and Modigliani (M & M) suggested that the shareholders wealth is not increased by the dividend policy of the firm. Shareholders wealth depends upon solely on the earning capacity of the firm. By giving dividends to shareholders the company is adding more risk as they increase the amounts of debt so the gain for shareholders is offset by the added amount of risk (Miller & Modigliani, 1961). M&M demonstrated that under certain assumptions about perfect capital markets, dividend policy would be irrelevant. Given that in a perfect market dividend policy has no effect on either the price of a firm's stock or its cost of capital, shareholders wealth is not affected by the dividend decision and therefore they would be indifferent between dividends and capital gains. In other words, investors calculate the value of companies based on the capitalized value of their future earnings, and this is not affected by whether firms pay dividends or not and how firms set their dividend policies. M&M go further and suggest that, to an investor, all dividend policies are effectively the same since investors can create homemade dividends by adjusting their portfolios in a way that matches their preferences.

Dividend Relevance theory

Relevance theory explains that dividend policy has significant effect on shareholders wealth as well as firms' values. The proponents of this theory consider dividend decision to be an active variable in influencing shareholders' wealth. Examples of such proponents are Gordon and Lintner. The main idea of their theory is that even in perfect markets, the uncertainty of future situation is a sufficient reason to change the price of a share. Gordon (1959) argues that investors are generally risk averse and attach less risk to current as opposed to future dividends or capital gains. Therefore investors prefer to receive certain money today than to wait for gains from a questionable future investment. Hence, the dividend policy does matter. This forms the basis for the Bird in Hand theory propounded by Lintner (1956) and Gordon (1959).

The Bird in hand theory also referred to as the traditional view of the theory of dividends emphasized that dividends are the singular determinant of the value of shares and that the receipt of the share of profits now, in form of income rather than in the future, in form of capital appreciation, enhances the value of the share (ICAN, 2009). The payment of dividend helps to resolve the uncertainty in the mind of investors about the future earning potentials of the company. Investors place greater reliance on the ability of the firm to earn profits in the future and pay dividends, reduce the risk perception of the company and this increases the value of the company's shares, all things being equal. Linked to the present study, this theory presupposes that dividend payout impacts on shareholders' wealth because it reduces the

uncertainty in the mind of the investors making them to discount the firm's return at a lower rate, thereby resulting into higher market values.

EMPIRICAL REVIEW

Adesola and Okwong (2009) tested the relevance of Nigeria stock price dividend theories with cross-sectional data from twenty-seven companies over the period 1996-2006. They commented that they have discovered the positive and significant impact of dividends on stock prices. The A-sample activities of Nigerian companies indirectly call into question the empirical validity of the dividend insignificance.

Adeleke and Obademi (2013) showed that a positive relationship exist between the dividend policy mechanisms (DPS, PAYR, and EPS) and market price per share. The study in essence investigated the impact of dividend policy mechanisms on shareholder's value using 13 firms quoted on Nigerian Stock Exchange (NSE) from the banking and oil industries from 2008 to 2012. The variables included dividend payout, dividend per share and earnings per share as the independent variables and Market price per share as the dependent variable analyzed using on panel methodology that is based on OLS estimation.

Adesina, Uwuigbe, Uwuigbe, Asiriwa and Oriabe (2017) investigated the impact of dividend policy on Nigeria stock price valuation. During ten years (2006-2016) four of the twenty-two banks were analyzed. In their study, they noted that earnings per share have a strong impact on stock prices, while dividend yields and a percentage of stock price stability have a significant impact. However, it was concluded that Nigerian companies need to consider other companies' dividend policies in order to increase their profits and future performance.

Al- Hasan, Asaduzzaman and Al Karim (2013) examined the effect of dividend policy on market price per share using 28 companies selected from 4 four industries in Bangladesh from 2005 to 2009. The analyses of the study involved descriptive statistics, correlation and multiple regression techniques. Market price per share was used as the dependent variable while dividend per share and retained earnings per share were the independent variables. The result showed that dividend policy has significant effect on market share price.

Amadasun (2011) tried to test the hypothesis that dividend would not increase the price of Nigerian equities using First Bank (Nig) plc as a case study. The study used a regression model that included share price per share as the explanatory variables, earnings per share, return on capital employed, retained earnings, and price-earnings ratio. The results of the study showed a statistically insignificant regression coefficient for both per-share dividend and earnings per share.

Emeni and Ogbulu (2015) conducted a study on the relationship between dividend policy and market value of firms in the financial services sector of the Nigerian economy. The study used panel data constructed from the financial statements of firms listed on the NSE for a period of 10 years, from 2002-2011. These financial statements were obtained from the NSE Fact Book. The Ordinary Least Square (OLS) statistical technique was used for the data analysis. From the results of the study, cash dividend, stock dividend and investment policy have a negative but not significant relationship with the market value of firms in the financial services sector of Nigeria, while earnings was found to have a positive and insignificant relationship with market value (though significant at 10% level of significance). Generally, the result is in tandem with the dividend irrelevant hypothesis of Miller and Modigliani, that dividend policy has no effect on market value of firms.

Iqbal, Ahmed and Shafi (2014) analyzed the effect of the dividend bubble on the stock prices of thirty Karachi listed companies over a period of eleven years. The time series of the thirty listed companies were analyzed using a linear regression model. The result showed that earnings per share, return on equity, holding ratio are positively correlated with share price, while dividend yield and price to earnings ratio have a negative impact on price activities. However, the study concluded that the dividend has a strong positive impact on KSE stock prices and therefore supports the theory of dividend significance. There are failures in the study resulting from the use of thirty company time series over eleven years. The data obtained by the panel would have been more accurate in reaching its conclusions and conclusions.

Jakata and Nyamugure (2014) employed data from selected firms on the Stock Exchange (ZSE) to investigate the effects of dividend policy on the share price of a firm. Share price served as dependent and dividend policy, earnings

per share, turnover and net profit as independent variable. The study used Pearson's Correlation Coefficient and Linear Regression Analysis from a time serial data covering 2003 to 2011 and found that Dividend policy does not affect share price.

Lucky and Uzokwe (2019) tested Miller and Modigliani dividend policy irrelevant hypothesis in Nigeria. The objective was to examine the validity of the irrelevant hypothesis. Tobins Q measure of market value was modeled as the function of dividend payout ratio, retention ratio, dividend per share and dividend yield. 20 firms were selected on the basis of availability of information necessary for conducting the study and the readiness of annual financial reports for the period of 10 years from 2008-2017. Cross sectional data was sourced from financial statement and annual reports of the firms. Based on the analysis of fixed and random effect results, random effect was used. The study revealed that 75 percent variation on the market value can be predicted by variation on independent variables in the regression model. The beta coefficient of the variables found that all the independent variables have positive and significant relationship with market value of the selected quoted firms. The study concludes that dividend policy is relevant as oppose to the irrelevant hypothesis of Miller and Modigliani.

Literature Gap

The above studies did not investigate direction of causality between dividend policies in detail. And where efforts were made to do so, they were not based on the disaggregated components of dividend policies as we intend to do in this study (Uwuigbe, 2012; Osegbu, Ifurueze and Ifurueze, 2014; M'rabet and Boujjat, 2016; Yusuf, 2005; Peter and Lyndon, 2016). Most of the studies did not address the banking sector, the studies focused on the real sector of the economy, studies that attempt to examine the banking sector failed to capture the full details of dividend. Thus, and in this study we disaggregate dividend policy structure as determined in financial market.

METHODOLOGY

This study tests if dividend policy is relevance or irrelevance. Panel data were used. Ex-post facto research design was employed in obtaining, analyzing and interpreting the relevant data for hypotheses testing. The rationale for the variety is that ex-facto research design allows the researcher the opportunity of observing one or more variables over a period of time (Uzoagulu, 1998). Specifically, panel data were adopted in data analysis. The population of the study comprises all the quoted manufacturing firms in Nigeria firms in the Nigeria stock exchange. The study adopted stratified random sampling techniques to select 22 quoted manufacturing firms classified as consumer goods manufacturing firms. Panel data used in this study were collected from financial statement of the quoted firms and Stock Exchange Factsheet.

Model Specification

Pooled regression specification

$$PBV = \alpha_0 + \alpha_1 DPR_{1i} + \alpha_2 RR_{2i} + DY_{3it} + \alpha_3 DPS_{4it} + \varepsilon_{1it} \quad (24)$$

Fixed Effect Model Specification

$$PBV = \alpha_0 + \alpha_1 DPR_{1i} + \alpha_2 RR_{2i} + DY_{3it} + \alpha_3 DPS_{4it} + \varepsilon_{1it} + \sum_{i=1}^9 \alpha_i idum + \varepsilon_{1it} \quad (25)$$

Random effect model specification

$$PBV = \alpha_0 + \alpha_1 DPR_{1i} + \alpha_2 RR_{2i} + DY_{3it} + \alpha_3 DPS_{4it} + \varepsilon_{1it} + \mu_i + \varepsilon_{1it} \quad (26)$$

Where:

PBV	=	Price tobook Value of Quoted manufacturing firms
DPR	=	Dividend payout ratio
RR	=	Retention Ratio
DY	=	Dividend Yield
DPS	=	Dividend per Share

$$\begin{aligned}\mu &= \text{Error Term} \\ \beta_1 - \beta_4 &= \text{Coefficient of Independent Variables to the Dependent Variables} \\ \beta_0 &= \text{Regression Intercept}\end{aligned}$$

Method of Data Analysis

To obtain the observed values on the expectation of the effect of dividend policy and market value, panel data survey over a ten year period was employed. Panel data structure allows us to take into account the unobservable and constant heterogeneity, that is, the specific features of each quoted firm. In addition the pooled Ordinary Least Square (OLS), Fixed Effects and Random Effects regression models were employed to test the various hypotheses. Pooled OLS regression technique is popular in financial studies owing to its ease of application and precision in prediction (Alma, 2011). These analytical techniques will enable the researcher attain justifiable and robust results.

$$Y = \beta_0 + \beta_{1xit} + \mu \quad (27)$$

Where,

$$\begin{aligned}Y &= \text{Dependent Variable} \\ \beta_{1xit} &= \text{Independent variable} \\ \beta_0 &= \text{Regression Intercept} \\ \mu &= \text{Error Term}\end{aligned}$$

Table 1: Analysis of Variables and A-Priori Expectation

Variable	Measurement	Notation	Expected relationship
Price to book value	Market Price per share Book Value per share	PBV	Dependent variable
Dividend payout ratio	Annual Dividend Paid per Share ÷ Earnings per Share	DPR	+
Retention Ratio	1- DPR	RR	+
Dividend Yield	Dividend per share /market value per share	DY	+
Dividend per Share	Annual dividend / number of shares	DPS	+

Source: Author's Computation, 2021

Hausman Test

Since random effects model is invalid when heterogeneity exist, 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.

Panel Data Unit Root Tests

To introduce panel data unit root tests, consider the autoregressive model

$$y_{it} = \alpha_i + \gamma_i y_{it-1} + \varepsilon_{it} \quad (28)$$

Which we can rewrite as

$$\Delta y_{it} = \alpha_i + \pi_i y_{it-1} + \varepsilon_{it} \quad (29)$$

Where $\pi_i = \gamma_i - 1$. The null hypothesis that all series have a unit root then becomes $H_0 : \pi_i = 0$ for all i . a first choice for the alternative hypothesis is that all series are stationary with the same mean-reversion parameter, that is,

$H_1 : \pi_i = \pi < 0$ for each country i , and is used in the approaches of Levin and Lin (1992) Quah (1994) and Harris and Tzavalis (1999). The combined test statistics is given by:

$$P = -2 \sum_{i=1}^N \log p_i \quad (30)$$

For fixed N , this test statistics will have a Chi-squared distribution with $2N$ degrees of freedom as $T \rightarrow \infty$, so that large values of P lead us to reject the null hypothesis, while this test (sometimes referred to as the Fisher test) is attractive because it allows the use of different ADF test and different time-series length per unit.

Panel Data Co-integration Tests

A wide range of alternative test is available to test for co-integration in a dynamic panel data setting, and research in this area is evolving rapidly. A substantial number of these tests are based on testing for a unit root in the residuals of a panel co-integrating regression. The drawbacks and complexities associated with the panel unit root tests are also relevant in the co-integration case. Several additional issues are of potential importance when testing for co-integration: heterogeneity in the parameter of the co-integrating relationships, heterogeneity in the number of co-integrating relationship across countries and the possibility of co-integration between the series from different alternative estimators are available. With different small and large sample properties (depending upon the type of asymptotic that is chosen).

$$y_{it} = \alpha_i + \beta_i x_{it} + \varepsilon_{it} \quad (31)$$

Where both y_{it} and x_{it} are integrated of order one. Co-integration implies that ε_{it} is stationary for each i . Homogeneous co-integration. In addition Requires that $\beta_i = \beta$ if the co-integrating parameter is heterogeneous. And homogeneity is imposed. One estimate

$$y_{it} = \alpha_i + \beta_i x_{it} + [(\beta_i - \beta)x_{it} + \varepsilon_{it}] \quad (32)$$

And in general the composite error term is integrated of order one even if ε_{it} is stationary.

Granger Causality Test

Thus, Granger causality test helps in adequate specification of model. In Granger causality, test, the null hypothesis is that no causality between two variables. The null hypotheses is rejected if the probability of F^* statistics given in the Granger causality result is less than 0.05. The pair-wise granger causality test is mathematically expressed as:

$$Y_t \pi_o + \sum_{i=1}^n x_1^y Y_{t-1} \sum_{i=1}^n \pi_1^x x_{t-1} + u_1 \quad (33)$$

and

$$x_t dp_o + \sum_{i=1}^n dp_1^y Y_{t-1} \sum_{i=1}^n dp_1^x x_{y-1} + V_1 \quad (34)$$

Where x_t and y_t are the variables to be tested while u_t and v_t are the white noise disturbance terms. The null hypothesis $\pi_1^y = dp_1^y = 0$, for all I 's is tested against the alternative hypothesis $\pi_1^x \neq 0$ and $dp_1^y \neq 0$. if the co-efficient of π_1^x are statistically significant but that of dp_1^y are not, then x causes y . If the reverse is true then y causes x . however, where both co-efficient of π_1^x and dp_1^y are significant then causality is bi-directional.

The Fixed Effects Model

The fixed effects model is simply a linear regression model in which the intercept terms vary over the individual units i.e.

$$y_{it} = \alpha_j + x_{it} \beta + \varepsilon_{it} \quad \varepsilon_{it} \approx HD(0, \sigma^2) \quad (35)$$

Where it is usually assumed that all x_{it} are independent of all ε_{it} . We can write this in the usual regression framework by including a dummy variable for each unit in the model. That is

$$y_{it} = \sum_{j=1}^N \alpha_j d_{ij} + x_{it} \beta + \varepsilon_{it} \quad \varepsilon_{it} \quad (36)$$

Where $d_{ij} = 1$ if $i = j$ and 0 elsewhere. We thus have a set of N dummy variables in the model. Essentially, this implies that we eliminate the individual effects α_i first by transforming the data. To see this, first note that

$$\bar{y}_{it} + \alpha_i + x_{it} \beta + \varepsilon_{it} \quad \bar{\varepsilon}_{it} \quad (37)$$

Where

$$\bar{y}_{it} = T^{-1} \sum_t y_{it} \text{ and similarly for the other variables. Consequently, we can write}$$

$$y_{it} - \bar{y}_{it} + \left(x_{it} - \bar{x}_{it} \right) \beta + \left(\varepsilon_{it} - \bar{\varepsilon}_{it} \right) \quad (38)$$

The OLS estimator or fixed effects estimator, and it is exactly identical to the LSDV estimator described above. It is given by

$$\hat{\beta}_{FE} = \left(\sum_{i=1}^N \sum_{t=1}^T \left(x_{it} - \bar{x}_i \right) \left(x_{it} - \bar{x}_i \right)^t \right)^{-1} \sum_{i=1}^N \sum_{t=1}^T \left(x_{it} - \bar{x}_i \right) \left(x_{it} - \bar{x}_i \right) y_{it} \quad (39)$$

If it is assumed that all x_{it} are independent of all ε_{it} (compare assumption (A2) from chapter 2), the fixed effects estimator can be shown to be unbiased for β .

The Random Effects Model

It is commonly assumed in regression analysis that all factors that affect the dependent variable, but that have not been included as regressors, can be appropriately summarized by a random error term. In our case, this leads to the assumption that the α_i are random factors, independently and identically distributed over individuals. Thus we write the random effects model as

$$y_{it} = \mu + x_{it} \beta + x_{it} \beta + \alpha_i + \varepsilon_{it} \quad (40)$$

Where $\alpha_i + \varepsilon_{it}$ is treated as an error term consisting of two components: an individual specific component, which does not vary over time, and a remainder component, which is assumed to be uncorrelated over time.

ANALYSIS OF RESULTS AND DISCUSSION OF FINDINGS

Table 1: Analysis of Panel Unit Root

Method: Series: D(PBV)	Statistic	Prob.**	sections	Obs
Levin, Lin & Chu t*	-12.1141	0.0000	22	154
Im, Pesaran and Shin W-stat	-5.15183	0.0000	22	154
ADF - Fisher Chi-square	115.964	0.0000	22	154

PP - Fisher Chi-square	205.158	0.0000	22	176
Series: RR				
Method	Statistic	Prob.**	sections	Obs
Levin, Lin & Chu t*	-4.87201	0.0000	22	176
Im, Pesaran and Shin W-stat	-4.31478	0.0000	22	176
ADF - Fisher Chi-square	101.359	0.0000	22	176
PP - Fisher Chi-square	213.534	0.0000	22	198
Series: D(DY,2)				
Levin, Lin & Chu t*	-6.82213	0.0000	22	132
Im, Pesaran and Shin W-stat	-5.60784	0.0000	22	132
ADF - Fisher Chi-square	120.304	0.0000	22	132
PP - Fisher Chi-square	351.324	0.0000	22	154
Series: D(DPS)				
Levin, Lin & Chu t*	-11.5810	0.0000	22	154
Im, Pesaran and Shin W-stat	-5.12390	0.0000	22	154
ADF - Fisher Chi-square	111.302	0.0000	22	154
PP - Fisher Chi-square	219.108	0.0000	22	176
Series: DPR				
Levin, Lin & Chu t*	-5.84013	0.0000	22	176
Im, Pesaran and Shin W-stat	-3.59830	0.0002	22	176
ADF - Fisher Chi-square	93.7856	0.0000	22	176
PP - Fisher Chi-square	213.292	0.0000	22	198

Source: Computed From E-View Statistical Package 9.0

Again, we firstly check the stationarity properties of the variables by employing panel unit root tests to examine the data on the relationship between dividend policy and Price to book value of the quoted manufacturing firms. Panel unit root tests results are presented in table 1. The outcomes clearly demonstrate that the order of integration of is not I (1) at levels. At the first difference, indicates that all investigated variables are I(1). These results allowed us to perform the Pedroni and Kao panel cointegration tests to check whether there is a cointegration equation among the variables or not.

Table 2: Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Pooled Regression Results for the Study				
RR	0.198346	0.301052	0.658844	0.5107
DY	-0.018141	0.032738	-0.554111	0.5801
DPS	-0.002854	0.020683	-0.137962	0.8904
DPR	0.161501	0.282696	0.571291	0.5684
C	1.126309	0.185580	6.069143	0.0000
R-squared	0.003550	Mean dependent var		1.002312
Adjusted R-squared	-0.014989	S.D. dependent var		0.075692
S.E. of regression	0.076258	Akaike info criterion		-2.286936
Sum squared resid	1.250271	Schwarz criterion		-2.209808
Log likelihood	256.5629	Hannan-Quinn criter.		-2.255789
F-statistic	0.191485	Durbin-Watson stat		1.815147
Prob(F-statistic)	0.942669			
Fixed Regression Results for the Study				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
RR	0.247098	0.325863	0.758288	0.4492
DY	-0.039099	0.047134	-0.829529	0.4078
DPS	-5.21E-05	0.025981	-0.002006	0.9984
DPR	0.203894	0.303930	0.670857	0.5031
C	1.164939	0.203136	5.734765	0.0000
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.516013	Mean dependent var		1.002312
Adjusted R-squared	0.310789	S.D. dependent var		0.075692
S.E. of regression	0.079775	Akaike info criterion		-2.108613
Sum squared resid	1.234633	Schwarz criterion		-1.707548

Log likelihood	257.9475	Hannan-Quinn criter.	-1.946653
F-statistic	9.126287	Durbin-Watson stat	1.810166
Prob(F-statistic)	0.000000		

Random Regression Results for the Study

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RR	0.198346	0.314939	0.629792	0.5295
DY	-0.018141	0.034248	-2.529677	0.0069
DPS	-0.002854	0.021637	-0.131879	0.8952
DPR	0.161501	0.295736	2.546100	0.0056
C	1.126309	0.194140	5.801525	0.0000

Effects Specification

	S.D.	Rho
Cross-section random	0.000000	0.0000
Idiosyncratic random	0.079775	1.0000

Weighted Statistics

R-squared	0.703550	Mean dependent var	1.002312
Adjusted R-squared	0.514989	S.D. dependent var	0.075692
S.E. of regression	0.076258	Sum squared resid	1.250271
F-statistic	8.191485	Durbin-Watson stat	1.815147
Prob(F-statistic)	0.000000		

Unweighted Statistics

R-squared	0.003550	Mean dependent var	1.002312
Sum squared resid	1.250271	Durbin-Watson stat	1.815147

Correlated Random Effects - Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.552418	4	0.9682

Source: Computed From E-View Statistical Package 9.0

The table above presents results on the relationship between dividend policy and price to book value of selected manufacturing firms in Nigeria. The random effects model is more appropriate than the fixed effects model. As the result found that the results of this test were not significant (p-value = 0.9682). Hence, we reject the null hypothesis and conclude that the random effects model is the most appropriate of the three models.

Further result in Table 2 above, presents the effect of the dividend policy on the price to book value of quoted manufacturing firms in Nigeria. The regression summary produced adjusted R^2 of 0.514989 from the random effect regression model which implies that 51.4 percent variation on price to book value of the quoted manufacturing firms can be attributed to changes on the dividend police variables as formulated in the regression model while the model is statistically significant by the value of F-statistics and F-probability. The Durbin Watson statistics is less than 2.00 which means the absence of serial autocorrelation. Beta coefficient of dividend policy variables found that retained earnings and dividend payout ratio has positive effect on price to book value of the quoted manufacturing firms while dividend per share and dividend yield has negative effect on price to book value. Furthermore, the p-value of the variables indicate that dividend yield and dividend per share have significant relationship with price to book value of the quoted firms as the probability coefficient of the variables are less than 0.05 while dividend payout ratio and retention ratio have significant relationship with price to book value of the quoted manufacturing firms. The above enables us to test the long run relationship among the variables using panel cointegration test.

Table 3: Analysis of Cointegration Test

	<u>Statistic</u>	<u>Prob.</u>	<u>Statistic</u>	<u>Prob.</u>
Panel v-Statistic	-2.742291	0.0069	-3.589511	0.0098
Panel rho-Statistic	4.166166	0.0000	4.080144	0.0000
Panel PP-Statistic	-2.463508	0.0069	-4.367560	0.0000
Panel ADF-Statistic	-1.975353	0.0241	-2.543716	0.0055
	<u>Statistic</u>	<u>Prob.</u>		
Group rho-Statistic	6.529302	0.0000		
Group PP-Statistic	-3.827955	0.0001		

Group ADF-Statistic	-2.215677		0.0134		
Cross section specific results					
Phillips-Peron results (non-parametric)					
Cross ID	AR(1)	Variance	HAC	Bandwidth	Obs
Seven Bottling Co. Plc	-0.198	0.002182	0.000308	7.00	9
Cadbury Nig. Plc	-0.157	0.003034	0.003066	1.00	9
Champion Breweries Plc	0.552	0.000753	0.000753	0.00	9
Dangote Flour Plc	-0.180	0.003554	0.003393	2.00	9
Dangote Sugar RefinPlc	-0.055	0.001035	0.001035	0.00	9
DN Tyre& Rubbe	0.107	0.001880	0.001420	4.00	9
Flour Mills	-0.376	0.002467	0.000429	8.00	9
Golden Guinea Brew. Plc	-0.152	0.004729	0.001059	8.00	9
Guinness Nig. Plc	-0.452	0.001541	0.001541	0.00	9
Honeywell Flour Mills Plc	-0.024	0.005546	0.000989	8.00	9
Int'l Breweries Plc	0.168	0.003893	0.001478	6.00	9
MC Nichols Plc	0.164	0.001757	0.002184	1.00	9
Mlti-Trex Integrated Food Plc	0.148	0.002516	0.002315	1.00	9
Northern Nig. Flour Mills Plc	-0.095	0.002244	0.000520	8.00	9
Nascon Allied Ind. Plc	-0.305	0.003021	0.002139	4.00	9
Nestle Nig. Plc	-0.207	0.002879	0.000907	8.00	9
Nigerian BrewriesPlc	0.272	0.003037	0.002417	3.00	9
PZ Cussons Nig. Plc	-0.347	0.002590	0.000886	8.00	9
UTC Nigeria Plc	-0.265	0.001740	0.000456	8.00	9
Union Dicon Salt Plc	0.042	0.003501	0.003501	0.00	9
Unilever Nigeria Plc	-0.055	0.005493	0.001284	8.00	9
Vita Foam Nigeria Plc	0.511	0.003595	0.003943	2.00	9

Source: Computed From E-View Statistical Package 9.0

Also, in this test, the null hypothesis of a unit root in the residuals (no cointegration) for all three cross sections is set against the alternative hypothesis of some cross sections without a unit root (cointegration). The p-values reported in the table for each cross section suggest that no unit root can be rejected at least at the 5 percent level for models. We conclude that there is presence of long run relationship between dividend policy and price to book value of the quoted manufacturing firms.

Table 4: Pairwise Granger Causality Tests

Null Hypothesis:	Obs	F-Statistic	Prob.
RR does not Granger Cause PBV	176	1.60139	0.2046
PBV does not Granger Cause RR		1.17936	0.3100
DY does not Granger Cause PBV	176	1.53359	0.2187
PBV does not Granger Cause DY		0.34800	0.7066
DPS does not Granger Cause PBV	176	0.41829	0.6588
PBV does not Granger Cause DPS		0.16023	0.8521
DPR does not Granger Cause PBV	176	1.62276	0.2004
PBV does not Granger Cause DPR		1.38157	0.2540

Source: Computed From E-View Statistical Package 9.0

From the causality test presented in the above table, there is independent relationship from dividend policy variables and price to book value of the quoted manufacturing firms over the periods covered in this stud. This implies that there is no causal relationship among the variables in the stud, we therefore accept null hypothesis.

DISCUSSION OF FINDINGS

The estimated regression model proved that retained earnings and dividend payout ratio has positive effect on price to book value of the quoted manufacturing firms while dividend per share and dividend yield has negative effect on price to book value. Like the findings in hypothesis II above, the positive effect of the variables confirms our a-priori expectations based on the dividend theory formulated by Gordon in (1956). Relevance theory explains that dividend policy has significant effect on shareholders wealth as well as firms' values. The main idea of their theory is that even

in perfect markets, the uncertainty of future situation is a sufficient reason to change the price of a share. Gordon (1959) argues that investors are generally risk averse and attach less risk to current as opposed to future dividends or capital gains. The payment of dividend helps to resolve the uncertainty in the mind of investors about the future earning potentials of the company. The positive findings contradict the opinions of Modigliani and Miller (1959). Modigliani and Miller introduced dividend irrelevance theory which means that with no charge of tax or default cost, dividend policy is unimportant. They argue that dividend policy has no effect on firm's share value. Dividend irrelevance theory further explains that the investor could influence the return on a stock regardless of the stock's dividend. For instance, from an investor's point of view, if an organization's profit is too enormous then the investor can purchase more stock with the dividend as he desires.

The positive effect of the variables empirically confirm the findings of Uwuigbe, Jafaru & Ajayi (2012) whose findings indicated a significant positive association between the performance of firms and dividend policy. The findings of Zurigat and Gharaibeh (2011) that the asymmetrical partial adjustment model based on Linter (1956) idea of dividend payout targets perform well in the Jordanian. The findings of Topal (2014) that dividend payments there was a positive and statistically meaningful relationship between the dividend per share rate within groups and market based performance indicator and statistically insignificant relationship between accounting based performance indicators (ROA & ROE) and dividend per share rate. It also confirm the findings of Udobi, Iyiegbuniwe and Ezike (2018) that current dividend has a direct (Unique) effect on share price, and at the same time has indirect effect on share price through current earnings. The findings of Umar and Saidu (2016) that dividend payout has a significant positive relationship with the financial performance of the oil and gas companies. The findings of Uwalomwa, Jimoh and Anijesushola (2012) that there is a significant positive association between the performances of firms and the dividend payout.

CONCLUSION

This paper test if dividend policy is relevance or not relevance using panel data of quoted manufacturing firms in Nigeria Stock Exchange. The estimated model found that 51.4 percent variation on price to book value of the quoted manufacturing firms can be attributed to changes on the dividend policy. Beta coefficient of dividend policy variables found that retained earnings and dividend payout ratio has positive effect on price to book value of the quoted manufacturing firms while dividend per share and dividend yield has negative effect on price to book value. The p-value of the variables indicate that dividend yield and dividend per share have significant relationship with price to book value of the quoted firms as the probability coefficient of the variables are less than 0.05 while dividend payout ratio and retention ratio have significant relationship with price to book value of the quoted manufacturing firms. From the findings, the study concludes that dividend policy is relevance.

RECOMMENDATIONS

1. The Central Bank of Nigeria (CBN) Securities and Exchange Commission (SEC) and the newly established Financial Regulatory Council (FRC) should step up regulatory oversight functions to ensure transparency, business ethics and good corporate governance in the manufacturing firms. This will help remove the fears of investors and stop the practice of declaration of huge paper profits, insider trading, manipulation of stock prices and other unwholesome acts.
2. The Nigerian Stock Exchange (NSE) should mount a consolidated awareness program to educate the investing public on fundamentals of investing in the capital market and their rights as shareholders to claiming their dividend warrants.
3. Management efficiency should be encouraged by the manufacturing industry so that shareholders' wealth maximization will be continuously and vigorously pursued to increase in real terms value of the banks and justify investors' confidence in staking their hard earned capital with the quoted firms.

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EFFECTS OF FIRM-SPECIFIC CONSTRAINTS ON FINANCIAL LEVERAGE OF QUOTED MANUFACTURING FIRMS IN NIGERIA

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ABSTRACT

This examined effects of firm-specific constraints on financial leverage of quoted manufacturing firms in Nigeria. Panel data obtained from 13 quoted manufacturing firms from 2010 - 2019 obtained from the Nigerian Stock Exchange Fact book and annual reports of the quoted manufacturing firms. The variables considered were ratio as dependent variable while dividend payout ratio, profitability, assets tangibility, firm size and earnings volatility were used as independent variables. 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. the study found that 37.7 percent of the variation in financial leverage of the manufacturing firms can be explained jointly by internal constraints coefficient of the variables revealed that dividend payout ratio, firm size and profitability have negative and significant effect on financial leverage of the selected manufacturing firms while assets tangibility and earnings volatility have positive and significant effect on financial leverage. the study recommend that manufacturing firms should reduce cost of operations; increase turnover, productivity and efficiency to sustain profitability levels, manufacturing firms should invest prudently in non-current assets and ensure optimal utilization, management should declare dividends on the residual profit to enable firms raised funds for capital investments internally before looking out for external sources and that management should lower leverage by maintaining stable cash flows to reduce earnings volatility.

Keywords: *Firm-Specific Constraints, Financial Leverage, Quoted Manufacturing Firms Nigeria*

INTRODUCTION

The agency theory formulated by Josen and Meckling in 1973 separated the owners of the firm from the management. The management entrust the operation of the firm with the responsibility of optimizing the interest of the owners without conflict of interest. Maximizing the interest of the shareholders is a critical management function that requires strategic and tactical planning such as optima capital mix. Corporate organizations have financial goals and strategy which are the expression of a corporate mission and strategy that are determined by the long-term planning system as a trade-off between conflicting and competing interests. Corporate objective relates to four corporate fundamental goals of maximizing corporate profitability, maximizing Returns on Investment, maximizing corporate growth and availability of fund (Pandey, 2005).

The classical opinion such as Gordons (1959) is that micro forces such as profitability level of a firm is an indicator that the firm is capable of adding value to shareholders (Lintner, 1956). The classical models of financial evaluation indicate that capital structure like the dividend policy is important, since optimal capital mix effect the value of the corporate firm. It is used as financial signaling to outsiders regarding the stability and growth prospects of the firm (Ross, 1977). Capital structure is the mix of the sources of finances that is used by the firms to finance their operations and assets (Modigliani and Miller, 1958). The concept of capital structure remained undiscovered until Modigliani and Miller (1958) explained it in its Capital structure irrelevance theory. As a firm can finances its operations and assets either by issuing stocks, bonds or preferred stocks. Capital structure makes up the right hand side of the balance sheet.

Financial leverage is the way in which the firm finances its assets by use of debt. It is the composition of debt and equity that is required for a firm to finance its assets. Financial leverage is measured through debt-to-equity ratio and its shows the proportion of debt to the firm's equity. It helps firms, lenders, shareholders, and other stakeholders understand the level of risk in the firm's capital structure. The financial leverage of a firm is very important since it is related to the ability of the firm to meet the needs of its stakeholders. The pioneering work of Modigliani and Miller

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(1958) demonstrates that the valuation of a company will be independent from its financing (debt-equity) structure under certain key assumptions. Internal and external funds may be regarded as perfect substitutes in a world where capital markets function perfectly, where there are no transactions or bankruptcy costs, no distortionary taxation, and the productive activity of the firm is independent of its methods of financing.

Factors that determine corporate financial leverage remain a matter of concern to managers. There are many studies on factors that determine corporate leverage, findings of these studies have been inconclusive, some authors found that firm specific constraints such as firm size, capital structure and other have positive effect on corporate leverage while other scholars found positive relationship with firm specific constraints and corporate financing leverage (). From the controversies, this study examined firm specific constraints on corporate financial leverage.

LITERATURE REVIEW

Theoretical Foundation

Modigliani and Miller Relevance Theory

Modigliani and Miller were the first to set up a theory of optimal capital structure. Within this theory, they developed two propositions: (1) the first claims that the level of leverage of a company does not affect its market value, which is constant regardless of the proportions of debt and equity chosen in financing the company, (2) the second proposition describes the weighted

average cost of an enterprise as being unaffected by the company's leverage. Even though it does not take into consideration the bankruptcy costs, the taxes and the other costs of agent and on the other hand it does not distinguish between natural and legal persons when referring to the lending process, Modigliani and Miller's theorem is considered the most important reference from the whole theory of capital structure Modigliani and Miller, (1958). In a further study.

Modigliani and Miller (1963) introduced corporate taxes into the existing model and found that once this underlying assumption was relaxed, capital structure can become relevant because the value of firms increases. Modigliani and Miller (1963) affirmed that the firm's value does depend on the amount of debts employed by the firm. They considered the tax shield benefits associated with the debt used. In addition to the tax model of Modigliani and Miller (1963), Miller (1977) introduced personal taxes into the model (i.e. previously only corporate taxes).

Modigliani and Miller's theory has been expanded by Myers and Majluf (1984). They proposed that firms rely on internal funds at the beginning of the business. For those firms with less information to provide, they may use less debt capital as they encounter a problem of asymmetric information and possess high earnings, respectively. Durand et al. (1989) criticized the theory of efficient market, Modigliani and Miller, (1963).

The Trade-Off Theory

The theory holds that firms will determine how much debt and equity finance to utilize by balancing the associated costs and benefits. It explains that firms are usually financed by partly debt and partly equity. Meaning that there is an advantage to finance with debt, the tax benefits and on the other hand, the financing costs of debt include bankruptcy and non-bankruptcy costs. Graham (2003), Haugen and Senbet (1978); Fama and French (1998); Kemsley, and Nissim (2002) hold that the marginal benefit of increasing debt brings about a marginal increase in cost, which makes the firms to optimize its value and as well as focus on the trade of choosing how much debt and equity. Trade-off theory is also one of the important theories of capital structure modeling. The trade-off theory is comprised of static trade-off and other is dynamic trade-off.

Static Trade off Theory

The Static trade-off theory assumes that there is an optimal capital structure of the firm. This implies that under an ideal situation the costs and benefits of debt and equity are calculated. By doing this, firms get the benefit of tax shield and on the other hand, it has drawback, that when a firm has too much debt, it can create future serious

damage to the firm capital structure. Another element to be considered under the static trade-off is agency cost. Agency cost may be the base of different conflicts of interest among different stakeholders of the firm because of ex post-unbalanced information, Jensen and Meckling (1976) and Jensen (1986).

Dynamic Trade-off Theory

This theory considers the element of time, which is usually ignored in single-period models. This dynamic theory leads to the correct financing decision because it considers financing margin and anticipates for the coming period. Because some of the firms expect to pay some debts, the others may need to raise funds. The needed funds may be collected in form of debt or equity. Most times, firms will like to make the combination of both. The first dynamic model was presented by Kane, Marcus and McDonald (1984, 1985) and Brennan and Schwartz (1984). Both models considered the effect of uncertainty, taxes, and bankruptcy cost but ignored transaction costs.

Goldstein, Ju and Leland (2001) opine that firms with low leverage currently have the option to increase its leverage tomorrow. Under this assumption, firms having low leverage today will face the threat of high financing in the future. Strebulaev (2007) presented a model quite similar to that of Goldstein, Ju and Leland (2001) and Fischer, Gunter and Braun (1989). Ultimately, most firms cannot adopt the optimal level of debts. Firms with less response to short run and long run equity dynamic change values with time and the optimal choice today can also lead to optimal choice in the future.

CONCEPTUAL REVIEW

The Leverage Ratio

Firm's financial performance is directly affected by its choice of capital structure. Companies may raise funds from internal (using part of the profit that would have been otherwise distributed as dividend to shareholders) or from external sources (issuance of debt or equity). When it comes to external financing, companies have to choose a specific debt-equity mix having in mind the consequences of both types of financing on their capital structure. When borrowed money is involve investing in actions that ultimately will result in higher production volume, sales and profits.

Debt holders continue to receive a fixed amount of interest, whereas shareholders might receive higher dividends. In bad times, debt holders will again receive their fixed interest, whereas shareholders, most probable, will not be paid the dividends. Because debt positively affects returns on shareholders in good times and negatively affects them in bad times, it creates a financial leverage. Within the capital structure, the level of the leverage is of great importance because it affects the weighted average cost of capital (WACC). The company has to choose the level of leverage so that the WACC is minimized and the firm's value is maximized. In order to observe the influence exerted by the factors specific to a firm on the capital structure of a company, previous studies analyzed traditional explanatory variables such as the company's profitability, the firm size, the asset structure, the dividend policy, the volatility of earnings.

The pecking theory of capital structure shows that if a firm is profitable, then it is more likely that financing would be from internal sources rather than external sources. In other words, firms tend to use internally generated funds first and then resort to external financing. This implies that profitable firms will have less amount of leverage (Myers and Majluf, 1984). By this, profitable firms that have access to retained profits can rely on them as opposed to depending on outside sources (debt). Murindeet al. (2004) observes that retentions are a principal source of finance. Titman and Wessel's (1988) and Barton et al. (1989) agree that firms with high profit rates would maintain relatively lower debt ratios since they can generate such funds from internal sources.

Leverage and Profitability

The relationship between capital structure and profitability is one that received considerable attention in the finance literature. The study regarding the effects of capital structure on profitability will help us to know the potential problems in performance and capital structure. Capital structure decision is the vital one since the profitability of an enterprise is directly affected by such decision. Hence, proper care and attention need to be given while determining capital structure decision.

The Pecking order theory states that firms will use internal cash flow before external funds (debt and equity issuance). The main source of internal cash flow is retained earnings. Higher profitability leads to greater internally generated

cash flow, and so profitable firms should have a lower leverage ratio. Consequently, we expect a negative relationship between profitability and debt ratio Rajan and Zingales (1995), Flannery and Ragan (2006), and Chang and Dasgupta (2009). Following Leary and Roberts (2005) and Lemmon et al, (2008), we measure firm profitability by the net operating income over the book value of total assets. On the other hand, a high level of profitability could decrease the probability of bankruptcy and distress costs.

Leverage and Size of the Firm

The relationship between capital structure decisions and firm value has been extensively investigated in the past few decades. Modigliani and Miller (1958), Modigliani and Miller (1963) are generally perceived as milestones among capital structure studies. They construct the role of taxes, market value of firm and cost of capital in capital structure decisions. Likewise, Jensen and Meckling (1976) and Myers (1977) introduce bankruptcy and financial distress costs and agency costs, respectively. These concepts are considered as the basics of trade-off theory. According to this theory, any increase in debt level causes an increase in bankruptcy, financial distress and agency costs, and hence decreases firm value. Thus, an optimal capital structure may be acquired by establishing equilibrium between tax advantages and financial distress and bankruptcy costs of debt. In order to establish this equilibrium firms should seek debt levels at which the costs of possible financial distress offset the tax advantages of additional debt Karadeniz et al (2009).

Firm size is most often measured by the logarithm of the book value of total assets Antonio et al (2008). The rationale behind using firm size as a determinant of capital structure is that large firms are more diversified and have a lower probability of bankruptcy Titman and Wessels (1988). The cost of borrowing will be less in large firms, which is consistent with the tradeoff theory.

On the other hand, pecking order theory predicts a negative relation between leverage and firm size, because large firms have a good reputation and have a long relationship with fund providers, reducing the adverse selection problem. As a result, large firms will be able to raise capital from the equity market with low cost. The size of firm has been found to positively affect firm leverage, Hovakimian et al (2004) and Antoniou et al, (2008).

Leverage and Tangibility of Assets

Tangible assets are one of the key drivers for explaining the capital structure within firms, Charalambakis and Psychoyios (2012). The impact of a firm's composition of assets and how they explain its capital structure is an ongoing debate. Tangible assets are generally more liquid than intangible assets. Therefore, tangible assets have a higher second market value, and in case of bankruptcy these could be quickly and easily sold. Furthermore, ownership of tangible assets should give companies with such assets an increased debt capacity. As Siblikov (2009) argued the question if tangible assets are negatively or positively associated with debt is not clear.

Modigliani and Millers proposition from 1958 laid the foundation for modern corporate finance Hillier (2013). Since then, several theories have developed from their thesis; two of these are the trade-off and pecking order theory. The trade-off and pecking order theory are contradicting each other concerning if tangible assets have a positive or negative effect on debt level. The first mentioned theory predicts a positive relationship, while the second predicts a negative.

Leverage and Dividend Payout Ratio

Capital structure and dividend policy are both interrelated with each other and cannot be studied in isolation because these two affect each other. The Residual theory explains the relation between capital structure and dividend policy which states that after fulfilling the requirements the firms distribute the remaining profits as dividend which means that the firms whose dividend is high move towards to raise funds through debt and have high debt ratio.

Barclay, Smith and Watts (1995) find that firms with high investment opportunities have a relatively lower dividend payment, and vice versa. They also highlight a significant negative relationship between dividend payout and growth opportunities, and a positive relationship with the size of the firm. These results are consistent with dividends helping to mitigate firm overinvestment and the free cash flow problem. Similar results relating to growth opportunities and firm size were found by Fama and French (2001), Denis and Osobov (2008), Eije and Megginson (2008) for firms across the EU, and Renneboog and Trojanowski (2010) for UK firms. Denis and Osobov (2008) and Renneboog and Trojanowski (2010) also find that dividend-paying firms are relatively more profitable, suggesting firms reduce the

resources under managers' control to avoid any growth of the firm beyond the optimum. The dividend payout ratio is another factor that may affect firm leverage.

Leverage and Volatility of Earnings

Firm's volatility is taken as a probability of its bankruptcy, Bauer (2004) and therefore a proxy for firm's risk. In Kale, Thomas and Ramirez (1991), the risk of bankruptcy is said to be among others, a major determinant of firm's capital structure. Given the study of Hsia (1981), Huang and Song (2002) opined that any rise in the value of variance of firm's assets least to a corresponding fall in the systematic risk of equity. So the business risk is expected to be positively related to leverage. Between volatility and leverage, Kim-Sorenson (1986) and Huang- Song (2002) confirmed a positive relation but a negative relationship is reported in the studies of Bradley et al (1984) and Titman and Wessels (1988).

Graham and Harvey (2001) showed that one of the important factors that affects firm capital structure is earnings volatility. Trade off theory predicts firms with a high probability of bankruptcy will have a low level of debt. A higher volatility of earnings will lead to a higher probability that the firm will not be able to pay its debt, so firms with high earnings volatility will have a low leverage ratio Harris and Raviv (1991), Fama and French (2002) and Antoniou et al (2008).

EMPIRICAL REVIEWS

Abdullah and Tursoy (2019) empirically investigated the nexus between performance of firms and capital structure with a sample consisting of non-financial German firms listed in the stock exchange. The study documents that more than 60% of the total assets of non-financial firms in Germany are funded with debt. The result confirms a positive link between firm's performance and structure of capital which resulted from tax shield and lower cost of debt capital compared to equity.

Moradi and Paulet (2019) explored the effect of firm specific factors on the structure of capital of 559 firms in six European economic before/during the period 1999 – 2015. Using the regression analysis, the study concludes that growth, profitability, tax shield and the effect of the euro crisis are related significantly. Equally of note is the relationship between size, tangibility of asset, tax shield (non-debt), volatility in-earnings as independent variable and leverage alongside debt equity ratio but negatively linked to not equity.

Ismawati (2018) Investigated on the effects of capital structure and dividends policy on the value of list firms in the Indonesian stock exchange market. The study applied firm level panel data on the methodology of multiple regression, correlational test as well as group statistics. The results showed that capital structure had a significant impact on firm's value while dividends policy retarded the growth of the firm in terms of value.

Nenu, Vintila and Gherghina (2018) analyzed the impact of capital structure on risk and firm performance of listed companies in Bucharest stock exchange, applied the multivariate fixed effect regression and the combined dynamic panel data estimations (2 step GMM) for the period 2000 – 2016. The study reveals that leverage is positively related to size of the company and price volatility (share) while debt structure impacted on corporate performance.

Devereux et al (2018) studied on tax and capital structure of 16,124 United Kingdom firms during the years 2001 to 2009 using the generalized method of moments (GMM). The study concludes that there is a large and positive link between taxation and firms leverage in the long run. Kieschruck and Moussawi (2018) did a sample study of united states corporations with respect to capital structure correlates from 1996 through 2016. The regression method was adopted for the series and the result holds that firm age is correlated to debt in the short and long run. Cooper and Lambertides (2018) studied on capital structure of 4374 firms registered/listed in the center for research in securities prices within the period 1979 to 2010 using the regression modeling technique. The authors conclude that high dividends increases are linked to increase in leverage of firms.

Kirui and Gor (2017) did an empirical study of firm's constraints and firm capital structure in Kenya using financial constraints dummy with the pecking order dependent variables to give room for financial constraints regimes. The study documents that constraint firms apply less internal funds and have less cash than unconstraint companies. Furthermore allowing financial constraints regimes in the pecking order equation, help in improving model

fitness. Buvanendra, Sridharan and Thyagarajan (2017) studied on determinants of capital structure with respect to firm specific factors and corporate governance in Srilanka and India for the period 2003M4 to 2012M12 using GMM and fixed effects regression. The outcome showed that firms in Srilanka and India partly adjust to optimum capital structure upon time. The study further concludes that there is a significant difference in determining capital structure for both Srilanka and India. Sanvicente, Bertoluzzo and Bortoluzzo (2017) Investigated capital structure determinants with interest in financial constrained and unconstrained firms spanning the years 2012 through 2015. Applying the generalized method of moments (GMM) the study concludes that previous and payout debt levels are major determinants of debt levels with variations in private and public firms.

Le and Phan (2017) investigated on the capital structure and firms performance of non-financial firms registered on the Vietnam stock exchange market over the period 2007 to 2012 with application of multiple regression analysis. The study outlines that capital structure and firm's performance indicators are inversely related. Jaisonghani and Kanjilal (2017) while exploring the nexus between firms performance and capital structure of 1194 publically-traded firms in India stock market, used the threshold panel regression and concluded that small size firms is influenced by high level debt negatively.

Mai (2017) examined the capital structure and firm performance of 783 firms listed companies in Shanghai/Shenzhen stock market during the years 2000 to 2014. The Generalized method of moments and logit quasi-maximum likelihood estimation was applied on the data and the result showed that a negative connection exist between structure of capital and earnings before interest and tax while capital structure and firm size was sign positive.

Nagasa (2016) did a sampled study of 32 private firms (manufacturing) in Ethiopia for the year 2006 – 2010. The regression modeling approach was adopted to investigate the impact of capital structure on profitability of firms. The study showed that profitability and debt are related equally of note is the significant link between firms' growth, firm size and profitability. Alimi et al (2016) while researching on a sample of 115 companies in Nigeria between 1998 through 2012 using the generalized method concluded firm's performance is connected to capital structure.

Chadha and Sharma (2015) carried out a study on 422 manufacturing firms in India for the period 2003 -2013 with emphasis on capital structure and profitability. The research indicated that leverage ratio is not related to return on assets and return on equity. Furthermore, the result testifies a significant nexus between leverage ratio, firm size, ROA, tangibility and ROE. Ayad and Mustafa (2015) in a similar circumstance also studied the structure of capital and firms profitability with empirical evidence in Iraq during the period 2004 to 2013 via regression modeling.

Vithessonthi and Tongurai (2015) examined the effects of capital structure of listed non-financial firms in Thailand for 2007 to 2009 using the instrumental variable as well as two stage least squares methods concluded that Leverage contributed negatively to the performance of firms in Thailand. Vithessonthi and Tongurai (2015) in a similar study on leverage and firm performance for 184,980 companies registered at ministry of commerce in Thailand within 2007 to 2009. The regression analysis was applied and the result showed that leverage is related to operating performance but responded negatively to firm performance of small firms. Canongia and Perobelli (2015) modeled the determinants of capital structure of listed Brazilian firms in the stock exchange market. Covering the period of 2000 to 2013, the study utilized a single multiple regression build based on panel data. In all, the results indicate that agency cost is positively/significantly contributed to leverage. Habimana (2015) investigated the link between capital structure and financial performance of firms in Africa, Middle East, Asia, Eastern Europe, India and China with the application of OLS technique. The findings reveal that capital structure (leverage) is negatively/significantly connected to returns and systematic risk. In all, the finding lends support to the trade-off theory of capital structure.

Dawar (2014) examined the agency theory with regard to capital structure and firm performance in India for the period 2003 to 2012. The outcome of the study reveals the presence of a negative link between leverage and firms performance in India, therefore contrasting the basis of the agency theory. Majumdar (2014) while exploring the determinants of capital structure of private firms in India using panel date regression concluded that private firms depends more on bank credit as expected since companies listed have the possibility of issuing bonds. Furthermore the existence of assets that can support as collateral is necessary, supporting the choice of asset tangibility as a criterion for classifying companies as unconstrained, despite not listed in the stock market.

Yuvarajsambasivam and Gashaw (2013) examined the performance of insurance companies in Ethiopia. This paper 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). Secondary data obtained from the financial statements (Balance sheet and Profit/Loss account) of insurance companies, financial publications of National Bank of Ethiopia are analyzed. 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 capital 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.

Amanuel (2011) examined the determinants of capital structure evidence from manufacturing share companies. The researcher used seven explanatory variables; tangibility, non-tax shields, growth, earning volatility, profitability, age and size of the firm were regressed against the dependent variables of total debt ratio, short term ratio and long term debt ratio. In connection of this, a sample of 12 companies were taken and secondary data was collected from audited financial statements of selected companies for the period of five years (1996- 2002EC). Stratified sampling design was employed and companies were selected based on simple random to represent different industry sectors (strata) within manufacturing share companies. Data was then analyzed on quantitative basis using multivariate OLS regression. The results show that tangibility, non-debt tax shields, earning volatility, profitability, and size of the firm variables are the significant determinants of capital structure of Addis Ababa manufacturing share companies at least one out of the three models for capital structure employed in the study. While no clear and statistical proved relation are obtained for the variables growth of the firm and age of the firm in any of the capital structure models.

David and Olorunfemi (2010) investigated the relationship that exists between earnings per share and leverage ratio on one hand and dividend per share and leverage ratio on the other hand in the Nigerian petroleum industry. The earnings per share and dividend per share are used as performance measures. The study employs panel data analysis using Pooled regression estimation, Fixed-effect estimation, Random-effect estimation and Maximum likelihood estimation. They find that there is positive relationship between earnings per share and leverage ratio on one hand and positive relationship between dividend per share and leverage ratio on the other hand.

METHODOLOGY

This study adopted ex-facto research design to examine factors that determine financial leverage of quoted manufacturing firms in Nigeria. Given that the entirety of the population is actually used for the study, a census of 13 quoted manufacturing firms were used, panel data were collected from the annual reports and various databases of the manufacturing firms for financial statement for the period 2010 to 2019.

Method of Data Analysis

The method of data analysis to be used in this study was the panel data multiple linear regressions using Ordinary Least Square (OLS) method. This approach, which is a quantitative technique, includes tables and the test of the hypotheses formulated by using ordinary least square regression analysis at 5% level of significance. In order to undertake a statistical evaluation of our analytical model, so as to determine the reliability of the results obtained and the coefficient of correlation (r) of the regression, the coefficient of determination (r^2), the student T-test and F-test will be employed.

Coefficient of Determination (r^2) Test –This measures the explanatory power of the independent variables on the dependent variables. Implying that it is an expression of the variation the endogenous variable(s) exert on the exogenous variable. As a rule of thumb, the R^2 should be at least 60% for the endogenous variables to possess appreciable and acceptable predictive power on the exogenous variable.

F-Test: This measures the overall significance of a given regression model. It presents the extent to which the aggregation of the endogenous variables (where a multiple regression model is used) influence or relate with the exogenous variable. Conventionally, its probability is used, where the decision criteria hinges on whether or not the

probability or p-value is greater or less than the α or significant level, which in this study is 0.05. Therefore, the null hypothesis is rejected where the p-value is less than 0.05, or not rejected where the p-value is greater than 0.05.

Student T-test: measures the individual statistical significance of the estimated independent variables at 5% level of significance.

Durbin Watson Statistics: This measures the colinearity and autocorrelation between the variables in the time series. The results range from 0 to 4, where 2 depict a perfect absence of serial correlation. However, due to the near impossibility of obtaining a DW score of 2, values that are close enough (to 2) are permissible.

Regression coefficient: This measures the extent in which the predictor variables affect the dependent variables in the study.

Probability Ratio: It measures also the extent in which the predictor variables can explain change to the dependent variables given a percentage level of significant.

Model Specification

The study adopts the panel data method of data analyses, which involve the pooled effect, fixed effect, the random effect, likelihood test and the Hausman Test.

Pooled Effect Model

$$DER = \alpha_0 + \alpha_1 DPR + \alpha_2 FS + \alpha_3 AT + \alpha_4 PR + \alpha_5 EV + \mu \quad (1)$$

Fixed Effect

The fixed effects strives to establish if differences will be observed by the application of a fixed or constant intercept value for the different variables that constitute cross-sectional structure.

The dummy variables are expressed as follows: if $j = i$, then $Di = 1$; otherwise $Di = 0$.²

Thus, we have:

$$DER = \alpha_0 + \alpha_1 DPR + \alpha_2 FS + \alpha_3 AT + \alpha_4 PR + \alpha_5 EV + \mu \quad (2)$$

Random Effects

Random effects focus on the relationship with the study sample as a whole; thus, the samples are randomly selected, as opposed to using the entire population. The total sample regression (a function of the random effect) can be expressed as:

$$DER_{it} = \sum_{j=1}^N \beta_0 + \beta_1 DPR + \beta_2 FS + \beta_3 AT + \beta_4 PR + \beta_5 EV + \mu. \quad (3)$$

If this is represented with random variables, then $\beta_{oj} = \bar{\beta}_0 + \mu_j$, which indicates that the difference occurs randomly, and the expectation value of β_{oi} is $\bar{\beta}_0$.⁵

(4)

Where

DER = the ratio of total debt to total Equity (Financial Leverage)

FS = (firm size) is the natural log of total assets

PR = (profitability) is the ratio of net operating income to the book value of total assets.

AT = (asset tangibility) is the ratio of the book value of tangible fixed assets to the book value of total assets.

EV = (earning volatility) is measured by the absolute value of the changes in net income.

DPR = (dividend payout ratio) is the ratio of dividends to net income

e_t represents the error term at time (t), i will be 1-5 and t will be 1-5

The behavioural assumptions are $\alpha_1, \alpha_2, \alpha_3, \alpha_4$ and $\alpha_5 > 0$.

A-Priori Expectations of the Variables

The a-priori expectation of the variables proposes that an increase in the explanatory variables lead to increase in the dependent variables financial leverage. Therefore it can be mathematical stated as follows: - $a_1, a_2, a_3, a_4 > 0$.

Hausman Test

The Hausman test (1978) is the most commonly used method for evaluating fixed and random effects. Generally, autocorrelation of data violates the principal assumption of OLS, thus the Hausman test is used to decide the choice between fixed effect and random effect given the state of data as regards the assumption. The idea is that as a rule of thumb, the random effect estimate is used, unless the Hausman test rejects it, in which case the fixed effect estimate is used. However, a failure to reject implies either that the random effect or fixed effect estimates are insufficiently close as to making such choice immaterial.

ANALYSIS AND DISCUSSION OF FINDINGS

Table 1: Stationarity Tests

Series: D(DER)				
Method	Statistic	Prob.**	Cross-sections	Obs
Levin, Lin & Chu t*	236.984	1.0000	13	91
Im, Pesaran and Shin W-stat	-3.95627	0.0000	13	91
ADF - Fisher Chi-square	66.3548	0.0000	13	91
PP - Fisher Chi-square	230.960	0.0000	13	104
Series: FS				
Levin, Lin & Chu t*	-6.87022	0.0000	13	104
Im, Pesaran and Shin W-stat	-2.56514	0.0052	13	104
ADF - Fisher Chi-square	51.4775	0.0021	13	104
PP - Fisher Chi-square	90.9484	0.0000	13	117
Series: D(PR)				
Levin, Lin & Chu t*	58507.7	0.0000	13	91
Im, Pesaran and Shin W-stat	-3.31418	0.0005	13	91
ADF - Fisher Chi-square	60.5871	0.0001	13	91
PP - Fisher Chi-square	177.077	0.0000	13	104
Series: D(AT)				
Levin, Lin & Chu t*	165.354	1.0000	13	91
Im, Pesaran and Shin W-stat	-77.1131	0.0000	12	84
ADF - Fisher Chi-square	58.6940	0.0001	12	84
PP - Fisher Chi-square	169.753	0.0000	12	96
Series: DPR				
Levin, Lin & Chu t*	-6.19015	0.0000	13	104
Im, Pesaran and Shin W-stat	-2.32139	0.0101	13	104
ADF - Fisher Chi-square	58.8729	0.0002	13	104
PP - Fisher Chi-square	107.355	0.0000	13	117
Series: EV				
Levin, Lin & Chu t*	-5.12359	0.0000	13	78
Im, Pesaran and Shin W-stat	-2.79318	0.0026	13	78
ADF - Fisher Chi-square	55.6135	0.0006	13	78
PP - Fisher Chi-square	177.692	0.0000	13	91

Source: Extracts from E-View Window 9.0, 2021

As shown in Table 1, the null hypotheses that all panels had unit roots for all variables were rejected at 5% level of significance since the p values were less than 5%. This therefore implied that all variables were stationary and robust regression models would be fitted without lags (at levels).

Table 2: Pooled Effect Regression Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DPR	-0.380659	0.097512	-3.903732	0.0002
AT	0.790597	0.236524	3.342569	0.0011
EV	0.435090	0.109243	3.982780	0.0001
FS	-0.226007	0.052726	-4.286466	0.0000
PR	-0.022447	0.006579	-3.411999	0.0009
C	15.51354	0.740079	20.96202	0.0000
R-squared	0.401646	Mean dependent var		15.08292
Adjusted R-squared	0.377519	S.D. dependent var		5.100180
S.E. of regression	4.023914	Akaike info criterion		5.667442
Sum squared resid	2007.793	Schwarz criterion		5.799790
Log likelihood	-362.3837	Hannan-Quinn criter.		5.721219
F-statistic	16.64702	Durbin-Watson stat		1.792924
Prob(F-statistic)	0.000000			

Source: Extracts from E-View Window 9.0, 2021

As shown, the findings indicate an adjusted R-square of 0.377519, which indicates that 37.7 of the variation in financial leverage of the manufacturing firms can be explained jointly by internal constraints while the remaining percentage can be accounted by other factors. An F-statistic of 16.64702 with a p value of 0.000000, indicate a joint significant contribution of the study variables. The Durbin Watson statistic indicates the absence of serial autocorrelation while beta coefficient of the variables indicate dividend payout ratio, firm size and profitability have negative and significant effect on financial leverage of the selected manufacturing firms. This implies that increase in the variables negatively reduces financial leverage of the firms by 0.38, 0.22 and 0.02 percent within the periods covered in this study. It is also evidence that assets tangibility and earnings volatility have positive effect on financial leverage such that increase in the variables lead to 0.79 and 0.43 percent increase in financial leverage of the quoted manufacturing firms.

Table 3: Fixed Effect Regression Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DPR	-0.422475	0.235002	-1.797751	0.0749
AT	0.756137	0.282764	2.674096	0.0086
EV	0.423665	0.113227	3.741731	0.0003
FS	-0.227089	0.062605	-3.627329	0.0004
PR	-0.021661	0.007886	-2.746792	0.0070
C	16.03618	1.953152	8.210411	0.0000
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.475691	Mean dependent var		15.08292
Adjusted R-squared	0.396108	S.D. dependent var		5.100180
S.E. of regression	3.963375	Akaike info criterion		5.719956
Sum squared resid	1759.334	Schwarz criterion		6.116999
Log likelihood	-353.7972	Hannan-Quinn criter.		5.881288
F-statistic	5.977314	Durbin-Watson stat		2.017223
Prob(F-statistic)	0.000000			

Source: Extracts from E-View Window 9.0, 2021

As shown in table 3, the fixed effect results indicate an adjusted R-square of 0.396108, which indicates that 39.6 of the variation in financial leverage of the manufacturing firms can be explained jointly by internal constraints while the remaining percentage can be accounted by other factors. An F-statistic of 5.977314 with a p value of 0.000000, indicate a joint significant contribution of the study variables. The Durbin Watson statistic indicates the absence of serial autocorrelation while beta coefficient of the variables indicate dividend payout ratio, firm size and profitability have negative and significant effect on financial leverage of the selected manufacturing firms. This implies that increase in

the variables negatively reduces financial leverage of the firms by 0.42, 0.22 and 0.021 percent within the periods covered in this study. It is also evidence that assets tangibility and earnings volatility have positive effect on financial leverage such that increase in the variables lead to 0.75 and 0.42 percent increase in financial leverage of the quoted manufacturing firms.

Table 4: Random Effect Regression Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DPR	-0.380659	0.096045	-3.963360	0.0001
AT	0.790597	0.232965	3.393625	0.0009
EV	0.435090	0.107599	4.043616	0.0001
FS	-0.226007	0.051932	-4.351940	0.0000
PR	-0.022447	0.006480	-3.464116	0.0007
C	15.51354	0.728944	21.28220	0.0000
Effects Specification				
			S.D.	Rho
Cross-section random			0.000000	0.0000
Idiosyncratic random			3.963375	1.0000
Weighted Statistics				
R-squared	0.401646	Mean dependent var		15.08292
Adjusted R-squared	0.377519	S.D. dependent var		5.100180
S.E. of regression	4.023914	Sum squared resid		2007.793
F-statistic	16.64702	Durbin-Watson stat		1.792924
Prob(F-statistic)	0.000000			
Unweighted Statistics				
R-squared	0.401646	Mean dependent var		15.08292
Sum squared resid	2007.793	Durbin-Watson stat		1.792924
Correlated Random Effects - Hausman Test				
Test Summary		Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random		9.314147	5	0.0972

Source: Extracts from E-View Window 9.0, 2021

As shown in table 4, the random effect results indicate an adjusted R-square of 0.377519, which indicates that 37.7 percent of the variation in financial leverage of the manufacturing firms can be explained jointly by internal constraints while the remaining percentage can be accounted by other factors. An F-statistic of 16.64702 with a p value of 0.000000, indicate a joint significant contribution of the study variables. The Durbin Watson statistic indicates the absence of serial autocorrelation while beta coefficient of the variables indicate dividend payout ratio, firm size and profitability have negative and significant effect on financial leverage of the selected manufacturing firms. This implies that increase in the variables negatively reduces financial leverage of the firms by 0.38, 0.226 and 0.0212 percent within the periods covered in this study. It is also evidence that assets tangibility and earnings volatility have positive effect on financial leverage such that increase in the variables lead to 0.79 and 0.43 percent increase in financial leverage of the quoted manufacturing firms. As shown in Table 4, the null was rejected at 5% level of significance since the p values were greater than 0.05. This implies that the most preferred models were random effect and this agreed with (Baltagi, 2005) who recommended it.

Empirically, the positive effect of the variables confirm the findings of Abdullah and Tursoy (2019) a positive link between firm's performance and structure of capital which resulted from tax shield and lower cost of debt capital compared to equity, Moradi and Paulet (2019) a positive relationship between size, tangibility of asset, tax shield (non-debt), volatility in-earnings as independent variable and leverage alongside debt equity ratio but negatively linked to not equity, Nenu, Vintila and Gherghina (2018) that leverage is positively related to size of the company and price volatility (share) while debt structure impacted on corporate performance. Devereux et al (2018) that there is a large and positive link between taxation and firms leverage in the long run. Kieschruck and Moussawi (2018) that firm age is correlated to debt in the short and long run. Cooper and Lambertides (2018) that high dividends increase are linked to increase in leverage of firms. Kirui and Gor (2017) that there is a significant difference in determining capital structure for both Srilanka and India. Sanvicente, Bertoluzzo and Bortoluzzor (2017) that previous and payout debt

levels are major determinants of debt levels with variations in private and public firms. Nagasa (2016) that profitability and debt are related equally of note is the significant link between firms' growth, firm size and profitability. Canongia and Perobelli (2015) that agency cost is positively/significantly contributed to leverage. Empirically the negative effect of the variables confirm the findings of Mai (2017) that a negative connection exist between structure of capital and earnings before interest and tax while capital structure and firm size was sign positive. Chadha and Sharma (2015) that leverage ratio is not related to return on assets and return on equity. Furthermore, the result testifies a significant nexus between leverage ratio, firm size, ROA, tangibility and ROE. Habimana (2015) that capital structure (leverage) is negatively/significantly connected to returns and systematic risk. In all, the finding lends support to the trade-off theory of capital structure. Forte et al (2013) that profitability is inversely related to leverage.

Table 5: Descriptive Statistics

	DER	DPR	AT	EV	FS	PR
Mean	15.08292	7.750462	6.579538	7.211846	10.35800	154.9848
Median	16.52000	0.490000	1.575000	1.325000	8.345000	0.610000
Maximum	19.78000	45.00000	553.0600	45.00000	37.50000	19864.30
Minimum	0.180000	0.040000	0.000000	0.040000	0.070000	0.080000
Std. Dev.	5.100180	12.80335	48.34271	12.28066	7.681234	1742.034
Skewness	-2.133692	1.891183	11.24038	2.050072	0.936649	11.26953
Kurtosis	6.677818	5.757363	127.5672	6.477910	3.365697	128.0042
Jarque-Bera	171.9083	118.6756	86787.80	156.5798	19.73283	87392.79
Probability	0.000000	0.000000	0.000000	0.000000	0.000052	0.000000
Sum	1960.780	1007.560	855.3400	937.5400	1346.540	20148.02
Sum Sq. Dev.	3355.526	21146.43	301475.3	19455.09	7611.175	3.91E+08
Observations	130	130	130	130	130	130

Source: Extracts from E-View Window 9.0, 2021

Table 5 presents the descriptive statistics for the dependent and explanatory variables. From the table, debt ratio has minimum and maximum values of 0.180000 and 19.78000 respectively and the mean value of 15.08292 as well as the standard deviation value of 5.100180. The standard deviation of 5.100180 signifies that the data deviate from the mean value from both sides by 5.100180 implying that there is no wide dispersion of the data from the mean because standard deviation is less than the mean value, the probability coefficient shows that the variables is normally distributed.

Dividend payout ratio has minimum and maximum values of 0.040000 and 45.00000 respectively and the mean value of 7.750462 as well as the standard deviation value of 12.80335. The standard deviation of 12.80335 signifies that the data deviate from the mean value from both sides by 12.80335 implying that there is wide dispersion of the data from the mean because standard deviation is higher than the mean value but the probability coefficient indicates that the variable is normally distributed.

Assets tangibility has minimum and maximum values of 0.000000 and 553.0600 respectively and the mean value of 6.579538 as well as the standard deviation value of 48.34271. The standard deviation of 48.34271 signifies that the data deviate from the mean value from both sides by 48.34271 implying that there is wide dispersion of the data from the mean because standard deviation is greater than the mean value but the probability coefficient indicates that the variable is normally distributed.

Earnings volatility has minimum and maximum values of 0.040000 and 45.00000 respectively and the mean value of 7.211846 as well as the standard deviation value of 12.28066. The standard deviation of 12.28066 signifies that the data deviate from the mean value from both sides by 12.28066 implying that there is wide dispersion of the data from the mean because standard deviation is higher than the mean value but the probability coefficient indicates that the variable is normally distributed.

CONCLUSION

This study looked at firm-specific constraints and financial leverage of quoted manufacturing firms in Nigeria. Panel data were sourced from stock exchange factsheet and annual reports of the quoted manufacturing firms. Based on the validity of random effect model, the study found that 37.7 percent of the variation in financial leverage of the manufacturing firms can be explained jointly by internal constraints while the remaining percentage can be accounted

by other factors. Dividend payout ratio, firm size and profitability have negative and significant effect on financial leverage of the selected manufacturing firms which implies that increase in the variables negatively reduces financial leverage of the firms by 0.38, 0.226 and 0.0212 percent within the periods covered in this study while assets tangibility and earnings volatility have positive effect on financial leverage such that increase in the variables lead to 0.79 and 0.43 percent increase in financial leverage of the quoted manufacturing firms.

RECOMMENDATIONS

- i. Profitability ratio has a negative and significant relationship with debt-to-equity ratio, therefore, we recommend that manufacturing firms should reduce cost of operations; increase turnover, productivity and efficiency to sustain profitability levels. On assets tangibility, we recommend that manufacturing firms should invest prudently in non-current assets and ensure optimal utilization.
- ii. Dividend ratio is inversely related with debt-to-equity ratio, this suggest that manufacturing firms should declare dividends on the residual profit to enable firms raised funds for capital investments internally before looking out for external sources.
- iii. Our findings showed that Earnings volatility is positive and significantly related with financial leverage. It is one of the important factors that affect firm financial leverage. A higher volatility of earnings will lead to a higher probability that the firms will not be able to pay its debt. Therefore, we recommend that manufacturing firms with high earnings volatility should lower leverage by maintaining stable cash flows to reduce earnings volatility.

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FINANCIAL SECTOR DEVELOPMENT AND ECONOMIC GROWTH

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ABSTRACT

This study examined Financial Sector Development and Economic Growth in Nigeria. The objective of the study was to investigate whether there is relationship between financial sector development and economic growth in Nigeria from 1998-2018. Time series data were collected from Central Bank of Nigeria (CBN) Annual Statistical Bulletin and the Nigerian Exchange (NSE) Fact Book. The Real Gross Domestic Product (GDP) was used as the proxy for economic growth which is the dependent variable while Credit to Private Sector, Broad Money Supply and Market Capitalization were proxies used for financial sector development which is the independent variable. Multiple regression analysis using Ordinary Least Square Model (OLS), Johansen co-integration test, unit root test using Augmented Dickey Fuller (ADF), Granger causality test were used as estimation technique. R-squared (R^2), Durbin Watson statistics, f-statistics were used to determine and explain the extent to which the independent variables impact on the dependent variable. The study found an R^2 of 95.8% and f- statistics of 129.9005, which shows Credit to Private Sector (CPS), Market capitalization (MCAP) and Broad money (BM) have a positive relationship on the Real Gross Domestic Product. The co-integration result revealed that long run co-integrating relationship between the dependent and the independent variables. The variables were found to be stationary at second differencing while the Granger causality test showed Real Gross Domestic Product (RGDP) has unidirectional causality with Total Market Capitalization (MCAP) and Credit to Private Sector (CPS) but has no causality with Broad money Supply (BM). It concludes that there is a significant relationship between financial sector development and economic growth. It therefore recommends for effective policies that will drive reforms for development of the financial sector in order to promote economic growth.

Keyword: Financial Sector, Development, Economic growth, and Real Gross Domestic Product

INTRODUCTION

A good number of studies in economic literature support the premise that, in addition to many other significant variables, the efficient and effective performance and long-term economic growth and welfare of a nation are related to its level of financial development. Financial development can be measured by variables such as depth, access, size, and the efficiency and stability of the financial system, which includes its intermediaries, range of assets, institutions, markets and regulations. The higher the level of financial development, the more extensive, the accessibility of financial services that allows for diversification of risk and such diversification, in turn, increases the long-term growth trajectory of a country and ultimately improves the prosperity and welfare of producers and consumers that have access to financial services. The connection between financial development and economic growth can be traced back to the works of Joseph Schumpeter in mid-20th century, and of late, to McKinnon (1973) and Shaw (1973). This connection is now well established in terms of empirical evidence.

Economic theory suggests that financial markets and intermediaries exist mainly because of two types of market frictions which include information costs and transaction costs. Financial markets and intermediaries play the important role of assisting in the provision of insurance services, hedging, trading, diversification and pooling of risk, allocation of savings and resources to the appropriate investment projects. It is also used in monitoring managers and promotion of corporate control and governance; efficient mobilization of savings; and facilitation of exchange of goods and services. Financial markets and financial intermediation contribute directly to economic growth and aggregate economic welfare through their impact on capital accumulation (i.e rate of investment) and on technological development and innovation. Firstly, greater financial development leads to greater mobilization of savings and its allocation to the highest-return investment projects and this in turn leads to increased accumulation of credit which enhances economic growth. Secondly, by allocation of capital to the right investment projects and promotion of sound

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corporate governance, financial development increases the rate of technological innovation and productivity growth, further enhancing economic growth and welfare.

Financial markets and intermediation also benefit firms and consumers in many other ways that are not directly related to economic growth. Consumers and producers having access to financial markets can reduce poverty, especially when the poor have access to banking services and credit. The role of microfinance banks becomes clear in this regard. They provide consumers' credit access for smooth consumption over time through lending or borrowing and stabilize consumer welfare during temporary shocks to wages and income. Microfinance banks can also increase the return on savings and ensure higher income and consumption opportunities by contributing to the diversification of savings and of portfolio choices. Insurance services on the other hand, can mitigate variety of risks that firms and individuals face, and allow also create room for better sharing of individual or even macroeconomic risk. In a developing country like Nigeria, financial sector development is part of the private sector development strategy to stimulate economic growth and reduce poverty.

Essentially, financial sector development concerns overcoming costs incurred in the financial system. This process involves the reduction of costs in acquiring information, enforcement of contracts, and execution of transactions which results in the emergence of financial contracts, intermediaries, and markets. The existence of various kinds and combinations of information, transaction, and enforcement costs in conjunction with different regulatory, legal and tax systems have greatly motivated distinct forms of contracts, intermediaries and markets across countries in different times. The financial system in a country, fundamentally has five key functions of which are: information production *ex ante* about possible investments and capital allocation, facilitation of the trading, diversification, and management of risk, monitoring investments and the exercise of corporate governance after providing financing, promoting the exchange of goods and services and mobilization and pooling of savings.

Financial sector development takes place when financial instruments, intermediaries and markets work together to reduce the costs of information, transactions and enforcement. A well-functioning and solid financial sector is a powerful engine behind economic growth because it generates local savings, which in turn lead to productive investments in local business. Furthermore, effective financial institutions such as banks can channel international streams of private remittances. There is ample empirical evidence suggesting that financial sector development plays a significant role in economic development due to the fact that, it promotes economic growth through capital accumulation and technological advancement by boosting savings rate, delivering information about investment, utilizing the allocation of capital, mobilizing and pooling savings, and facilitating and encouraging foreign capital inflows. A meta-analysis of 67 empirical studies finds that economic growth is robustly connected with financial development. It has also been proofed that countries with better-developed financial systems tend to enjoy a sustained period of growth, and studies confirm the causal link between the two variables stating that financial development is not simply a result of economic growth; it is also the driver for growth. Financial development reduces poverty and inequality by empowering and expanding access for the poor and vulnerable groups, facilitating risk management thereby reducing their vulnerability to shocks, and raising investment and productivity that generates higher income. Additionally, financial sector development also assists the growth of small and medium-sized enterprises (SMEs) by giving them access to finance. They are typically labour-intensive and tend to create more number of jobs than large firms do, which contributes significantly to economic development in emerging economies like Nigeria's. Furthermore, financial sector development also involves setting up strong and robust financial policies and regulatory framework because the absence of adequate financial sector policies could have disastrous outcome, as illustrated by the global financial crisis.

In general, it is believed that economic recoveries after financial crises have been shown to be much slower than those that occur after recessions not associated with financial crises. This has been the case in the slow economic recovery of many countries after the global financial crisis.

The added strain on the financial system as a result of the global financial crisis has only increased the need to strive towards stability. Notwithstanding, it is also imperative to consider the positive impact that broader financial development and more dynamic financial systems can have on longer-term economic growth. Several researches carried out supports the idea that countries that have experienced occasional financial crises have, on average, demonstrated higher economic growth than countries that have exhibited more stable financial conditions.

Therefore, while it is important to mitigate the short-term impact of crises, it is also important to view financial development in terms beyond that are of financial stability. There is a heavy implication on economic development--both when financial sector development functions and malfunctions. The global financial crisis has challenged conventional thinking in financial sector policies and sparked several debates on how best to achieve sustainable development. Nonetheless, to effectively reassess and re-implement financial policies, publications such as Global Financial Development Report (GFDR) by the World Bank and Global Financial Stability Report (GFSR) by the IMF can play an important role and should be acknowledged by country's financial policies making institution. The Global Financial Development Report (GFDR), which is a new initiative by the World Bank, highlights issues that have come to the forefront after the global financial crisis and presents policy recommendation to strengthen systems and avoid similar crisis in the future. On the other hand, the GFDR report by gathering data and knowledge on financial development around the world aims to put into spotlight issues of financial development and hopes to present analysis and expert views on current policy issues. It is based on this premise that this study is being consummated.

Finance is always seen as the life-blood of any economic system. Given the available resources and suitable attitudes, a financial sector well-developed can contribute positively to the rate of acceleration of economic growth. It is presumed that economic growth greatly depends on the rate of capital formation and capital formation depends on whether funds are made available in time, in the volume required, and on terms that are favourable to parties involved, all of which can be achieved with a well-developed and efficient financial system. What constitutes financial development are generally discussed by pointing out the differences in the financial structures of the developing countries. Bhole (2004). The financial sector in Nigeria has a long history of financial repression and heavy regulatory regimes. Especially, in the late eighties, the Nigerian government embarked on a Structural Adjustment Programme (SAP), in order to address the supposed economic ills of financial repression wherein the programme was categorised into three classes; improvement of monetary management, improvement of the financial structure and reforms to strengthen the foreign exchange market and capital movements. The endeavour was directed at inducing an effective intermediation between savers and investors, promoting financial savings and reducing distortion in investment.

These reforms of the financial structure led to changes in Nigeria's financial sector in an effort to foster competition, streamline the relationship between the public and financial sectors of the economy and strengthen the supervisory role of the regulatory authorities. CBN (2006). Growth and development are key economic objectives of all countries, perceiving its strategic role, the Nigerian government embarked on a strategic plan to grow its economy to be among the 20 largest economies in the world by the year 2020. In order, to achieve this, several lessons were drawn from the successes of the South East Asian and the BRIC countries (Brazil, Russia, India and China) that leveraged on the successful transformation of their financial systems. CBN (2007). Taking into account that the Nigerian financial sector has undergone series of reforms with the objectives of strengthening the financial sector's role of financial intermediation in order to promote economic growth, this study is carried out to demonstrate whether there is relationship between financial sector development and economic growth in Nigeria and intends to demonstrate the relationship between proxy variables being considered.

CONCEPTUAL REVIEW

Oluyemi (1995) considers the financial sector of any country's economy as an engine of growth that could incredibly aid the promotion of rapid economic transformation. In conclusion he stated that no economy can ever develop without an appreciable growth in the financial sector. Being a prime mover of economic development, the financial sector mobilizes savings from surplus to deficit economic units. This no doubt has helped in the productivity of any economy. The efficiency and effectiveness of the intermediation process of financial institutions in a country is a function of the level of the how developed the financial system is. The financial sector, being a section of the economy made up of firms and institutions that provide financial services to commercial and retail customers which comprises of a broad range of industries including banks, microfinance banks, investment companies, insurance companies and real estate firms has an important role to play in economic development of any country. A substantial part of the financial sector generates revenue from loans, which in turn gain incentives as finance costs drop. The health of the economy, to a large extent depends in large part, to the strength of its financial sector.

Economic growth on the other hand is a gradual and steady change in the state of the economy in the long-run which comes about by a general increase in the rate of savings and population. Jhingan (2005) stated that economic growth can be characterized as an upward change in the level of production of goods and services by a country over a certain period of time which is usually brought about by relationship with external forces and advancement in innovative technology. An economy is said to be growing when there is an increase in a country's productive capacity which later yields more in production of more goods and services. Jhingan (2003) describes Economic growth as a measure for the improvement of standard of living of the people. An international monetary fund report in 2009 has it that Nigeria's money and capital markets still lack the depth to lift the economy out of the doldrums. The financial markets have been underdeveloped overtime and the underdevelopment in the financial markets has further dampened the level of economic growth in Nigeria.

THEORETICAL REVIEW

It is vitally important to bear in mind that from the beginning, that over the years, researchers have had divergent views with regard to the role the development of the financial sector plays in promoting economic growth. In this regard, while some hold the view that finance plays a critical role in fostering economic growth, others believe that finance is an overstressed determinant of growth and as such demand economic growth precedes for finance. This section, therefore, presents the evolution of the theories underpinning financial development and economic growth theory over the years.

Walter Bagehot's Theory

Walter Bagehot is known for his works in corporate finance and money and banking. The important role finance plays in an economic growth is first attributed to his work in 1873 titled "Lombard Street: A Description of the Money Market". Bagehot (1873) argues that if English traders using greater portion of funds they borrowed in comparison to their own capital can borrow at low interest rates, they can sell their goods at much lower prices than a trader using his own capital, and still be able to make higher returns on their own funds after paying for the interest on their loans. In the face of competition, these traders are able to reduce their prices further, and forego a relatively smaller profit, and can drive out the old-fashioned traders who trade in the market using their own capital. At lower prices, traders using borrowed capital are, thus, able to produce more and sell more of their products, therefore inducing economic growth.

Bagehot thus established that "development in finance, such as the joint-stock company and limited liability enabled the industrial revolution in Britain by facilitating the mobilization of capital for large-scale investments" Driffill(2003).

Schumpeter's Model of Economic Growth

Joseph Alois Schumpeter was an economist who is another pioneer of the theory on financial development and economic growth who, in his work that was published in 1934, recognised the role that bank credits play in promoting economic development. He argued that economic development cannot take place naturally but would require an entrepreneur to initiate innovation to replace the existing and old technologies, which he termed as "creative destruction". As such, for the entrepreneur to carry out his function and induce economic growth, he would require technical knowledge and banking credit to purchase goods that he will use to conduct investigations, therefore, leading to innovations and eventually growth. He further argued that economic growth and development would only take place because of new products and improvements in the old ones and that would only happen because of innovation. Critical to this model is the role bank credits that used to finance research and development play, in order to come up with cost effective methods of production that would eventually result in the increase of goods and services produced in the economy.

Harrod-Domar Growth Model

Harrod-Domar postulated that economic growth is achieved when more investment leads to more growth. Their theory is based on linear production function with output given by capital stock(k)times constant. Investment, according to

the theory generates income and also augments the productive capacity of the economy by increasing the capital stock. The theory maintained that for the economy to maintain full employment in the long run, net investment must increase continuously as well as growth in the real income at a rate sufficient enough to maintain full capacity use of a growing stock of capital. This generally implies that the more an economy is able to save and invest out of a given GDP, the greater the growth of GDP and which will be inversely related to capital output ratio.

Neo-Classical Model of Growth

The Neo-Classical Model theory was first propounded by Robert Solow over four decades ago. It is based on the work of Solow (1956) and Swan (1956) which is an extension of the Harrod-Domar model that was developed in 1946. According to Solow (1956), economic growth is a factor of labour, capital and technology. The theory entails that a temporary equilibrium can be achieved by varying the combination of labour, capital and technology in the economy, thereby ignoring any specific role that finance can play with regard to economic growth. Solow (1956) argued that economic growth is independent of the rate of savings and investment in the economy and that capital investments resulting from increased savings only lead to temporal growth as capital is subject to diminishing returns in a closed economy with fixed stock of labour and no technological progress. In this regard, he argued that only through technological advancement, can sustainable economic development be achieved. This model treats productivity improvements as an exogenous variable which means that productivity improvements are assumed to be independent of the amount of capital investment.

Endogenous Growth Theory

This Growth Model advocates for improvement on the Neo-Classical Model of Growth. It accentuates that economic growth is determined by endogenous factors rather than by external forces. In order to demonstrate this, the theory has two folds, one that believes economic growth to be essentially determined by investments in knowledge, innovation and human capital while the second one centres around externalities and positive overflow effects that can prompt economic growth. Key to this theory is the vital role that financial intermediation plays concerning accomplishing economic growth. In this regard, several researchers such as Levine (1997), Bencivenga and Smith (1991) and Saint-Paul (1992) have diligently fused, in the Endogenous Growth Model, the function of the financial system in determining economic growth. Smith (1991) contentions are entered on the effective financial intermediation that emerges when liquidity risk is adequately managed to trigger savers put their resources into profitable investments that can actuate economic growth. Saint-Paul (1992) contends that stock market that a well-developed and well-functioning can promote economic growth through risk sharing by investors. Similar to the arguments of Saint-Paul (1992), is the arguments of Levine (1997) who placed more emphasis on the significance of stock markets in creating finance needed for investments purposes, particularly in assets that are less liquid.

EMPIRICAL REFLECTIONS

The vital role that the financial sector plays in economic growth has intrigued macroeconomists and financial economists for several years now. Various econometric studies such as the ones by Unalmis (2002) who researched the direction of causality between financial development and economic growth in Turkey utilizing Granger non-causality in the context of Vector Error Correction (VEC) model. He made use of annual data from 1970 to 2001 to carry out his study. The study found that with exception of one of the proxies utilized, causality runs from financial development to economic growth in the short-run, according supporting the theory that causality runs from financial development to economic growth. Odiambho (2004) examined the function of financial development on economic growth in South Africa. The research proxied economic growth with GDP per capita against three proxies of financial development which includes the ratio of Broad money supply (M_2) to Gross Domestic Product (GDP), the ratio of currency to narrow money and the ratio of bank claims on the private sector to Gross Domestic Product (GDP). He used the Johansen-Juselius co-integration approach and Vector Error Correction model to experimentally uncover overwhelming theory that growth in demand for financial services depends upon growth in total goods and services between financial development and economic growth and totally rejects the theory that causality runs from financial development to economic growth. Waqabaca (2004) analysed low frequency data from 1970 to 2000 of growth rate in Fiji examining the causal relationship between financial developments and economic growth. The study utilised unit root test and co-integration technique within a bivariate Vector Autoregressive (VAR) framework. The empirical results obtained

proposed a positive relationship between financial development and economic growth for Fiji with causality running from economic growth to financial development. He posits that this result is basic with countries that have less complex financial systems particularly the less developed nations of the world. The findings supports the theory that growth in real output increases the demand for financial services.

Caporale (2005) examined the hypothesis of endogenous growth models that financial development caused higher growth through its influence on the level of investment and its productivity utilizing data from four countries. The study showed that in fact, investment productivity was the channel through which security exchange market development enhanced the growth rate in the long run. Wadud (2005) used the data of three South Asian countries namely India, Pakistan and Bangladesh and examined the long-run causal relationship between financial development and economic growth. He detailed financial system into “bank-based” and “capital market based” classifications. The study utilized a co-integrated Vector Auto-regressive (VAR) model to assess the long-run relationship between financial development and economic growth. The empirical outcomes proposed that there is causality between financial development and economic growth which runs from financial development to economic growth lending its support to the theory that holds that the development of the financial sector will ultimately lead to economic growth. Mohammed and Sidiropoulos (2006) researched the impact of financial development on economic growth in Sudan using data from 1970 to 2004. The study assessed the long-run and short-run relationship between financial development and economic growth using the Autoregressive Distributed Lag (ARDL) model to co-integration analysis by Pesaran and Shin (1999). Their empirical results showed a weak relationship between financial development and economic growth in Sudan, this is as a result of the inefficient allocation of resources by financial institutions, the absence of an appropriate investment climate required to foster significant private investment in order to promote growth in the long run, and the poor quality of bank credit allotment. Amaral and Quintin (2007) stated that the development of the financial market grows output by expanding the capital utilized in production and ensuring that capital is put into best uses. Thornton (1995), Rousseau and Sylla (2001), and Calderon and Liu (2002) support the claim that development of the financial system promotes economic growth, thus supporting that causality flows from financial development to economic growth with no feedback response from economic growth. i.e causality runs from financial development to economic growth.

Hakeem (2009) employed a panel data framework, using fixed effect, random effects and maximum likelihood estimation techniques in his investigation of financial development and economic growth. The indicators that reflects financial development includes liquid liabilities, broad money supply, private credit and domestic credit, each taken as a ratio of the Gross Domestic Product (GDP). Financial development was found to have no strong impact on economic growth which, he attributed to the long periods of financial repression in the region investigated. Chang, Jia and Wang (2010) examined fund reallocation by banks and regional economic growth based on 1991–2005 provincial level data of four state-owned commercial banks in China. They found there was correlation at the regional level between fund reallocation and bank loans on the one hand and economic growth on the other. Mixed results was found by Esso (2010) in a study that investigated the co-integrating and causal relationship between financial development (proportion of private credit to Gross Domestic Product) and economic growth in seven West African countries over the period 1960–2005. The results show that there is a long-run relationship between financial development and economic growth but with various forms of causality. In Ghana and Mali, financial development leads economic growth while it is economic growth that leads financial development in Burkina Faso, Cote d'Ivoire and Sierra Leone, while in Cape Verde and Liberia bidirectional causality is observed. This implies that Cape Verde, Ghana and Mali should give policy priority to financial reforms while Burkina Faso, Cote d'Ivoire and Sierra Leone should promote economic growth. This result invalidates the view that level of development of a country determines the causal relationship between financial development and economic growth as these countries are about at the same level of development, yet they show inconsistent causality. On the other hand fact that the study used a single proxy of financial development (proportion of private credit to Gross Domestic Product) might have limited the chances of revealing more relationship between financial development and economic growth these countries. Demetriades and James (2011) examined eighteen Sub-Saharan African countries and the report shows that the relationship between credits and growth is altogether absent while causality from financial development to economic growth in the long run does not exist. Yazdani (2011) studied the role and performance of commercial banks credit allocation to private sector on the economic growth of Iran utilizing the following variables; profitability, cash available in circulation, and investment. He analysed the data with

Spearman correlation test, Durbin-Watson test, independent t-test, Pierson correlation test ,variance analysis F-test and linear regression chart. The result showed that all variables in the research impact on the economic growth of Iran.

Zhang, Wang and Wang (2012) examined the relationship between financial intermediation and economic growth in China, using data from 286 Chinese cities over the period 2001–2006. Their results suggest that traditionally used indicators of financial development are generally positively associated with economic growth after controlling for many factors associated with growth. Goldsmith (1969) used data gathered from over 35 countries in the period 1860-1963 to examine the relationship between aggregate measures of how well the financial system functions economic growth. The study used the value of financial intermediary assets divided by Gross National Product(GNP) to gauge financial development under the assumption that the size of the financial system is positively correlated with the provision and quality of financial services.

The findings of the study showed if periods of several decades are considered, a rough parallelism can be observed between economic and financial development because there are indicators in the few countries for which the data are available that periods of more rapid economic growth have been accompanied though not without exception by an above average rate of financial development. Levine and Zervos (1998) empirically studied 47 developed and developing countries in the sample period , 1976-1993 where the relationship between measures of stock market liquidity, size, volatility and integration with global capital markets on the one hand, and economic growth, saving rates, improvements in productivity and capital accumulation, on the other hand. In conclusion, they stated that in most of the countries considered stock market liquidity and bank development showed positively and significantly relationship and were correlated with economic growth, capital accumulation and productivity increases. On the other hand, stock market size, volatility and integration with global capital markets, however, were not significantly correlated with economic growth and productivity increases. Demirguç-Kunt and Levine (1996) investigated the relationship between structure of the financial sector and economic growth. Their focus was on the impact the financial system is market or banking oriented and what the relation is to economic growth. They employed two methodologies; The first being the use of cross-country approach that determines if economies grow faster in market or banking oriented systems. Their result showed that neither market nor banking oriented systems have more or less influence on economic growth rather what leads are that the level of financial development and the surroundings in which financial intermediaries and markets operate causes economic growth. The second methodology focused on the branch of industry approach to ascertain whether various branches, which heavily depend on external finance, faster growth rate in market or bank based financial systems. They summarily stated that external economies that do heavily rely on finance externally tend to grow faster.

Cetorelli and Gambera (2001) explored the empirical relevance of banking market structure on economic growth. They used an extension of the Rajan and Zingales data set, with both cross-industry and cross-country characteristics. They employed three models to help in their analysis and tested whether sectors that are more in need of external finance grow disproportionately slower or faster if they are in a country with high number of bank branches. Ratio analysis and various test of robustness were used in their empirical analysis and it was observed that from their study that an efficient bank market structure enhances economic growth.

Hermes and Lensink (2003) in their empirical investigation established that there is a relationship between financial development and economic growth. Of the 67 countries examined in the data set, 37 have a sufficiently developed financial system that creates room that contributes positively to economic growth. And most of these countries are in Latin America and Asia. Hao et al, (2004) used provincial data China spanning from 1985 to 1999 to examine how the development of financial intermediaries influences China's economic growth during the post-1978 reform period. The results show that the development of China's financial intermediation sector contributes to its rapid economic growth through two channels which includes the institution of loans for state budget appropriation and the mobilization of household savings.

Janice & Serge (2015) investigated the impact of financial development on economic growth using time series data in Cameroon. This investigation was carried out using three common indicators of financial development (broad money, deposit/GDP and domestic credit to private sector). The study was analysed using the Auto Regressive Distributive Lag (ARDL) technique of estimation, it was discovered that there exist a short-run positive relationship between Broad money(M_2),government expenditure and economic growth, a short run negative relationship between bank deposits,

private investment and economic growth equally exists. However in the long run, all proxies of financial development show a positive and significant impact on economic growth and thus confirms the existence of a positive and long-term impact of all the proxies of financial development on economic growth through bound test.

Medjahaed (2016) examined the impact of financial development on economic growth in the context of the Middle East /North Africa(MENA) countries and considered a number of measures of financial development that are: private credit to GDP, M_2/GDP , the ratio of commercial bank assets to the total of commercial bank assets and central bank assets. The growth rate of real GDP as dependent variable and few core control variables of economic growth. The study employed panel time series data over the year of 1980-2012 for each indicator for a split sample of 11 MENA countries. In order to measure the impact, the study analyzed the data by applying panel autoregressive distributed lag (ARDL) framework of pooled mean group (PMG), mean group (MG) and Dynamic fixed effect (DFE) estimators and result obtained from PMG estimators demonstrates that the financial intermediary has a negative effect on the growth rate in the MENA countries in the short and long run.

Zins and Weill (2017) measured lending cyclicalities by estimating the sensitivity of bank lending growth to GDP per capita growth of the host country. A greater sensitivity is associated with a more cyclical lending behaviour. Panel data from 230 commercial banks covering 38 African countries spanning the period from 2002 to 2015 was used which includes five groups of banks based on ownership: domestic privately-owned, domestic state owned Pan African banks, banks owned by foreign developed investors, and banks owned by foreign developing investors. Their main finding was that, lending of African banks is pro-cyclical with loan growth positively linked to host GDP per capita growth. Madallena (2018) carried out a study to determine the correlation between financial sector development and economic growth, where she examined the cross country data of 87 countries over ten years from 2005 to 2015 using the ordinary least Square regression and her investigations showed a positive relationship between financial development and economic growth. She used financial access, depth and stability as proxy for financial development while GDP per capita was used as proxy for economic growth.

Cristian, Vladimir & Danuletiu (2019) selected 45 low income, middle income and high income countries from the total number of countries (by eliminating those with incomplete data for selected variables. The data covers a ten-year period (2006–2015) using the Least Square models with F-statistic, Adjusted R-squared and Durbin-Watson test and the results showed that economic growth estimated by Real GDP rate was positively related to financial development

proxies which includes soundness of banks, financial market sophistication, ease of access to loans and by local equity market access and negatively influenced domestic credit to private sector. Cepni, Hacihasanoglu & Yilmaz(2020) analyzed the co-movement between credit growth and GDP growth in Turkey over the period January 2004–October 2019 using Wavelet analysis, and took into account the time and frequency variation, and the results strongly show the presence of the time- and frequency-variation in the relationship. Specifically, the results show that for a group of financial variables, credit growth is highly correlated with GDP growth. The findings of Nnanna (2004) were more disturbing. He, also using Ordinary Least Square regression technique, concluded that financial sector development did not significantly affect per capita growth of output. Empirical studies on Nigerian finance-growth dynamics are not only limited in number but restricted in scope, in terms of the measure of financial development. Ndebbio (2004) studied the impact of financial deepening on economic growth and development in Sub-Saharan African countries using an ordinary least square regression model. The study utilized the two financial deepening variables which includes the degree of financial intermediation measured by broad money supply as a proportion to Gross Domestic Product, and the growth rate of per capita real money balances. The findings of the study showed that a well-developed financial sector encourages overall high but sustainable growth of an economy. It also found that in the long run, there exists bidirectional causality between financial deepening and economic growth and that financial sector development strongly affect per capita growth of output which he attributed to the strong finance basis and the presence of well-functioning capital markets.

Nzotta and Okereke (2009) used time series data spanning 1986-2007 based on two stages least analytical model and concluded that financial deepening did not support economic growth in Nigeria. However, Afangideh (2009) improved upon the works of Nzotta and Okeke(2009) by using three stage least square estimation technique on a data spanning 1970 to 2005, in which he found that a well-developed financial system mitigates growth financing constraints by increasing bank credit and investment activities with resultant rise in output. The finding of Agu and Chukwu (2008)

used data between 1970-2005 in which they employed the augmented Granger causality test to ascertain the direction of causality between financial deepening and economic growth in Nigeria. Their findings revealed that causality that financial deepening leads economic growth and economic growth runs causality to financial deepening, depending on the financial deepening variable that is used. Fadare (2010) explored the effect that financial sector reforms had on economic growth in Nigeria over the period 1999 - 2009. He used the ordinary least square regression technique and found that interest rate margins, parallel market premiums, total banking sector credit to the private sector, inflation rate, inflation rate lagged by one year, size of banking sector capital and cash reserve ratios account for a very high ratio of the changes in economic growth in Nigeria.

Emmanuel and Adegboyega (2014) examined the relationship that banks had on economic growth in Nigeria. They adopted linear regression function for the study and specified that the level of real Gross Domestic Product, which is a measure of economic activity, is a function of banks credit to the economy which is a measure of the contribution of banks. The results of the models estimated show that banks have significant and positive impacts on economic growth in Nigeria.

METHODOLOGY

For the purpose of this study, the population of study is the Real Gross Domestic Product(RGDP), total market capitalization(MCAP), credit to private sector(CPS) and broad money supply(BM) time series data sourced from the Central Bank of Nigeria Annual Statistical Bulletin and Nigerian Stock Exchange Fact Book. Due to the research limitation and constraint in data accessibility, the researcher limited its sample size to few financial sector development indicators (MCAP,CPS,BM) and economic growth indicator (RGDP). So therefore, the sample size is the MCAP,CPS,BM and RGDP time series data within the period of 1998-2018 as collected from Central Bank of Nigeria Annual Statistical Bulletin and Nigerian Stock Exchange Fact Book. The sampling technique to be used for the study is simple random sampling technique, reason being that simple random sampling technique is used to make statistical inferences about a population and it allows for unbiased data collection which lets studies arrive at unbiased conclusions. This technique, also allows every member of the population to be selected thereby increasing generalizability of results.

Model Specification

Based on the objectives of the study, the functional model is specified as follows

$$RGDP = f(MCAP, CPS, BM) \quad (1)$$

It is empirically stated as

$$RGDP = \beta_0 + \beta_1 MCAP + \beta_2 CPS + \beta_3 BM + \mu \quad (2)$$

Where:RGDP= Real gross domestic product (proxy for dependent variable)

MCAP =Total Market capitalization;CPS=Credit to private sector BM=Broad money; β_0 =regression intercept; β_1 , β_2 , β_3 =coefficient of the independent variables to the dependent variable μ =error term:Where RGDP = Real GDP for the sample period;MCAP = Total market capitalization contribution to Real Gross Domestic Product; CPS = Credit to private sector contribution to Real Gross Domestic Product ;BM = Broad money contribution to Real Gross Domestic Product μ = the “noise” or error term; α_1 and β_0 = slope and coefficient of regression. The coefficient of regression, β_1 , β_2 and β_3 indicate how a unit change in the independent variable (total market capitalization, credit to private sector and broad money) affects the dependent variable (Real Gross Domestic Product). The error term μ , is incorporated in the equation to cater for other factors that may influence RGDP.

Estimation techniques

The technique used in this study is the Ordinary Least Square (OLS) estimation technique. The test instruments in the OLS are the t-statistics and f-test which would be used to test the significance of variables and the overall significance of the regression respectively. Other test instruments that would be employed are the Durbin Watson test which would be used to test the presence or absence of correlation between and among the explanatory variables and the adjusted R-square, used to test the percentage variation of the dependent and independent variables. The e-view statistical package will be used to compute the data.

Stationality Test

Time series data are assumed to be non-stationary and this implies that the result obtained from Ordinary Least Square (OLS) may be misleading. It is therefore necessary to test the stationarity of the variables using Augmented Dickey Fuller test to level, first and second difference. The ADF test constructs a parameter correction for higher order correlation by assuming the times series is an auto regressive process. Mathematically expressed as

$$\Delta y_t = c + \beta_t + \alpha y_{t-1} + \sum_{j=1}^k \gamma_j \Delta y_{t-j} + \epsilon_t \quad (3)$$

$$\Delta y_t = c + \alpha y_{t-1} + \sum_{j=1}^k \gamma_j \Delta y_{t-j} + \epsilon_t \quad (4)$$

Johansen co-integration test

The co-integration test is established whether a long run equilibrium relationship exists among the variables. It is generally accepted that to establish a co-integration, the likelihood ratio must be greater than the Mckinnon critical values.

Granger Causality

To determine the direction of causality between the variables, the study will employ the standard Granger causality test (Granger,1969). The test is based on Vector error correction model (VECM) which suggests that while the past can cause or predict the future, the future cannot predict or cause the past. Thus, according to Granger(1969) X Granger cause Y if past value of X can be used to the past value of Y. the test is based on the following regression model

$$Y_t = \alpha + \sum_{i=1}^n \alpha_i Y_{t-i} + \sum_{i=1}^n X_{\alpha i} X_{\mu} \quad (5)$$

$$X_t = \beta + \sum_{i=1}^n \beta_i Y_{t-i} + \sum_{i=1}^n X_{\beta i} X Y_t \quad (6)$$

Regression Analysis

In its simplest form regression analysis involves finding the best line relationship to explain how the variation in an outcome or dependent variable y depends on the variation in a predictor or independent variable or explanatory variable, x .the regression equation can be expressed in a multiple linear form where it involves a single dependent variable and a set of multiple independent or explanatory variables. Given the multiple number of independent variables in this study, the multiple regression technique was utilized with the aid of the e-view statistical tool.

A'priori Expectation

This explains the theoretical linkage about the signs and magnitude of the parameters of the specified functions. The A'priori expectations are predetermined by the principles of financial and economic theory which represents the expected sign of the parameter in accordance with the relationship among the variables under study. On a'priori grounds, we expect to have a positive relationship between proxies of the independent variable (Financial sector development) and the dependent variable (Real Gross Domestic Product).This can be mathematically expressed as: $b_1 b_2 b_3 > 0$.

Presentation of Data and Analysis**Table I Ratio of Real GDP to MCAP,CPS and BM**

Years	MCAP/RGDP	CPS/RGDP	BM/RGDP
1998	1.20	1.58	2.19
1999	1.30	1.92	2.80
2000	2.00	2.24	3.71
2001	2.62	3.03	5.02
2002	2.64	3.21	5.20
2003	4.29	3.46	6.16
2004	6.03	4.06	6.09
2005	7.73	4.91	7.04
2006	12.8	5.73	9.50
2007	30.97	8.54	11.95
2008	20.20	15.04	17.41
2009	14.10	18.26	18.88
2010	18.16	18.60	20.21
2011	17.87	18.54	21.17
2012	24.70	24.44	23.18
2013	30.10	24.90	23.97
2014	25.14	25.50	24.18
2015	24.60	27.06	26.84
2016	23.77	31.04	31.83
2017	33.50	32.26	32.65
2018	31.50	32.27	35.93

Source: Researcher's computation; MCAP=Total market capitalization); CPS=Credit to private sector; BM=Broad money supply; RGDP=Real Gross Domestic Product

The table above shows the ratio of the independent variables to the dependent variable. Based on the statistical postulation of Porter and Gujarati(2009), that time series data are prone to stationarity problems, we subjected our data to Augmented Dickey Fuller Unit root test in order to avoid having spurious result. The output of the result is presented below:

Testing For Unit Root Test**Table II Summary Result of The Unit Root Tests at Level**

Variable	Order of Integration	Critical Value at $\alpha = 0.05$	ADF statistic	T-Value	P-Value ($\alpha=0.05$)	Remark
RGDP	I(0)	-3.029970	-1.494310	0.5147	$>\alpha$	Not significant
MCAP	I(0)	-3.020686	-1.149571	0.6745	$>\alpha$	Not significant
CPS	I(0)	-3.020686	0.414776	0.9783	$>\alpha$	Not significant
BM	I(0)	-3.020686	1.345694	0.9979	$>\alpha$	Not significant

Source: e:view10 computation

Table III First Differencing

Variable	Order of Integration	Critical Value at $\alpha = 0.05$	ADF statistic	T-Value	P-Value ($\alpha=0.05$)	Remark
RGDP	I(1)	-3.029970	-2.459515	0.1402	$>\alpha$	Not significant
MCAP	I(1)	-3.029970	-4.866088	0.0012	$<\alpha$	Significant
CPS	I(1)	-3.029970	-3.531620	0.0185	$<\alpha$	Significant
BM	I(1)	-3.029970	-3.462724	0.0213	$<\alpha$	Significant

Source:e:view10 computation

Table IV Second Differencing

Variable	Order of Integration	Critical Value at $\alpha = 0.05$	ADF statistic	T-Statistic	P-Value ($\alpha=0.05$)	Remark
RGDP	I(2)	-3.052169	-3.665633		0.0155< α	Significant
MCAP	I(2)	-3.052169	-5.117566		0.0009< α	Significant
CPS	I(2)	-3.065585	-5.366182		0.0006< α	Significant
BM	I(2)	-3.040391	-6.292288		0.0001< α	Significant

Source:e:view10 computation

Table V Combination of Different Integrations

Variable	Order of Integration	Critical Value at $\alpha = 0.05$	ADF statistic	T-Statistic	P-Value ($\alpha=0.05$)	Remark
RGDP	I(2)	-3.052169	-3.665633		0.0155< α	Significant
MCAP	I(1)	-3.029970	-4.866088		0.0012< α	Significant
CPS	I(1)	-3.029970	-3.531620		0.0185< α	Significant
BM	I(1)	-3.029970	-3.462724		0.0213< α	Significant

Source:e:view10 computation

From the result of presented in table IV-V above, time series under investigation report stationary at order1(1) at second differencing justifying the uniformity of the data set and thus suggest that we can proceed to test for long run relationship which might have existed amongst the variables using Johansen cointegration test.

Table VI Johansen cointegration for the variables: Maximum Eigen Test Result

Hypothesized CE(s)	No. of	Eigen value	Maximum-Eigen	0.05 Critical value	Prob.	Decision
None		0.916575	28.13008	27.58434	0.0426	Reject Ho
At most 1		0.829242	18.01656	21.13162	0.1292	Accept Ho
At most 2		0.732445	6.543412	14.26460	0.5445	Accept Ho
At most 3		0.017180	0.213803	3.841465	0.6438	Accept Ho

Source: Computed by researcher from E-view 10

Table VII Johansen cointegration for the variables: Trace Statistics Test Result

Hypothesized No. of CE(s)	Eigen value	Trace Statistics	0.05 Critical value	Prob.**	Decision
None*	0.772483	52.90385	47.85613	0.0156	Reject Ho
At most 1	0.612578	24.77377	29.79707	0.1697	Accept Ho
At most 2	0.291348	6.757214	15.49471	0.6060	Accept Ho
At most 3	0.11190	0.213803	3.841465	0.6438	Accept Ho

Source: Computed by researcher from E-view 10

From table VI and VII the co-integration test is used to check the presence of a long-run relationship among the variables. The Johansen approach produces two statistics, trace and maximum Eigen value which are used to determine the number of co-integrating vectors.

The trace statistic shows the presence of 1 co-integration equation and the Max-Eigen value statistic also indicates 1 co-integrating equation at 0.05 level of significance. Given the results generated,. Hence, it is concluded that a long-run relationship exists among the variables and hence the variables are co-integrated.

Granger Causality Test

According to Granger (1969), measuring the correlation between variables will not be enough to construct a complete understanding about the relationship between two or more time series. This is because some correlations may be spurious and not useful, as there might be a third variable that cannot be accounted for. This is the essence of performing the causality test. The causality test and the results are presented in table VIII below;

Table VIII Presentation Pairwise Granger Causality Tests

Null Hypothesis:	Obs	F-Statistic	Prob.
MCAP does not Granger Cause RGDP	19	1.15498	0.3433
RGDP does not Granger Cause MCAP		4.23141	0.0365
CPS does not Granger Cause RGDP	19	2.74974	0.0983
RGDP does not Granger Cause CPS		5.86920	0.0141
BM does not Granger Cause RGDP	19	2.21737	0.1457
RGDP does not Granger Cause BM		1.66437	0.2247
CPS does not Granger Cause MCAP	19	1.60232	0.2363
MCAP does not Granger Cause CPS		4.87625	0.0247
BM does not Granger Cause MCAP	19	3.01467	0.0815
MCAP does not Granger Cause BM		3.29017	0.0674
BM does not Granger Cause CPS	19	3.29536	0.0672
CPS does not Granger Cause BM		0.74347	0.4933

Source: eview 10 computation

From the analysis in table VIII above this indicates that: Real Gross Domestic Product (RGDP) has a unidirectional causality with Market Capitalization (MCAP), Credit to Private Sector (CPS) and Broad Money Supply (BM).

Table IX Multiple Regression Analysis

Variable	Coefficient	Std. Error	t-Statistic	Prob.
MCAP	0.304953	0.000163	1.869311	0.0443
CPS	0.941914	0.000595	1.581448	0.0322
BM	0.2845613	0.000639	0.433360	0.0302
C	23655.28	1946.979	12.14974	0.0000
R-squared	0.958200	Mean dependent var		46826.48
Adjusted R-squared	0.950824	S.D. dependent var		17326.90
S.E. of regression	3842.358	Akaike info criterion		19.51520
Sum squared resid	2.51E+08	Schwarz criterion		19.71416
Log likelihood	-200.9096	Hannan-Quinn criter.		19.55838
F-statistic	129.9005	Durbin-Watson stat		1.751463
Prob(F-statistic)	0.000000			

Source: Eview10

With our table IX above, the examining of the Ordinary Least Square regression estimate shows that the variables examined in this study, the value of R-Squared 95.8% and R-adjusted of 95.1% of the Real Gross Domestic Product (dependent variable) can be explained by the variation of total market capitalization, credit to private sector and broad money supply (BM). The F-Statistics (129.9005) and F-Statistic (0.00000) justifies the validity of the regression model and indicates its statistical significance.

The Durbin Watson statistics (1.751463) shows that there is the absence of autocorrelation between variables being examined. The Akaike info criterion figure of 19.51520 is the lowest of the criterion on table 4.11 and indicates the best model to adopt in this study. The coefficient of MCAP, CPS and BM measures how a unit change in independent variable affects the dependent variable. From the results, a unit change in total market capitalization leads to about 30.49% increase in Real GDP. While a unit change in credit to private sector leads to 94.19% increase in Real GDP and accordingly a unit change in BM leads to 26.46% increase in Real GDP. This shows that there is a positive relationship between total market capitalization, Broad money, Credit to private sector and the Real GDP.

Test of Hypotheses

H₀₁: There is no significant relationship between Credit to Private Sector and Real Gross Domestic Product in Nigeria.

From the result of the analysis in table X, $R^2=0.958200$ and P-value for credit to private sector is 0.0322. The R^2 value of 0.958200 shows there is a significant relationship between credit to private sector and Real Gross Domestic Product in Nigeria.

Since the P- value $0.0322 < 0.05$ level of significance, we reject the null hypothesis “There is no significant relationship between credit to private sector and Real Gross Domestic Product in Nigeria”.

H₀₂: There is no significant relationship between broad money supply and Real Gross Domestic Product in Nigeria.

From the result of the analysis in table X, $R^2=0.958200$ and P-value for credit to private sector is 0.0302. The R^2 value of 0.958200 shows there is a significant relationship between broad money and Real Gross Domestic Product in Nigeria.

Since the P- value $0.0302 < 0.05$ level of significance, we reject the null hypothesis “There is no significant relationship between broad money and Real Gross Domestic Product in Nigeria”.

H₀₃: There is no significant relationship between total market capitalization and Real Gross Domestic Product in Nigeria.

From the result of the analysis in table X, $R^2=0.958200$ and P-value for between total market capitalization is 0.0443. The R^2 value of 0.958200 shows there is a significant relationship between total market capitalization and Real Gross Domestic Product in Nigeria.

H₀₄: There is no causal relationship between financial sector deepening and real gross domestic product in Nigeria should be rejected.

From the analysis on table VIII the researcher inferred that there was a unidirectional causality between total market capitalization, credit to private sector, broad money and RGDP, therefore we reject the null hypothesis “There is no causal relationship between financial sector deepening and real gross domestic product”.

The hypotheses summarized in table x below;

Table X Summary of Hypotheses findings

Hypotheses	Conclusion
H ₀₁	Rejected
H ₀₂	Rejected
H ₀₃	Rejected
H ₀₄	Rejected

Source: Researcher,s computation

DISCUSSION OF FINDINGS

The objective of this study is to establish the relationship between financial sector development and economic growth in Nigeria. From the findings of the study, The result of the OLS shows that, there is positive relationship between each of the MCAP,CPS,BM and RGDP. R-square(R^2) which is the coefficient of variation shows that about 95.8 % of changes in the real gross domestic product is explained by total market capitalization, credit to private sector and broad money while only 4.2 percent is explained by other factors. The standard errors for the independent variables are all insignificant. This shows that the independent variables are statistically reliable to predict the dependent variable, implying reliability of the results.

From the results, a unit change in total market capitalization leads to about 30.5% increase in Real GDP while a unit change in CPS leads to 94.1% increase in Real GDP and accordingly a unit change in BM leads to 28.6% increase in

Real GDP. The causality test between the variables which was conducted using Granger model shows that causality runs from the three independent variables (total market capitalization and credit private sector, broad money) to the dependent variable (Real GDP). This means that total market capitalization, and the credit to private sector causes changes in Real GDP. The findings based on the data for the period 1998 – 2018 from both the Ordinary Least Square, Johansen co-integration model and the Granger causality test provide evidence, in support of earlier findings from studies both here in Nigeria and other economies. The result is in line with some of the theories examined in study of which includes; Schumpeter's Model of economic growth, Endogenous growth theory and Walter Bagehot's theory.

CONCLUSION

The financial sector of any country's economy acts as the engine of growth that could facilitate and aid the promotion of rapid economic transformation. From the findings, we conclude that there is a significant relationship between financial deepening variables (Credit to private sector, total market capitalization and broad money supply) and economic growth variables (Real gross domestic product). The researcher concludes that there is a unidirectional causality between broad money, total market capitalization credit to private sector and real gross domestic product.

RECOMMENDATIONS

Based on the findings of this study and conclusion drawn thereof, we specifically make the following recommendations;

1. The study recommends that since there is a positive long run relationship that exists between financial sector and economic growth as revealed in the findings through Johansen co-integration test, government should adopt policies that will aid the development of the financial sector in order for economic growth to thrive.
2. The study recommends the need to strengthen financial institutions credit policy through effective and efficient regulation and supervisory framework in order to make credit available and affordable to the private sector.
3. The study recommends that there is an urgent need for legal requirements to fast track financial markets and institutions for efficient credit system.
4. The study recommends that government addresses the issues in the poor infrastructure such as power, security and transport as this will reduce the cost of funds for financial institutions and also deepens and sustains the momentum for growth.
5. The study recommends that since causality is from Financial deepening to Economic growth that effective policies and supervision of the financial sector should be enhanced to have a robust economy.

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EFFECTS OF FINANCIAL DEVELOPMENT ON THE ECONOMY

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ABSTRACT

This study explored the effects of financial development on the Nigerian economy for the period 1981 to 2019 with the application of time series data generated from the central bank of Nigeria. In an attempt to carry out this investigation, the study applied auto regressive distributed lag modeling as a methodological tool and the results shows that Credit to private sector at lag 1 insignificantly influence growth in Nigeria. Inferentially, an increase in credit to private sector expands investments which further trigger's growth in the economy. Gross fixed capital formation is significant and inversely related to economic growth in Nigerians but responded positively to growth. Insurance premium at lag 2 and levels influences economic growth, while at Lag 1 Insurance Premium contributed to growth. Market capitalization contributed minimally to economic growth in Nigeria. Oil price positively influence economic growth at levels and second difference. In view of this, the study among others that there should be a deliberate collaboration between the government through the private sector credit by building conducive and enabling environment that promotes capital investment in the economy

Keyword: Financial Development, Gross Fixed Capital Formation, Market Capitalization and Economy

INTRODUCTION

The development of the financial sector has contributed to the pace of economic growth through its effects on saving and investment, Killick and Martin (1990). Therefore, an efficient and robust financial sector supported by a good regulatory system promotes a country's economic growth. The Nigerian financial sector is broadly divided into two sub-sectors such as the informal and formal sectors. The informal sector has no formalized institutional framework, no formal structure of rates and comprises the local money lenders, thrifts, savings and loans associations and all forms of associations. However, this informal sector is poorly developed and not integrated into the formal financial system. The formal sector comprises of the banking sector, the capital market and non-bank financial institutions. The financial sector refers to the part of the entire economy which primarily comprises money markets, banking institutions and brokers. It is a very important sector in most large and highly developed countries.

The level of development and innovation of traditional and non-traditional financial services sector happens when financial instruments, markets and intermediaries work together to lessen the costs associated with information, enforcement and transactions. Similarly, Nnanna, Englama and Odoko (2004) argued that financial development is capable of influencing or enhancing economic growth in three ways, viz: (i) by pushing up the efficiency level of financial intermediation, (ii) by expending the social marginal productivity of capital, and (iii) by influencing the private savings rate. The implication of this observation is that financial institutions can promote economic growth by carrying out their functions efficiently, especially that of provision of credit.

According to the National Bureau of Statistics 2019 report, the finance and insurance sector represents the financial industry. The sector recorded a gross domestic product growth rate of 24% at the end of the first quarter of 2020, having experienced a contraction of 9.12% in the first quarter of 2019. Based on existing data, Financial Institutions sector remains the fastest-growing sub-sector in the Nigerian economy and that the closest is the Telecommunication and Information sub-sector at a gross domestic product growth rate at 9.17%.

According to Levine (2004) most of the theoretical explanations reveal that financial sector development instigates economic growth by creating economic conditions that enhance efficiency in resource allocation. In the light of this,

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economic growth is viewed by Baye and Jansen (2006) as the rate of change in real output. It is usually stated as the percentage of change on annual basis. However, Aretis *et al* (2007) asserts that economic growth has to do with the expansion of real output per capita (per worker) over time. Supportively, Riley (2000) viewed economic growth as depending on some factors in the long-run. Those factors include: (i) the growth of the nation's stock of capital, (ii) the entrepreneurial ability of human resources, (iii) the trend rate growth of the productivity of labour and capital, and (iv) technological progress or improvements.

Growth models are numerous in literature, yet, there is seemingly no agreement as to which model will achieve the finest results. Some of the existing growth models are: the Two-gap Model, Maximum Theory, Schumpeterian Theory, Harold-Domar Theory of growth, Neo-classical Model of Growth, and the Endogenous Growth Theory.

Building on this theoretical foundation, a plethora of empirical studies will be examined with regards to the relationship between financial sector development and economic growth, Chang and Caudill (2005); Seetanah (2008); Anwar and Nguyen (2011); Uddin *et al.* (2013) and Nwani and Bassey Orie (2016), etc. The results of most of the aforementioned studies have shown that financial development is a significant driver of economic growth.

Mainly, this study is concerned with the role of financial sector in the mobilization of savings, enhancing economic activities in the private sector and the size of the financial sector. According to Levine (1997), Levine (2004) and Beck *et al.* (2011) the growth-generating ability of every financial sector depends significantly on how efficient the sector could mobilize and allocate savings.

This study further seek to contribute to the existing studies by examining the effects of financial development on the Nigerian economy using the auto-regressive distributed lag (ARDL) approach to co-integration analysis. The Nigerian financial sector has stimulate the growth of the economy through increased mobilization of savings, provision of credit to the private sector and reduction in information and transaction costs making this study necessary.

Purposefully, we have included two major deterministic uncommonly used variables: insurance premium per insured and international crude oil price to represent the insurance sector and commodity market respectively. These two newly introduced variables seem to contribute positively to the economic growth of Nigeria. We are certain that the outcome of the study will be beneficial to financial regulators and industry players, as it connect to understanding the positive role the financial service sector plays in Nigeria.

LITERATURE REVIEW

The Nigerian Financial System is made up of different financial institutions that are interrelated for the development of the economy. Commercial banks are the most relevant financial institutions in Nigeria that encourage and mobilize savings and also channel savings into productive investment units Central Bank of Nigeria, (2017).

The Nigerian financial system consists of the formal sector (bank and non-bank financial institutions) and the informal sector (savings and loan association, local money lenders, etc.). The Financial Institutions in Nigeria can be broadly categorized into money market and Capital Market.

The Nigerian financial systems help in the allocation of resources for economic efficiency. It performs three major functions that are responsible for the economic growth and development. Firstly, the system provides convenient and efficient payments system. Secondly, the financial system pools savings form net surplus units and channel credit to productive investments. Thirdly, it aids deposit mobilization, according to Oluitan (2010) and Central Bank of Nigeria (2017). The essential role of a financial system in economic development is necessary to generate and mobilize scarce capital funds as a key condition to economic growth and development originated in the classic work of Schumpeter (1934).

The financial system entails more than the institutions and markets that operate in the financial sector. According to Revel (1973), who opines that the financial institutions and markets do not constitute the entire financial system, that the financial system has three key features: the extent of the interrelationships; the forms of the financial claims in which the interrelationships are expressed; and the pattern of relationships between persons and bodies of different kind as well as independent economic units.

In summary, the financial system is a web of organized and regulated financial interrelationships among financial institutions of various kinds, between and among the various economic units and persons, bodies, namely: households (consumers/savers), businesses (producers/borrowers), governments (regulators, producers, lenders and borrowers) and external bodies and persons that make up the economic system. The relationships are expressed in the composition of financial claims available to the system. The financial institutions and economic units interact in the different financial markets where financial instruments are sold and bought, thus forming a web of assets and liabilities, shares and debts, Agu (2015)

A financial system is a super structure erected on the basis of wealth of an economic system. Goldsmith (1969) referred to it as the relationship between the super structure (being a set of financial institutions, intermediaries and instruments) and the financial structure (being the real wealth or national income), which is referred to as the financial interrelationship ratio (FIR). The ratio differs between developed and developing countries, all things being equal, a high ratio signifies financial development.

Economic Growth

The term economic growth is described as the positive and sustained increase in aggregate goods and services produced in an economy within a given time period. According to IMF (2012), economic growth is the increase in the inflation-adjusted market value of the goods and services produced by an economy over time. According to Akpakpan, (1987), as cited by Wilson (2003), economic growth is defined in terms of achievement of yearly increase in both the total and per capita output of goods and services. In other words, it refers to the sustained increase in actual output of goods and services. According to Bjork (1999), increase in economic growth is caused by more efficient use of inputs such as labour productivity, energy or material, new goods, physical capital and services. Hence, economic growth is an increase in per capita real income overtime. It can also be said to refer to growth of potential output; that is production. Economic growth is conventionally measured as a percentage rate of increase in real Gross Domestic Product (GDP). Thus, economic growth can be stated in real or nominal terms. When the increase in aggregate level of goods and services is deflated by the rate of inflation, we have real economic growth but when measured without deflating, it is called nominal economic growth.

The aggregate production function also referred to as the neoclassical production function developed by Solow (1957) is used to develop a source of growth equation. Total output (Y) is a function of technology (A) usually known as total factor productivity (TFP), physical capital (K) and labor (L). The way TFP enters the production function is known as Hicks-neutral where an increase in the level of technological progress has no impact on the marginal products of labor and capital, Ansari and Ahmed (1998). Total output is the total production in a country which is usually approximated with the gross domestic product (GDP), Kormendi & Meguire (1985). The centerpiece of the standard neoclassical growth model developed by Solow is an aggregate production function of the form

$$Y_t = f(K_t, L_t, T_t) \quad (1)$$

Where: Y is output, K is capital, L is labour and T is an index of technology or efficiency.

Financial Development and the Nigerian Economy

Private Sector Credit and Economic Growth

The financial intermediation role is generally performed by the financial sector, which channels savings into productive investment. The Central Bank of Nigeria (CBN) identifies that for an economy to function effectively given structural rigidities, and for the private sector to develop and succeed, business needs to have access to credit.

Deposit-taking institutions in particular are well recognized for performing the crucial role of sourcing finance to support private sector consumption and investment in Nigeria. Credit to private sector refers to financial resources provided to the private sector, such as loans and advances, purchases of non-equity securities, trade credits and

other accounts receivable, which establish a claim for repayment Olowofeso, Adeleke and Udoji (2015). However, credit can be viewed from two areas such as trade or commercial credit and banking system credit. According to Freear (1980), trade credit refers to transactions which involve the supplier handing over goods or performing a service without receiving immediate payment.

Banking system credit to private sector involves the direct provisioning of loans and overdrafts to the private sector by institutions, such as deposit money banks, non-interest banks and merchant banks on economic growth. Levine (1997) argued that the efficient allocation of capital within an economy enhance economic growth and noted that there has been growing recognition for the positive impact of financial intermediation on the economy since the early 1990s. A number of empirical works have applied various analytical approaches to investigate the relationship between private sector credit and economic growth. For instance, Aliero, Abdullahi and Adamu (2013) examined the relationship between private sector credited and economic growth in Nigeria, using times series data for the period of thirty seven (37) years (1974-2010). They employ the Autoregressive distributed lag (ARDL) bound F-test for con-integration and to arranger causality to estimate variables they find a positive and significant relationship between private sectors credited economic growth in the long-run. Olowofeso, Adeleke and Udoji (2015) examine the impacts of private sector credit on economic growth in Nigeria using quarterly data spanning 2000 Q1 to 2014 Q4. The Gregory and Hausen (1996) co-integration test that account for structural breaks and endogeneity problems and fully modified ordinary least squares procedure was employed to estimate the model coefficients. The finding reveals a positive and statistically significant effect of private sector on output.

Stock Market Capitalization and Economic Growth

The capital market aids the growth-path of the economy. It is responsible for long term capital accumulation/formation and ensures the liquidity and stability of the financial system, Ifunanya, Stanley and Ogochukwu (2020). This is achieved through the financial intermediation and allocation of saving's among competing users which are critical to economic growth. The financial markets in term of promoting economic growth have been shown through significant improvements in stock market development.

Stock markets aid countries towards economic growth. Securities exchange is the basic in supporting worthy monetary proficiency by exchanging reserves from financial specialist with surplus to other beneficiaries. Where the inflows of funds into the markets out weight the outflows, market capitalization improves and the reverse holds. Therefore, market capitalization is largely affected by activities in stock markets, which then have direct impact on economic growth such as individual wealth, the performance of firms and consumers, and the cyclical performance of the economy. However low market capitalizations stems from underdeveloped stock markets and leads to low states of economic development and economic growth, Mushkin (2004). Jalloh (2018) examine the relationship between stock market capitalization and economic growth using current data from a sample of African countries. A dynamic panel approach is employed to estimate data. The results show a positive and significant relationship between stock exchange capitalization and economic growth provides encouraging signal for African countries to explore markets as a potential avenue for improving economic growth. Ifunanya, Stanley and Ogochukwu (2020) examine a comparative study of the stock market capitalization on economic growth in Nigeria and South Africa for the period 2000-2018. The study utilizes time series data and OLS regression to analyze the data. The study found that the relationship between market capitalization ratio to GDP and economic growth is positive for South Africa and but insignificant for Nigeria.

Insurance Sector and Economic Growth

The insurance sector constitutes a composite unit of the overall financial system and is capable of stimulating economic growth, Eferakeya and Anichebe (2019). The sector provides risk management and risk adjustment services to other sectors of the economy such as industrial, transportation, agricultural, mining, petroleum, banking, etc. It also contributes to economic growth by acting as financial intermediary through capital formation and provides business funding for deficit sectors of the economy, Etale (2019). The growing links between the insurance and other financial sectors also emphasize the possible role of insurance companies in economic growth. Insurance are similar to banks and capital markets as the needs of business units and provide households in financial intermediation, Haiss and Sumegi (2006). The availability of insurance services is essential for the stability of the economy and can make the business participants accept aggravated risk. The insurance sector is playing an important role by enhancing internal cash flow at the assured and by creating large amount of assets placed on the capital market and hence may contribute to economic growth, Haiss and Sumegi (2006). Insurance may also have effect along the line of maintaining financial stability, mobilizing savings, facilitating trade and industry; it allows for the risk to be managed more effectively, helps reduce losses, allocate capital more efficiently, and it can also be a substitute or complement for government security programs Skipper (2001).

The International Crude Oil Price and Economic Growth

The sustainable growth of every nation is dependent on several factors of which energy forms an integral part of the economic growth. It is inevitable that fluctuations in oil prices have significant effects on welfare and economic growth, Awunyo-Vitor, Samanhyia and Bonney (2013). International crude oil price is an important factor which would cause the depression of the economy, it may increase the domestic cost of factor inputs, then push up the overall inflation, it does cause the net exports decline in the oil importing countries and this leads to the deterioration of the trade balance, which also cause the consumer spending and investment growth, Qianqian (2010). The increase in crude oil price is considered good news in oil exporting countries and bad news in oil importing countries, the reverse should be expected when the oil prices decreases. The transmission mechanisms through which oil prices have an impact on real economic activity include both supply and demand channels, Ghalayini (2011).

Oil price fluctuation has impacts the Nigerian economy as an importing nation, an expansion in the price of oil will intensify the cost of production, subsequently prompting inflation and decelerating the growth rate of the economy in Nigeria, Mordi and Adebisi (2010).

Awunyo-Vitor, Samanhyia and Bonney (2018) examine the causal linkage between oil price change and economic growth in Ghana using data from World Development indicators and international statistics. The results show that there is an inverse relationship between oil price change and economic growth. Also the effect of oil price change on economic growth is statistically not significant in the long-run.

Gross Capital Formation and Economic Growth

Capital formation plays an important role in the economic growth and development process. It has always been seen as potential growth enhancing player. Capital formation determines the national capacity to produce, which in turn, affects economic growth. Deficiency of capital formation has been cited as the most serious constraint to sustainable economic growth Owolabo & Ajayi (2013). It is therefore not surprising that the analysis of capital formation has become one of the central issues in empirical macroeconomics. Economics theories have proved that capital formation plays a crucial role in the models of economic growth Beddies (1999), Gbura and Thadjimichael (1996), Gbura (1997). The capital fundamentalism view was supported by the studies of Youopoulos and Nugent (1976) as cited in Bakare (2011). The dynamics of capital formation and its relationship on economic growth is link to the works of Ugwuegbe and Uruakpa (2013); Swan (1956); Rekha (2010) and Gbenga and Akinola (2013). However, Rekha (2010) carried out a research on the short-long run relationship between capital formation and economic growth and conclude that capital formation exert influence on economic growth.

THEORETICAL REVIEW

Demand-Following and Supply Leading Hypothesis

The theoretical framework of this study is structured toward two diverging theoretical paradigm namely the “supply leading hypothesis” and “demand following hypothesis” in line with Patrick (1966) which postulated a feedback relationship between economic growth and financial development.

The ‘demand-following’ hypothesis posits a unidirectional causation from economic growth to financial development. It is directed toward financial system passive response to economic growth meaning that the increasing demand for financial services might lead to the aggressive expansion of the financial system as the real sector of the economy grows. However, the study of Gurley and Shaw (1955, 1967), Goldsmith (1969) and Jung (1986) and Guryay, Safakli and Tuze (2007) support the demand following hypothesis.

Luintel and Khan (1999) model this with a demand function as presented in equation (2). The equation comprises of financial development (X); per capita output (Y) and real interest rate (R).

$$X = F(Y, R) \text{ for } f_i > 0 \quad (2)$$

It is assumed that X is the summation of x_1 and x_2 ; with $x_1 = f_1(Y)$ and $x_2 = f_2(R)$; for $f_1 > 0$ and $f_2 > 0$. Likewise, Banerjee *et al* (1998) makes a similar proposition by including per capita Investment to equation (2)

$$X = F(Y, I, R) \text{ for } f_i > 0 \quad (3)$$

The connection between finance and growth is stated explicitly by King and Levine (1993) and further expatiated by Levine (2004).

The ‘supply-leading’ hypothesis posits a unidirectional causation that runs from financial deepening to economic growth implying that new functional financial markets and institutions will increase the supply of financial services. This will definitely lead to high but sustainable real economic growth. This hypothesis performs two roles namely to transfer resources from low growth sectors to high growth sectors and to promote entrepreneurial response in the later sector.

Earlier scholars like Schumpeter (1912), Goldsmith (1969), Shaw (1973) and McKinnon (1973), emphasized the importance of the financial sector in economic growth. Hicks (1969) argued that the industrialization process in England was promoted by the development of the financial sector which increased the access of the government and people to funds that was used to finance capital projects which led to the development of the economy. This view was supported by King and Levine (1993), that financial development increase economic growth. Moreover, Bensivenga (1995) concluded that well developed financial market induces long run economic growth. Other studies that supports the supply leading hypothesis include Calderon and Liu (2002) and Levine, Beck and Loayza (2000).

The model forms the basis for the supply-leading hypothesis, which assumes that the activity of the financial institution causes an enlargement of the economy. In this term paper, output (Y) is affected by “financial factors” (X) and “all other factors” associated with growth (P) that finance does not capture. In essence, finance affects growth through funding of the firms by which the productive base of the economy increases.

$$X = B(X, P) \text{ for } b_i > 0 \quad (4)$$

The intuition used by King and Levine (1993a) is applied to both equations (2) and (3), thus present these in equation (6) below. M is used to capture other factors associated with financial development (X) that are not captured by output(Y).

$$X = F(Y, M) \text{ for } f_i > 0 \quad (5)$$

Based on this assertion, we now have two models that are similar to each other, with equation (4) explaining supply – leading hypothesis while equation (5) explains the demand – following hypothesis. The positive notation for b_i and f_i implies that the relationship between financial development and economic growth is expected to be positive and vice versa Oluitan (2010).

Progressively, there is a third hypothesis known as the “stage of development hypothesis” which holds that the supply-leading financial development can induce real investment in the early stages of economic development, Patrick (1966).

We believe that the research outcome pursuant to the purpose of the study (objectives) will be mostly patterned towards the stance of Demand-Following and Supply Leading Hypothesis

The McKinnon and Shaw Theory

McKinnon (1973) and Shaw (1973) outlined the constraints placed on economic development by an ineffective financial sector and the benefits that accrue from financial liberalization in developing or ‘lagging’ economies. In general, the deep-seated problems of the lagging economy are related to all the economy not only to the financial sector. Thus, financial sector liberalization is part of a wider set of reforms and is not mutually exclusive to those reforms. Emphasis is placed on fragmentation imposed on economies by centralized decision making, especially in financial markets. Prices diverge across markets, or market segments and equilibrating resource flows do not occur, or are prevented. Government intervention in financial markets, usually in the form of interest rate controls, high bank reserve requirements or strict credit allocation directives, is the main source of ‘financial repression’. Uncertainty arising from resulting fragmentation reduces entrepreneurial leverage capacity and narrows maturity horizons, leading to an inferior savings and investment climate, from which is impossible to generate vigorous economic growth.

The analysis of McKinnon and Shaw afford valuable insights into the role of the financial sector in developing economies. These hinge on the fragmented nature of the economies, which is a considerable advance compared with traditional neoclassical models, built on assumptions of perfect information and zero transaction costs. Financial sectors evolve around the minimization of information asymmetry and transaction costs, and lagging economies are least

developed in this regard mainly due to divisive regulation, inadequate infrastructure, and macroeconomic control and low performance.

The McKinnon-Shaw analysis injected life into the financial development debate, spawning contributions from many other theorists, most of whom supported their findings. Greenwood and Jovanovic (1992) and King and Levine (1993) have developed formal models in which financial sectors services (especially efficient management of information asymmetry, risk diversification, and liquidity management) endogenously contribute to economic growth. It would be wrong to suggest that there is universal consensus about the benefit of financial sector reform to the economic development process. Most theorists, including McKinnon (1991), emphasize the dangers of financial sector liberalization under appropriate conditions. However, some, like Dornbusch and Reynoso (1989), are skeptical of the benefit from financial liberalization and others, like the neo-structuralists (Van Wijnbergen (1983) and Taylor (1983), suggest that it can actually inhibit economic development.

EMPIRICAL REVIEW

Some of the empirical studies in the area of finance and macroeconomics that have supported the financial sector development - economic growth nexus include:

Hermes and Lensink (2003) established a relationship between financial development, foreign direct investment (FDI) and economic growth. An empirical investigation was carried out on the role financial development plays in enhancing the positive relationship between FDI and economic growth. On the 67 countries in the data set, 37 have a sufficiently developed financial system in order to let FDI contribute positively to economic growth. Most of these countries are in Latin America and Asia. Most all the other countries in the data set are in Sub-Saharan Africa. These countries have very weak financial systems and consequently FDI does not contribute positively to economic growth.

Hao *et al* (2004) using Chinese provincial data from 1985 to 1999 examines how the development of financial intermediation influences China's economic growth during the post-1978 reform period. His results show that China's financial intermediation development contributes to its rapid economic growth through two channels: first, the institution of loans for state budget appropriation and second, the mobilization of household savings. Loan expansion, however, does not contribute to growth since loan distribution by financial intermediaries is inefficient.

Agbo and Nwankwo (2018) studied the effect of financial sector development on economic growth in Nigeria using secondary data covering the period 1981 to 2013. They employ the Dickey Fuller unit root test to confirm the stationarity of the variables involved and ordinary least squares technique to determine the extent to which other variables impact on economic growth. The results show that money supply, minimum rediscount rate and exchange rate have positive and insignificant effect on economic growth. On the other hand, banking sector credit, credit to the private sector, market capitalization and foreign direct investment discovered to be having negative and insignificant effect on economic growth. The study recommends that governments should evolve policies in favour of making the financial sector of their economies more efficient.

Olushola and Uzoma (2018) studies on financial sector development and economic growth in Nigeria using time series data of the period 1981 – 2017 obtained from the Central Bank of Nigeria (CBN) Statistical Bulletin & Statement of Accounts and the Federal Bureau of Statistics such as Total insurance income, total deposit money banks assets, total stock market capitalization, and broad money supply as ratio of gross domestic product for each year were used as proxies that measure activities in the financial sector and further analyze using least square regression method. The results showed that there is a positive and significant relationship between total insurance income and economic growth in Nigeria. Also, the model taken as a whole suggested that there is a positive and significant relationship between deposit money banks assets, stock market capitalization and economic growth in Nigeria. The broad money supply though had a significant impact on the economic growth of Nigeria. The researchers concluded that to achieve a steady economic growth, the financial intermediation should be strengthened through expansion in the capital market, bank consolidation and improvement in the insurance sector.

Balogo (2014) examined the relationship between financial sector development and economic growth in Nigeria using time series data of the period 1990-2009. The methods employed are the unit root, co-integration, ordinary least square

and the vector error correction term. The finding reveals that banking sector credits, total market capitalization and foreign direct investment positively affect economic growth.

Ahmad and Malik (2009) studied financial sector development and economic growth using a panel data of 35 developing countries over the period 1970-2003. The generalized method of moments (GMM) was employed to analyze variable. The finding was that financial sector development affects per capita GDP.

Puatwoe and Piabuo (2017) investigated the impact of financial sector development on economic growth using time series data in Cameroun. The Auto-regressive Distributed Lag (ARDL) technique of estimation was employed. The result shows that all the variables of broad money, deposit / GDP and domestic credit to private sector in the long run has a positive and significant impact on economic growth.

Mirang'onda, Mwaseba and Ngwilizi (2018) examined the impact of financial sector development on economic growth in Tanzania by employing Auto-regressive Distributed Lag (ARDL) approach. The result shows that, in both long-run and short-run, financial developments exert significant but negative effect on economic growth.

Levine (2005) reviewed and critiques theoretical and empirical research on the relationship between the operation of the financial system and economic growth. Several empirical researches have suggested that financial development positively affects economic growth.

Luintel and Khan (1999) use a sample of ten less developed countries to conclude that the causality between financial development and output growth is bi-directional. Hansson and Jonung (1997) examine the long-run relationship between finance and economic growth in Sweden from the 1830s to the 1990s and identify a link between the volume of credit and the level of GDP, prior to World War II. The financial system had the largest impact on GDP in the period 1890-1939. These findings are consistent with studies, indicating that the role of the financial system in promoting growth was significant during the early stages of economic development. They suggest interdependence between finance and economic growth rather than any one-way causal relationship.

Similarly, Fase (2001) investigated the relationship between financial development and long-term economic growth in the Netherlands between 1900 and 2000. The causality runs from financial intermediation to economic growth until World War II in the Netherlands, and vanishes afterwards. Fase (2001) argues that the development of the financial system has a greater impact on growth in a developing country than in developed economies. Fase and Abma (2003) examine the relationship between financial development and economic growth in nine emerging economies in South-East Asia. They found that financial development affects economic growth and that causality runs from financial structure to economic development, indicating that, in developing countries, a policy of financial reform is likely to improve economic growth. Andres et al. (2004) jointly estimate the effects of financial development and inflation on growth using both cross-section and time-series dimensions of the data on inflation, growth, and some banking and stock market indicators, over the period 1961-1993, for a sample of OECD countries.

METHODOLOGY

This study applied time series data generated from the central bank of Nigeria bulletin from 1981 to 2019. The model specification follows after the work of Schumpeter (1912), Mckinnon (1973), Fry (1995) and King and Livine (1993) who opine that financial development spur economic growth.

The functional relationship is expressed as:

$$RGDP = f \left(\frac{CPS}{GDP}, \frac{MKT}{GDP}, \frac{TIY}{GDP}, \frac{OILP}{GDP}, \frac{GFCF}{GDP} \right) \quad (6)$$

The econometric form of the model is stated below:

$$RGDP_t = c_0 + \beta_1 \frac{CPS}{GDPT} + \beta_2 \frac{MKT}{GDPT} + \beta_3 \frac{IP}{GDPT} + \beta_4 \frac{OILP}{GDPT} + \beta_5 \frac{GFCF}{GDPT} + u_t \quad (7)$$

Where:

RGDP is proxy to the Economy which is measured by Rate of GDP growth at time 't'. It is the market value of goods and services produced within the geographical confines of Nigeria.

$\frac{CPS}{GDP_t}$ Represents credit to private sector to gross domestic product at time 't'

$\frac{MKT}{GDP_t}$ Represents stock market capitalization to gross domestic product at time 't'

$\frac{IP}{GDP_t}$ Represents total insurance premium per insured to gross domestic product at time 't'

$\frac{OILP}{GDP_t}$ Represents international crude oil price is measured as the Brent spot price (in US dollars per barrel) at time 't'

$\frac{GFCF}{GDP_t}$ Represents gross fixed capital formation to gross domestic product at time 't'

U_t Represents the error term at time 't'

A priori Expectation: $\beta_1, \beta_2, \beta_3, \beta_4$ and $\beta_5 > 0$

Unit Root: The Augmented Dickey-Fuller (ADF) tests will be employed to test for the presence of unit roots in the time series data. The Augmented Dickey-Fuller (ADF) test is assumed superior due to its popularity and wide application. The ADF is commonly used because of its easy applicability. The ADF test adjusts the DF test to take care of possible autocorrelation in the error terms by adding the lagged difference term of the dependent variable. The number of lags will further be verified using the Akaike information criteria and Schwarz information criteria.

Auto-Regressive Distributed Lag (ARDL) Technique: We proposed to adopt the technique suggested by Pesaran, Shin and Smith (2001) known as Autoregressive Distributive Lag Model (ARDL), which is based on the general to specific modeling technique to estimate data. This research utilizes the newly proposed autoregressive distributive lag (ARDL) approach which was developed and introduced by Pesaran et al (2001), and later revised by Nayaran (2005) for the case of small sample size data (30-80 observations). The ARDL approach offers some desirable statistical advantages over other co-integration techniques because it permits the use of variables that become stationary without differencing $I(0)$ and variables that become stationary after first differentiation $I(1)$, it does not accept variables that become stationary after second differentiation $I(2)$. Also, this technique can be applied irrespective of whether the variable is $I(0)$, $I(1)$ or fractionally co-integrated, Pesaran (1997).

Recall that the basic form of an ARDL model is:

$$y_t = \beta_0 + \beta_1 y_{t-1} + \dots + \beta_p y_{t-p} + \alpha_0 x_t + \alpha_1 x_{t-1} + \alpha_2 x_{t-2} + \dots + \alpha_q x_{t-q} + \varepsilon_t \quad (8)$$

Where ε_t is the random disturbance term which is serially independent and assumed to be well behaved or constant.

An Autoregressive Distributive Lag model is considered as an ARDL (p q) model whose reduced form is presented as:

$$y_t - \mu + \sum_{i=0}^p \alpha_i \Delta y_{t-i} + \sum_{i=0}^q \beta_i \Delta x_{t-i} = \varepsilon_t \quad (9)$$

Where, y_t is the dependent variable with its lags as independent variables. x_t is the lagged independent variables and ε_t being the white noise. Generally, using the lag operator L applied to each component of a vector.

A detail specification of the model with respect to the variables of study is presented below.

$$\Delta RGDP_t = \beta_0 + \sum_{i=0}^p \beta_1 \Delta CPS_{t-i} + \sum_{i=0}^p \beta_2 \Delta MKT_{t-i} + \sum_{i=0}^p \beta_3 \Delta TIY_{t-i} + \sum_{i=0}^p \beta_4 \Delta OILP_{t-i} + \sum_{i=0}^p \beta_5 \Delta GFCF_{t-i} + \mu_7 RGDP_{t-1} + \mu_8 CPS_{t-1} + \mu_9 AMKT_{t-1} + \mu_{10} IP_{t-1} + \mu_{11} OILP_{t-1} + \mu_{12} GFCF_{t-1} + \varepsilon_t \quad (10)$$

Where Δ refers to the first difference operator and ε_t being the error term. The test involves conducting F-test for joint significance of the coefficient of lagged variables for the purpose of examining the existence of a long-run relationship among the variables. The null hypothesis of no long-run relationship existing between the variables ($H_0: \beta_7 = \beta_8 = \beta_9 = \beta_{10} = \beta_{11} = \beta_{12} = 0$) is examined following Pesaran et al. (2001).

The decision to reject or accept H_0 is based on the Following conditions: if $F\text{-value} > \text{upper bound}$, then reject H_0 and the variables are co-integrated, if $F\text{-value} < \text{lower bound}$, then accept H_0 and the variables are not co-integrated, but if $F\text{-value} \geq \text{lower bound}$ and $\leq \text{upper bound}$, then the decision is inconclusive. The presence of an error-correction term among a number of co-integrated variables shows that changes in the dependent variable is a function of both the level of disequilibrium in the co-integration relationship (represented by the ECM) and the changes in other explanatory variables. This therefore implies that any deviation from the long-run equilibrium will feed back into the changes in the dependent variable, thereby forcing the movement towards the long-run equilibrium, Masih (2002). However, this research explores the issues surrounding co-integration analysis and the Error Correction model within the Distributed Lag model framework that is, the Autoregressive Distributed Lag Approach to co-integration.

The error correction model for the estimation of the short run relationships is specified as:

$$\Delta \text{RGDP}_{t-1} = \beta_0 + \sum_{i=0}^p \beta_1 \Delta \text{CPS}_{t-1} + \sum_{i=0}^p \beta_2 \Delta \text{MKT}_{t-1} + \sum_{i=0}^p \beta_3 \Delta \text{TIY}_{t-1} + \sum_{i=0}^p \beta_4 \Delta \text{OILP}_{t-1} + \sum_{i=0}^p \beta_5 \Delta \text{GFCF}_{t-1} + \text{ECM}_{t-1} \quad (12)$$

Where ECM=Error correction term.

A negative and significant ECM_{t-1} coefficient (λ_1) implies that any short term disequilibrium between the dependent and explanatory variables will converge back to the long-run equilibrium relationship.

RESULTS

Table 4.4: Results for unit root test using ADF

Variables	ADF Statistics at Levels	5% Critical Value at Levels	ADF Statistics at First Diff.	5% Critical Value at First Diff.	Remarks
GDP	5.302536	-2.945842	-	-	I (0)
CPS	-0.855100	-2.943427	-4.875126	-2.945842	I (1)
GFCF	-3.360601	-2.943427	-	-	I (0)
LOGIP	-0.399565	-2.945842	-6.884768	-2.948404	I (1)
MKT	-2.234402	-2.943427	-6.422570	-2.945842	I (1)
OILP	-1.224826	-2.943427	-5.393906	-2.945842	I (1)

Source: Computed from E-views 10

We have examined the nature of the variables adopted for the study using the ADF test. At levels, gross domestic product and gross fixed capital formation were stationary. The remaining non-stationary variables such as credit to private sector, oil price and market capitalization were subjected to the first differencing test of the ADF and they all became stationary. These results implies that the series have mix stationarity characteristics of I (0) and I (1).

Autoregressive Distributed Lag (ARDL) Test

The estimation procedure for this analysis is the autoregressive distributed lag model. The result of the estimation tool is reported in table below.

Table 4.5 Results for ARDL

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
GDP(-1)	0.125781	0.173498	0.724970	0.4761
CPS	-2.318312	1.401227	-1.654487	0.1122
CPS(-1)	2.525771	1.561352	1.617682	0.1200
GFCF	-1.437598	0.620811	-2.315679	0.0303
GFCF(-1)	0.750710	0.492359	1.524719	0.1416
LOGIP	-8.501360	28.61890	-0.297054	0.7692
LOGIP(-1)	24.70375	26.60816	0.928428	0.3633
LOGIP(-2)	-53.57227	18.61160	-2.878434	0.0087
MKT	5.631108	29.34067	0.191922	0.8496

OILP	0.323506	0.178406	1.813317	0.0834
OILP(-1)	-0.472416	0.231107	-2.044145	0.0531
OILP(-2)	0.332709	0.232624	1.430242	0.1667
C	465.1041	210.9317	2.204998	0.0382

R-Square = 0.52, F = 2.067069, F-Prob. = 0.067409, DWS = 2.03

Source: E-views 10 Output

In analyzing the effects of financial development on the Nigerian economy, the ARDL was applied as an estimation approach. Based on the ARDL result, credit to private sector at levels contributed negatively to growth and progress of the Nigerian economy. Credit to private sector (CPS) at lag 1 insignificantly influence growth in Nigeria. Inferentially, an increase in credit to private sector expands investments which further trigger's growth in the economy. Gross fixed capital formation (GFCF) is significant and inversely related to economic growth in Nigerians but responded positively to growth. This implies that an increase in net investment which is essentially a measure of gross fixed capital formation is helps in propelling economic growth. A reduction in fixed capital will alternatively reduce growth. Insurance premium (LogIP) at lag 2 and levels influences economic growth, while at Lag 1 Insurance Premium (IP) contributed to growth. By inference, an increase in insurance premium informs of policies that cover home, auto, life, healthcare encourages growth. On the other hand, a reduction in the amount of money an insurance firm receives from an individual to keep insurance policy active is bound to retard growth. Market capitalization contributed minimally to economic growth in Nigeria. That is, capital market activities in form of market value of publically traded shares in line with outstanding shares showed growth expansion in the Nigerian economy. Oil price (OP) influenced positively on growth at levels and second difference. This means income emanating from the sales of crude oil has contributed to growth of the Nigerian economy. At Lag2, oil price insignificantly relates to economic growth. This means that oil price has not help in growing the Nigerian economy.

The Adjusted R-Square of 52% reveal that the model is fairly fit and strong enough to explain the variations in growth rate as a result of changes in credit to private sector (CPS), Gross fixed capital formation (GFCF), Insurance Premium (Log IP) Market Capitalization (MKT) and oil price (OILP) with variations unexplained amounting to 48%. The fisher's statistics is significant at 5% level, which testifies the possibility of a joint relationship between the variables. All the same, the Durbin Watson statistics of about 2.03 is approximately 2, implying that the model is free from serial correlation among error terms.

Cointegration Bound Test
Table 4.6 Results for ARDL Bound test

Test Statistic	Value	Signif.	I(0)	I(1)
Asymptotic: n=1000				
F-statistic	5.258834	10%	2.26	3.35
K	5	5%	2.62	3.79
		2.5%	2.96	4.18
		1%	3.41	4.68
Actual Sample Size	35	Finite Sample: n=35		
		10%	2.508	3.763
		5%	3.037	4.443
		1%	4.257	6.04
t-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
t-statistic	-5.038778	10%	-2.57	-3.86
		5%	-2.86	-4.19
		2.5%	-3.13	-4.46
		196		

1% -3.43 -4.79

Source: E-views 10 Output

The result of the bound test judging from value of the F-Statistics (5.258834) at K=5 is greater than (10%, 5%, 2.5% & 1%) level of significance. We conclude that there is long run relationship among variables: financial development (Credit to private sector (CPS), Gross fixed capital formation (GFCF), and Insurance Premium (Log IP) Market Capitalization (MKT) and oil price (OILP)) and economic growth in Nigeria.

ARDL-ECM

Table 4.7: Results for ARDL ECM

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	465.1041	75.33800	6.173566	0.0000
D(CPS)	-2.318312	1.057696	-2.191850	0.0393
D(GFCF)	-1.437598	0.429102	-3.350250	0.0029
D(LOGIP)	-8.501360	17.34634	-0.490095	0.6289
D(LOGIP(-1))	53.57227	14.07685	3.805700	0.0010
D(OILP)	0.323506	0.136092	2.377112	0.0266
D(OILP(-1))	-0.332709	0.143640	-2.316276	0.0302
CointEq(-1)*	-0.874219	0.140485	-6.222873	0.0000

Source: E-views 10 Output

Using the ECM method of the ARDL, it's observed that model's ECM is rightly signed at -0.874219 and it's significant. This implies that at 87%, the model can adjust its previous errors with a speed of about 87%. The Adjusted R² is about 68%, testifying the strong nature of the ECM model which the probability of the F-Statistics is completely significant implying that variables are jointly related. The DW statistics is 2, showing the absence of serial correlation in the model.

Granger Causality

Table 4.8: Results for Granger Causality Test

Null Hypothesis:	Obs	F-Statistic	Prob.
MKT does not Granger Cause CPS	36	10.8188	0.0003
CPS does not Granger Cause MKT		0.79544	0.4604
LOGIP does not Granger Cause CPS	35	3.56641	0.0408
CPS does not Granger Cause LOGIP		0.93333	0.4044
OILP does not Granger Cause CPS	36	7.80955	0.0018
CPS does not Granger Cause OILP		1.53461	0.2315
OILP does not Granger Cause MKT	36	0.66949	0.5192
MKT does not Granger Cause OILP		3.81739	0.0330
OILP does not Granger Cause LOGIP	35	0.05581	0.9458
LOGIP does not Granger Cause OILP		4.12660	0.0261
GFCF does not Granger Cause LOGIP	35	26.9463	2.E-07
LOGIP does not Granger Cause GFCF		9.40185	0.0007

Source: E-views 10 Output

Using the granger approach of estimating feedback relationship, we observed a unidirectional causality from market capitalization (MKT) to credit to private sector (CPS). Also of note is the unidirectional movement from insurance premium to credit to private sector.

Oil price (OILP) lead a casualty to credit to private sector (CPS) which market capitalization (MKT) unilaterally influences oil price (OILP). Insurance Premium (LogIP) granger causes oil price (OILP) while log or insurance premium (LogIP) lead support to Gross fixed capital formation GFCF.

DISCUSSION OF FINDINGS

The discussion of findings for the impact of financial development on the Nigerian economy is derived from the estimated regression output of the autoregressive distributed lag (ARDL). This is to say that the implications of the results will be interpreted from the estimated ARDL regression.

Credit to private sector at levels contributed negatively to growth and development of the Nigerian economy. Credit to private sector (CPS) at lag 1 insignificantly influence growth in Nigeria. Inferentially, an increase in credit to private sector expands investments which further trigger's growth in the economy. This underscores the research of Fapetu and Obalade (2015), Aliero and Abdulahi and Adamu (2018) that credit to private sector contribute to growth. On the contrary, the following studies amply the impact of credit to private sector on economic growth: Levine (1997) argued that the efficient allocation of capital within an economy enhance economic growth and noted that there has been growing recognition for the positive impact of financial intermediation on the economy since the early 1990s. Rioja and Valev (2003) and King and Levine (1993) all established the fact that credit to private sector enhanced economic growth in the long run.

Aliero, Abdullahi and Adamu (2013) examine the relationship between private sector credited economic growths in Nigeria, using times series data for the period of thirty seven (37) years (1974-2010). They employ the Autoregressive distributed lag (ARDL) bound F-test for con-integration and to arranger causality to estimate variables they find a positive and significant relationship between private sectors credited economic growth in the long-run. Olowofeso, Adeleke and Udoji (2015) examine the impacts of private sector credit on economic growth in Nigeria using quarterly data spanning 2000 Q1 to 2014 Q4. The Gregory and Hausen (1996) co-integration test that account for structural breaks and endogeneity problems and fully modified ordinary least squares procedure was employed to estimate the model coefficients. The finding reveals a positive and statistically significant effect of private sector on output.

CONCLUSION

Gross fixed capital formation (GFCF) is significant and inversely related to economic growth in Nigerians but responded positively to growth. This implies that an increase in net investment which is essentially a measure of gross fixed capital formation aids economic growth. A reduction in fixed capital will alternatively reduce growth. Rekha (2010), Ugwuegbe and Uruakpa (2013) had earlier documented a contrary evidence that capital formation encourages economic growth. By implication the above result is in line with economic theories, as they have proved that capital formation plays a crucial role in the models of economic growth, Beddies (1999) and Gbura (1997). The capital fundamentalism view was supported by the studies of Youpoulos and Nugent (1976) as cited in Bakare (2011). On the contrary, Onyinye, Idenyi and Ifeyinwa (2017) hold that gross capital formation has no significant impact on economic growth in Nigeria, and further recommended strong collaboration between the government and the private sector with the view to promoting capital investment in Nigeria. Insurance premium (LogIP) at lag 2 and levels influences economic growth negatively, while at Lag 1 Insurance Premium (IP) contributed to growth. By inference, an increase in insurance premium informs of policies that cover home, auto, life, healthcare encourages growth. On the other hand, a reduction in the amount of money an insurance firm receives from an individual to keep insurance policy active is bound to retard growth. Eferakeya and Anichebe (2019), Etale (2019) and Kjosevskea etal (2014) provided an empirical support that insurance industry influences development. Therefore the industry should be improved to meet the growth needs of the Nigerian economy. The empirical evidence in this study is in line with the Demand following and Supply-leading Hypothesis; McKinnon and Shaw and Economic growth theories. These theories have been severally linked insurance sector development (as one of the financial activities) as an important determinant to economic growth. This is supported by numerous researches on the relationship between insurance sector and economic growth such as Ward and Zurbrugg (2000) and Peleckiene (2019). Stock market capitalization contributed minimally to economic growth in Nigeria. That is, capital market activities in form of market value of publically traded shares in line with outstanding shares showed growth expansion in the Nigerian economy. Similarly, Jalloh (2018) had reported

that market capitalization contribute to development of the Nigeria while the studies of Atje and Jovanovic (1993) held a contrary view that capital market and its activities are inversely related to development and as such cannot command the required growth. Oil price (OIP) influenced positively on growth at levels and second difference. This means income emanating from the sales of crude oil has contributed to growth of the Nigerian economy which affirms the studies of Farzanegan and Markwardt (2009) and Qianqian (2011). In these works the authors held a common view that international petroleum prices influence the rate of growth and development. At Lag2, oil price insignificantly relates to economic growth. This means that oil price has not help in growing the Nigerian economy and it succumbs to the recent findings of Awunyo-Vitor, Samanhyia and Bonney (2018). In the same way, Chang and Wong (2003) also established that crude oil prices slow down development process. This may likely be ascribed to the Dutch disease phenomenon which characterizes the development and expenditure pattern of most oil producing countries. That is, revenues generated from the sales of crude oil in Nigeria have not been adequately applied in the development of the Nigerian economy as result of leakages and corruption in the oil industry.

RECOMMENDATIONS

By implication, the sustainable growth of every nation is dependent on several factors of which energy forms an integral part of the economic growth. It is inevitable that fluctuations in oil prices have significant positive and negative effects on welfare and economic growth.

This could be attributable to the fact that the international crude oil price is an important factor which would either cause the depression or buoyancy of the economy. Evidently, the increase in crude oil price is considered good news in oil exporting countries and bad news in oil importing countries, the reverse should be expected when the oil prices decreases.

The transmission mechanisms through which oil prices have an impact on real economic activity include both supply and demand channels, Ghalayini (2011). Based on the outcome of the results, the study recommend that there should be a deliberate collaboration between the government through the private sector credit by building conducive and enabling environment that promotes capital investment in the economy.

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MONETARY POLICY AND RETURN ON ASSETS OF COMMERCIAL BANKS: A TIME VARIANT ANALYSIS FROM NIGERIA ECONOMY

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ABSTRACT

This study examined the effect of monetary policy on the return on assets of commercial banks in Nigeria. The objective was to examine the effect of monetary policy on the return on assets of Nigeria commercial banks. Time series data were sourced from annual reports of the commercial banks and Central Bank of Nigeria Statistical Bulletin. Ordinary Least Square (OLS), Augmented Dickey Fuller Test, Johansen Co-integration test, normalized co-integrating equations, parsimonious vector error correction model and pair-wise causality tests were used to conduct the investigations and analysis. The results show that return on equity, broad money supply, liquidity ratio and loan to deposit ratio are stationary at level $I(0)$ while cash reserve ratio and monetary policy rate are stationary after first difference implying that they integrated at order one $I(1)$. The results of the Trace Tests indicate the presence of at least one co-integrating vectors. Thus, the null hypothesis of no co-integration amongst the variables is rejected. This infers the existence of a long run relationship between monetary policy rate, liquidity rate, loan to deposit ratio, broad money supply, cash reserve ratio and return on equity. The results of the error correction coefficient are statistically significant and have a negative sign, which confirms a sufficient condition for the variables to be co-integrated. This also implies that the speed at which explanatory variables would adjust from short run disequilibrium to changes in return on equity in order to attain long run equilibrium is 89% within a year. The results granger causality test shows that there exist a unidirectional relationship between liquidity ratio and return on equity. The study concludes that monetary policy rate has the strongest long run impact on return on assets of commercial banks. It recommends that managers of commercial banks should be abreast with the development from Central Bank of Nigeria monetary policy actions to achieve increase profitability and bank managers should have a good understanding of the monetary policy tools and how it works.

Keywords: *Monetary Policy, Return on Assets, Commercial Banks, Time Variant Analysis, Nigeria*

INTRODUCTION

In Nigeria, the banking industry is dominated by the commercial banks. Somoye,(2008) &Okpara,(2011) argued that regulations, reforms and policies in the banking sector are absolutely necessary to ensure the protection of depositor's funds and to give strength to the financial system so as to stimulate growth of the economy, as any failure in the sector will negatively affect the economic growth of the country. It is therefore imperative that monetary policy targets are set to regulate the financial services sector. Monetary policy targets are therefore essential in nature (Onodugo, Okoro, Benjamin and Vincent, 2016).

The central bank is responsible for the conduct of monetary policy to pursue the macroeconomic objectives of the government (Akomolafe, Danladi, Babalola and Abah, 2015). Items in commercial banks' balance sheet are influenced by the Central Bank of Nigeria through the use of direct monetary policies. The Central Bank of Nigeria sets the interest rate and allocation of credit in the economy in line with the economic objectives and plans of the government. The policies involve targeting monetary aggregates, monitoring and manipulating policy rates to direct the interbank rate in the desired direction which in turn determines the direction of other market rates. Today, the targeting of inflation and that of interest rate amongst other policies are the core policies attracting the attention of the Central Bank of Nigeria.

Various monetary policies have been instituted by the Central Bank of Nigeria to control, regulate and develop the financial system. These have sometimes resulted in distortions in the economy. Over the years, the effects of monetary policies on the performance of banks have been a subject of concern. The removal of the maximum lending rate ceiling in 1993 saw interest rates rising to unprecedented levels just as the inflation rate was rising which rendered banks' high lending rates negative in real terms. In 1994, direct interest rate controls were restored. As these and other

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controls introduced in 1994 and 1995 had negative economic effects, total deregulation of interest rates was again adopted in October, 1996. In 2004, the Central Bank of Nigeria directed that commercial banks in the country must have a minimum capital base of N25billion. Furthermore to influence the direction of interest rate in line with monetary policy condition, Monetary Policy Rate (MPR) was adopted by the Monetary Policy Committee as a replacement for the Minimum Rediscount Rate in 2006 (Ajayi and Atanda, 2012). The MPR has remained the operating instrument for the direction of interest rate since then. The volatility in the monetary policy formulation has no doubt affected the performance of the banking sector in Nigeria.

Ogbulu & Torbira, (2012) observed that the Central Bank of Nigeria's use of monetary policy instruments is to ensure stability in the banking sector and influence the soundness of assets of banks reflected in their performance. The study by Ajayi & Atanda, (2012) found that there is insignificant impact of monetary policy instruments on the banks' performance which means the effect of the policies on profitability of banks was minimal. Supporting their argument, according to Okpara (2009), the results of their study showed that monetary policies didn't have a negative effect on profitability of banks. However, as banks continue to witness low profitability, poor asset quality, bank failures, mergers and consolidations and consistent sanctions from the Central Bank of Nigeria on banks, there is the questioning of the effect of monetary policy on banks asset quality and returns. In Nigeria, commercial banks still face challenges in respect to government policies and regulations.

According to Bekaert (1998), bank earnings are affected by unanticipated changes in interest rates, cash reserve and liquidity ratios. The potential impact of interest rates and other monetary policy targets on commercial banks financial performance has long been a concern for bankers. Chiegbu & Njoku (2013) posit that an efficient banking sector can promote economic growth, and the profitability of commercial banks is dependent on the monetary policy actions of the regulatory authority. The performance of the commercial banks and the soundness of the environment were the banks operate is what actually leads to economic growth. The commercial banks therefore have to keep a balance between making profits for their organization and abiding to all monetary policy regulations and guidelines as set by the central bank. Hence it is important to study the impact of monetary policy on return on assets of the commercial banks in Nigeria.

LITERATURE REVIEW

Conceptual Review

Concept of Monetary Policy

According to Cagan & Schwartz (1987) monetary policy is the exercise of the central bank's control over the money supply as an instrument for achieving the objectives of economic policy. In the words of Rowan, (1980) monetary policy is defined as the discretionary action undertaken by the authorities designed to influence the supply of money, cost of money or rate of interest and the availability of money." Monetary policy as explained above, involves the management of money and credit for the furtherance of the general economic policy of the government to achieve the predetermined objectives. There have been varying objectives of monetary policy in different countries at different times and in different economic conditions. Different objectives sometimes clash with each other and there is a problem of selecting a right set of objectives for the monetary policy of a country. The proper objective of the monetary policy is to be selected by the monetary authority keeping in view the specific conditions and requirements of the economy as explained by (Kaplan, Moll and Violante, 2018).

Monetary Policy Instruments

Cash Reserve Ratio

Cash reserve ratio (CRR) is a specified minimum fraction of the total deposits of customers, which commercial banks have to hold as reserves either in cash or as deposits with the central bank. It is set according to the guidelines of the central bank of a country. The amount specified as the CRR is held in cash and cash equivalents with the Central Bank. The aim here is to ensure that banks do not run out of cash to meet the payment demands of their depositors. CRR is a crucial monetary policy tool and is used for controlling money supply in an economy. CRR specifications give greater control to the central bank over money supply. Commercial banks have to hold only some specified part of the total deposit as reserves. This is called fractional reserve banking (Udeh, 2015). It is the statutory cash reserves that banks are to keep with the Central Bank of Nigeria and this cash ratio was designed to help rescue the liquidity of the banks and hence control the volume of banks credit that can be extended by the commercial banks Olatu, Aladesanmi and Mary, (2014). A good number of researches focused on cash reserve requirements in developing economies and its impact on the profitability of banks.

Liquidity Ratio

According to Olweny and Chiluwe, (2012), liquidity ratio is the proportion of total deposits to be kept in liquid assets so as to safeguard the bank's ability to meet depositor's cash withdrawals. It is set by the central bank to increase or decrease the cash that is available to commercial banks. This ratio was designed to maintain the ability of banks to meet depositor's cash withdrawals so the confidence in the banking system is ensured. The CBN determines what this ratio should be and this therefore makes liquidity ratio a tool of monetary control. The liquid assets that make up the liquidity ratio include, cash balance and other short-term assets, which can easily be realizable into cash without much loss of value.

Monetary Policy Rate (MPR)

The MPR is the interest rate set by the Central Bank of Nigeria to serve as indicative rate for transactions in the interbank market. It was introduced in December 2006 to replace the minimum re-discount rate and is used as the operating target for monetary policy. But this did not correspond with the trend in CRR and loan to deposit ratio, which indicated monetary ease. This explains why MRR could not be effective as indicative rate of monetary policy stance. The change from MRR to MPR improved the link between MPR, CRR and loan to deposit ratio. According to Morgan (2002) it is the minimum lending rate or the interest rate charged by the central bank to the commercial banks for short term loans. It is also referred to as the rate used for discounting bills of exchange. This is accessed through the discount window. When the discount rate is increased, it affects both individuals and businesses. The banks then increase the rates charged their customers to borrow money.

Open Market Operation

This refers to when the central bank purchases and sells securities in order to regulate the supply of money in the economy. This affects the ability of banks to give loans to individuals and businesses. The central bank engages in expansionary open market operations or contractionary open market operations depending on what they want to achieve at a particular point in time. If the target is to increase money supply in the economy, and reduce interest rates, treasury bills will be purchased from the banks which will increase the funds at the disposal of the banks.

Monetary Policy, Post Banking Consolidation from 2007-2019

This period witnessed persistence of excess liquidity. The reforms were meant to minimize macro-economic instability arising from distress in the banking system. The Central Bank of Nigeria motivated intermediation through the deepening of the private sector, financing of growth in the private sector, and encouraging investment inflows through participation of the industry in the global financial system. Foreign investment actually increased from that period to date. Corporate governance and transparency was stressed and supervision of the banks became more effective.

According to Central Bank of Nigeria, (2009) Current monetary policy strategy involves; restructuring of debt instruments to longer tenors, occasional forex swap, increased deregulation of the forex markets, aggressive liquidity mop up through open market operations and discount window operations amongst others. Monetary targeting has become an anchor of the monetary policy framework since the deregulation era, though it was not firmly established until the post-bank consolidation regime from 2006.

Financial Performance of Commercial Banks

Financial performance of banks relates to the concept of bank profitability. This means that the profitability of the bank explains the financial performance of the bank. The banks generate profit from the role of intermediation. They earn fees from the services rendered to their customers. The financial performance of a bank is determined by factors internal to the operations and from factors that are external (Sattar, 2014). This is in line with the opinions of (Ongore, 2013) and (Al-Taminiet *al.*, 2015).

The internal factors are bank specific determinants of financial performance because they are initiated from the balance sheet and the income and loss statement while the external determinants are the variables which are outside the control of banks' management such as monetary policies. Chen *et al.*, (1986) explained that these macroeconomic factors are significant in explaining bank performance, profitability and return on investment. Gilchris, (2013) agrees that the financial performance is commonly measured by ratios such as return on equity and return on assets. There are many different mathematical measures to evaluate how well a company is using its resources to make profit (Irungu, 2013). Financial performance can be measured using the following techniques; operating income, earnings before interest and taxes, net asset value (Gilchris, 2013).

Irungu (2013) described financial performance analysis as the process of identifying the financial strengths and weakness of the firm by properly establishing the relationship between the items of the balance sheet and income and loss statement. It's the process of identifying the relationship between the component parts of financial statements to

ascertain an organization position, performance and prospects. Financial performance analysis can be undertaken by management, owners, creditors as well as investors (Chen, 2011). Ongore&Kusa (2013) argued that financial performance analysis helps in short and long term forecasting and growth.

Theoretical Framework

Four main schools of thought have presented varied positions on how monetary policy actions explain the cyclical upswings and downswings in macroeconomics. They are the classical theory, the Keynesian theory, the monetarist theory and Neo-Keynesian theory.

The Classical Theory

For the classical schools, money is neutral in its effect on the economy. Thus a change in the money stock does not affect the real variables like output, employment and income (Ezirim 2005). This theory is based on a direct and mechanical relationship between money and prices. If the quantity of money is increased, the price level will also increase in the same proportion and vice versa. Such a relationship is based on the quantity theory equation

$$MV = PT \text{ or } M/P = VT \quad (1)$$

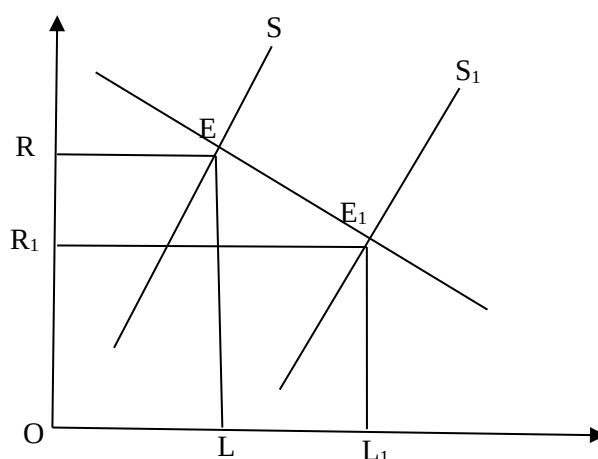
Where M is the total quantity of money, P is the price level of goods traded, V is the velocity of circulation of M, and T is the volume of transactions of goods. The equation shows that the supply of real cash balances (M/P) must equal the demand for real cash balances (VT). As such money plays a causal role in the classical school which means that changes in the money stock cause changes in the absolute price level, and in normal income. To elaborate it, the classicist specified two channels through which monetary changes are transmitted to the real sector of the economy. They are the direct mechanism and the indirect mechanism which are discussed below.

The Direct Mechanism

The mechanism is based on the long run equilibrium of the demand for and supply of money. Assume the money stock is raised, this lead to increase in the supply of actual money balance (M/P) of the public which now exceed the demand for them.

The Indirect Mechanism

This mechanism operates through the money rate of interest and involves the commercial banking system. Assume the Central Bank makes open market purchase of government securities which raise the reserves of commercial banks. With excess reserves, the banks lend more which lowers the money rate of interest. This is illustrated in figure 2.2 where the D and S represent the demand and supply of loanable funds respectively. The equilibrium interest OR is determined at point E where the two curves intersect each other.



Demand and Supply of Loan

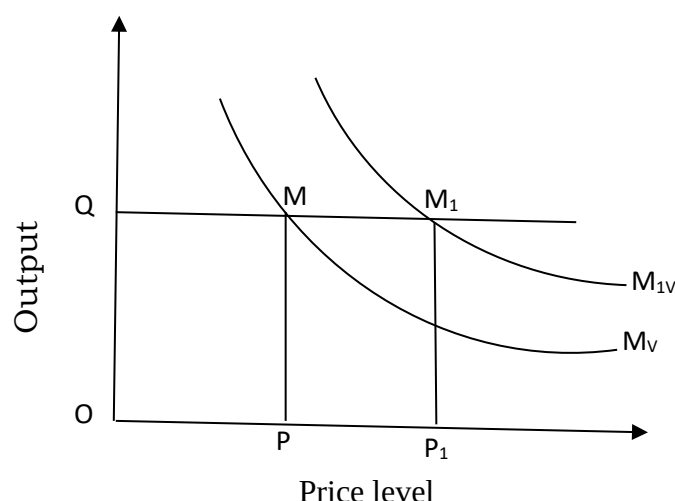


Figure 1 Indirect Mechanism of Monetary Policy

With increase in the reserve of banks, the supply of loanable funds increases which shifts the S curve to the right to S_1 . Now the banks lend LL_1 more of funds and the interest rate falls to OR . The reduction in the market rate relative to the real rate creates a disparity between the actual and desired stock of real capital. This encourages businessmen to invest more in new capital assets. This in turn, raises the aggregate demand for money which is financed by new money creation. This expands MV to M_1V as shown in figure 1. Given the full employment level OQ in the economy, the increase in the money supply raises the price level proportionately so that

$$MM_1 = PP_1 \quad (2)$$

The Keynesian Theory

The monetary policy action in the Keynesian theory is indirect via the interest rate. In the Keynesian, changes in the money supply affect aggregate expenditure, output, employment and income indirectly through changes in the interest rate (Keynes, 1936 and Ezirim, 2005). Assume the central bank increase the money supply by open market purchase of government bonds; it lowers the interest rate which in turn increases investment and expenditure, thereby raising the national income. The mechanism by which changes in the money supply are transmitted into the income level is called the asset effect. With income level unchanged when the money supply is increased, it causes economic agent to spend their excess holdings of money on bonds. This means an increase in the demand for bonds and a rise in their prices. A rise in the prices of bonds brings down the money interest rate. This, in turn, increases the speculative demand for money. Economic agents prefer to keep money in cash rather than lend it at a low interest rate. This is called the liquidity effect. This is the first stage in the Keynesian transmission mechanism.

EMPIRICAL REVIEW

Adeniyi, Kayode, Sakirat, and Olamide, (2018) investigated the relationship between monetary policy instruments and Deposit Money Banks credit performance in Nigeria. An annual time series data covering a period of 36 years from 1981-2016 were sourced from Central Bank of Nigeria and used for the study. The relationship between monetary policy and credit creation of Deposit Money Banks was captured by monetary policy variables and structural changes in monetary policy. The study employed Toda and Yamamoto granger non-causality model to examine the relationship existing between Deposit Money Banks loan and advances and monetary policy variables in Nigeria. The findings revealed that structural changes in monetary policy system exerted positive significant impact on loan and advances of Deposit Money Banks in Nigeria. Findings also revealed bidirectional relationship existing between MPR and loan and advances of Deposit Money Banks in Nigeria. Precisely, MPR proved to be a significant variable which causes Deposit Money Bank loans and advances in Nigeria. The other explanatory variables; broad money supply (LM_2), liquidity ratio (LR), inflation rate (IFR) and cash reserve ratio (CRR) does not granger cause loan and advances of Deposit Money Banks in Nigeria within the study period. The study concluded that the structural change in monetary policy system and monetary policy rate have significant impact on loan and advances of deposit money banks in Nigeria. Hence, the study recommended that monetary authority should formulate policies that will stabilize interest rate so as to boost the investors' confidence.

Bawa, Akinniyi and Njarendy, (2018) examined the effect of cash reserve ratio and money supply on the profitability of DMBs in Nigeria. Data for the study were extracted from the annual reports and accounts of the DMBs for the study period (2002-2012). Descriptive statistics and regression analysis technique were used to analyze the data. The results reveals that cash reserve ratio has negative and insignificant impact on the earnings of DMBs in Nigeria. Money supply has a positive significant effect deposit money banks volume of loans and advances, interest rate and interest income. The study recommends that the CBN should redefine monetary policy instruments; Cash Reserve Ratio (CRR) by setting CRR at equilibrium level in order to make more funds available to DMBs for advancing loan and investing in the economy for growth and development.

Sanusi, (2018) examined the effect of Monetary Policy on the financial performance of Deposit Money Banks in Nigeria. Specifically, the study establishes the effect of Central Bank Rate (CBR) on the financial performance of Deposit Money Banks, it also establish the effect of Reserve Ratio Requirement on the financial performance of Deposit Money Banks. The methodology used for data collection was mainly from primary source which included questionnaire and personal interview in order to have knowledge of Monetary Policy on the financial performance in Union Bank Plc. Information was also gathered from the secondary source which includes literature review of previous research, consultation of textbooks and internet. Simple percentage and Chi-square statistical method were used to analyze the data collected before reaching conclusion. The findings of the research indicated that deposit money bank policy affect banking operations in its bid to regulate money supply in the economy with particular reference to deposit and credit creation.

Kimani and Koori, (2018) examined the effect of monetary policy on financial performance of commercial banks in Kenya. The study made use of annual panel data while focusing on Commercial Banks in Kenya for the period 2012 to 2016. Causal research design was adopted where the study made use of panel data which was analyzed within the framework of a panel regression model. The findings of the study show that Central Bank Base Rate has a negative and insignificant effect of financial performance of commercial banks in Kenya. Secondly, the findings of the study indicated a positive and significant effect on money supply on financial performance of commercial banks. Thirdly, the findings of the study provide evidence of a negative and significant effect of Cash Reserve Ratio on financial performance of commercial banks. Furthermore, the findings of the study show that inflation has a negative and insignificant effect on commercial banks in Kenya. Lastly, the findings of the study indicated a significant moderating effect of bank size on the relationship between monetary policy and financial performance of commercial banks in Kenya.

Gambacorta and Lannotti, (2010) investigated the velocity and asymmetry in response of bank interest rates (lending, deposit, and inter-bank) to monetary policy changes from 1985-2002 using an Auto-regressive Vector Correction Model (AVECM) that allows for different behaviours in both the short-run and long run. The study shows that the speed of adjustment of bank interest rate to monetary policy changes increased significantly after the introduction of the 1993 Banking Law, interest rate adjustment in response to positive and negative shocks is asymmetric in the short run, with the idea that in the long- run the equilibrium is restored. They also found that banks adjust their loan and deposit prices at a faster rate during period of monetary tightening in Italy.

Obioma and Onyebueke, (2018) investigated the role of monetary policy in bank asset quality performance of Nigerian banks. There have been mixed results as to the role of monetary policy on many performance indicators in the past by different scholars. Those indicators could be profitability, asset growth and returns on investments. So the research goal was to find out the impact of monetary policy instruments-money supply, liquidity ratio, monetary policy rate, and cash reserve ratio- on commercial banks asset performance. The literature reviews extensively looked at the work done by past scholars on the different transmission channels through which monetary policy affects banking and economic activities and these channels of transmissions have been broadly examined under the monetarist and Keynesian schools of thought. In the research methodology used secondary while employing multiple regression method/model as econometric technique in estimating the relationship between monetary policy and bank performance proxy by loans and advances, assets and turnover ratio. The study also used the ordinary least square (OLS) and unit root (Augmented Dickey Fuller) test to determine the stationarity or otherwise of the variables. The empirical results emanating from the analysis indicates that monetary policy had some level of effect on bank performance proxies by Turnover rate (TOR), Bank Assets (BAS) and Loan and Advances (LADV). It is equally indicative of the fact that the relationship is instrument sensitive, i.e., some monetary policy tools work better on some bank performance indexes while such may not work on some other ones. The strength of monetary policy was found to lie on the combination of the various instruments. The findings thus, support the monetarist theory that monetary policy when effectively utilized can have effect on banks activities and portfolio especially their portfolio performance. It was evident that monetary and fiscal policies employed by the CBN and ministry of finance are not harmonized adequately. Using the error correction model and Johansen co-integration technique, Ezeaku, Ibe, Ugwuanyi, Modebe and Agbaeze, (2018) examined the monetary policy transmission channels on industry performance in Nigeria within the period 1981 to 2014. Three channels of

monetary policy transmission being bank channel (private sector credit to GDD), interest rate channel (real lending rate) and exchange rate channel was regressed on real output measured as the contribution of the industrial sector to GDP. The study found a long run relationship between monetary policy and industrial output with about 72% annual speed of adjustment. However, all the channels of monetary policy transmission had insignificant negative effects on industry performance with about 61% significant explanatory power.

Kaplan and Violante, (2018) undertook a study on monetary policy uncertainty and market interest rates. The study used a simple model that relates monetary policy uncertainty to term structure of interest rates. The study found that long-term interest rates are positively related to monetary policy uncertainty with the magnitude increasing with maturity. Further, the study showed that the empirical evidence generally supports the theoretical predictions that an increase in consumption volatility leads to lower interest rates because higher uncertainty encourages households to increase savings.

Ogbeifun and Akinola, (2019) examined the impact of monetary policy tools on the performance of deposit money banks in Nigeria. The study sought to evaluate the effect of money supply on the performance of Deposit Money Banks in Nigeria; the significant impact of monetary policy rate on Deposit Money Banks' Performance; to investigate the influence of Cash reserve ratio on Deposit Money Banks' Performance. The study was predicated on the Classical theory, Keynesian theory and Neo-Classical theory. The secondary data were obtained from the Central Bank of Nigeria Statistical Bulletin. The multiple regression analysis i.e. Ordinary least square (OLS) was used to test the impact of monetary policy tools on the performance of deposit money banks in Nigeria. The result showed that the monetary policy variables had a positive relationship on performance of Nigerian Deposit Money Banks except Money Supply and Liquidity Ratio. The study concluded that monetary policy tools have a significant effect on the financial performance of commercial banks in Nigeria.

Osakwe, Ibenta, and Ezeabasili, (2019) examined the effect of monetary policy on the performance of the banking sector in Nigeria. The explanatory variables were monetary policy rate, Treasury bills rate, Cash reserve requirement and money supply; while the dependent variable is the profit after tax. The study adopted an ex-post facto research design and used secondary data obtained from the Central Bank of Nigeria Statistical Bulletin. The study covered a period of 32 years (1986 to 2017). The data were subjected to Augmented Dickey Fuller stationarity test to determine the best suitable econometric tool of analyses. The Autoregressive Distributive Lag (ARDL) was used for the model estimation. The results indicate that: monetary policy tools have significant effect on the banking sector performance in Nigeria in the short run only. The study thus concluded that monetary policy tools may not be a long run policy instrument for the growth of the banking sector output in Nigeria but rather a short run instrument.

Kenourgios and Ntaikou, (2019) examined the impact of the European Central Bank's unconventional monetary policy (UMP) on bank lending supply and performance in the euro area, through comparing the evolution of bank-specific variables before and after the UMP implementation. By using a dynamic panel data analysis on banks across discrete country groups (euro zone, core, peripheral) and by controlling for bank-specific and country-level variables, the study provided evidence that the bank lending decisions and performance of euro zone banks are not UMP driven, implying the limited ability of the ECB to enhance the effectiveness of banks' lending channel and to affect banks' profitability during the crisis. The study findings also suggested that different criteria determined banks' lending strategy before the UMP period, bank credit strategies vary across the country samples, while the weaker economies' banks seem to underestimate the impact of liquidity risk on their lending activity.

Aginam and Obi-Nwosu, (2019) examined the effect of monetary policy on banks performance in Nigeria. The variables of monetary policy rate, liquidity ratio, broad money supply and interest rate were regressed on return on equity (ROE) for the period of 30 years (1987- 2017). The study adopted an ex-post facto research design because the data for the study are secondary data that already existed. Econometric techniques, including Augmented Dickey Fuller and Philip Perron tests for unit roots and Ordinary Least Square (OLS) were employed for the analysis. The result of the study indicate that monetary policy rate, liquidity ratio and broad money supply have positive and significant effect on return on equity (ROE) while interest rate has negative and insignificant effect on return on equity (ROE) within the period under review. The study thus concludes that monetary policy can be used to influence the performance of deposit money banks in Nigeria.

Adediran, George, Alege, and Obasaju, (2019) assessed the influence of monetary policy tools on bank credit performance in Nigeria, using annual data covering 36 years for the period 1980–2015. The study adopted the Cobb–Douglas production function and estimated a specified model using autoregressive distributed lag co-integration approach. The study found out that cash reserve requirement, which is credit policy easing, is significant in growing the Nigerian economy, as compared to monetary policy rate. The implication of this is that, if credit policy easing is properly implemented, it could be efficient in offsetting adverse external credit shocks.

Hayo, Henseler and Rapp, (2019) investigated monetary policy interest-rate-to-performance sensitivity of the European banking sector over the 07/2012–06/2017 period when interest rates were (close to) zero. The study applied the Word scores approach to introductory statements of ECB's Governing Council press conferences to estimate a 'shadow prime rate'. Based on short-run intraday event windows, the study found that shadow prime rate changes positively affect changes in the EURO-STOXX-Banks Future. The study findings add to the recent evidence documenting that banks benefit from increasing interest rate levels in a low-interest-rate environment.

Farajnezhad, Suresh, and Ramakrishnan, (2019) examined the significance of the monetary policy transmission mechanism particularly credit channel in Malaysian. The study analyzed the commercial banking in Malaysia, using static panel data method to evaluate the monetary policy. Yearly data were employed using over the period 2008 to 2017. The sources of cross-sectional are liquidity, capital and bank size in various between banks. The study discovered the fundamental relations between the bank loan and monetary policy variable using two major tests OLS, random effect model and fixes effect model. The results of the study show that there is a credit channel in the case of Malaysia.

Adesina, Nwidiobie, and Amadi, (2018) ascertained the monetary policy instruments of the Central Bank of Nigeria during and after the bank consolidation exercise (2000 to 2016) and determined the effects of these policies on the financial performance of deposit money banks (DMBs) in Nigeria. An Autoregressive Lag Model (ADL) analysis of secondary data obtained from the CBN Statistical Bulletin, 2016 shows that monetary policies of the CBN had a significant effect on the performance of DMBs in the short-run but an insignificant effect in the long-run.

Gap in Literature

The gap in literature, which has informed this research, is to identify the relationship between monetary policies and bank profitability and their joint contribution to financial performance of commercial banks. The dwindling profit of commercial banks in Nigeria and the fact that regulators come up with monetary policies from time to time due to economic factors without really checking how these policies may negatively affect the financial performance of banks calls for this study especially since a healthy financial system is necessary for the economy of any nation.

Though several empirical studies such as Ubi, Lionel and Eyo (2012), Ajayi and Atanda, (2012), Agbonkheshe and Asekome, (2013), Jegede (2014), Udeh, (2015), Punita and Somaiya, (2006), VandenHeuvel, (2006), Yonnus and Aklita, (2009), Abdurrahman, (2010), Ajayi and Atanda, (2012), Akanbi and Ajagbe, (2012), Enyioko, (2012), Olweny and Chiluwe, (2012), Ekpunget *al.*, (2015), Ndugbu and Okere, (2015) Udeh, (2015), Onodugoet *al.*, (2016), Ndubuakuet *al.*, (2017) carried out investigations on the impact of monetary policy on performance of the banking sector, both within and outside Nigeria. Some of these researchers actually considered the monetary policy tools, targets and variables as they affect the financial performance of commercial banks in Nigeria but used one or two variables each to explain the dependent and independent variables and limited the number of years to less than 50 years as carried out by this study. In this his study, five monetary policy variables were used and three performance indicators including the net interest margin to gross income which is not commonly used in previous studies.

Other studies have also been performed investigating monetary policy and profitability in Nigeria including, Enyioko, (2012) who examined the performances of banks in Nigeria based on the interest rate policies. The study found that interest rate policies have not improved the overall performances of banks significantly. Aburime, (2008) found that real interest rate, inflation, monetary policy and foreign exchange regime are positively associated with banks' return on assets of the banks in Nigeria. Mbai, (2006) found out that proper interest rate management reduced bank exposure to risk and provides an opportunity to stabilize and improve their net income. Given the volatile macroeconomic environment in Nigeria, there is need for up to date research on the complex relationship between monetary policy and return on assets of commercial banks in Nigeria.

METHODOLOGY

Research Design

The study adopted the ex-post facto research design. This is because the researcher has no control over the variables in the study as he cannot manipulate but only reports what has happened or is happening (Cooper & Schindler, 2002). Secondly, it is designed to synchronize with the hypothetic deductive research method which also includes co relational and classical econometric investigation procedure, involving a five stage sequence.

Population of the Study

The population for this study is therefore 22 commercial banks quoted on the floor of the Nigerian stock exchange.

Sample Size and Sampling Procedure

For the purpose of this study, the sample size corresponds with the period defined for this study which ranges from 1970 through 2019, a duration of fifty (50years) years. Consequently, the sample size was not obtained by application of a deterministic model; neither did the respective years constituting the sample size selected by a sampling technique. Therefore, all the years defined by the period of the study are adopted as the sample.

Data Collection Method

The data for this study was time series data, which is information on variables of a study over various time periods. This time-based data adopted is secondary data since they are obtained from already existing publications, journals which constitutes secondary sources of information. The source of this research data however was gotten from Central Bank of Nigeria publication, namely Central Bank of Nigeria Economic Reports, Annual Reports and Statement of Accounts and Statistical Bulletin for various issues and years. The data on return on asset, return on equity, and interest margin to gross income, monetary policy rate, liquidity ratio, cash reserve ratio, growth rate of broad money stock, and loan to deposit ratio were collected for the periods of fifty years.

Data Analysis Techniques

Two categories of techniques were employed in the study: descriptive analytical techniques and econometric analytical techniques.

Descriptive Analytical Techniques

The skewness, for instance, is a measure of asymmetry of the distribution of the series around its mean. It is calculated as

$$S = \frac{1}{N} \sum_{i=1}^N \left(\frac{y_i - \bar{y}}{\sigma} \right)^3 \quad (3)$$

Where

S = Skewness,

N = Numbers of years/observations,

y_i = Mean,

$\bar{y}$ = Median

σ = Standard Deviation

The kurtosis measures the peakedness or flatness of the distribution of the series. It is calculated using the formular below:

$$K = \frac{1}{N} \sum_{i=1}^N \left(\frac{y_i - \bar{y}}{\sigma} \right)^4 \quad (4)$$

Where

K = kurtosis

N = Numbers of years/observations,

y_i = Mean,

$\bar{y}$ = Median

σ = Standard Deviation

The test statistic measures the difference of the skewness and kurtosis of the series with those from the normal distribution. It is calculated as

$$\text{Jarque-Bera} = \frac{N}{6} \left(S^2 + \frac{(K-3)^2}{4} \right) \quad (5)$$

Where

N = Number of years or observation

S^2 = Skewness

K = Kurtosis

Under the null hypothesis of a normal distribution the Jarque-Bera statistic is distributed as with 2 degrees of freedom. The reported probability is the probability that a Jarque-Bera statistic exceeds (in absolute value) the observed value under the null hypothesis. A small probability

Unit Root Test

The Augmented Dickey Fuller (1981) technique was adapted to test the time series of data employed for the study. The ADF test regression equations are specified as shown below;

$$\Delta V_t = \eta V_{t-1} + \eta \sum_{i=1}^N \Delta V_{t-i} + \varepsilon_i \quad (6)$$

$$\Delta V_t = \alpha_0 + \lambda V_{t-1} + \eta \sum_{i=1}^N \Delta V_{t-i} + \varepsilon_i \quad (7)$$

Where in equation (4), (5) and (6) above, V represents the variables used for the unit root test. In most case, unit root test is conducted on individual variables using either intercept without trend or intercept with trend. Thus, equation (4) represents the model without intercept and no trend, equation (5) represents the model with intercept but no trend while equation (6) represents the model with intercept and trend. The hypotheses to be tested are as follows: H0: X_t is non – stationary, H1: X_t is stationary.

Co-integration Test

To test for the presence of long-run equilibrium relationship, the Johansen's and Juselius (1990) and Johansen (1991) multivariate co-integration technique is employed. The co-integration test is based on the following equation.

$$\Delta y_t = \alpha + \eta_1 \Delta y_{t-1} + \eta_2 \Delta y_{t-2} + \eta_3 \Delta y_{t-3} + \eta_4 \Delta y_{t-4} + \dots + \eta_{k-1} \Delta y_{t-k+1} + \eta_k y_{t-k} + \mu_t \quad (8)$$

Where n and n are 4x4 matrices and k is the lag length. The tests used here involved co-integration with linear deterministic trend in the error correction model (ECM). The test for the presence of long-run equilibrium relationship is carried out based on the Johansen's (1991) multivariate co integration technique. Usually, applying this technique, two statistics are involved; Trace statistic and Maximum Eigen statistic. When the sample size is smaller than forty (i.e n<40), the Maximum Eigen statistic provides the more sophisticated results. The hypotheses to be tested under these statistics are as follows:

For the Trace Statistic

Null hypothesis

Ho: r = 0

Ho: r = 1

Ho: r = n

Alternate hypothesis

H1: r ≥ 1

H1: r ≥ 2

H1: r = n

For the Maximum Eigen Statistic

Null hypothesis

Ho: r = 0

Ho: r = 1

Ho: r = n

Alternate hypothesis

H1: r = 1

H1: r = 2

H1: r = n

Maximum Eigen statistic can only check co-integration one by one.

Note: The Null hypothesis is rejected on the ground that the values of either the Trace or Maximum statistics are greater than the Mackinnon critical value of 5% or 1% for studies in Management and Social sciences. Co-integration analysis does not provide information about possible patterns or direction of the relationship among the variables. Hence we will employ the causality test.

Granger-Causality Test

The test for linear causality or feedback effect between the specified variables was done using granger causality techniques. The test is based on the following equation below.

$$Y_t = \alpha_0 + \sum_{i=1}^n \alpha_i Y_{t-i} + \sum_{i=1}^n \beta_i X_{t-i} + \mu_{1t} \quad (9)$$

and

$$X_t = \alpha_0 + \sum_{i=1}^n \alpha_i \beta_{t-i} + \sum_{i=1}^n \beta_i Y_{t-i} + \mu_{2t} \quad (10)$$

Where X_t and Y_t are the variables to be tested while μ_{1t} and μ_{2t} are white noise disturbance terms and n is maximum number of lags. The null hypothesis $\alpha_1 = \beta_1 = 0$ for all 1 's is tested against the alternative hypothesis $\alpha_1, 0$ and $\beta_1, 0$, if the coefficient of α_1 are statistically significant, that of β_1 are not, then X causes Y , if the reversal is true than Y causes X . However, where both coefficient of α_1 and β_1 are significant then causality is bi-directional.

Model Specification

From the objectives of this study, the models specified below captures the five (5) variables of monetary policy and return on assets as measure of financial performance of commercial banks in Nigeria.

$$ROA_t = f(MPR_t, LDR_t, CRR_t, LTR_t, BMS_t) \quad (11)$$

Equation 15 presents the estimable version of equation (14)

$$ROA_t = \alpha_0 + \beta_1 MPR_t + \beta_2 LDR_t + \beta_3 CRR_t + \beta_4 LTR_t + \beta_5 BMS_t + \mu \quad (12)$$

$$= \alpha_0 + \sum_{i=0}^n \beta_i + E_{it}; \beta_i \geq 0 \quad (13)$$

Where

ROA	=	Return on Assets
MPR	=	Monetary Policy Rate
LDR	=	Liquidity Ratio
CRR	=	Cash Reserve Ratio
LTR	=	Loan to Deposit Ratio
BMS	=	Growth in Broad Money Supply
α_0	=	Constant / Intercept
$\beta_1 - \beta_5$	=	Coefficients of independent variables
μ_{it}	=	Error Term

Operational Measures of Variables

Return on Assets (ROA): Determines the robustness of financial institutions to shocks to their balance sheet. This is captured by the actual capital base of banks as a ratio to liability to the form of risk weighted assets over the study period. The formula used for the calculation of return of assets is;

$$ROA = \text{Net Income} / \text{Average Total Assets}$$

Money supply (MS): the federal government uses its tools to reach a certain level of money in the economy. The equilibrium interest rate falls when the federal government through the central bank expands its money supply target. Money supply is therefore the total value of money available in an economy at a point in time. It includes printed notes, money in deposit accounts and other liquid assets. An increase in the money supply aimed at increasing aggregate

output is called an expansionary monetary policy. It is important for a valuation and analysis of the money supply to be done as this aids policy makers make policies and alter existing policies for the economy.

RESULTS, ANALYSIS AND DISCUSSION OF FINDINGS

Table 1 Descriptive Statistics results of Monetary Policy Variables and Return on Assets

	ROA	MPR	LTR	LDR	CRR	BMS
Mean	3.909000	11.05280	66.56120	50.23800	9.536000	18.05380
Median	2.300000	12.10000	67.81500	48.65000	8.000000	17.50000
Maximum	22.50000	26.00000	87.30000	94.50000	32.00000	46.10000
Minimum	-7.200000	3.500000	37.97000	29.10000	1.000000	8.600000
Std. Dev.	5.094561	4.933968	11.99397	12.54232	7.241455	6.576364
Skewness	1.543859	0.360160	-0.491528	0.900387	1.193390	2.187726
Kurtosis	6.905577	3.111130	2.626810	4.503857	3.870062	9.538619
Jarque-Bera	51.64070	1.106690	2.303479	11.46744	13.44526	128.9544
Probability	0.000000	0.575023	0.316087	0.003235	0.001203	0.000000
Sum	195.4500	552.6400	3328.060	2511.900	476.8000	902.6900
Sum Sq. Dev.	1271.773	1192.858	7048.916	7708.178	2569.495	2119.180
Observations	50	50	50	50	50	50

Source: E-view 9.0 Output

The results in Table 1 show the mean values of 3.90%, 11.05%, 66.56%, 50.23%, 9.53% and 18.05% for ROA MPR LTR LDR CRR and BMS while it has median values of 2.3% for ROA, 12.1% for MPR, 67.8% for LTR, 48.65% for LDR, 8% for CRR and 17.5% for BMS for the periods under study. The maximum values of each of the series are 22.5% for ROA, 26.0% for MPR, 87.3% for LDR, 94.5% for LTR, 32% for CRR and 46.1% for BMS. On the other hand, the minimum values of the series for the period under study are -7.2% for ROA, 3.50% for MPR, 37.97% for LDR, 29.1% for LTR, 1.0% for CRR and 8.60 for BMS respectively. The gap between the maximum and minimum values is widest in term of liquidity ratio (LDR). In addition, the provision under LDR offer wider absolute variations with a standard deviation of 12.54%, followed by 11.9% for LTR, 7.2% for CRR, 6.57% for BMS and 4.9% for MPR. With a mean average of 3.9% it is observed that return on assets (ROA) witnessed the widest swing with a standard deviation of 5.09%. The skewness which is a measure of asymmetry of the distribution of the series around its mean is seen to be positive for all series under investigation which is an indication that the distributions have a long right tails. The kurtosis measures the peakedness or flatness of the distribution, the results reported a kurtosis of 6.90 for ROA, 3.11 for MPR, 2.63 for LTR, 4.50 for LDR, 3.87 for CRR and 9.54 for BMS. As a decision rule, the kurtosis of the normal distribution is 3. If the kurtosis exceeds 3, the distribution is peak (leptokurtic) relative to the normal while if the kurtosis is less than 3, the distribution is flat (Platykurtic) relative to the normal. The series ROA, MPR, LDR, CRR and BMS records a kurtosis of more than 3, hence their distribution is leptokurtic (peak) in nature while the LTR posted a kurtosis of less than 3 and their distributions can be described as flat (Platykurtic).

Table 2: Augmented Dickey-Fuller Test for Model I

Variables	Level	1 st Difference	2 nd Difference	Conclusion
ROA	4.354690***	12.29489***	6.713368***	I(0)
BMS	4.014586***	9.638208***	6.565942***	I(0)
CRR	2.105053	5.351923***	8.847664***	I(1)
EXR	2.093954	4.692588***	9.033435***	I(1)
LDR	4.702195***	7.619580***	6.642526***	I(0)
LTR	4.381435***	6.417334***	9.914318***	I(0)
MPR	2.365492	7.385233***	8.494382***	I(1)

Note that ***, **, * indicates significance at 1%, 5% and 10% respectively

Author's Computation: Extract from Eviews

The table 2 presents the summary results of the ADF unit root test. The results show that ROA, BMS, LDR and LTR are stationary at level I(0) while CRR, EXR and MRP are stationary after first difference implying that they integrated at order one I(1). It is also pertinent to note that all the results are significant at 99 percent level of confidence. That is to say that various ADF t-statistics were significant at 1%. We shall proceed to test the long run association ship which might have existed between the employed variables using Johansen Co-integration test.

Table 3: Johansen Co-integration Test for Model I

Null Hypothesis	Alternative Hypothesis	Test Statistics	Critical-value
Trace Statistics			
None*	$R < 1$	133.6560	125.6154
At most 1	$R < 2$	94.59449	95.75366
At most 2	$R < 3$	57.62587	69.81889
At most 3	$R < 4$	34.51120	47.85613
At most 4	$R < 5$	15.95082	29.79707
At most 5	$R < 6$	6.495561	15.49471
At most 6	$R < 7$	0.593520	3.841466
Maximum Eigenvalue Test			
None	$R = 1$	39.06155	46.23142
At most 1	$R = 2$	36.96862	40.07757
At most 2	$R = 3$	23.11467	33.87687
At most 3	$R = 4$	18.56038	27.58434
At most 4	$R = 5$	9.455256	21.13162
At most 5	$R = 6$	5.902040	14.26460
At most 6	$R = 7$	0.593520	3.841466

Author's Computation: Extract from Eviews

The co-integration test seeks to empirically define the longrunassociationship between a given set of variable. Its essence is to identify the scholastic drift among the variable to know if they move together. We carried out this analysis using the Johansen Cointegration output assuming all the study variables as endogenous using the trace and Eigenvalue test. From the above test, the trace statistic suggests there is one cointegration equation whereas the Eigenvalue test suggests that there is no cointegration equation. Using the Eigenvalue criteria we shall assume there is no long run associationship and movement among the employed variables and therefore there is no further need to correct errors for the short run and long run dynamics.

Table 4: OLS Multiple Regression Results-Model I

Variable	Coefficient	Std. Error	t-Statistic	Prob.
MPR	-0.540428	0.143479	-3.766609	0.0005
LTR	-0.054227	0.051495	-1.053060	0.2982
LDR	0.168076	0.049578	3.390165	0.0015
CRR	-0.088067	0.093361	-0.943301	0.3508
BMS	-0.105506	0.094513	-1.116303	0.2705
C	7.489666	6.540234	1.145168	0.2585
R ²	0.534695			
Adjusted R ²	0.469768			
F-statistic	8.235405			
Prob(F-statistic)	0.000006			
Durbin-Watson stat	1.733824			

Author's Computation: Extract from E-views

From the result table 4, the relative statistics show that of the six explanatory variables under investigation, only two passed the test of hypothesis as they exhibit a significant p-value accordingly. From the result presented above, monetary policy rate, liquidity ratio exhibit a significant p-value of 0.0005 and 0.0015 with corresponding coefficients of -0.540428 and 0.168076 respectively. This result suggest that one percent increase in monetary policy rate is capable of reducing return on assets to the tune of 0.5404 while one percent increase in liquidity ratio is capable of stimulating return on assets to the tune of 0.1681. However, loan to deposit ratio, cash reserve ratio and growth in broad money supply exhibit negative and insignificant and relationship to return on assets. From the global statistics the adjusted R² report an average coefficient of 0.469768 which implies that 46.97% of variation in the explained variable is captured by the explanatory variables. The F-statistics and corresponding p-value report the overall significances of the model while the Durbin Watson statistics shows a coefficient of 1.733824 which is within the acceptable range and thus implies the absence of autocorrelation.

Table 5: Granger Causality Test-Model I

Null Hypothesis:	Obs	F-Statistic	Prob.	Decision
MPR does not Granger Cause ROA	48	0.49558	0.6127	Accept H_0
ROA does not Granger Cause MPR		3.42363	0.0417	Reject H_0
LTR does not Granger Cause ROA	48	1.05704	0.3563	Accept H_0
ROA does not Granger Cause LTR		0.74333	0.4815	Accept H_0
LDR does not Granger Cause ROA	48	4.18763	0.0218	Reject H_0
ROA does not Granger Cause LDR		0.81248	0.4504	Accept H_0
EXR does not Granger Cause ROA	48	0.08411	0.9195	Accept H_0
ROA does not Granger Cause EXR		0.07296	0.9298	Accept H_0
CRR does not Granger Cause ROA	48	0.13976	0.8700	Accept H_0
ROA does not Granger Cause CRR		0.46144	0.6335	Accept H_0
BMS does not Granger Cause ROA	48	0.64450	0.5299	Accept H_0
ROA does not Granger Cause BMS		1.37548	0.2636	Accept H_0

Author's Computation: Extract from E-views

To determine to direction of causality between the explained and explanatory variables, the Engel Granger (1987) causality test was performed on the variables as indicated in the table above. The results above show that return on asset cause monetary policy. Also liquidity ratio cause return on assets. We can conclude that there is unidirectional relationship between return on asset and monetary policy. The result also suggests unidirectional relationship between liquidity ratio and return on asset.

DISCUSSION OF FINDINGS

From the study, in respect to return on assets, the Johasen co-integration test shows no long run relationship between the variables. It is also revealed that monetary policy rate has a negative significant relationship in return on assets. The loan to deposit ratio, money supply and cash reserve ratio also show negative relationship but they are insignificant. The only variable that showed positive relative is the return on asset is the liquidity ratio. Causality test carried out showed that monetary policy rate and liquidity ratio has unidirectional relationship with return on assets. The results gotten are in line with the study carried out by Jegede, (2014) who empirically research on the impact of monetary policy on commercial banks' performance through the lending channel.

CONCLUSION

From the foregoing, the following conclusion was made to justify that the specific objectives of this study are achieved. The relationship between bank performance and monetary policy exists in the long-run, and when there is temporal disequilibrium, bank performance indicators quickly adjust within a short period to the equilibrium position. Since there is evidence that long run influence runs from monetary policy to bank performance. There is need to know which of the variables has the strongest multiplier effects on bank performance. This study concludes that monetary policy rate has the strongest long run impact on financial performance of commercial banks followed by money supply. Monetary policy rate is more sensitive to return on asset than the other performance indicators. The most sensitive factor to return on equity is liquidity ratio followed by money supply. Thus, the study concludes that a good understanding of the monetary policy actions can be very critical in influencing commercial bank performance.

RECOMMENDATIONS

- i. Managers of commercial banks should be abreast with the development from CBN monetary policy actions to achieve increase profitability.
- ii. To maximize shareholder wealth, bank managers should have a good understanding of the monetary policy tools and how it works.
- iii. The monetary policy instruments should be applied properly and timely to achieve high bank returns.

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CORPORATE DISCLOSURE AND RETURN ON EQUITY OF QUOTED MANUFACTURING FIRMS EMPIRICAL ANALYSIS FROM NIGERIA

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ABSTRACT

This study assessed the effect corporate disclosure on the financial performance of quoted manufacturing firms in Nigeria. The objective of the study was to ascertain if there was significant relationship between corporate disclosure and financial performance of quoted manufacturing firms. The specific objective of the study was to ascertain the relationship between financial, governance, social and risk disclosure on the return on equity of manufacturing firms. The study adopted deductive approach and employed the ex post facto research design and relied on secondary data from 20 quoted manufacturing firms while data were analyzed using panel data analysis, ordinary least square estimator, fixed effects and random effect models. From the validated fixed effect model, the study found that the independent variables can explain 70.9% and 51.1% variation on return on equity. Beta coefficient of the variables found that financial disclosure, social disclosure and governance disclosures have positive impact on the return on equity of the selected manufacturing firms while risk disclosure have negative effect on return on equity of the manufacturing firms. From the findings, the study concludes that there is significant relationship between corporate disclosure and financial performance of quoted manufacturing firms. It is recommended that there is need for more clear guidelines to be customized to enhance the level of disclosure in every sector in which companies are listed, management should endeavor to prioritize the financing policy of the firms to reduce debt equity risk associated corporate bankruptcy and the manufacturing companies should have disclosure above the statutory requirements set by the regulatory bodies since it can work as a good corporate governance tool.

Keywords Corporate Disclosure, Return on Equity, Quoted Manufacturing Firms, Nigeria

INTRODUCTION

Disclosure is an essential component of a robust corporate governance framework as they provide the base for informed decision making by shareholders, stakeholders and potential investors in relation to capital allocation, corporate transactions and financial performance monitoring. The importance of disclosure has been widely recognized by both academics and market regulators, resulting in numerous rules and regulations being introduced over time to ensure timely and reliable disclosure of financial information, creating standards to which companies must adhere.

Disclosure is taking on a new meaning of more comprehensive and proactive disclosures instead of the release of corporate governance details or policies in a reactive fashion. The new concept of disclosure putting more responsibilities on the corporation not only let the truth be available to the public but imposes to disclose it to every stakeholder and different stakeholder groups (Fung, 2014).

Disclosures play a pivotal role in addressing the issues related to information asymmetry and agency costs of firms. Voluntary disclosures are those disclosures which are beyond the compulsory ones and are communicated portraying a better image of the company and its prospects in front of its investors. Under contract theory and economics, information asymmetry leads to superfluous decisions because of information gap between the parties.

Governance disclosure as explained by Tarus and Omandi (2013) is the disclosure that discloses key information in regard to process of making decision, implementing procedures and observing functionality of the firm. When financial disclosure is low, governance disclosure is important since it will serve to explain any financial forecast by analyst. Shareholders are usually well informed and protected when they receive timely and relevant information such as the composition and competence of the board, size of the board, frequency of the meeting held, plans of compensation etc. which are part of disclosure in governance. Donaldson, (2003) notes that governance disclosure is increases market liquidity and investor confidence which eventually may result into good performance of the firm.

Financial disclosure entails full disclosure of the financial information to reduce information asymmetry between the companies. The tenet of any corporate governance system is based on the goal of good financial reporting which

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compliance with the complex accounting standards in conjunction with other regulatory requirements around the world (Fung, 2014). Financial reports full and prompt disclosure help shareholders goal of maximization of wealth to be pursued by managers since any unlawful pursuit is properly scrutinized to limit the top managers' discretion of following their own interest. With more financial disclosure, investors are able to invest wisely since they will be well informed as to the right choice of capital which as result reduces cost of financing through the decreased liquidity premium.

Empirical evidence suggests that disclosures lead to reduction in information asymmetry which calls for less risk and more protection of investors on one hand while on the other hand it leads to less cost of capital for firms. Under contract theory of economics, information asymmetry leads to unwarranted decisions related to transactions due to imbalanced information with the parties. Information asymmetry is a foremost reason behind apprehensions cropping up in the minds of investors due to agency problem in corporate form of business.

Corporate disclosure blends of financial and non-financial information which meets the diverse information requirements of users. The term non-financial is used to refer to information such as resources and relationships, environmental matters and management's expectations of future performance. While corporate disclosure needs to be ensured that a user is able to identify a clear link between an entity's business, financial performance and position (Marshall, FRC 2012.). Corporate reporting is no more considered as an expensive burden to keep the information needs of stakeholders intact. Therefore this study examined the effect of corporate disclosure on the financial performance of quoted manufacturing firms in Nigeria.

Varghese (2011) when linked in his study the voluntary annual report disclosures of manufacturing companies in India with firm characteristics, found that though there was a variation in disclosures done by manufacturing companies in India from 2002 to 2005 but regression analysis found non-significant relation between the nature of industry and extent of disclosures. Studies such Mwangi and Mwiti (2015) investigated the impact of voluntary disclosures on stock performance, Mutiva (2015) examined the effect of voluntary disclosures on financial performance of entities quoted at Nigeria Stock Exchange and Lopokoiyit (2012) investigated the how the extent to which Nigeria Stock Exchange share prices are impacted by corporate governance practices. Asava (2013) investigated the relationship between voluntary disclosure and stock returns for companies quoted at the Nigeria Stock Exchange and her research paper reveals that there was no correlation between voluntary information and stock return. Significant proportion of the studies examined above are foreign studies with limited studies that dealt with the effect of corporate disclosure on the performance of quoted manufacturing firms in Nigeria, therefore this study examined the effect of corporate disclosure on the financial performance of quoted manufacturing firms in Nigeria.

LITERATURE REVIEW

Corporate Disclosure

Corporate disclosure can be defined as the communication of information by people inside the public firms towards people outside. The main aim of corporate disclosure is "to communicate firm performance and governance to outside investors" (Haely and Palepu, 2001). This communication is not only called for by shareholders and investors to analyze the relevance of their investments, but also by the other stakeholders, particularly for information about corporate social and environmental policies.

Disclosure takes different forms. The first one is financial reporting, essentially financial statements whose contents are defined by accounting standards (for instance the International Financial Reporting Standards). As compliance with good practice in corporate governance is now required, reporting also concerns governance (for instance, the "comply or explain" principle has been enforced since 2008 in the European Union). Reporting must respect specific rules, even specific formats, restricting the discretion of managers, and allowing stakeholders a better understanding of information. Besides reporting, managers also communicate information in a less formal way, for instance by press conferences, by announcement on Internet sites and so on.

Whatever the form the disclosure takes, two other distinctions can be done. The first distinction is based on the opposition between financial and non-financial disclosure. The latter includes information relating to the company's social and environmental responsibility and company's corporate governance as well as information relating to the firm's operating methods or to managers' health (Healy and Palepu, 2001). The second distinction is based on the opposition between voluntary and mandatory disclosure. Voluntary disclosure is a measure of self-regulation or a response to the expectations of stakeholders and civil society for more disclosure (Chandler, 1997).

Financial Disclosure

Any good corporate governance system requires financial disclosure as fundamental objectives of financial reporting. Making the management accountable of their action is an element of a good system with high level of disclosure. Tarus and Omandi (2013) conducted a study to examine business case for corporate disclosure from Kenyan market. They hypothesized financial disclosure to have a positive and significant effect on firm performance. Financial disclosure was assessed using corporate disclosure index while firm performance was measured using the Return on Asset (ROA). Regression analysis supported the hypothesis of positive relationship though the correlation analysis showed this relationship to be weak.

Risk Disclosure

Iatridis (2008) examined accounting disclosure and financial attributes in the UK market. Among the key accounting attributes is risk exposure disclosure. Firms ought to disclosure for assurance that they are still in line with the accounting regulation. Iatridis(2008) argues that for a firm to raise capital in the debt markets an extensive risk disclosure is necessary since it improves companies' image as well as communicating to stakeholders how best manager are in managing risks.

Governance Disclosure

Bhat, Hope and Kang (2006) investigated whether governance disclosure affect forecasting accuracy by analyst. A sample of non-US firm cross-listed in the New York Stock Exchange as American Depositary Receipts was used covering period of 10 years. Governance disclosure was found to be positively related to the accuracy of earning forecasts by analysts. Also, it's worth noting that governance disclosure serves to explain forecasts when the financial disclosure is low.

Social Disclosure

KPMG (2005) in a survey by KPMG discussed the social disclosure benefits. It was seen that innovation, customized to help the stakeholders and enhanced corporate relationship made firm to enjoy long term benefits. A firm that engage in corporate social responsibility and discloses the same in their reports they are deemed to raise the esteem of the firms. Such firms are found to have a competitive advantage over other firms as they are considered to be social, friendly and thus the firms will able to meet their long term and short-term goals.

Financial Performance

Financial performance has been an area of concern for many theorists due to the significant role played by the performance onto the investors' confidence. Many researches have been conducted in line to corporate governance and financial performance, nonetheless a few have been done in Kenyan context despite several companies been placed under receivership reason be inability to pay part or all of their dues. Collapse of companies has rendered many jobless while destroying the economic development (RoK, 2014). Such are the issues that make corporate governance disclosure and financial performance a relevant study for discussions.

Financial performance is normally viewed as how best managers have been able to utilize the resources available to the firm to enhance value. The main goal of shareholders in any company is to maximize their wealth which is enabling when a firm is performing well from time to time. Financial performance is reflected in the securities of company that is trading shares and debts. Though an increase in the value of securities is not always as result of improved performance but studies have shown a positive relationship between the financial performance and securities (Fung 2014; Jahanshad et.al, 2014). Good reputation which is enhanced in one way by the consistency of the company's performance explains the change in the market value of securities.

Profitability connotes a situation where the income generated during a given period exceeds the expenses incurred over the same length of time. The fundamental requirements here are that the income and the expenses must occur during the same period of time (Matching Concept) and the income must be a direct consequence of the expenses. The period of time may be one week, three months, one year (Sabo, 2007). The term profit can take either its economic meaning or accounting concept which shows the excess of income over expenditure viewed during a specified period of time. On one hand, profit is one of the main reasons for the continued existence of every business organization. On the other hand, profit is expected so as to meet the required return by owners and other outsiders.

Return on Assets

Return on Assets is measures of firm's performance that reveals to the users of financial statement how well a company uses its assets to generate income. A higher ROA denotes a higher level of firm performance. A rising

ROA, for instance, may initially appear good, but turn out to be unimpressive if compared with other companies in the same line of activities or industrial average. Hence, if a company's ROA is below industrial average, the company is not utilizing its full capacity.

Booth et al. (1999) posited that this measure was used in their study because it was the only variable that can be calculated across countries. They conclude that country comparisons of profitability are therefore difficult. Among other authors that adopted this measure in their empirical studies are Zeitun and Tian (2007), Zeitun (2009), Tze-Sam and Heng (2011), Onaolapo and Kajola (2010) and Khan (2012). The ROA ratio may thus be more useful when compared to the risk-free rate of return to be rewarded for the additional risk involved. If a firm's ROA is equal or even less than the risk-free rate, investors will be indifferent and better off just purchasing a bond with a guaranteed yield.

$$\text{ROA} = \frac{\text{Profit before Interest and Tax}}{\text{Total Asset}} \quad (1)$$

Return on Equity

Return on equity is another measure of firm performance that shows how well a company has used the capital from its shareholders to generate profits. Investors use ROE as a measure of how well a company is using its money. Evidently, numerous empirical studies have employed this measure in quest to observe the predicted relationship between financial structure and firm performance (Tze-Sam and Heng, 2011; Zeitun and Tian, 2007; Onaolapo and Kajola, 2010; Kajola 2008; Zeitun, 2009; Skopljak and Luo, 2012; Khan, 2012).

$$\text{That is; ROE} = \frac{\text{Profit before Interest and Tax}}{\text{Shareholders' Funds}} \quad (2)$$

Earnings per Share

Earnings per share are a ratio that measures earnings in relation to every share on issue. This is measured by dividing the profit before interest and taxes with the outstanding number of shares of the firm. This indicates how much each one share of the firm will earn from the yearly proceeds. The earnings for every share represent shareholders' slice of the pie. As earnings go up over time, the value of that piece of the firm becomes more valuable and this is why the price will be bid. Whilst there are not many truisms when it comes to share investment, one is that if earnings rise consistently over the long term, then the share price will follow. Apparently, issue of shares that increases the number of outstanding shares dilutes the equity owners' residual value. Tze-Sam and Heng (2011) provide empirical investigation using EPS as a proxy for corporate performance to establish its relationship with financial structure. The measure is derived thus;

$$\text{EPS} = \frac{\text{Profit before Interest and Tax}}{\text{No of Outstanding Shares}} \quad (3)$$

Theoretical Review

Agency Theory

Agency theory was brought forth by Jensen and Meckling (1976). They argued that there exists a principal-agent relationship. The theory proposed that a corporation's management is recruited by shareholders to run corporations on their behalf. This is mainly geared towards minimization of operational costs and optimization of corporation resources. Further, the theory argues that there exist information gaps which increase monitoring and agency costs. This situation amplifies conflict between principal and agents and the former ought to incur more costs so as to gather more information.

According to Jensen and Meckling (1976) there is a positive and significant relationship between ownership control and agency conflicts since there are high chances of management pursuing their own self-interests at the expense of the shareholders. More so, the attitude of management triggers the capital structure choice and if they are risk-averse they may maintain lower gearing levels while risk-seekers increase the financial risk.

William, Ginter and Shewchuk (2006) argued that the primary purpose for studies on agency theory is to minimize the chances of information asymmetry. Similar studies such as Conyon and Schwalbach (2000) revealed a positive relationship between corporate governance and elimination of agency costs. This precipitates the need for better corporate governance practices as such to eliminate the possibilities of information asymmetry.

Consequently, information gathering costs may hinder a healthy relationship and this will ultimately be incurred through monitoring, contractual and residual costs. Voluntary information disclosure is one of the measures adopted by

corporations to minimize monitoring costs. Since most investors are geared towards wealth and profit maximization there is need for listed companies to consistently disclose financial information in simple and clear forms.

Signalling Theory

Signalling hypothesis was developed to explain the relationship between two parties with different levels of information access. Past studies have shown that good corporate governance signals better firm performance (Chiang, 2005). Chiang showed that there is significant positive relationship between superior information disclosure and firm performance.

According to Spence (2007) there exist some levels of information asymmetry between firm management and ordinary shareholders. Company stakeholders do not have full access to all company operations details and they rely on publicly available information to make investment decisions (Ravid&Sudit, 1994). In practice companies which consistently share positive information with members of the public always attains superior performance. According to signalling theory advocated by Spence (1973), corporate disclosure serves the purpose of informing investors and analysts about the firm value and quality. This implies that voluntary disclosure decisions are one of the avenues for reporting of relevant information about company performance.

EMPIRICAL REVIEW

Ozbay (2009) examined the relationship between corporate financial disclosure and company performance in the Istanbul Stock Exchange (ISE) in Turkey. Secondary data for a total of 27 companies were sampled from annual reports for a period of 11years. These companies were selected since they were thought to be the largest and the most liquid companies in ISE. Company performance was assessed using market to book value (MTBV), price to cash flow (PTCF), price earnings ratio (PE) and market adjusted stock returns (MASR). Financial disclosure was cross-checked with 36 attributes referring to accounting policies and standards, audit fees and efficiency indicators. Panel data analysis was applied and result of the finding showed that there was inverse relationship between MTBV, PTCF, MASR and financial disclosure confirming Aksu and Kosedag (2006) findings. However, PE ratio showed a direct relationship with financial disclosure.

Edogbaya and Kamardin (2015) examined the impact of financial disclosure and firm performance in Nigeria listed companies. Secondary data was collected from the listed firms and panel data analysis was used to analyse the data. Firm performance was measured by Tobin's Q and ROA and financial disclosure was checked against attributes based on disclosure and disclosure rules and one (1) was awarded when a firm meet the said criteria and zero otherwise. It was hypothesized that financial disclosure and information disclosure had a positive relationship with firm performance which supported after the analysis.

Banerjee, Mauslis and Pal (2014) used panel data analysis to test the relationship between the disclosure and disclosure on performance of companies listed in Russian stock market. Firm performance was measured by Tobin's Q and Earnings before interest and Tax to asset (EBIT/TA) while disclosure and disclosure was observed and cross-check with the disclosure list. There result of this study showed a significant and strong negative impact of financial disclosure and firm performance agreeing with Hermalin and Weisbach (2012) findings.

Jahanshad, Heidarpour and Valizadeh (2014) documented the relationship between financial information disclosure (FIT) and financial performance of Tehran Stock Exchange. The study covered a period of 6 years ending 2011 with 94 listed firms being analysed. Financial disclosure was assessed by comparing disclosed information against Standard and Poor's model where information was classified according to reporting standards; that is based on structure of ownership and shareholders (consisting 28 items), board structure and management (35 items) and financial disclosure and information disclosure (35 items) while financial performance was assessed by multiple indicators, market to book value, Price Earnings ratio and market adjusted stock return. A significant relationship between the FIT and financial performance was revealed.

Fung (2014) in a study of demand and need for disclosure and disclosure in Hong Kong reveals that financial disclosure is important in capturing the attention of the investors since with information they can monitors the management governance process and behaviour. Fung further notes that with increased disclosure, a company is able to defer embezzlement and scandals thereby fostering efficiency of the company way of allocating resources and making decisions.

Jahanshad, Heidarpour&Valizadeh (2014) examined the relationship between financial information disclosure and firm performance among Tehran securities exchange listed companies. Panel data was collected among 94 companies which are listed in 2006 to 2011. Financial disclosure measure was adapted from Standard and Poor's model 35 items on financial disclosure and information disclosure. Financial disclosure was measured using market to book value, price to cash flow, price earnings ratio, market adjusted stock return. Panel regression analysis was used to analyse the

data and the study found positive and significant relationship between market to book value, price earnings ratio, market adjusted returns and firm performance. Although, price to cash flow had an inverse relationship it was not significant. Jahanshadeh *et al.*, further argued an increased information disclosure increased firm performance

Stiglbauer (2010) investigated the disclosure and disclosure of corporate governance in determining Germany companies' success. 100 Germany firms listed in the Prime Standard segment were sampled. Secondary data from compliance statement, annual report, compensation report, shareholder meetings, code of conduct and companies' websites were used. Firm performance was assessed using market to book value of equity and total shareholder return. Governance disclosure and disclosure was indicated by disclosure index prepared as per the Germany regulation. It was established that there exists a significant positive relationship between corporate governance disclosure and disclosure with firm performance using content analysis.

Varshney, Kaul and Vasal (2012) examined a case of corporate governance index and firm performance in India. Corporate governance index was composed of both internal and external mechanisms. The internal mechanism was composed of board structure and ownership structure. The external mechanism was composed of market for corporate control and product market share. Board structure was operationalized as "Proportion of outside directors, board size, number of board size, CEO duality" and ownership structure was categorized as the proportional of ownership structure owned by individual, institutional ownership, employee ownership schemes. Firm performance was measured using economic value added (EVA) though related measures such as Tobin's Q, RONW and ROCE were also considered. Purposive sampling technique was used to select 105 listed companies. Two stage least squares regression analysis was used to analyse the data. There was a positive and significant relationship between governance and firm performance. There was no significant relationship between governance and (Tobin's Q, RONW and ROCE). The choice of panel data analysis methods was appropriate since the data had both time series and cross-sectional characteristics.

Javaid and Saboor (2015) studied impact of corporate governance on manufacturing firm performance in Pakistan. Panel secondary data was collected from annual financial statement of 58 manufacturing firms through use of purposive sampling technique and only firms which had complete data in 2009 to 2013 were considered in the study. Governance was operationalized to be composed of twenty-one items which were grouped into board structure, ownership structure and disclosure. Board structure governance disclosure was composed of board size, percentage of non-executive directors, percentage of executive directors, CEO duality; number of board meetings, board meetings effectiveness and existence of chief finance officers, ownership disclosure was composed of percentage of block shareholders, ownership concentration, managerial ownership, directors' ownership, institutional ownership and percentage of voting shares with controlling shareholders. Governance disclosure was determined by, Disclosure of Corporate Governance practices, Disclosure of remuneration, Audit related committee, Disclosure of shareholding categories, Disclosure of Executive member Ownership, Availability of financial report on websites, Audit Related Committee. Panel regression analysis showed a positive and significant relationship between governance disclosure and firm performance. They concluded that governance disclosure had positive contribution towards firm's performance among listed manufacturing firms thus it contributed towards shareholders wealth maximization.

Okougbo (2011) investigated the empirical evidence of corporate governance on firm performance on selected listed companies. Governance was operationalized as CEO duality, audit committee independence and ownership, the firm performance was measured using return on assets, profit margin and return on equity. Secondary data was collected from annual financial statements of 52 listed companies which actively traded in 2003 to 2008. Generalized least squares regression analysis, the results showed a significant relationship between governance and return on assets and profit margin. The study recommended that there is need for development of governance measures which are customized to a specific industry or sector. Moreover, there is need for continued evaluation of corporate governance measures as such to ascertain their status and effects they have on firm performance.

Tarus and Omandi (2013) studied the relationship between social disclosure and firm performance. Secondary data was selected from audited annual reports and NSE bulletins. The study used a content analysis approach. Firm performance measures were adopted from Kato & Long (2006) that is ROA and EBIT/TA while social disclosure was determined by the disclosure index predefined. Data was analyzed using correlation and regression analysis method. Results of the study revealed that it was beneficial for a firm that engages in corporate social responsibility which gives a company reputation and social capital that important for increased performance.

Abiodun (2012) investigated the relationship of corporate social responsibility (CSR) on profitability among companies listed in Nigeria. Random sampling technique was used to select 10 companies which were listed and actively trading in 1999 to 2008. Results of the study revealed a positive and significant relationship between social responsibility and firm profitability. Although CSR enhances firm performance listed companies in Nigeria have embraced the act and there is need for sensitization on use of CSR as medium for improving firm performance.

Mujahid and Abdallah (2014) examined the influence of CSR on firm performance and shareholders wealth. A comparative analysis was carried out between 10 firms which are complaint in relation to CSR and non-complaints. Firm performance was operationalized as return on equity, return on assets. There was a positive and significant relationship between CSR and ROE, ROA and shareholders wealth.

Kanwal, et al., (2013) studied the impact of CSR on firm performance in Pakistan. Purposive sampling technique was used to select 15 listed companies in Karachi securities exchange. They argued that through CSR an organization understands its societal role. Regression analysis showed a positive and significant relationship between CSR and firm performance. More so continued firm participation in CSR enhances long term company sustainability. The choice of ordinary least squares regression model was not appropriate since the data was panel it was good to use panel regression analysis.

Murtaza, et al., (2014) examined the impact of corporate social responsibility on firm performance in Pakistan. They argued that CSR is an ethical necessity which can improve the public rating of a particular company. Purposive sampling was used to draw respondents among companies listed in the food sector. Both qualitative and quantitative data was collected and analysed. Results of the study showed that they were a positive and significant relationship between CSR and firm performance. They concluded that continued participation in social activities improves retention of company's image by members of the public.

Cornett, Erhemjamts, and Tehranian (2014) examined the impact of corporate social responsibility on financial performance of US based commercial banks. The findings of their study revealed there was a positive and significant relationship between CSR and commercial banks performance. Moreover, the commercial banks which were located in regions with minority communities were involved in CSR and registered increased growth on their performance.

Bravo (2016) studied the financial forward looking voluntary annual report disclosures extracted through coded content analysis in order to examine their linkage with stock return volatility of Standard and Poor's 100 companies. It was found that apart from the "level of information, the interpretation and effectiveness of forward looking information depends upon the reputation of the company." The study found a significant relationship between forward looking disclosures and stock returns once again proving that annual reports are an important vehicle to communicate corporate information. This study is of special relevance to capital market regulators and managers because voluntary disclosures are a part of specific disclosure strategy for capital markets as they reduce the information gap between the firm and its investors. Besides corporate reputation various other control variables affecting the stock returns viz. trading volume, size, leverage, firm performance, firm growth, listing age, book to market ratio, industry have been corroborated in this study. This is because of information asymmetry which leads to stock return volatility wherein these voluntary disclosures help in smoothening out such asymmetries.

Shroff, et al. (2013) highlighted the market effect of voluntary disclosure reforms on investors and capital markets. Voluntary disclosures contribute towards efficient capital markets by reducing information asymmetry and thus enhance investor protection and confidence. The Securities and Exchange Commission (SEC) relaxed Voluntary disclosure norms called Securities Offering Reform (SOR) which prompted this study to find if firms provide significantly more disclosures after SEC's reform. The study found that there is relation between voluntary disclosures and information asymmetry which affects cost of capital. Similarly a 2015 study of Russell examined continuous disclosures and information asymmetry through ordinary least square regression and two stage least square regressions. It found that more disclosures are done by firms with greater information asymmetry which further add to more information asymmetry. Hence, Apart from Financial Reporting the importance of non-financial reporting is picking up fast. Both financial and non-financial reporting is important because shareholders and various stakeholders get a holistic view of performance and position of the business. As per the latest European Union directive (2014) large public interest entities like listed companies, banks, insurance and other companies as designated by the member states with more than 500 employees should disclose information on their policies, risks and outcomes related to environmental matters, social and employee aspects, respect for human rights, anticorruption and bribery issues, and diversity in their board of directors. There's a lot of flexibility with respect to reporting these disclosures, sometimes even by way of a separate report as per national, international or European guidelines. To further guide reporting of non-financial information UN global compact, OECD guidelines, ISO 26000, ILO's Tripartite declaration concerning social policy of multinationals, Global Reporting Initiative guidelines.

Dogan (2013) examined whether there exists a relationship between firm size and firm performance as indicated by profitability on the companies listed in Istanbul Stock Exchange (ISE). The study covered a period of four years and a total of 200 active companies were investigated from the online data that was available on the ISE. Profitability of the firm was assessed by use of Return on Asset (ROA) while the total sales, Total assets and the number of employees measured the size of the firm. Dogan using multiple regression and correlation analysis found that there exists a direct relationship between firms' indicators of size and profitability.

Al-Matari, Al-Swidi, Fadzil and Al-Matari (2012) examined the effect of board characteristics on firm performance from 136 non-financial listed companies in Kuwaiti Stock Market held firm size as control variable. This study adopted correlation research design approach. Secondary data from the annual reports of year 2009 were analysed using multiple regressions. The result of the study revealed firm size to have insignificant, but a direct relationship effect on ROA which assessed the firm performance supporting findings from Lehn et al. (2003) who contended that firm size has a positive relationship on growth opportunities which has effects on firm performance.

Pervan and Visic (2012) investigated the influence of firm size on the success of the Croatian medium-size and large enterprises. Online data for 1722 firms from Croatian Financial Agency and Amadeus database was gathered from year 2002 to 2010. Firm's success was measured in the perspective of profitability and hence profitability ratio such as ROE, ROA, profit margin, EBITDA margin, EBIT margin was used. Firm size was assessed using the logarithm of firm assets and number of employees. Analysis of the data showed that there was significant and weak positive relationship between firm size and profitability of the firm.

Literature Gap

From the review of the literature above, firms need to enhance corporate disclosure in their bid to enhance the value and performance for the owners. Several factors have been cited as the indicator of firm performance in the different studies but the most in summary it can be said that Tobin's Q, Return on Equity (ROE) and Return on Assets (ROA). Some studies show that there exists a positive relationship (Tarus&Omandi, 2013; Edogbaya&Kamardin, 2015) between the financial disclosure and firm performance even though others revealed an inverse relationship (Banerjee, Mauslis& Pal, 2014; Ozbay, 2009; Jahanshad et al, 2014).

Information disclosure shows openness, caring and accountability between the management and the stakeholders which works to influence the choice of firms' performance in both developed and developing economies which may have similar influence in east Africa securities exchange and no documented evidence have been done amongst the four securities exchanges. For companies to operate as per the expectation of the investor there is need for full disclosure over and above to ensure that the goal of wealth maximization is enhanced.

Some studies have disregarded the fact that the data they used was panel and ended up applying inappropriate analysis methods such as OLS, instead of applying panel data analysis method for cross sectional and time series data. Also, most of the studies used a purely descriptive approach and therefore have omitted testing the relationship between the dependent and independent variable. Many scholars in the past have investigated effects of corporate governance on financial performance for the listed firms, though only a few have considered in particular the disclosure in corporate governance and its influence on financial performance of firms. This study therefore aims to fill this gap by focusing the effect of corporate disclosures and financial performance of quoted manufacturing firms in Nigeria.

METHODOLOGY

Research Design

This study examined the relationship between corporate disclosure and profitability of quoted food and beverage manufacturing firms, secondary data were used. Ex-post facto research design was employed in obtaining, analyzing and interpreting the relevant data for hypotheses testing. The rationale for the variety is that ex-facto research design allows the researcher the opportunity of observing one or more variables over a period of time (Uzoagulu, 1998). Specifically, panel data were adopted in data analysis.

Nature and Source of Data

The secondary data that were used in this study which were sourced from the financial statement of the quoted firms, firm annual statements and reports are deemed to be reliable because they are statutorily required to be audited by a recognized auditing firm before publication.

Population of the Study

According to Asika (1991) the population is a census of all the elements or subject of interest and may be finite or infinite. The full set of cases from which the sample is taken is called the population. The population of this study comprises 63 quoted manufacturing firms on the floor of Nigeria stock exchange.

Sample Size and Sampling Procedure

The study used random techniques to select 20 quoted manufacturing firms. The quoted manufacturing firms selected have been in existence within the time scope the study. The following manufacturing firms are selected; the sample population of this study covers the twenty (20) manufacturing firms in Nigeria

Model Specification

These analytical techniques enabled the researcher attain justifiable and robust results.

$$Y = \beta_0 + \beta_{1Xit} + \mu \quad (4)$$

Where Y = Dependent Variable

β_{1Xit} = Independent variable

β_0 = Regression Intercept

μ = Error Term

Disaggregating Equation 3.1 to form the multiple regression models, we have, the model specified in this study was adopted from Babalola (2012).

$$ROE = F(FDC, RDC, GDC, SDC) \quad (5)$$

Transforming equation 3.2 to econometrics form, we have

$$ROE = \beta_0 + \beta_1 FDC + \beta_2 RDC + \beta_3 GDC + \beta_4 SDC + \mu \quad (6)$$

Formulating model for hypotheses testing

Where:

ROE = Return on equity

FDC = Financial disclosure measured by corporate disclosure index

RDC = Risk Disclosure measured by debt equity ratio

GDC = Governance disclosure measured by corporate governance index.

SDC = Social disclosure measured by environmental disclosure index

α_0 = Intercept

$\alpha_1 - \alpha_7$ = coefficient of independent variables to the dependent variable.

et = error term

A-priori Expectation = $\beta_1, \beta_2, \beta_3, \beta_4$ and $\beta_5 > 0$

Technique for Analysis

Ordinary Least Square method has been employed in a wide range of economic relationships with fairly satisfactory results (Koutsoyiannis, 1977). Citing the work of Gaur and Gaur (2006), Ujunwa (2012) stressed that fixed effects and random effects models will aid to observe variations among cross-sectional units simultaneously with variations within individual units over time. This undermines an exploration of the effect of slow changing within individual firms' factors. Hence, the rationale for adopting Fixed Effects and Random Effects models estimator as additional test is to enable the researcher control time contrast and time invariant variables, and thereby control for the effect of the unobserved heterogeneity in the dataset. Ujunwa (2012) opines that coefficient of estimations are reliable when regression parameters do not change over time and do not differ between various cross-sectional units. Therefore, when the regression estimation differ widely between the two models (Fixed and Random Effects models), the adoption of Hausman test will be essential. Panel data over the period from 2010-2016 is used and in line with notable literature, such as the work of Majumdar and Chhibber (1999), Zeitun and Tian (2007), and Onaolapo and Kajola (2010), firm's performance measure was regressed on each of the variants of financial information and other control variables holding other factors that may affect market value not included in the equation constant.

Statistical Approach

(i) **Coefficient of Determination (R^2):** This is used to measure the extent to which the independent variables in the model can explain changes on the dependent variable.

(ii) **T-Test:** This is used to measure the significance of the independent variables to the dependent variable and the hypothesis was tested at 5% level of significance and at 95% confidence interval. The hypothesis for this test is stated as follows:

Null I hypotheses: $H_0: \beta = 0$, (Statistically not significant)

Alternate hypotheses; $H_1: \beta \neq 0$. (Statistically Significant)

And the decision rule states that “ H_0 ” should be rejected when statistics is greater than the critical value, but when the T-statistics is lower than the critical value, the “ H_0 ” is accepted.

(iii) **F-Test:** This is used to find out the overall significance of the regression model at 5% level of significance. The hypothesis for this test is stated as:

Null Hypotheses; $H_0: \beta_1 - \beta_6 = 0$ (all slope coefficients are equal to zero)

Alternative Hypotheses: $H_0: \beta_1 - \beta_6 \neq 0$ (all slope coefficients are not equal to zero)

The decision rule for this test is that “ H_0 ” should be rejected when F-statistics is greater than the critical value of F. but when the F-statistics is lower, then the “ H_0 ” is accepted while the H_1 is rejected.

(iv) Test of Autocorrelation

The Durbin Watson statistics is used in this research to test for the presence of autocorrelation. When there is presence of autocorrelation, the First order autoregressive scheme will be employed to correct it. The hypotheses states that:

$H_0: \rho = 0$ (There is serial independence in the errors)

$H_1: \rho > 0$ (There is first order (AR) positive autocorrelation).

When the Durbin Watson Statistics (DW-Stat) is less than lower Durbin Watson (D_L), the null hypothesis (H_0) is being rejected but if the Durbin Watson statistics is greater than the upper Durbin Watson (D_U), the null (H_0) is then accepted.

ANALYSIS AND DISCUSSIONS OF FINDINGS

Table 4.1: Regression Results

Variable	Pooled Effect			Fixed effect			Random effect		
	β coefficient	T. stat	P. value	β coefficient	T. stat	P. value	β coefficient	T. stat	p. value
FDC	0.750670	1.205922	0.2293	1.471555	1.857211	0.0450	0.809237	3.289054	0.0000
RDC	-0.271787	-0.764132	0.4457	-0.322496	-0.837901	0.0033	0.721967	1.338632	0.0050
SDC	3.180877	0.121229	0.0036	0.350308	0.231034	0.0176	-0.809237	-0.996545	0.0003
GDC	4.073774	0.141464	0.0077	0.193496	0.288747	0.7731	0.721967	0.035823	0.4986
C	49.85483	6.686930	0.0000	46.48734	5.075775	0.0000	0.809237	0.164807	0.3285
R-squared	0.490787			0.709544			0.296389		
AdjR ²	0.331504			0.511308			0.131664		
F-statistic	10.45703			4.742383			1.843678		
F- Prob	0.000095			0.000550			0.386297		
D W	1.785922			1.910454			1.910454		
Redundant Fixed Effects Tests: Testing the Redundant Effect									
Effects Test	Statistic	d.f.	Prob.						
Cross-section F	32.804202	(19,171)	0.0001						
Cross-section Chi-square	16.689363	19	0.0109						
Hausman Test									
Cross-section random	22.674677	4	0.0137						

Source: extract from E-view 9.0

In testing the validity of the models, the fixed effects on the cross section Redundant Fixed Effect- Likelihood Ratio, the P- value is 0.001 indicating that the effects are significant. Select the random effect and perform the Correlated Random Effects- Hausman test, testing the random effects model against the fixed effects model. The null hypothesis

in that case is that both tests are consistent estimators and the random effects model is efficient. Under the alternative hypothesis, only the fixed effect is consistent. Since the p-value is 0.0137, the null hypothesis is rejected and, therefore, the fixed effects model is to be preferred.

From the table, the pooled effect model found that 49.0% and 33.1% variation on the dependent variable which is return on equity can be explained by variation on the independent variables which are financial disclosure, risk disclosure, social disclosure and financial disclosure. The F-statistics and the F-probability proved that the model is significant; the Durbin Watson statistics of 1.785 is less than 2.00 but greater than 1.50 which implies the absence of serial autocorrelation within the time series. The beta coefficient of the variables found that financial disclosure, social disclosure and governance disclosures have positive impact on the return on equity of the selected manufacturing firms while risk disclosure have negative effect on return on equity of the manufacturing firms.

The fixed effect model found that the independent variables can explain 70.9% and 51.1% variation on the dependent variable. The F-statistics and the probability found that the model is statistically significant. The Durbin Watson statistics of 1.910 is less than 2.00 but greater than 1.50 which implies the absence of serial autocorrelation within the time series. While beta coefficient of the variables found that financial disclosure, social disclosure and governance disclosures have positive impact on the return on equity of the selected manufacturing firms while risk disclosure have negative effect on return on equity of the manufacturing firms.

The results of the cross sectional random effect found that the independent variables can explain 29.6% and 13.1% variation on the dependent variable which is the dividend payout ratio, while the F-statistics and the F-probability found that the model is statistically not significant. The Durbin Watson statistics of 1.91 is less than 2.00 but greater than 1.50; this means the absence of serial autocorrelation within the time series. The beta coefficient of the variables found that financial disclosure, social disclosure and governance disclosures have positive impact on the return on equity of the selected manufacturing firms while risk disclosure have negative effect on return on equity of the manufacturing firms.

DISCUSSION OF FINDINGS

This study examined the effect of corporate disclosure on the performance of quoted Nigeria manufacturing firms. The estimated regression model found that 49 percent variation on return on equity of the quoted manufacturing firms can be explained by variation on the independent variables. The results proved that financial disclosure, social disclosure have positive and significant effect on the return on equity of the quoted manufacturing firms while governance disclosure have positive but not significant effect on return on equity of the quoted manufacturing firms within the time scope of this study.

The positive effect of the variables confirms our a-priori expectation and justifies that objective of corporate disclosure. Theoretically the findings validates the agency theory on the role of the management in ensuring adequate return on investments of the shareholders, the findings also confirm the stakeholders theory and in line with the signaling theory.

Empirically the positive effect of the variables confirms the findings of Edogbaya and Kamardin (2015) that financial disclosure and information disclosure had a positive relationship with firm performance which supported after the analysis, the findings of Jahanshad, Heidarpour and Valizadeh (2014) found relationship between the FIT and financial performance was revealed, the findings of Fung (2014) that financial disclosure is important in capturing the attention of the investors since with information they can monitor the management governance process and behavior, the findings of Jahanshad, Heidarpour & Valizadeh (2014) found positive and significant relationship between market to book value, price earnings ratio, market adjusted returns and firm performance.

Although, price to cash flow had an inverse relationship it was not significant and the findings of Linsmeier, Thornton, Venkatachalam & Welker (2002) According to stakeholder theory, companies with high degree risk should disclose the most amount of risk related information and explain the cause in an effort to reassure stakeholder that managers are prepared to address these risks (Abraham & Cox, 2007). The findings of Stiglzbauer (2010) that there exists a significant positive relationship between corporate governance disclosure and disclosure with firm performance using content analysis.

However, the study found that there is negative and significant relationship between risk disclosure and the return on equity of the quoted manufacturing firms. The negative effect of the variable contradicts the a-priori expectations of this study and contradict theories such the modern portfolio theory. Empirically, the negative effect of risk disclosure confirms the findings of Ozbay (2009) that there was inverse relationship between MTBV, PTCF, MASR and financial disclosure confirming Aksu and Kosedag (2006) findings. However, PE ratio showed a direct relationship with financial

disclosure and Banerjee, Mauslis and Pal (2014) that a significant and strong negative impact of financial disclosure and firm performance agreeing with Hermalin and Weisbach (2012) findings

CONCLUSION

This study investigated the relationship between corporate disclosure and financial performance of quoted manufacturing firms in Nigeria. From the validated fixed effect model, the study found that the independent variables can explain 70.9% and 51.1% variation on the dependent variables. Beta coefficient of the variables found that financial disclosure, social disclosure and governance disclosures have positive impact on the return on equity of the selected manufacturing firms while risk disclosure have negative effect on return on equity of the manufacturing firms.

From the finding, the study concludes that there is significant relationship between financial disclosure and the financial performance of quoted manufacturing firms in Nigeria. There is significant relationship between social disclosure and the financial performance of quoted manufacturing firms in Nigeria. There is no significant relationship between governance disclosure and the financial performance of quoted manufacturing firms in Nigeria. There is significant relationship between risk disclosure and the financial performance of quoted manufacturing firms in Nigeria.

RECOMMENDATIONS

1. There is need for more clear guidelines to be customized to enhance the level of disclosure in every sector in which companies are listed. It will be paramount for management of all listed companies to evaluate their levels of disclosure and in areas where they are void they increase as such to minimize agency conflict.
2. Management should endeavor to prioritize the financing policy of the firms to reduce debt equity risk associated corporate bankruptcy and the manufacturing companies should have disclosure above the statutory requirements set by the regulatory bodies since it can work as a good corporate governance tool.
3. Economic policymakers need to ensure transparency and accountability in annual reporting, which can be achieved through deployment of more regulations on disclosures. This is because management has more information about a company compared to shareholders, customers, suppliers, creditors, and government regulators including capital market authorities
4. Corporate governance practices should be enhanced among quoted firms in Nigeria and there is need to foster on the need for listed companies to be as transparent as possible this will boost capital inflow to Nigeria financial market and ultimately promote investment culture and foster corporate performance.

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DYNAMICS OF CREDIT RISK MANAGEMENT AND NON-PERFORMING LOANS PORTFOLIO: EVIDENCE FROM QUOTED COMMERCIAL BANKS IN NIGERIA

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ABSTRACT

This study examined the dynamics of credit risk management and nonperforming loan portfolio of quoted commercial banks in Nigeria. Cross sectional data was sourced from financial statement of commercial banks and Central Bank of Nigeria Statistical bulletin from 2009-2018. Non-Performing loan portfolio was used as dependent variable while credit monitoring, credit appraisal and internal lending policy were used as independent variables. 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 40.8 per cent variations in the nonperforming loans can be accounted for by the independent variables. From the fixed effect results, it was evidenced that internal lending policies and credit appraisal have positive relationship with performing loans portfolio while credit monitoring have negative relationship with performing loans portfolio of the commercial banks. from the findings, the study conclude that there is significant relationship between credit monitoring, credit appraisal, internal lending policies and commercial banks nonperforming loan portfolio in Nigeria. it recommend that the need to strengthen supervision of banks by the Central Bank of Nigeria and the Nigeria Deposit Insurance Corporation to enhance credit risk management behaviour of the commercial banks. Banks should maintain high credit standards while the Apex Bank and other regulatory agencies should maintain high surveillance on banks' credit operations; Banks should collect and perfect all collaterals which are used for obtaining loans. The collateral should be more than the value of loan approved, in case of default. Bank management should consider monitoring of loans as priority in credit management functions. Insider dealing should be outlawed in banks in Nigeria

Keywords: Credit Risk Management, Non-Performing Loans Portfolio, Quoted Commercial Banks, Nigeria

INTRODUCTION

Credit creation is the main income generating activity of banks. The loan portfolio is typically the largest asset and the predominant source of revenue of banks (Achou & Tenguh, 2008). Bad loans impair bank profitability and its long-term operation significantly Ahmed (2006). Increasing amount of bad loans in the credit portfolio of banks is antagonistic to banks in achieving their objectives and substantial volume of bad loans indicate the existence of financial fragility and cause of worry for banks management and regulatory authorities. Banks lend to individual, corporate organizations and government (Adebisi & Matthew, (2015). To estimate the financial viability of a portfolio, banks not only limit their analysis to project evaluation techniques alone, but also by evaluating all credit risks that could become threats to the overall performance of such a portfolio. Schall and Halley (2016) outlined the key indicators for loan analysis as capacity, collateral, capital, condition and character.

Nonperforming loan is a byproduct of performing loans and needs to be treated as an undesirable output (Guarda, Rouabah, and Vardanyan, 2012). Barseghyan (2010) suggests that nonperforming loan has widespread social and economic implications, as they reduce social output and diminishes the production growth. A loan is nonperforming when payments of interest and principal are past due by 90 days or more, or interest payments equal to 90 days or more have been capitalized, refinanced or delayed by agreement, or payments are less than 90 days overdue, but there are other good reasons to doubt that payments will be made in full.

In commercial banks, credit risk management is the process of identification, analysis and acceptance or mitigation of uncertainty in investment decisions. Essentially, credit risk management occurs any time management of commercial banks or fund manager analyses and attempts to quantify the potential for losses in an investment and then takes the appropriate action given his investment objectives and risk tolerance. Credit risk management is the quality control of commercial banks (Adebawo and Enyi, 2014). Credit risk analysis involves the consideration of the source of risk, the consequence and likelihood to estimate the inherent or unprotected risk without controls in place. It

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also involves identification of the controls, an estimation of their effectiveness and the resultant level of risk with controls in place. It entails the systematic application of management policies, procedures and practices to the tasks of identifying, analyzing, assessing, treating and monitoring risk (Haneef, et al., 2012).

The problems of bad loans, if left unsolved, can greatly jeopardize the smooth functioning of banks through erosion of banks asset and reduction of income through accumulation of losses and increased provisions to compensate for these losses (Kunt and Detragiache, 1998). High level of bad loans in a banking system poses a systemic risk, inviting a panic run on deposits and sharply limiting financial intermediation, and subsequently investment and economic growth (Mohammed, 2012). This implies that bank management need to formulate measures to management credit risk.

While there are many studies on the effect of credit risk management, most of the studies focused on the effect of credit risk management on profitability of commercial banks. Mohammed (2012) carried out an assessment of the credit management process of credit unions. The study found that credit unions are deficient in the credit control department. A study conducted by Ahlberg and Anderson (2012) on credit risk, Credit Assessment, Basel III, Small Business Finance in 95 small and large banks in Sweden found out that most banks had a well-developed credit process where building a mutual trust relationship with the customer is crucial. Chege (2010) concluded that credit risk management practices enhance profitability of the MFI. This study examined the effect of credit risk management on the nonperforming loans of quoted commercial banks in Nigeria.

LITERATURE REVIEW

Credit Risk Management

Credit management is a procedures banks adopted in the mitigation or reducing the negative effect of credit risk. A comprehensive credit risk management structure is vital because it helps increase the revenue and survival. According to (Singh, 2013) sound credit-giving is one of the most essential principles which strengthen financial institutions in their financial standing. Sound credit management, giving establishes credit limits as well as develop credit granting process for approving new credits will ensure reduction in credit default. Credit plays a very vital part in the economic growth and development of a country. These roles credit plays can be categorized into two: it enables the transfer of funds to where it will be most effectively and efficiently used and secondly, credit economizes the use of currency or coin money as granting of credit has a multiplier effect on the volume of currency or coin in circulation.

Singh (2013) noted that Credit management means the total process of lending starting from inquiring potential borrowers up to recovering the amount granted. It is noted that, in banking sector, credit management is concerned with activities such as accepting application, loan appraisal, loan approval, monitoring, and recovery of non-performing loans. Credit risk management described credit management as methods and strategies adopted by a firm to ensure that they maintain an optimal level of credit and its effective management, it is an aspect of financial management involving credit analysis, credit rating, credit classification and credit reporting.

Adebisi and Oyedijo (2012) viewed credit management as simply the means by which an entity manages its credit sales, it is a prerequisite for any entity dealing with credit transactions since it is impossible to have a zero credit or default risk. Adesoji (2019) opined that credit management greatly influences the success or failure of commercial banks and other financial institutions. This is because the failure of deposit banks is influenced to a large extent by the quality of credit decisions and thus the quality of the risky assets. He further notes that, credit management provides a leading indicator of the quality of deposit banks credit portfolio. A key requirement for effective credit management is the ability to intelligently and efficiently manage customer credit lines. In order to minimize exposure to bad debt, over-reserving and bankruptcies, companies must have greater insight into customer financial strength, credit score history and changing payment patterns.

Credit Monitoring

Every bank has to develop and implement comprehensive procedures and Information systems to follow up the condition of individual credits. An effective loan monitoring system according to Odufuye (2007) will include measures to: Monitor compliance with established agreements, Assess, where applicable, collateral coverage, relative to creditor's current condition, identify contractual payment delinquencies and classify potential credits on a timely basis, and, direct actions at solving problems promptly for remedial management. Loan monitoring which is the work of the relationship manager in most cases is not a choice, but an imperative for effective and efficient credit administration in the banking sector. Problem loans can easily be spotted out. The banker's experience, knowledge of the customer's business and above all, faith in the customer can be a guide in taking a decision as to how far the customer can be supported before declaring the loan as bad. In some occasions, the customer may be in need of more support. Any or a combination of the following strategies can then be employed:

Financial statements like the balance sheet and income statement do not convey relevant financial information necessary for any economic decision, as their figures are in their absolute terms. But when items in these statements are related to each other (inter or intra), a more relevant financial information is generated for an objective and reliable investments decision. This is where ratio comes in.

Internal Credit Policy

The management of any loan starts with credit policy, the formulation of which is the responsibility of which is the bank board of directors and management. It is the base for determining what type of credit to grant to customers. Nwankwo (1990) defines credit policy as a blue print containing management guidelines for use by line officer of a bank in the handling of credit applications. Its objective is to provide corporate direction through a standardized procedure, derived from operational interest of the bank, in satisfying the customer credit need but with full cognizance of the prevented monetary and fiscal policy guidelines of the government. Adekanye (2010) however identifies three basic types of credit policy. They are the restrictive credit policy, moderate credit policy and liberal credit policy. A restrictive credit policy is adopted by a bank that has no plan to grow at a rate that is more than minimal. Such a bank is not willing to take any risk more than minor one and prefer to do business with customer whose paying habit almost never varies within terms. Moderate credit policy is a mixture of restrictive and liberal policy approaches to credit. It tends to match receivable to provide adequate cash flow; while a liberal policy is a high-risk policy with the probability of heavy loss of receivable the danger of such bank survival can be real because they are usually prone to undercapitalization and occasionally liquidity problem. Therefore, to minimize risks, enhance lending and maintain standard, the loan policy should specify the quantity of loan to be made the type of securities to be accepted and limits for the different types of loan.

Credit Appraisal

Pursuance of all alternatives to maximize recovery, including placing customers into receivership or liquidation as may be appropriate. Ensuring that adequate and timely loan loss provisions are made based on actual and expected losses and Regular review of deteriorating loans. It should be emphasized that after a loan has been classified as substandard, it should be assigned to a specific Account Manager in the Recovery Unit. The Account Manager serves as the primary customer contact during the recovery process. A number of methods exist for recovering debts owed by banks. Some of these, according to Adem (2009) are: Appeals to debtors, threats and blackmail, legal action, use of debt-factoring companies, invoice discounting, seizure and sale of collaterals, use of Nigerian Deposit Insurance Corporation's services

Financial analysis is a quantitative exposition of the strengths and weaknesses of the operations of business enterprise Okereke, (2003). This means that the performance (good or bad) of the enterprise is exposed to the user(s) in quantitative terms upon which an interpretation is carried out and informed decision taken. Financial analysis is objective and scientific since it is based on facts and standards. It is multidimensional. The performance of a company in a specific area say, profitability may be of interest to one user but may not be of interest to another. Thus, financial analysis varies according to the specific interests and needs of the users.

Non-Performing Loans

A debt is said to be bad when there is no hope of recovering the amount from the debtor. As soon as a debt is recognized to be bad, it should be transferred from the debtor's account to the debit of an account called Non-performing loans Account (Inanga et al, 2001). In banks, a bad debt is normally written off as a loss and classified as an expense because the debt owed the bank is unable to be collected and all reasonable efforts have been exhausted to collect the amount owed. Before a debt can become bad it will be doubted by the bank of recovery. After the bank is sure that the debt is irrecoverable, then it becomes a bad debt.

Kent (1960) agreed that an account does not become bad overnight as it must have shown some red signs for some time. He pointed out that it is the banker's duty to show considerable interest in such accounts because large volume of credit is likely going to give rise to a large account of non-performing loans if the credit is not well analyzed and managed. Therefore, a credit manager should focus on desirable loan. According Holden (1995), a loan is desirable when it falls within the operation area of the bank. A profitable loan or lending is the one that will be repaid and would not be detrimental to the growth and development of the bank in particular but which would also promote the economic growth and development of the community in general. Generally, loan is desirable and suitable only if it is in accordance with the government directive and bank policy.

Licensed banks are mandated to make accurate provision for perceived losses based on the credit portfolio classification system prescribe on paragraph 2 in order to reflect true financial condition. Two types of provision (that is specified and general) are considered adequate to achieve the objective. Specific provisions are made in the basis of perceived

risk of default on specific credit facilities while general provision are made on recognition of the fact that even performing credit facilities harbours same risk of loss no matter how small.

For prudential purpose, provisioning as prescribed section 3.1 of BOFIA Act section 12 should only take cognizance of realizable tangible security (with perfected legal title) in course of collection or realization, consequently, collateral value should be recognized six months following outstanding un-provided principle should not exceed 50% of the estimated net realizable value of the collateral security.

- i. For credit exposure where the principal payment is in arrears by more than one year, there should be an outstanding un-provided portion to the credit facility irrespective of the estimated net realized value of the security held.
- ii. For credit exposure secured by a leased charge or by an unprotected or equitable charge over tangible security, it should be treated as an unsecured credit and no account should be taken to such security held in determining the provision for loss to be made Osiegbu (2005).

General Provision

Each bank that is licensed is mandated to make general provision of at least 1% of risk assets not specifically provided for.

Credit Portfolio Disclosure Requirement

- i. Each licensed bank is required to provide in its audited financial statement, an analysis of its credit portfolio into performing and non-performing as defined in paragraphs 2.2 and 2.4 of prudential guideline for licensed banks.
- ii. The amount of provision for deterioration in credit quality (that is, losses) should be separated between principal and interest.
- iii. A maturity profile of credit facilities based on contracted repayment programme should be provided along with the maturity profile of deposit liabilities in the financial statement.

Interest Accrual

It is the responsibility of bank management to recognize revenues when they are earned or realized and make provision for all losses as soon as they can be reasonably estimated. However, experience revealed a wide density, amongst licensed banks on income recognition. When a few banks cease accruing interest on nonperforming credit facilities after three months, some after six months or one year and some do not like the need to suspend interest in such facilities.

In order to ensure the reliability to publish operating results, the following criteria should be adopted by all bank licensed for the treatment of interest on non-performing credit facilities:

- i. All categories of non-performing credit facilities should automatically be placed in un-accrual status that is, interest thereon should not be recognized as income.
- ii. All interest previously accrued and uncollected but taken into revenue should be reversed and credited into suspense account specifically created for this purpose which should be called "unless paid in cash by the borrower. Future interest changes should also be credited into same account until such facilities begin to perform.
- iii. Once the facilities begin to perform, interest previously suspended and provision previously made against principal debts should be recognized on cash basis; If Before a "non-performing facility" can be reclassified as "performing" unpaid interest outstanding should not exceed 90 days.

Sub -Standard

This form of loan advance shows a distinct loan weakness that endangers the insolvency of the debt incurred. It normally includes loans granted to debtors who are having cash flow element that is not enough in meeting the current maturing debt, loans to borrowers which are significantly undercapitalized, and loans to borrowers lacking sufficient working capital to meet their operating needs. Substandard loan advances are not secured by the current sound worth and paying capacity of the client. NPLs and receivables which are more or up to ninety days overdue but not up to the 180 days unpaid are also substandard loan. Thus loan advances become unpaid when the principal or interest component is due and unpaid for 30 days or more (Onoh, 2002). The following objective and subjective criteria should be used to identify sub-standard credit facilities.

Objective criteria: facilities as defined in paragraph of BOFIA (b) on which unpaid principal and/or interest remain outstanding for more than 90 days but less than 180 days.

Subjective criteria: credit facilities which display well defined weakness which could affect the ability of borrowers to repay such as inadequate cash flow to serve debt under capitalization or insufficient working capital absence of adequate financial information or collateral documentations, irregular payment of principal and or interest, and inactive accounts, where withdrawal exceed payments or where repayments can hardly cover interest changes.

This type of loan advances indicates all the weakness features shown in the substandard loan category with other added features that the loan are not well-secured and the limitation making the liquidation in full on the basis of the facts currently existing together with the conditionality, values which could be highly doubtful. Even though the probability of loss is very high, the existence of certain strong indicative factors may work to the advantage and strengthening of the repayment, deferring its estimated loss categorization until more exact status determined (Onoh, 2002). NPLs and receivables having 180 days or more unpaid period but not up to the 360 days unpaid period are classified as doubtful loan advance. The following objective and subjective criteria should be used to identify doubtful credit facilities.

- i. Objective criteria: Facilities on which unpaid principal and/or interest remain outstanding for at least 180 days but less than 360 days and are nor legal titled to leased assets or perfected realizable collateral in the process of collection or realization.
- ii. Subjective criteria: facilities which, in addition to the less strength associated with sub-standard credit facilities – reflect that full payment of the debt is not certain or that realizable collateral value will be insufficient to cover banks' exposure.

Loss are said to be uncollectible and of such little value that their continuation as recoverable advances is not warranted. However, this does not indicates that there is no recovery value of the loan advance, but the practicability to defer writing off this type of loan even though partial retrieval may be hampered in the future. This type of loan advance includes liquidated or insolvent companies with bad current asset and cash flow. Financial institutions should however not keep this loan advances within their records no matter the long term effort made in recouping the advances (Onoh, 2002). Losses should be taken in the period in which they surface as uncollectible. The NPLs and the receivables having the 365 days unpaid period or more are all termed as a loss.

The following objective and subjective criteria should be sued to identify lost credit facilities:

Objective criteria: Facilities on which unpaid principal and/or interest remain outstanding for 360 days or more and not secured by legal title to has assets a perfected realized collateral in the cause of collection or realization.

Subjective criteria: Facilities which in addition to the weakness associated with doubtful credit facilities, are considered uncollectible and are of such little reduce that continuation as a bankable assets is unrealistic such as facilities that have been abandoned, facilities secured with unremarkable and unrealizable securities and facilities extend to judgment debtor with no means or for closable collateral to settle debts. Banks are required to adopt the criteria specific in paragraphs in PGBL classify them credit portfolios in true accounting value of their credit facilities. Licensed banks should note that the central bank of Nigeria reserves the right to object to the classification of any credit facilities and to prescribe the classification it considers appropriate for such credit facilities.

THEORETICAL REVIEW

The Balloon Loan Portfolio Theory

The Balloon Loan Portfolio (BLP) Theory is a postulation originated in this study as part of contributions to knowledge. The theory situates the practice of hiding, suppressing or covering up critically challenged loans in a bank's loan book, without disclosure, until the loans become extremely bad and possibly irrecoverable. Such credits could take the form of insider-related lending, name lending, policy lending or any other third-party loan that initially failed the Risk Asset Acceptance Criteria (RAAC) of the bank, but was nevertheless granted, under lower assessment standards, due to inordinate influence of the bank's executives. From another perspective, such loan could also be a good loan from the beginning, which passed through a stringent appraisal system, similar to

the system described in the stringent lending theory (Kithinji 2017), but suffered declining performance due to environmental defect such as macro-economic recession, adverse fiscal policy, weak demand, loss of market or even unexpected adverse change in borrower's character.

When loan default persists for more than 90 days, banks are mandated to classify such loans as non-performing and make provision in line with the dictates of the Prudential Guidelines or loan impairment charge in line with the requirements of the International Financial Reporting Standard (IFRS) or write off the loan, in extreme cases.

Risk Management Theory

David (1997) developed this theory aiming to study why risk management was required, and outlines theoretical underpinning under contemporary bank risk management; its emphasis is on market and credit risks. The theory indicates that market and credit risks would have either direct or indirect effect on banks survival (Eichhorn, 2004). One would expect the credit risk indicators to influence banks profitability if there is no effective and efficient credit risk management (Ngugi, 2001).

This theory identifies major source of value loss as Market risk being a change in net value of asset due to change in interest rate, exchange rate, equity and commodity prices (Wu and Olson, 2010). Regulators are concerned with overall risk and have minimum concern with individual risk of portfolio components as managers are capable of window dressing the bank position. The need for total risk show that measurement of risk cannot be centralized as risk of a portfolio is not just a sum of component as per Markowitz theory. This implies that portfolio risk must be driven by portfolio return which is invariant to changes in portfolio composition (Beverly, 2015). Regulatory requirements and alternative choices require managers to consider risk return trade off, Measurement of risk is costly thus bank managers compromise between precision and cost (Sovan, 2009).

Value at risk (VAR) uses asset return distribution to estimate the potential losses. Monte-Carlo simulation and analytical VAR method are two principle method of estimating VAR and they enable managers to estimate forecast. They have advantage of computational efficiency and tractability though they may show non-normal distribution experiencing fat tails reflecting inconstancy of return volatility. This method incorporates sound economic theory that incorporates market structure (Muhammad & Bilal, 2014). Where there is non-normal distribution student is appropriate, it is useful for fat tails distribution since it's aimed at describing the behaviour of portfolio returns. Analytical value at risk uses standard portfolio theory; the return distribution is described in terms of variance and covariance representing risk attributes to a portfolio over horizon (Sovan, 2009). In this research market risk measurement utilised value at risk (VAR).

Empirical Review

Ali (2015) conducted an investigation into the effects of credit risk management on the financial performance of commercial banks in Jordan during the period 2005 -2013. The purpose of the study was to examine the influence of credit risk management indicators (such as capital adequacy ratio (CAR), ratio of non-performing loans to gross loans (NPL/GL), ratio of credit interest to credit facilities (CI/CF), leverage ratio and the ratio of facilities loss to net facilities (FL/ NL)) on financial performance (profitability) of commercial banks. Profitability was measured by ROA and ROE. Panel regression in the form of pooled least squares and correlation analysis was carried out along with descriptive statistics. Stationarity of the variables was tested with the ADF. Secondary data from the annual reports of 13 banks were used and analysed. Empirical findings indicate that the ratio of non-performing loans to gross loans positively related to financial performance and an inverse relationship was found between the ratio of facilities loss to net facilities and financial performance but no impact of CAR and CI/CF on financial performance was recorded. The study recommended an improvement in the credit management procedures through an establishment of appropriate policies.

Al-Khouri (2011) assessed the impact of bank's specific risk characteristics, and the overall banking environment on the performance of 43 commercial banks operating in 6 of the Gulf Cooperation Council (GCC) countries over the period 1998-2008. Using fixed effect regression analysis, results showed that credit risk, liquidity risk and capital risk are the major factors that affect bank performance when profitability is measured by return on assets while the only risk that affects profitability when measured by return on equity is liquidity risk.

Alshatti (2015) assessed effect of credit risk management on Jordan commercial banks performance in financial perspective. The study sampled thirteen banks for the years 2005 – 2013 and established that management of credit risk impacts the banks' financial performance. From this study, it was resolved that management of credit risk indicators has a significant effect on banks' financial performance. The study recommended that banks should develop or adopt a credit risk management system to help them to improve or enhance their profits. The study focused on credit risk indicators including nonperforming loans, leverage and loss provision on facilities and not on the risk management practices like credit risk identification, appraisal, control and monitoring.

Aremu, et al (2016) indicated that robust appraisal of loan requests is of utmost importance in the credit risk management value chain. This is to ensure that, incidents of non-performing loans and the overwhelming impact of loan loss is reduced to the barest possible or kept within regulatory threshold in the banking system. The study further found out that, when credit requests are presented to the bank, if bank credit officers show adequate diligence, skill

and professionalism in the credit analysis process by properly evaluating and articulating the transaction, the projects, the customers and the prevailing economic situations, lending decisions will be well informed and non-performing loan ratio will be on the low side comparatively.

Aremu, et al (2016) studied the effect of credit processing and administration on non-performing loans in the Nigerian banking industry and found out that lending is one of the major functions of banks in all economies and that interest charged on loans constitutes a significant part of bank earnings. However, the possibility that loan repayment obligations may be defaulted creates miseries for the lender, the borrower and the economy as a whole. The study identified bad loans as a major threat to the profitability and stability of banks in Nigeria. It reviewed existing literatures on the concepts and theory of credit, and recommended strict adherence to the tenets of prudential lending as laid down in the policies and regulatory framework. It emphasized its findings that, if the credit analysis and administration systems are weak, loan loss will always be huge, profitability of banks will be impaired and the economy as a whole will receive a hit.

Arko (2012) on the causes and effects of NPLs on MFIs' operations in Ghana, it was asserted that the lender should ensure that good decisions are made relative to granting of loans with the object of minimizing credit risk. In other words, the lender ought to always aim to assess the extent of the risk associated with the lending and try to minimize factors that could otherwise compromise repayment. The scholar further asserts that, needless to say, the lender should gather information regarding the prospective borrower that will assist in reaching a sound credit decision. It was noted that in order to mitigate NPLs which are occasioned by non-repayment of loans, MFIs in Ghana have adopted a standard loan request procedure and requirements that are usually contained in credit policy manual with the object of guiding loan officers and customers.

Asantey and Tengey (2014) studied the effects of bad loans on banks' lending ability and financial performance using secondary data from the annual reports of four listed commercial banks (Eco bank, GCB Bank, CAL Bank, and Agricultural Development Bank) for a 5 year period covering 2008 to 2013. The aim of the paper was to examine the effects of bad loans on the lending ability and net profit (return on investment) of the banks. Pearson correlation test and OLS were used to examine the data. The study discovered a high negative correlation between bad loans and lending ability at 0.05 alpha levels and a high negative correlation between bad loans and financial performance, measured as return on investment or net profit at 0.05 levels.

Ashatti (2015) examined the effect of credit risk management on financial performance of the Jordanian commercial banks over a period of ten years, 2003 – 2013. The study used descriptive ratios including, Return on Assets and Return on Equity, correlation and regression analysis, estimated by panel square method to analysed the data collected from thirteen commercial banks and found out that the credit risk management indicators considered have a significant effect on bank loan performance

Awojobi, Amel and Norouzi (2018) examined factors impacting the efficiency of risk management in Nigerian banks. The study covered a period of 7 years, 2010 – 2016. Cross-sectional data on bank-specific and macro factors were analysed using the panel regression model. The study found out that microeconomic risks such as threats of new competition are unavoidable and must be appropriately dealt with. The study also found out that bank-specific issues such as technological failures, commercial inefficiency of a supplier or customer, political manipulation, are possible risks faced by banks and other financial institutions. These factors impact the efficiency of risk management in Nigerian banks.

Beck et al (2013) conducted an empirical study on the determinants of non-performing loans (NPL) in seventy-five countries in a dynamic panel regression, fixed and random effects framework. Secondary data set for the period 2000-2010 was used. The ratio of NPL to gross loans was used as the dependent variable. Empirical results indicate that real GDP growth, share prices, exchange rates and lending rates significantly influenced NPL. Of these factors, real GDP growth was mentioned as the main driver of CR. Ben-Naceur and Omran (2008) examined the influence bank loan administration, concentration, financial and institutional development on commercial banks' margin and profitability in Middle East and North Africa (MENA) countries from 1989-2005 found that bank capitalization and credit administration have positive and significant impact on banks' net interest margin, cost efficiency and profitability.

Bentum (2012) conducted empirical assessment of the determinants of profitability of commercial banks in Ghana during the global financial rises. To address the research problem, the study aimed at evaluating the impact of bank-specific factors, industry characteristics and macroeconomic factors on profitability in the commercial banking sector in Ghana. Secondary data from the annual reports of the banks for 10 years from 2001 to 2011 were used. Multiple linear regressions in the form of fixed effect model (FEM) were used. The dependent variable, ROA was used as a proxy for profitability whereas internal and external factors were used as independent variables. The study reported that profitability was determined by bank specific variables, industry factors as well as macroeconomic factors. Bank factors that influence profitability, according to the study are capital and reserve to total assets, non-interest income to

gross income ratio and the natural log of total deposits. Macroeconomic factors that affected profitability during the study period were real GDP growth rate, annual growth rate of inflation and annual growth rate of money supply.

Literature Gap

The literature examined in this study did not investigate direction of causality between credit risk management and banking performance. Studies that attempt to do so failed to establish the exact causal relationship between the variables (Tanui, et al 2015; Swamy, 2012; Somoye, 2018). This study enhances the analysis by establishing the causal relationship that exists between credit risk management and loan portfolio of quoted commercial banks in Nigeria.

METHODOLOGY

The study employed the ex-post factor research design which entails the utilization of historical data to forecast future trends employing econometric or analytical techniques. The use of ex-post facto design enables researchers to analyse past trends and explain the relationship between the dependent and independent variables. The population of the study covers 24 reporting commercial banks to Central Bank of Nigeria. However, the sample size covered 13 quoted commercial banks in Nigeria existing within the time scope of this study. Panel data used in the study were collected from annual reports and various databases of the banks for financial statement for the period 2009 to 2018.

Data Analysis Method

The method of data analysis to be used in this study was the panel data multiple linear regressions using Ordinary Least Square (OLS) method. Moreover, in order to undertake a statistical evaluation of our analytical model, so as to determine the reliability of the results obtained and the coefficient of correlation (r) of the regression, the coefficient of determination (r^2), the student T-test and F-test will be employed.

1. **Coefficient of Determination (r^2) Test** –This measures the explanatory power of the independent variables on the dependent variables. For example, to determine the proportion of economic growth in our model, we used the coefficient of determination. The coefficient of determination varies between 0.0 and 1.0. A coefficient of determination says 0.20 means that 20% of changes in the dependent variable is explained by the independent variable(s).
2. **F-Test:** This measures the overall significance. The extent to which the statistic of the coefficient of determination is statistically significant is measured by the F-test. The F-test can be done using the F-statistic or by the probability estimate. We use the F-statistic estimate for this analysis.
3. **Student T-test:** measures the individual statistical significance of the estimated independent variables at 5% level of significance.
4. **Durbin Watson Statistics:** This measures the colinearity and autocorrelation between the variables in the time series. It is expected that a ratio close to 2.00 is not auto correlated while ratio above 2.00 assumed the presence of autocorrelation.
5. **Regression coefficient:** This measures the extent in which the predictor variables affect the dependent variables in the study.
6. **Probability Ratio:** It measures also the extent in which the predictor variables can explain change to the dependent variables given a percentage level of significant.

Model Specification

The study adopts the panel data method of data analyses which involve the fixed effect, the random effect and the Hausman Test.

Pooled Effect Model

$$NPLP_{it} = f(\beta_1 CM + \beta_2 CP + \beta_3 ILP + \varepsilon_{it}) \quad (1)$$

Fixed Effects

The fixed effects focus on whether there are differences by using a fixed intercept for each of the different cross-sectional structures. If we assumed that the dummy variable for a conglomerate company is 1 or 0, then D_i , which is the dummy variable for firm i , can be expressed as:

$$D_i = \begin{cases} 1, & i-1 \\ 0, & \text{otherwise} \end{cases} \quad D_2 = \begin{cases} 1, & i-2 \\ 0, & \text{otherwise} \end{cases} \quad \dots \quad D_N = \begin{cases} 1, & i-1 \\ 0, & \text{otherwise} \end{cases} \dots \dots \dots \quad (2)$$

The regression of total samples can be expressed as:¹

$$Y_{it} = \sum_{i=1}^N \beta_{oi} D_i + \beta_i D_s + \beta_2 D_{ma} + \beta_3 s_1 + \beta_{oi} D_4 s_2 + \varepsilon_{it} \dots \dots \dots \quad (3)$$

The dummy variables are expressed as follows: if $j = i$, then $D_i = 1$; otherwise $D_i = 0$.²

To further investigate the fraud effect, Adebayo (2012) analysed whether the independent variables affect the dependent variable, this regress the effect of the independent variables on the dependent variables.

$$NPLP_{it} = f(\beta_1 CM + \beta_2 CP + \beta_3 ILP + \varepsilon_{it} \quad (4)$$

Because the fixed effects account for both cross-sectional and time-series data, the increased covariance caused by individual-firms differences is eliminated, thereby increasing estimation-result efficiency.

Random Effects

Random effects focus on the relationship with the study sample as a whole; thus, the samples are randomly selected, as opposed to using the entire population. The total sample regression (a function of the random effect) can be expressed as:

$$NPLP_{it} = \sum_{j=1}^N \beta_0 + f(CM + \beta_2 CA + \beta_3 ILP + \varepsilon_{it} \dots \quad (5)$$

If this is represented with random variables, then $\beta_{oj} = \bar{\beta}_0 + \mu_j$, which indicates that the difference occurs randomly, and the expectation value of β_{oi} is $\bar{\beta}_0$.⁵

(6)

Where

NPLP = Non-Performing loan portfolio proxy by log of non-performing loans

CA = credit Appraisal proxy by percentage of increase/ decrease in nonperforming loans

CM =Credit monitoring proxy by log loan loss provision

ILP = Internal lending policy proxy by dummy variable 1 for internal lending policy and 0 for non-internal lending policy.

A-Priori Expectations of the Variables

$$BRD_{it} > 0 \quad BC_{it} > 0 \quad \text{and} \quad TR_{it} > 0$$

The model had performing loans of the as the dependent variables; credit risk management is expected to have a positive relationship with performing loans of the commercial banks.

Hausman Test

The Hausman test YairMundlak (1978) is the most commonly used method for evaluating fixed and random effects. If variables are statistically correlated, then the fixed-effects estimation is consistent and efficient, whereas the random-effects estimation is inconsistent, and the fixed-effects model should be adopted. Conversely, if the variables are statistically uncorrelated, then the random-effects estimation is consistent and efficient, whereas the fixed-effects estimation is consistent but inefficient, and the random-effects model should be adopted.

Pooled Regression

In testing pooled regression by using ordinary least squares (OLS) first as it is the simplest to do with panel data. We stipulated that the error term should be independently and normally distributed with zero mean and constant variance

and more importantly must not correlated with the independent variables pooled OLS linear regression is given as follows:

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + U_{it} \quad (7)$$

Where Y_{it} is the dependent variable; β_0 is a constant term; X_1 to X_4 , are the independent variables; β_1 to β_4 are slope parameters; $i \dots n$ refer to the cross-sectional units and t is the time period.

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 or affixed effects panel regression approach can be employed. The fixed effects model is simply a linear regression model in which the intercept terms vary over the individual units' i.e.

$$y_{it} = \alpha_j + x_{it} \beta + \varepsilon_{it} \quad \varepsilon_{it} \approx HD(0, \sigma^2) \quad (8)$$

Where it is usually assumed that all x_{it} are independent of all ε_{it} it can write this in the usual regression framework by including a dummy variable for each unit in the model. That is

$$y_{it} = \sum_{j=1}^N \alpha_j d_{ij} + x_{it} \beta + \varepsilon_{it} \quad \varepsilon_{it} \quad (9)$$

Where $d_{ij} = 1$ if $i = j$ and 0 elsewhere. We thus have a set of N dummy variables in the model. The parameters $\alpha_1, \dots, \alpha_N$ and β can be estimated by ordinary least squares.

The Random Effect Model

It is commonly assumed in regression analysis that all factors that affect the dependent variable, but that have not been included as regressors, can be appropriately summarized by a random error term. In our case, this leads to the

assumption that they α_i are random factors, independently and identically distributed over individuals. Thus we write the random effects model as

$$y_{it} = \mu + x_{it} \beta + x_{it} \beta + \alpha_i + \varepsilon_{it} \quad (10)$$

Where $\alpha_i + \varepsilon_{it}$ is treated as an error term consisting of two components: an individual specific component, which does not vary over time, and a remainder component, which is assumed to be uncorrelated over time. That is, all

correlation of the error terms over time is attributed to the individual effects α_i . It is assumed that α_i and ε_{it} are mutually independent and independent of x_{js} (for all i and s). This implies that the OLS estimator for μ and β from (10.15) is unbiased and consistent.

Granger Causality Test

This study tested for causality to examine the relationship between the variables. Although regression analysis deals with the dependence of one variable on other variables, it does not imply causation. Thus, Granger causality test helps in adequate specification of model. In Granger causality, test, the null hypothesis is that no causality between two variables. The null hypotheses is rejected if the probability of F^* statistics given in the Granger causality result is less than 0.05. The pair-wise granger causality test is mathematically expressed as:

$$Y_t \pi_o + \sum_{i=1}^n x_1^y Y_{t-1} \sum_{i=1}^n \pi_1^x x_{t-1} + u_1 \quad (11)$$

and

$$x_t dp_o + \sum_{i=1}^n dp_1^y Y_{t-1} \sum_{i=1}^n dp_1^x x_{y-1} + V_1 \quad (120)$$

Where x_t and y_t are the variables to be tested white u_t and v_t are the white noise disturbance terms. The null hypothesis $\pi_1^y = dp_1^y = 0$, for all I 's is tested against the alternative hypothesis $\pi_1^x \neq 0$ and $dp_1^y \neq 0$. if the co-efficient of π_1^x are statistically significant but that of dp_1^y are not, then x causes y . If the reverse is true then y causes x . however, where both co-efficient of π_1^x and dp_1^y are significant then causality is bi-directional.

Panel Data Co-Integration Test

A substantial number of these tests are based on testing for a unit root in the residuals of a panel co-integrating regression. The possibility of co- integration between the series from different alternative estimators is available. With different small and large sample properties (depending upon the type of asymptotic that is chosen).

$$y_{it} = \alpha_i + \beta_i x_{it} + \varepsilon_{it} \quad (13)$$

Where both y_{it} and x_{it} are integrated or order one. Co-integration implies that ε_{it} is stationary for each i . Homogeneous co-integration. In addition requires that $\beta_i = \beta$ if the co-integrating parameter is heterogeneous. And homogeneity is imposed. One estimate

$$y_{it} = \alpha_i + \beta_i x_{it} + [(\beta_i - \beta)x_{it} + \varepsilon_{it}] \quad (14)$$

And in general the composite error term is integrated of order one even if ε_{it} is stationary. However, the problem estimator will also average over i , so that the noise in the equation will be attenuated. In many circumstance, when

Panel Unit Root

We noticed that it is necessary to examine the stationarity of data since the use of non-stationary data can lead to spurious regressions. Unit root tests such as DF test, ADF tests e.t.c, are weak and tend to accept the null hypothesis. Besides, individual unit root tests have limited power. Since we have panel data, Levin, Lin and Chu's (LLC) model is recommended as it allows for both entity-specific and time-specific effects. The null hypothesis is unit root exists, indicating the data is non-stationary. To introduce panel data unit root tests, consider the autoregressive model

$$y_{it} = \alpha_i + \gamma_i y_{it-1} + \varepsilon_{it} \quad (15)$$

Which we can rewrite as

$$\Delta y_{it} = \alpha_i + \pi_i y_{it-1} + \varepsilon_{it} \quad (16)$$

Where $\pi_i = \gamma_i - 1$. The null hypothesis that all series have a unit root then becomes $H_0 : \pi_i = 0$ for all i . a first choice for the alternative hypothesis is that all series are stationary with the same mean-reversion parameter, that is, $H_1 : \pi_i = \pi < 0$ for each country i , and is used in the approaches of models. The combined test statistics is given by:

$$P = -2 \sum_{i=1}^N \log p_i \quad (17)$$

For fixed N , this test statistics will have a Chi-squared distribution with $2N$ degrees of freedom as $T \rightarrow \infty$

RESULTS AND DISCUSSION OF FINDINGS

Table 1: Presentation of Panel Unit Root Test

Method: NPLP	Statistic	Prob.**	Cross-sections	Obs
Panel Unit Root at Levels				
Levin, Lin & Chu t*	0.55479	0.7105	13	104
Im, Pesaran and Shin W-stat	1.46124	0.9280	13	104
ADF - Fisher Chi-square	16.4879	0.9237	13	104
PP - Fisher Chi-square	24.3485	0.5560	13	117
Series: CM				
Levin, Lin & Chu t*	1.34715	0.9110	13	104
Im, Pesaran and Shin W-stat	0.82356	0.7949	13	104
ADF - Fisher Chi-square	16.4478	0.9248	13	104
PP - Fisher Chi-square	19.3981	0.8192	13	117
Series: CA				
Levin, Lin & Chu t*	-5.09689	0.0000	13	103
Im, Pesaran and Shin W-stat	-2.66156	0.0039	13	103
ADF - Fisher Chi-square	51.2266	0.0022	13	103
PP - Fisher Chi-square	94.9225	0.0000	13	116
Series: ILP				
Levin, Lin & Chu t*	5.1E+16	1.0000	13	104
Panel Unit Root at First Difference				
Series: D(NPLP,2)				
Levin, Lin & Chu t*	-8.54944	0.0000	13	78
Im, Pesaran and Shin W-stat	-5.05296	0.0000	13	78
ADF - Fisher Chi-square	79.8840	0.0000	13	78
PP - Fisher Chi-square	220.784	0.0000	13	91
Series: D(CM,2)				
Levin, Lin & Chu t*	-5.71146	0.0000	13	78
Im, Pesaran and Shin W-stat	-3.16886	0.0008	13	78
ADF - Fisher Chi-square	60.4662	0.0001	13	78
PP - Fisher Chi-square	156.022	0.0000	13	91
Series: D(CA,2)				
Levin, Lin & Chu t*	-10.7899	0.0000	13	77
Im, Pesaran and Shin W-stat	-4.25877	0.0000	13	77
ADF - Fisher Chi-square	69.5765	0.0000	13	77
PP - Fisher Chi-square	159.505	0.0000	13	90
Series: ILP				
Levin, Lin & Chu t*	5.1E+16	1.0000	13	104

Source: Extract from E-view, 2021

The table 1 tests panel unit root on the relationship between bank credit monitoring, credit appraisal and nonperforming loan portfolio quoted commercial banks in Nigeria, from the table we can conclude that the results of panel unit root test (IPS test) reported support the hypothesis of a unit root in all variables across among the variables, as well as the hypothesis of zero order integration in first differences. Even at one per cent significance level, we found that all tests statistics in both with and without trends significantly confirm that all series strongly reject the unit root null at first difference. Given the result of IPS test, it is possible to apply panel cointegration method in order to test for the existence of the stable long-run relation among the variables.

Table 2: Presentation of Multiple Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Fixed regression model				
ILP	0.276348	0.236963	1.166204	0.2460
CM	0.496070	0.134377	3.691631	0.0003
CA	-0.050967	0.053086	-0.960088	0.3391

C	2.066746	0.853674	2.421001	0.0171
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.621287	Mean dependent var		4.896512
Adjusted R-squared	0.571016	S.D. dependent var		2.007089
S.E. of regression	1.314581	Akaike info criterion		3.500551
Sum squared resid	195.2780	Schwarz criterion		3.855256
Log likelihood	-209.7855	Hannan-Quinn criter.		3.644675
F-statistic	12.35861	Durbin-Watson stat		1.088711
Prob(F-statistic)	0.000000			
Random regression model				
ILP	0.280417	0.236773	1.184330	0.2385
CM	0.668903	0.107416	6.227213	0.0000
CA	-0.054986	0.052065	-1.056092	0.2930
C	1.067814	0.737870	1.447157	0.1504
Effects Specification				
			S.D.	Rho
Cross-section random			0.737706	0.2395
Idiosyncratic random			1.314581	0.7605
Weighted Statistics				
R-squared	0.254673	Mean dependent var		2.412824
Adjusted R-squared	0.236785	S.D. dependent var		1.520776
S.E. of regression	1.325193	Sum squared resid		219.5170
F-statistic	14.23723	Durbin-Watson stat		1.040407
Prob(F-statistic)	0.000000			
Unweighted Statistics				
R-squared	0.444235	Mean dependent var		4.896512
Sum squared resid	286.5726	Durbin-Watson stat		0.820030
Correlated Random Effects - Hausman Test				
Test Summary		Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random		5.026197	3	0.1699

Source: Extract from E-view, 2021

The Hausman (1978) specification was used to determine the appropriate model on the relationship between credit monitoring, credit appraisal, internal lending policies and nonperforming loans portfolio of quoted commercial banks in Nigeria. Table 2 shows Hausman specification test the model has the value of $p = 0.1699$ for the regression model of dependent and independent variables. This shows random effect model is more appropriate, because the null hypothesis is accepted. Therefore, this includes insignificant P-value, $\text{Prob} > \chi^2$ larger than 0.05, then it is more suitable to use random effects.

The adjusted R^2 is 0.236785; this implies that 23.6 per cent variations in the nonperforming loans portfolio can be accounted for by the independent variables. This means 76.4 per cent of variations in the performing loans portfolio of the quoted commercial banks are explained by exogenous variable. This also indicates that there are other variables that influence the variations in the level of nonperforming loans. The F-statistics (Fisher statistics which is a measure of the overall goodness of fit of regression) of 14.23723 and probability of 0.000000 which implies that the regression model fitted the data, therefore there is goodness of fit. **D-W** statistics also showed significant values. The value of the DW statistics which ranges from 0.820030 further indicates that the regression equation is free from the problem of autocorrelation. Hence, the results can be relied upon to make meaningful inferences.

Furthermore, the beta coefficient of the variables, from the random effect results it indicates that internal lending policies and credit appraisal have positive relationship with performing loans portfolio while credit monitoring have negative relationship with performing loans portfolio of the commercial banks. The estimates model paved that the regression intercept is positive and significant which implies that holding other variables constant, performing loans portfolio of the commercial banks increases by 1.06 units within the time scope of this study.

Table 3: Pedroni Residual Cointegration Test

	Statistic	Prob.	Weighted Statistic	Prob.
Panel v-Statistic	-3.834121	0.0467	-2.400902	0.0118
Panel rho-Statistic	2.899405	0.9981	2.651556	0.0060

Panel PP-Statistic	1.067895	0.8572	0.215885	0.5855
Panel ADF-Statistic	2.090810	0.9817	0.876971	0.8097
	<u>Statistic</u>	<u>Prob.</u>		
Group rho-Statistic	4.325100	0.0000		
Group PP-Statistic	4.791069	0.0055		
Group ADF-Statistic	1.915242	0.9723		

Source: Extract from E-view, 2021

The table 3 examined the presence of long run relationship between credit appraisal, credit monitoring, internal lending policies and nonperforming loan portfolio of quoted commercial banks in Nigeria. Our results proved that the variables are integrated in the order of I (1). Since the variables are found to be integrated in the same order I (1), we continue with the panel cointegration tests proposed by Pedroni (1999, 2004). Cointegrations are carried out for constant and constant plus time trend and the summary of the results of cointegrations analyses are presented in table 3. In constant level, we found that the seven statistics reject null hypothesis of no cointegration at the five per cent level of significance for the ADF statistic and group ρ –statistic, while the group –ADF is significant at one per cent level.

Table 4: Pairwise Granger Causality Tests

Null Hypothesis:	Obs	F-Statistic	Prob.
ILP does not Granger Cause NPLP	104	NA	NA
NPLP does not Granger Cause ILP		NA	NA
CM does not Granger Cause NPLP	104	0.02159	0.9786
NPLP does not Granger Cause CM		2.83698	0.0434
CA does not Granger Cause NPLP	103	0.88112	0.4176
NPLP does not Granger Cause CA		1.56191	0.2149

Source: Extract from E-view, 2021

The objective of the above table was to determine the causal relationship between credit monitoring, credit appraisal and internal lending policies and nonperforming loan portfolio of quoted commercial banks. As summarized in table 4, a unidirectional causal relationship has been found between nonperforming loan portfolio and credit monitoring, indicator of the commercial banks which is significant at 5 per cent probability, because the p-value is < 0.05. The study found no the causality among the variables.

DISCUSSION OF FINDINGS

The estimated model found that the explanatory variables can explain 23.6 per cent variations on the nonperforming loan portfolio of the commercial banks over the periods covered in this study. Further examination of the results from the f-statistics and probability justifies that the model is significant. The estimated beta coefficient of the variables indicates that internal lending policies and credit monitoring have positive and significant relationship with nonperforming loan portfolio of the commercial banks. The regression coefficient proved that a unit increase on the variables can lead to 0.28 and 0.66 units on the nonperforming loan portfolio of the commercial banks. The finding contradicts our expectation of the study as effective management of credit risk reduces the incidence of nonperforming loans of commercial banks.

The positive effect of the variables can be traced to effective credit risk management strategies. Theoretically the findings confirm the risk diversification theory and in line with risk management theory. Empirically, this finding contradicts the findings of Macharia (2012) that non-performing loans, rate of loan repayment and operational expenses largely affect the profitability of the institutions and that non-performing loans and operational expenses have more significant effect than the rate of loan repayment that is achieved by the organization. Muasya (2013) that there is a significant negative relationship between credit risk management practices and loan losses in commercial banks in Kenya, Mutua (2014) that in view of risk analysis as a credit risk management practice in the bank the application of modern approaches to risk measurement.

However, the estimated regression model found that credit have has negative and significant relationship with nonperforming loan portfolio of the commercial banks. The regression coefficient justifies that credit monitoring will reduce performing loan portfolio of the commercial banks by 0.05 per cent. The negative effect of credit appraisal on nonperforming loan portfolio of the commercial banks confirms the a-priori expectations of the study and confirms the relevance of risk diversification.

The negative findings of confirm the findings of Nkegbe and Yazidu (2015) whose study reported negative trend in bank performance and a positive relation between market of loan and bank performance, Nyong'o (2014) that credit risk management practices adopted by the banks influences the level of non-performing loans to a great extent and that risk identification, risk monitoring and risk analysis and appraisal would lead to decrease in non-performing loans, the findings contradict the findings of Olawale (2014) whose findings showed negative relationship but not significant between loan ratio and total advances in terms of deposits and further shown a significant negative relationship between nonperforming loans and advances rate and banks' profitability.

CONCLUSION

The study result implies that 40.8 per cent variations in the nonperforming loans can be accounted for by the independent variables. From the fixed effect results, it was evidenced that internal lending policies and credit appraisal have positive relationship with performing loans portfolio while credit monitoring have negative relationship with performing loans portfolio of the commercial banks. from the findings, the study conclude that there is significant relationship between credit monitoring, credit appraisal, internal lending policies and commercial banks nonperforming loan portfolio in Nigeria.

RECOMMENDATIONS

1. Based on the findings of this study work, the researcher recommends the need to strengthen supervision of banks by the Central Bank of Nigeria (CBN) and the Nigeria Deposit Insurance Corporation (NDIC) to enhance credit risk management behaviour of the commercial banks.
2. Banks should maintain high credit standards while the Apex Bank and other regulatory agencies should maintain high surveillance on banks' credit operations; Banks should collect and perfect all collaterals which are used for obtaining loans. The collateral should be more than the value of loan approved, in case of default.
3. Bank management should consider monitoring of loans as priority in credit management functions. Insider dealing should be outlawed in banks in Nigeria. This was a major source of huge nonperforming loans portfolio in 1990s. Over extension of loans to promoters, directors and other large shareholders is often done at the detriment of depositors because such funds often become irrecoverable

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CORPORATE DEBT POLICY AND FIRM VALUE: NEW EVIDENCE FROM NIGERIA.

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ABSTRACT

This study adopts the panel data framework to investigate the relationship between corporate debt policy and the market value of quoted firms in Nigeria using secondary data from the published accounts of sixty (60) companies selected from all the sectors of the economy covering the period from 1990 to 2016. Specifically, the paper examines the effects of short-term debt, long-term debt, debt to equity ratio and total debt stock on market value per share using all the three methods of panel data approach of research methodology namely pooled regression, random effects and fixed effects being supported by likelihood ratio and Huasman tests to justify the selection of an appropriate model. Furthermore we conducted pairwise panel causality tests to establish if there is a reverse effect on debt policy variables from market value per share of the companies. Contrary to the irrelevance theory, there is evidence from the fixed effects results that market value per share has a negative relationship with short-term debt, long-term debt and debt to equity ratio while it has a positive relationship with total debt stock. However, while the effect of short-term debt, long-term debt, total debt stock is highly statistically significant, that of debt to equity ratio is statistically insignificant. The joint influence of the independent variables highly significantly explains as much as sixty one percent (61%) of the variations in market value per share. Therefore, our conclusion is that a strategic reduction in both short-term and long-term debts is needed to maximize shareholders' wealth in Nigeria.

Key words: Corporate debt policy, firm value, fixed effects.

INTRODUCTION

One of the key principles of sound financial management is to develop a debt policy which would entail establishing parameters for issuing debt and managing the debt portfolio of an organisation. The whole essence of it is to provide guidance that would ensure that debt is issued prudently and cost effective which ultimately leads to sound debt position that preserves the financial stability of the firm. But Modigliani and Miller (1958) assume that markets are perfect and integrated, drawing conclusion that the costs of different forms of capital and invariably the value of a firm are not determined by decisions on how debt and equity are structured to fund a business. This is an indication that market value is calculated using the earning power and risk of the underlying assets of the company independent of the way it finances investments. Thus, rather than financial leverage, the firm's investment decisions have strong implications for its value in the stock market. This however, generated some controversy in view of the position of the authors which seems not have any practical relevance.

However, the argument received considerable criticisms for lacking practical relevance based on the restrictive assumptions which are also acknowledged by the authors themselves. It is in realization of this that Modigliani and Miller (1963) modified their earlier model by including corporate tax which, according to them, has practical relevance. Because interest paid on long-term debt is tax deductible, it provides incentives for the use of debt capital, and the more a firm uses debt, the more its profitability increases. So a levered firm tends to be more profitable than unlevered firm and this reflects on the value of the firm. Thus, firms that are levered have higher market value than firms that use only equity.

From the empirical perspective, the number of studies that have focused on the relationship between capital structure and firm value both in developed and developing countries is also considerable. However, there are conflicting results.

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Some studies have found empirical support for the irrelevance theory despite its limitations, while others have found evidence supporting the view that capital structure matters. Also, among the latter studies, there also is mixed evidence on the direction of the impact of capital structure on firm value. While some found studies found evidence of positive impact, others found evidence of negative impact.

In Nigeria, the story is not different. However, what appears to be a major gap in the literature is the little consideration of the impact of firm-specific effects such as organizational culture, policies and strategies that are directly unobserved on the relationship between capital structure and firm value. Most of the previous Nigerian studies fail to control these unobserved factors that potentially have impact on firm value both directly and through their interactions with capital structure variables. Hence, this study intends to fill this gap.

The study, therefore, seeks to examine the relationship between corporate debt policy and firm value in Nigeria from 1990 to 2016 under the panel data framework. In particular, the study examines the effects of short-term debts, long-term debts, debt to equity ratio and total debt stock on market value per share for 60 quoted companies selected from 12 sectors in Nigeria. The study also examines whether the unobserved firm-specific effects such as management policies, organizational culture and strategies affect firm market value, and whether these unobserved effects are correlated with capital structure variables.

The rest of the study has the following structure: Section 2 contains literature review. Section 3 describes the data, methods and models used in the empirical analysis. Section 4 contains the empirical analysis and results while in section 5 the results are discussed with conclusion of the study.

LITERATURE REVIEW

Modiglianni and Miller (1963) provide the theoretical framework that links debt policy and market value of firm. The authors maintain that the firm can maximize its value through the judicious use of leverage thereby contradicting their earlier proposition that led to the irrelevance theory. Consequently, several alternative theories emerged demonstrating in various ways how the relationship between capital structure and firm value exists. Prominent among them are the trade off theory, the pecking order theory and the agency costs theory all providing explanation for the relevancy of capital structure in the funding of a business.

Pandey (2005) describes the trade off theory as providing a nexus between the effect on profits under debt financing and cost of bankruptcy. Apparently, the cost of capital decreases as the proportion of debt increases until the marginal benefit of further increases in debt declines with increases in debt as the marginal cost of bankruptcy increases. At this point, a trade off emerges which optimizes the overall value of the firm which becomes a suitable benchmark for choosing how much of debt and equity the company desires.

The pecking order theory first appeared in the work of Donaldson (1961) in an attempt to measure the debt capacity of a company to institutionalize sound debt policy but was later popularized by Myers and Majluf (1984). It ranks the sources of funding according to their level of risk and proposes the use of retained earnings as the first resort and new equity as the last resort. Therefore, as reported by Miller (1977) and Pandey (2004) the theory predicts a negative relationship between debt-equity ratio and firm value contrary to the irrelevance theory. Myers (1984) provides further insights on the selection process of a good financing mix using data from a cross section of US non-financial companies. Among the findings are that sixty two percent (62%) of all expenditure is financed by retained earnings and the bulk of external financing came from borrowing with a maximum of six percent (6%) left for new stock issues. This is consistent with Hillier et al (2008) showing the application of the pecking order theory by selected firms in four developed economies in the way they raised capital for their businesses between 1970 to 1994.

The basis of agency theory as articulated by Jensen (1986) is that managers' interests are not aligned with those of business owners. Just as the trade off theory deals with financing issues, the agency theory underlines debt as a controlling mechanism because the owners are not comfortable injecting more funds in the business as they perceive free cash for managers. As organizations use debt increasingly, the attention of managers ultimately is more required and therefore would result to increase in monitoring costs which is likely to reduce cost of equity. However, when share prices increase, there are capital gains to the shareholders and it would affect the

capitalization rate. For instance, if a company devalues an investment fund the price drops and this will reduce the cost of capital. So a fall in share price would lead to loss by an investor while the company pays for possible gain an investor would earn (Shawn et al, 2011).

According to Loncan and Calderia (2013), firm value is optimized at the point where the present value of the marginal benefits of tax shields from debt is equal to the present value of the marginal costs of financial distress. This supports totally the arguments contained in the static trade off theory. The functional relationship between capital structure and firm value is given by:

$$FV = f(L) \quad (1)$$

where FV is firm value and L is leverage as proxy for capital structure.

Given the above functional expression, they specified the fixed effects model to test firm value with given set of data for capital structure variables shown below:

$$Y_t = \alpha_i + \beta_1 X_{it} + \dots \beta_2 W_{it} + e_{it} \quad (2)$$

Where Y is the dependent variable for firm I in time t

Alpha (α) is the firm varying linear coefficient (constant)

Beta (β) is the angular coefficients

X and W are the (independent) explanatory variables and e is epsilon being the residual.

On the basis of these factors they developed profit efficiency equation derived by equity capital ratio to test the agency cost hypothesis and the effects of efficiency risks. There were fairly contending results showing signals of risk averse behaviour among investors and stock returns volatility. This could be traced to leverage. But then there were sufficient cash balances which may serve as shield for future cash constraints should there be higher investments that would be able to check distress. On the contrary too much cash may also cause market discounts since opportunity costs are likely to arise. Other implications are that increased agency costs portray heavy cash at the disposal of managers and perhaps inefficient pay out policies. Therefore it can be concluded that firms are likely to attain optimality in their capital structure by maintaining a balanced position between both benefits from debt use and the associated costs as well as a neutral point where shareholders and creditors are indifferent about their costs.

Andras, et al (2014) revisit the well-established puzzle that leverage is negatively correlated with measures of profitability. In contrast, at times when firms are close to their optimal level of leverage, the cross-sectional correlation between profitability and leverage is positive. At other times, it is negative. These results are consistent with dynamic trade – off models by Miller (1977). They confirm that the results are not driven by factors such as investment opportunities, market timing strategies, payout or reversion of leverage policies.

This was further expanded by Andras, Rettl and Whited (2014) in their attempt to revisit the well-established puzzle by Myers (1984) and in the process introduced the dynamic trade – off concept having established that leverage is negatively correlated with measures of profitability. They calibrated models to navigate optimal level of leverage with results of cross-sectional correlation between profitability and leverage. The results were showing positive at some instances and negative at other times.

Yu-Shu and Chu-Yang (2010) also confirm that the relationship between leverage and firm value is significant but identified a definite level beyond which a further increase in debt financing does not improve proportional firm value. This gives empirical support to the trade off theory providing a basis for tax shields to continuously knock off debt financing costs until a point where increasing agency costs and distress/bankruptcy costs begin to emerge and grow to cover the shields. The studies by Miller (1977) and Myers (1984) brought out some issues on the incidence of tax upon which Modiglianni and Miller (1963) built their argument to support leverage. The cost of corporate and personal taxes borne by shareholders are likely to offset the tax shields because both capital gains and dividends attract taxes from which the incidence earlier avoided from company income tax would now be subjected to bear. This will undermine the extensive application of the trade off theory because such shields justify the use of debt.

Tetman and Wessels (1988) observed that firms with sufficient assets to secure debts are likely to have more debt in their capital structure. But then debt increases have the tendency to cause increases in the value of equity subject to better corporate governance and management proficiency in the effective utilization of such debts. In line with financial theory, volatility correlates positively with leverage and this provides a basis to argue that higher capital structure (higher leverage) results in higher risk (volatility). The study opened another chapter of the debate that capital structure should be considered with other factors rather than just leverage. The measures of capital structure articulated by the authors are long term debt, short term debt and convertible debt denominated by market value of shares. In their findings, firms with low debts are not likely to have high costs and this explains the relationship between leverage and enterprise value in a linear fashion.

Kannadhasan, et al (2016) adapted a research model using data from the Indian Pharmaceutical industry to moderate the relationship between financial leverage as an explanatory variable and both corporate performance and shareholders returns as dependent variables. The study provided empirical evidence to prove that financial leverage is significantly related to shareholders return but when corporate performance is applied, the relationship becomes insignificant.

In Nigeria, Chechet and Olayiwola (2014) adopted panel data estimation to show that profitability is significantly related to debt ratio in a non linear fashion using a sample of seventy (70) listed companies in the Nigerian Stock Exchange from the year 2000 to 2009. Similarly Nwude, et al (2016) also obtained annual data from forty three (43) companies listed in the Nigeria stock exchange and adopted the panel data methodology to analyze the relationship between debt structure and firm performance covering a period of 12 years from 2001 to 2012. The results are similar with the studies mentioned above showing that all the variables of capital structure such as long-term debt ratio, short-term debt ratio and total debt ratio have significant negative relationship with firm performance.

Salawu (2007) also utilized panel data pertaining to fifty non financial quoted firms in the Nigeria Stock Exchange with a view to statistically estimating the effect of leverage on firm performance. With a study period covering five years from 1990 to 2004, static tests were conducted and panel data specifications used to arrive at results showing that leverage is negatively correlated with profitability. The study also provides evidence that Nigerian quoted companies apply more short term debt than long term debt with a statistical mean value of about sixty (60) percent. This prompted the author's recommendation that firms should adopt appropriate measures to lengthen the maturity structure of corporate debt as well as deal with the phenomenon of collateral which influences all bank borrowing in Nigeria.

Nduka, Achugh and Ucheahara (2016) investigates the effect financing mix could have on corporate performance in Nigeria. They adopted the ordinary least square method to analyze secondary data obtained from twenty seven firms listed on the Nigerian Stock Exchange for a period of research covering seventeen years beginning from 1996 and 2013. They constructed a multiple regression model with debt ratios, return on assets and return on equity based on the panel data generated. From the results, a firm's capital structure represented by debt to equity ratio has a significantly negative impact on both return on assets and return on equity being proxies of firm performance. These findings prompted the authors to recommend among others that firms should identify other relevant factors that influence corporate performance other than debt. Such factors as corporate governance, quality of management, size of the firm, tangibility, growth etc. It is also necessary that firms understand their conditions, analyze their debt capacities, look at the need to maintain comparability with other firms in the same industry before making the final decision regarding their capital structure.

Toby (2010) used Earnings Per Share (EPS), Dividends Per Share (DPS), Asset growth, turnover, net profit and shareholders fund as proxies for Corporate Performance to study the effect financial, operating and even combined leverage could have on them. The results showed that only turnover and profitability have statistically significant inverse correlation with leverage.

METHODOLOGY

According to Brooks (2008), a data set is panel if it consists of both time series and cross-sectional elements. So it is a kind of longitudinal data consisting of repeated observations on variables for large numbers with cross-sections in stacked form like individuals, organizations, industries or countries while the time series observations can be hourly,

daily, weekly, monthly, quarterly and yearly. If N represents the cross-sectional units and T represents the time series observations, then, there are a total of $N \times T$ observations for the panel data. With the combination of both time series and cross-sectional dimensions, it provides a rich dataset sufficient for asymptotic benefits as well as a better framework for modeling cross-sectional heterogeneity than the cross-sectional data type.

It is our view that observations on 60 companies for twenty seven years period fit the definition of panel data as emphasized previously. It is also our view that a sample size of 1,620 is sufficient to obtain consistent, unbiased and reliable results that will truly represent the population. Yearly time series observations for the 60 selected companies are used. The variables are market value per share, long-term debt, short-term debt. The data on the study variables are obtained through secondary sources. Specifically, the data are collected and computed from annual reports and accounts of the selected companies for different years submitted at the Nigerian Stock Exchange obtained at the Port Harcourt office.

METHODS OF DATA ANALYSIS

The panel data framework is employed. The advantage of the panel framework is that it gives more data points and thus, more degree of freedom. It also controls for the influence of unobserved firm-specific effects such as management policies, organizational culture and strategies, while examining the main study relationships. Accordingly, the three traditional panel data methods are used to analyze the relationship between capital structure and firm market value. The methods are pooled regression, fixed effects and random effects methods. The performances of these methods are compared to determine the best method for our panel data. In the light of this, the Likelihood ratio test and the Hausman specification test are employed. While the former compares the estimates of the pooled method with those of the fixed effects, the latter compares the random effects estimates with those of the fixed effects. The empirical inference is usually based on the estimates of the best performing method.

MODEL SPECIFICATION

The functional model for the relationship between debt policy and firm value is given by:

$$MVS = f(STD, LTD, TDS, DER) \quad (3)$$

where;

MVS = Firm market value per share or share price

STD = Firm short-term debt

LTD = Firm long-term debt

TDS = Firm total debt stock

DER = Firm total debt to equity ratio

The econometric parameterization of this model is given by:

$$MVS_{it} = \alpha + \beta_1 STD_{it} + \beta_2 LTD_{it} + \beta_3 TDS_{it} + \beta_4 DER_{it} + v_i + \varepsilon_{it} \quad (4)$$

where α is the regression constant, v_i represents the unobserved firm-specific factors and ε_{it} is the disturbance term. The parameters, $\beta_1, \beta_2, \beta_3$ and β_4 are the regression slopes which are also constant cross-sectionally. If v_i is found to be statistically insignificant, then our empirical model is a pooled regression specification. On the contrary, if v_i is statistically significant, then the model is either a fixed effects specification or a random effects specification depending on whether there is correlation between v_i and the betas. If such correlation exists, then the model is a fixed effects specification. Otherwise, the model is random effects specification. There is therefore, good reason to consider the two hypotheses associated with the conventional panel data methodology; (1) the unobserved firm-specific variables are jointly not different from zero and (2) the unobserved firm-specific factors are uncorrelated with the observed variables.

Furthermore, causality test is carried out to determine whether there is a causal relationship between corporate debt portfolio and firm value using the following general linear bivariate model within the context of panel data.

$$MVS_{it} = \alpha + \sum_{k=1}^K \beta_k MVS_{it-k} + \sum_{k=1}^K \delta_k TDER_{it-k} + \gamma_i + \varepsilon_{it} \quad (5)$$

$$TDER_{it} = \alpha + \sum_{k=1}^K \theta_k TDER_{it-k} + \sum_{k=1}^K \phi_k MVS_{it-k} + \gamma_i + \varepsilon_{it} \quad (6)$$

where $TDER$ is the ratio of total debt to equity, k is the highest number of lags while other parameters are as defined previously. The ratio of total debt to total equity is used since our interest is only on causality between debt policy and firm market value. If the lag coefficients on $TDER\delta_k$, are jointly significant, other things being equal, then we can reject the null hypothesis that $TDER$ does not Granger cause MVS and conclude that there is unidirectional causality running from debt policy to firm market value. On the other hand, if the lags of the lag coefficients on $MVS\phi_k$, are jointly significant, other things being equal, then we can reject the null hypothesis that MVS does not Granger cause $TDER$ and conclude there is unidirectional causality running from firm market value to debt policy. Further, if both δ_k and ϕ_k are significant, then we conclude that there is feedback or bidirectional causal relationship between debt policy and firm value. However, if δ_k and ϕ_k are not significant, we can say that both debt policy and firm market value are independently related.

EMPIRICAL RESULTS

Table 1 shows the pooled descriptive statistics for the study variables.

Table 1: Pooled descriptive statistics

Variable	Mean	Std Dev	Maximum	Minimum	Skewness	Kurtosis
<i>MVS</i>	19.17	64.30	1200.00	0.00	10.42	147.15
<i>Debt-equity ratio</i>	112.54	1541.840	53250	-55	29.45	963.09
<i>Short term debt</i>	10114.56	63135.66	1199462	-179	12.71	197.93
<i>Long term debt</i>	25519.67	754703.14	28701724	-48701	37.81	1437.49

Source: SSPS output

From table 1, the pooled market share per share averaged ₦19.17, reaching an all-time high of ₦1,200 and a record low of ₦0.00 over the period under study. This indicates that market per share is very low and there are more companies whose market value per share is below the average. Based on their mean, the Nigerian quoted companies use more long term debt than short term debt. On the other hand, debt to equity ratio averaged 112.50 over the same period which means there are also more companies with lower ratio. All variables have a positively skewed distribution ($S > 0$), The large kurtosis coefficient associated with each variable suggests that all data have a distribution that is more peaked than the normal distribution. Thus, data extremes are present in our panel dataset. Therefore there is need for log-transformation of the data for quality and reliable empirical results.

Table 2 shows the panel estimation results and goodness of fit statistics for the relationship between debt policy and market value per share. Table 3 shows the Likelihood ratio and Hausman tests for panel model selection. Whereas the Likelihood ratio test formally compares the fixed effects estimates with those of the pooled regression under the null hypothesis that the pooled regression model is the preferred model, the Hausman specification test formally compares the fixed effects estimates with those of random effects under the null hypothesis that the random effects model is the preferred model.

Table 2: Panel estimation results

Variable	Pooled Estimate	Fixed Effects Estimate	Random Effects Estimate
<i>Constant</i>	0.5943 (0.0000)	0.1610 (0.2623)	0.1564 (0.4526)
<i>LSTD</i>	-0.1723 (0.0000)	-0.0942 (0.0010)	-0.1058 (0.0002)
<i>LLTD</i>	0.0357 (0.3514)	-0.1042 (0.0007)	-0.0914 (0.0026)
<i>LTDS</i>	0.2727 (0.0000)	0.3893 (0.0000)	0.3755 (0.0000)
<i>LDER</i>	0.0547 (0.0214)	-0.0178 (0.3929)	-0.0112 (0.5856)
R-squared	0.1019	0.6304	0.0914
Adj. R-squared	0.0991	0.6122	0.0887

F-statistic	37.3674(0.0000)	34.6451 (0.0000)	33.1475 (0.0000)
Durbin-Watson	0.2498	0.5932	0.5639

Source: EViews output; Bracket () contains *p*-values

Table 3: Model selection tests

Test	Chi-square statistic	<i>p</i> -value
Likelihood Ratio test	1173.95	0.0000
Hausman Test	9.487	0.0500

Source: E Views output

From table 2, we can see that the estimated coefficients for LSTD and LTDS are largely similar for the three models in terms of their signs and significance while the estimated coefficients for LLTD and LDER are similar for only fixed effects and random effects models. The coefficient on LTDS is 0.2727 (*p*-value = 0.0000), 0.3893 (*p*-value = 0.0000) and 0.3755 (*p*-value = 0.0000) for pooled regression, fixed effects and random effects models respectively, indicating that total debt stock and firm market value are positively and significantly related. However, the coefficient on LLTD is 0.0357 (*p*-value = 0.3514), -0.1042 (*p*-value = 0.0007) and -0.0914 (*p*-value = 0.0026) respectively for pooled regression, fixed effects and random effects models. This indicates that while the pooled regression model estimated a positive and insignificant relationship between long term debt and firm market value, both fixed effects and random effects models estimated negative and highly significant relationship. The coefficient on LSTD is -0.1723 (*p*-value = 0.0000), -0.0942 (*p*-value = 0.0010) and -0.1058 (*p*-value = 0.0002) for pooled regression, fixed effects and random effects models respectively, indicating that short term debts and firm market value are negatively and highly significantly related. Similarly, the coefficient on LDER is 0.0547 (*p*-value = 0.0214), -0.0178 (*p*-value = 0.3929) and -0.0112 (*p*-value = 0.5856), indicating that while the pooled regression model estimated a positive and significant relationship between debt to equity ratio and firm market value, both fixed effects and random effects models estimated negative and insignificant relationship.

In terms of model fitting, although, the F-statistic (*p*-value = 0.0000) is highly significant for all models, we can see that the fixed effects model has a much better goodness of fit than both pooled regression and random effects models as indicated by the Adjusted R-squared. Specifically, the Adjusted R-squared is 0.6122 for the fixed effects model, and 0.0991 and 0.0887 for pooled and random effects models respectively. This shows that the proportion of the observed variation in firm market value that is due to factors related to firm leverage is approximately 61%, 9% and 8% for fixed effects, pooled regression, and random effects model respectively. Similarly, although, the Durbin-Watson statistic is much less than 2 in all cases, its value is highest for fixed effects model (DW = 0.593), followed by random effects model (DW = 0.563) and then by pooled regression model (DW = 0.249). Thus, the fixed effects model provides the best fit for the relationships being studied.

From table 3, we can see that both Likelihood ratio and Hausman specification tests are significant. However, while the Chi-square statistic for Likelihood ratio test is significant (*p*-value = 0.0000) at less 1% level, the Chi-square statistic for Hausman test is significant at approximately 5% (*p*-value = 0.0500) level. Thus, we strongly reject the null hypothesis that the pooled model is the preferred specification and conclude that the firm-specific factors are relevant. In addition, we reject the null hypothesis of random effects model at approximately 5% level of significance and conclude that the firm-specific effects are correlated with the explanatory (leverage) variables.

From the fixed effects results, we can see that market value per share has a negative relationship with short-term, long-term debts and debt to equity ratio while it has a positive relationship with total debt stock. This implies that controlling for the unobserved firm-specific effects, firm value would decrease (increase) following an increase (decrease) in short-term debt, long-term debt and debt to equity ratio but would increase (decrease) following an increase (decrease) in total debt stock. Thus, firm value moves in opposite direction with short term debt, long-term debt and debt-equity ratio but moves in the same direction with total debt stock. However, while the impact of short-term debt, long-term debt, total debt stock is highly statistically significant, the impact of debt to equity ratio is statistically insignificant. The joint

influence of all the variables highly significantly explains as much as 61% of the variations in market value per share. Thus, our firm value model is well fitted to our panel data. Therefore, contrary to MM's argument, our results indicate evidence that capital structure is a strong determinant of firm value in Nigeria.

The results of the Pairwise Granger Causality tests are presented in tables 4 to 6. As stated in section 3, this test helps to determine whether the variables of interest in all our empirical model are causally related to firm market value. All tests are based on 5% level of significance.

Table 4 shows the pair wise Granger causality test results for long term debt and firm market value. The causality from long term debt to firm market value is tested under the null hypothesis that LLTD does not Granger Cause LMVS. A rejection of this null (that is, if the p-value is less than 0.05) would imply evidence of a unidirectional causality from long term debt to firm market value. On the other hand, the reverse causality is tested under the null that LMVS does not Granger cause LLTD. A rejection of this null would imply evidence of a unidirectional causality from firm market value to long term debt. However, if both null hypotheses are rejected, then there is evidence of a feedback causality between firm market value and long-term debts. On the contrary, if both hypotheses are not rejected, then there is no causality between the two variables. We include one lag of each variable in each test equation.

Table 4: Causality test between firm market value and long-term debts

Null Hypothesis	F-statistic	Probability
LLTD does not Granger Cause LMVS	1.49597	0.2215
LMVS does not Granger Cause LLTD	0.41562	0.5192

Source: EViews output

From table 4, we can see that the associated probability of the F-statistic (p-value > 0.05, 0.1) is quite high in both cases, suggesting that the test is insignificant at all conventional levels. Thus, both null hypotheses are not rejected. This implies that the relationship between long-term debt and firm market value is not causal. Table 5 shows the pairwise Granger causality test results for short-term debts and firm market value. The causality from short-term debts to firm market value is tested under the null hypothesis that LSTD does not Granger Cause LMVS. A rejection of this null would imply evidence of a unidirectional causality from short-term debts to firm market value. On the other hand, the reverse causality is tested under the null that LMVS does not Granger cause LSTD. A rejection of this null would imply evidence of a unidirectional causality from firm market value to short-term debts. However, if both null hypotheses are rejected, then there is evidence of feedback causality between firm market value and short-term debts. On the contrary, if both hypotheses are not rejected, then there is no causality between the two variables. We include one lag of each variable in each test equation.

Table 5: Causality test between firm market value and short-term debts

Null Hypothesis	F-statistic	Probability
LSTD does not Granger Cause LMVS	0.27142	0.6025
LMVS does not Granger Cause LSTD	2.39848	0.1217

Source: EViews output

From table 5, we can see that the associated probability of the F-statistic (p-value > 0.05) is substantially greater than 0.05 in both cases, signifying that the test is insignificant at all conventional levels. Therefore, both null hypotheses are not rejected. Thus, like the case of long-term debt, the relationship between short-term debt and firm market value is not a causal one.

Table 6 shows the pairwise Granger causality test results for debt-equity ratio and firm market value. The causality from debt-equity ratio to firm market value is tested under the null hypothesis that LDER does not Granger Cause LMVS. A rejection of this null would imply evidence of a unidirectional causality from debt-equity ratio to firm market value. On the other hand, the reverse causality is tested under the null that LMVS does not Granger cause LDER. A rejection of this null would imply evidence of a unidirectional causality from firm market value to debt-equity ratio. However, if both null hypotheses are rejected, then there is evidence of a feedback causality between firm market value

and debt-equity ratio. On the contrary, if both hypotheses are not rejected, then there is no causality between the two variables. We include one lag of each variable in each test equation.

Table 6: Causality test between firm market value and debt-equity ratio

Null Hypothesis	F-statistic	Probability
LDER does not Granger Cause LMVS	4.12976	0.0423
LMVS does not Granger Cause LDER	4.46766	0.0347

Source: EViews output

From table 6, we can see that the associated probability of the F-statistic (p-value <0.05) is less than 5% in both cases, which means that the test is significant at 5% level. Thus, both null hypotheses are rejected. This implies evidence that there is a feedback or bidirectional causal relationship between debt to equity ratio and firm market value.

DISCUSSION OF FINDINGS

The study seeks to examine the relationship between debt policy and firm value in Nigeria from 1990 to 2016 under the panel data framework. In particular, it examines the effects of short-term debts, long-term debts, debt to equity ratio and total debt stock on market value per share for 60 quoted companies selected from all the sectors of the capital market in Nigeria. The study also examines whether the unobserved firm-specific effects such as management policies, organizational culture and strategies affect firm market value, and whether these unobserved effects are correlated with the explanatory variables.

First, there is evidence that the unobserved firm-specific effects; management policies, organizational culture and strategies, have strong impact on firm market value. There is also evidence that these unobserved effects are correlated with capital structure variables. The conclusion, therefore, is that fixed effects model is the best description of the observed firm-level Nigerian data. Second, there is evidence from the fixed effects results that market value per share has a negative relationship with short-term, long-term debts and debt to equity ratio while it has a positive relationship with total debt stock. This implies that controlling for the unobserved firm-specific effects, firm value would decrease (increase) following an increase (decrease) in short-term debt, long-term debt and debt to equity ratio but would increase (decrease) following an increase (decrease) in total debt stock. Thus, firm value moves in opposite direction with short term debt, long-term debt and debt-equity ratio but moves in the same direction with total debt stock. However, while the impact of short-term debt, long-term debt, total debt stock is highly statistically significant, the impact of debt to equity ratio is statistically insignificant. The joint influence of the capital structure variables highly significantly explains as much as 61% of the variations in market value per share. Thus, our firm value model is well fitted to our panel data.

The study by Nduka et al (2016) that consider term structure of debt also have this evidence. However, Antwi, Mills and Zhao (2012) found evidence from Ghana that long-term-debt is far stronger than other leverage variables in determining the market value of a firm. Among the factors that explain this effect, the systematic depreciation of the assets of the companies seems more pronounced. When firms use more long term debt especially in emerging markets where such debts are usually collateralized by fixed assets, there is the tendency to affect the value of firms through double shields provided. First from the tax exemptions about the interest of the loans and secondly from the non debt shields owing to the accounting credits allocated to the assets as depreciation charges. This becomes a very good incentive for managers to increase the use of debt.

CONCLUSION AND POLICY IMPLICATIONS

We conclude that Total debt stock is found to have had a strong explanatory power on market value of shares on the basis of the empirical analysis. With a direction of relationship as positive, it is suggestive that an increase in the value of total debt is likely to result in a corresponding increase in the market value of shares. This is consistent with the findings by Demirgunes (2017) and Lawal (2014) suggesting that leverage significantly improves the value of firms with an indication that quoted companies effectively utilize debt instruments in Turkey and Nigeria. These findings

provide empirical evidence to confirm that the use of debt with a positive effect on the value of firms. So there is sufficient evidence to prove that changes in the market value of quoted firms can be traced to the use of debt.

A clear synopsis of previous studies with the variables shows that term structure of debts does not have any influence on the relationship between capital structure and the value of firms. This suggests that both short and long term debt regress very similarly to affect the value of quoted firms. However, a factor that is consistent among the overall findings in respect of previous studies with evidence from emerging markets is that firms use short term debt more than long term debt. This is not unconnected with the peculiar circumstances and the effects such could create on the economic activities in Nigeria and other emerging markets. Apparently, there is dearth of strong institutions in these countries and very low patronage in the capital markets which are the only channels for the transmission of financial assets and instruments of long term maturity.

Debt-equity ratio has a negative insignificant effect on the market value of firms but the causality test shows a strong influence from market value of firms to debt to equity ratio. Debt ratios are usually consistent with the stability or volatility of the capital market. When an economy has a downturn, market value of debt ratios increase at much higher rate than their book value. This is an indication of reaction to fluctuations in the market. This is evident from the persistently and consistently negative relationship they have with all types of debt ratios in all periods and under all estimation methods as it is seen from Barclay and Smith (1996) and Pandey (2001). It is simply an indication that firms use more debt as they grow and as their size increase, but as profits improve they reduce debt.

It is important to explain that debt equity ratio establishes a relationship between long term debts and shareholders fund. It measures the relative proportion of debt and equity in financing the assets of the firm. The two components are (i) Long term Debts characterized by term loans, debentures or bonds and (ii) Shareholders' funds such as shares, preference shares, reserves and net operating surplus after adjusting for fictitious assets and preliminary expenses where they occur. So it is a good indicator of sound debt policy in an organization with a tendency that when it moves in the same direction with cost of capital it becomes apparent that the company has adequate checks and proper debt control measures.

It is convincing that there is some level of consistency among the results of previous studies with evidence from countries which cut across all stages of development. We have Miller (1977) and Myers (1984) being studies using data in developed countries while Pandey (2004) and Demirgunes (2017) provide evidence from emerging markets. Then we have a number of studies that have evidence from Nigeria such as Salawu (2007), Chechet and Olayiwola (2014) and Nwude, et al (2016). It is also important to note that these studies used a number of proxies to establish a significant negative relationship between capital structure and firm value. They include short-term debt, long-term debt, total debt and debt equity ratio as capital structure variables while return on asset and return on equity are used as proxies for firm value.

On the whole, our results indicate evidence that debt policy is a strong determinant of firm value in Nigeria and this is contrary to the irrelevance theory. Therefore, our conclusion is that a strategic reduction in both short-term and long-term debts is needed to maximize shareholders' wealth in Nigeria.

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OWNERSHIP STRUCTURE AND FINANCIAL PERFORMANCE: EVIDENCE FROM SELECTED LISTED OIL AND GAS COMPANIES IN NIGERIA

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Abstract

This study examined the effects of ownership structure on the financial performance of listed oil and gas companies in Nigeria for the period of 2006-2018. Secondary data was extracted from the financial reports and accounts of the sample companies. Robust OLS as the best estimator of the regression model was used to analyse the data extracted. The findings revealed foreign ownership has a positive significant impact on the financial performance of oil and gas companies in Nigeria. Based on the findings, the study recommends that foreigners should be allowed to take the majority of the ownership structure of listed oil and gas companies in the downstream sector of the petroleum industry in Nigeria. Furthermore, management of these companies should formulate policies that would boost the number of shares allocated to foreigners since foreign ownership increases financial performance.

Keywords: Foreign Ownership, Managerial Ownership, Concentrated Ownership, Ownership Structure, Corporate Governance.

INTRODUCTION

The relation between ownership structure and firm value has been reported to be one of the most interesting issues in corporate finance (Sanda, Mika'ilu&Garba, 2005). It is the subject of continuous debate since the original paper of Berle and Means (1932) who suggested that firms with a wide dispersal of shares tend to under-perform. Berle and Means (1932) observed that during the 1920s, ownership structure in public companies became one in which shareholders had become so numerous and dispersed that they were no longer able to manage the companies they owned and needed to monitor management. In recent years the discussion has centred on an assessment of the relative advantages and drawbacks of concentrated ownership structure as opposed to the separation between management and ownership (Usman &Yero, 2012).

In the light of the conflicts between owners and manager, one of the objectives pursued by governance mechanisms is to prevent managers/directors from taking inadequate measures or from performing in a manner that is inconsistent with maximizing value to the owner, a phenomenon of management immunity can sometimes develop. This is known in the literature as observed by Jensen andMecklin, (1976) as 'management entrenchment'. Management entrenchment reflects the situation in which managers/directors are immune to the discipline imposed by a wide range of control mechanisms (Berger, Ofek & Yermack, 1997). The level of the managers/directors' entrenchment according to Demsetz (1983); Bebchuck, Cohen and Ferrell (2009) may be enhanced by several factors, particularly the weight of ownership held and voting power in decision-making. Managers/directors can also choose to invest in projects that would be rejected when the rate of return required by the owners is considered, but which would meet their own expectations (Fama & Jensen, 1983; Bebchuk, Cohen, & Ferrell, 2009; Lisboa, 2007). For higher levels of managerial ownership, performance increases again, as the owner/manager/director of the company has additional incentives in valuing share price (Loderer& Martin, 1997).

On the other hand, ownership concentration is another mechanism of corporate governance which influences agency costs (Jensen &Meckling, 1976). Based on this premise, the effect of ownership concentration on performance has been widely documented in the literature (Sanda, Mika'ilu and Garba, 2005). Since dispersion creates free riding problems and makes it difficult to supervise, a positive relationship is expected between ownership concentration and corporate performance. Consistent with this hypothesis supervision, Shleifer and Vishny (1986) refer to the important role played by large owners, and how the stock price rises as the percentage of shares held by them increases. Also, Grossman and Hart (1986) argue that owners with a high stake in the company show greater willingness to play an active role in decisions as they can internalize the benefits of their monitoring effort. The method used by large owners to oversee the management/administration is a result of informal agreements drawn up amongst them (Shleifer&Vishny, 1997). Nevertheless, ownership concentration can lead to conflicts between controlling and minority owners leading to worse performance, as advocated by expropriation hypothesis. Conversely, if the value of the company is too high in relation

to expectations generated and participation is subject to high risks, the owners are driven to sell part of their holdings (Pinto & Augusto, 2014).

Conflict of interests between managers and shareholders as well as between controlling and minority shareholders lies at the heart of the corporate governance literature (Jensen & Mecklin, 1976). The literature however fails to produce any conclusive evidence on the relationship between ownership structure and firm profitability as Mitton (2002), Joh (2003) found a positive effect of ownership on firm performance while Dalton, Daily, Certo, and Roengpitya (2003); Sanchez, Juan and Garcia (2007) on the other hand find no substantive relation between ownership structure and financial performance. Most of the studies are in banking sector, manufacturing firms, conglomerates (Andow & David, 2016; Saifullahi, Muhammad & Shehu, 2015) but has been carried in the oil and gas sector.

These inconclusive findings by previous literature make this study relevant as the study's domain which is the Nigerian oil and gas sectors is characterised with business who explore crude oil from the Niger Delta region of the country that has experienced several issues of militancy kidnapping and destruction of company's asset. Given that researchers like Pinto & Augusto (2014) have argued that high environmental risk that affects the operation of business might instigate owners to sell part or all of their holdings which will consequently lead to a loss in equity other decision making roles they play in the board, it is therefore necessary to carry out such study to investigate the impact of ownership structures on the financial performance of oil and gas firms in Nigeria as previous studies like Demsetz and Villalonga (2001) have observed that when owners of a privately held company decide to sell shares, and when shareholders of a publicly held corporation agree to a new secondary distribution, they are, in effect, deciding to alter the ownership structure of their firms and, with high probability, to make that structure more diffuse which ought to be influenced by the profit-maximizing interests of shareholders, so that, as a result, there should be no systematic relation between variations in ownership structure and variations in firm performance. Also, most of the studies in this area failed to make some robust tests in order to improve the validity and reliability of the statistical inference derived from the studies. However, this study conducts heteroskedasticity, hausman, Lagrangian tests among others.

Though there are several studies that have investigate ownership structure as it relates to earnings management (Usman and Yero, 2012), dividend policy (Miko and Kamardin, 2015), capital structure (Mahrt-Smith, 2000), firm value San-Martin-Reyna and Durán-Encalada, 2012), firm performance (Saifullahi, Mohammed, and Hassan, 2015); there is however not many studies that have investigated the impact of ownership structures on the financial performance of oil and gas firms in Nigeria despite their contribution to the Nigerian economy at large and also noting the fact that since ownership in oil and gas companies in Nigeria varies with concentration, managerial, and foreign ownership, the result is uncertain as to how it will affect firm financial performance. In this wise, the study raises the question how does ownership structure influences the financial performance of oil and gas companies in Nigeria.

The main objective of the study is to examine the effect of ownership structure (managerial ownership (MGO), concentrated ownership (INST) and foreign ownership (FRNO) on the performance of listed oil and gas companies in Nigeria. It is therefore hypothesised that ownership structure, Managerial Ownership, Concentrated Ownership, and Foreign Ownership have no significant influence on the financial performance of listed oil and gas companies in Nigeria.

LITERATURE REVIEW

Concept of Ownership Structure

Ownership Structure of a firm refers to the distribution of control and ownership in the firm. Control is seen as the ability to influence decisions and for shareholders; it is represented by voting power. While ownership is regarded as the right to cash flows of the company which is proportionate to the shareholdings (Shehu, 2012). Ownership structure is one of the main dimensions of corporate governance and is widely seen to be determined by country-level corporate governance characteristics such as the development of the stock market and the nature of state intervention and regulation (La Porta Silanes, Shleifer & Vishney, 1998). Ownership structure is defined by the distribution of equity with regard to votes and capital but also by the identity of the equity owners. These structures are of major importance in corporate governance because they determine the incentives of managers and thereby the economic efficiency of the corporations they manage (Jensen and Meckling, 1976). Ownership structure is seen as the opus of the biggest five

shareholders, which include the mixture of institutional shareholders, individual and managerial shareholders (Alipour&Amjadi, 2011). Other authors looked at ownership structure as the percentage of shares held by Directors (Shah, Butt & Saeed, 2011). Furthermore, ownership structure is seen as decisions made by those who own or who would own shares. They measure ownership structure as the composition of board ownership, institutional ownership and foreign ownership (uwalomwa&Olamide, 2012). Hence, ownership structure is seen as the classes or clusters of owners that exercise rheostat over activities of a firm.

Managerial Ownership

Insider ownership which is also seen as managerial ownership reflects the governance problem arising due to variance in the cash flow and control rights. Insider ownership has two dimensions. In the first case, insider ownership can be defined as managerial ownership (manager-owner), where managers are assigned ownership rights as a post facto incentive mechanism by owners. In the second case, insider ownership is defined by the de facto ownership rights held by an insider who promotes and also manages (owner-manager). But Muhammad, Indra and Yunika (2013) defined Managerial Ownership as a situation where the manager has shares, in other words, the manager of the firm and as well as the company's shareholders. The definitions above look at the possession of shares from insider perspective which is not different from the shares held by those at the helm of affairs, i.e. the managers of the company. This implies that, managerial ownership means the amount of share either in naira amount or units of shares held by those who manage the affairs of the business where they act as an agent of the public (shareholders).

Concentrated Ownership

Concentrated ownership also referred to as block holdings/ownership is an internal governance device that allows the largest shareholders to gain control over management behaviour and decision (Omar & Hind, 2012). Under the corporate governance code released by the Securities and Exchange Commission (SEC) in 2003, SEC defined block-holding as any investor with more than a 5% equity stake in the firm. The definition given by Omar and Hind (2012) did not provide specifically what level constitutes block holdings, but as for the definition given by Nigeria Securities and Exchange Commission in its documents relating to corporate governance code sees block holdings as those who have more than 5% equity stake in a firm.

Foreign Ownership

Foreign control means one or more foreign persons having the authority or ability to establish or direct the general policies or day-to-day operations of the firm. Foreign control is presumed to exist where foreign persons own 25 percent or more of the outstanding voting securities unless one U.S. person controls an equal or larger percentage (Usman and Yero, 2012). Foreign investors can be effective monitors of managers in emerging markets, because foreign investors demand higher standards of corporate governance. If foreign investors assume a role of active monitors, firm performance is expected to increase as foreign ownership increases.

REVIEW OF EMPIRICAL LITERATURE

This subsection reviews various existing studies on the impact of ownership structure and its proxies with performance of firms.

Managerial Ownership and Financial Performance

Andow and David (2016) examined the influence of managerial ownership on the financial performance of conglomerate firms in Nigeria from 2004-2013. Secondary data was employed which was analysed with multiple linear regression. The study found that, managerial ownership has a significant negative impact on the firms' performance. It was recommended that, managerial ownership should not control up to 50% or more of shares allotted in the company which helps in reducing their control over other shareholders which may be responsible for poor performance. The study concluded that, managerial ownership plays a negative role on the financial performance of conglomerate firms. This study differs from Andow and David (2016) as it is looking at oil and gas companies.

Basyith, Fauzi and Idris (2015) investigated the impact of managerial ownership on firm performance of blue chip firms listed on Indonesia Stock Exchange from 2010-2014. The study has 45 firms as its population where 38 were

used as sample. The study used secondary data only which was analyzed using regression analysis. The study found among other things that, managerial ownership has a significant negative impact on firm performance. The study concluded that, managerial ownership influences firm performance. This study differs from Basyith, Fauzi and Idris (2015) as it examines ownership structure and financial performance of oil and gas companies from 2006-2015.

Saifullahi, Mohammed and Shehu (2015) examined the influence of managerial ownership on the performance of 6 conglomerate companies in Nigeria from 2008-2013. The study employed secondary data and it was analyzed with multiple linear regression. It was found that, managerial ownership has a strong negative significant impact on the conglomerate companies in Nigeria. However, the study recommended that, managers should be discouraged by the board to hold a substantial unit of shares by instituting a policy that will restrict the number of their holdings to avoid decrease in performance. The study concluded that, managerial ownership negatively affects performance of conglomerates in Nigeria. The current study examines ownership structure and financial performance of oil and gas companies.

Gugong, Arugu and Dandago (2014) studied the impact of ownership structure on the financial performance of 17 listed insurance firms in Nigeria from 2001-2010. The study employed secondary data which was analyzed with regression technique and the study found that, managerial ownership has a significant impact on insurance companies' performance. It was recommended that, the code on owner's equity of listed insurance companies in Nigeria should be sustained and be promoted for full implementation so that the firms can have a perpetual life. The study concluded that, managerial ownership influences insurance companies' performance. The current study examines ownership structure and financial performance of oil and gas companies and the study failed to conduct robustness tests in order to improve the validity of their findings.

Zakaria and Purhanudin (2014) examined the impact of managerial ownership on the performance of Malaysian listed trading and services firms from 2005-2010. The study used secondary source of data and the data was analysed using regression technique. It was found that, managerial ownership positively influences the performance of the firms and the study concluded that, the higher the managerial ownership, the high firm reports high performance. This study differs from that of Zakaria and Purhanudin (2014) as it looks at ownership structure and financial performance of oil and gas companies.

However, in contrast to the findings of Saifullahi, Mohammed, and Hassan (2015); Demsetz & Villalonga (2001), in a more recent study, Zakaria, Palanimally and Purhanudin, (2014) investigated ownership structure and firm performance in Malaysian trading and services sector for a period of six years (2005 to 2010). The study used secondary data and it was analysed with regression technique. Their findings revealed that when firm has managerial ownership, it can enhance the firm performance. They further found that trading and Services firms are not affected by ownership structure under pre crisis period as compared to during post crisis period. This finding is also supported by Sanda, Mika'ilu and Garba (2005) posited that director and managerial shareholding is significantly negatively related to firm performance. This compares with outside directors and ownership concentration, which are not significant in all cases. This finding also does not support Adenikinju and Ayorinde (2001), who saw no significant relationship between firm performance and insider ownership. In addition, McConnell and Servaes (1990) credited a significant relation between insider ownership and firm performance.

On the other hand, a non-significant relationship exists in the work of (Loderer and Martin 1997). Managerial ownership has negative and strong impact on firm performance of study with 8 sample firms (Faruk & Mailafia, 2013). This study supports the study of Morck, Shleifer and Vishney, (1998) who analyzed the relationship between the manager's percentage of shares and firm performance. They gave a positive for holding within three ranges, 0% to 5%, beyond 25%, but negative one between 5%-25%.

Concentrated ownership and Financial Performance

Concentrated shareholding or ownership which is also referred to as block ownership is the proportion of shares (usually more than 5%) owned by a certain number of shareholders. It is argued that the higher the number of shares owned by the block holders, the more managers' action will be regulated and monitored to act in the interest of the shareholders (Sanda et al. 2005). However, some researchers have reported mixed findings between concentrated ownership and financial performance.

Basyith, Fauzi and Idris (2015) investigated the impact of block-holder ownership on firm performance of blue-chip firms listed on Indonesia Stock Exchange from 2010-2014. The study has 45 firms as its population where 38 were used as sample. The study used secondary data only which was analyzed using regression analysis. The study found among other things that; Block-holder ownership has a significant positive impact on firm performance. The study concluded that, Block-holder ownership influences firm performance. The current study examines ownership structure and financial performance of oil and gas companies.

Further, Pinto & Augusto (2014) analyzes the causal relationship between the ownership concentration and operational performance using a sample of 4163 Portuguese SMEs and panel data models. The study used secondary data and it was analysed with regression technique. The main results show an endogenous and dynamic relationship between those variables. The quadratic specification established between ownership concentration and operational profitability suggests that for low levels of control rights the expropriation hypothesis prevails and for high levels the supervision hypothesis prevails. The study concluded that, ownership structure affects operational performance of Portuguese SMEs. The current study examines ownership structure and financial performance of oil and gas companies.

In the context of Japanese manufacturing enterprises, Hu and Izumida (2008) conducted a study where they analyze the causal relationship between ownership concentration and performance. Secondary source of data was used and regression was used to analyse the data. The results suggest a U-shaped relationship between ownership concentration and performance, in line with the expropriation effect predominant in low levels of ownership and the supervision effect for intermediate levels of ownership, indicating that both dispersed ownership and high ownership concentration are associated with improved performance. On the other hand, they showed an insignificant effect of performance on ownership concentration, supported by the fact that capital markets have low liquidity, which prevents larger owners from changing their portfolios depending on performance. Considering the results, they conclude that ownership concentration is not determined by performance in illiquid markets, where it is difficult to transact and change ownership in response to changes in circumstances. The current study examines ownership structure and financial performance of oil and gas companies.

Foreign Ownership and Financial Performance

Empirically, Lee (2008) examine the effect of equity ownership structure on firm financial performance in South Korea using panel data for South Korea in 2000--2006. They focused on the role of two main dimensions of the ownership structure: Ownership concentration (i.e., the distribution of shares owned by majority shareholders) and identity of owners (especially, foreign investors and institutional investors). Secondary source of data was used and regression was used to analyse the data. They found that firm performance measured by the accounting rate of return on assets generally improves as ownership concentration increases, but the effects of foreign ownership and institutional ownership are insignificant. Andow and David (2016) assessed the impact of foreign ownership on the financial performance of conglomerate firms in Nigeria from 2004-2013. The study employed panel data and it was analyzed with regression technique. The study found that, foreign ownership has a negative significant impact on the conglomerate firms' performance. The study concluded that, foreign ownership increases the performance of conglomerates in Nigeria. This study differs from Andow and David (2016) as it examines ownership structure and financial performance of oil and gas companies from 2006-2015.

Abdulrahman and Reja (2015) examined the impact of foreign ownership on bank performance in Malaysia from 2000-2011. Using secondary data, multiple fixed effect regression was used for the data analysis and the study found that, foreign ownership has an insignificant impact on the Malaysian banks' performance. It was concluded that, the insignificant results of foreign ownership suggest that the type of ownership structure does not have significant impacts to the bank performance. This study differs from Abdulrahman and Reja (2015) as it examines ownership structure and financial performance of oil and gas companies from 2006-2015. Saifullahi, Mohammed and Shehu (2015) examined the impact of foreign ownership on the performance of 6 conglomerate firms in Nigeria from 2008-2013. Secondary data was extracted from annual reports accounts of the firms and it was analyzed with panel multiple linear regression. The study found an insignificant impact exists between foreign ownership and performance. The study concludes that, foreign ownership does not play a role on the performance of conglomerates firms in Nigeria. Zakaria and Purhanudin (2014) examined the impact of foreign ownership on the performance of Malaysian listed trading and services firms from 2005-2010. The study used secondary source of data and the data was analyzed using regression technique. It was

found that, foreign ownership positively influences the performance of the firms and the study concluded that, the higher a firm foreign ownership, the better it performs.

However, based on the empirical literatures reviewed there are evidences that divergent views exist on the impact of ownership structure and its proxies on financial performance of banks, manufacturing firms, conglomerates and none of the studies exist in the oil and gas sector of the Nigerian economy. This study contributes to bridging the gap.

THEORETICAL FRAMEWORK

The major underpinning theory on this study is the agency theory although there are other related financial theories such as institutional theory and stakeholder theory. The study however leans on the agency theory because the later explains the relation between ownership structure and financial performance in the context of this study.

The agency problem was developed by Jensen and Meckling (1976) and Fama and Jensen (1983). The theory states the relationship between principals such as a shareholders and agents such as a firm's senior management. The principal delegates work to an agent. The theory attempts to deal with firstly, the agency problem where there is a conflict of interest between a company's management and the company's stockholders, and secondly, that the principal and agent settle for different risk tolerances. There are two main agency relationships in a firm that are normally in conflict; those between the company's management and stockholders and between the stockholders and the debt holders. These agency conflicts have implications on corporate governance and business ethics. Such relationships have expensive agency costs that are incurred so as to sustain an effective agency relationship. Incentive fees paid to agents to encourage behaviour consistent with the principal's goals are common examples of agency costs (Bowie and Edward, 1992). One of the ways of reducing agency problems is debt financing which helps those problems that are normally related to free cash-flow and asymmetric information problems especially in the case of privately held debt. Secondly, Conflicts of interest between managers and shareholders also arise from the divisions between ownership and control. Managerial ownership can align the interest between them, hence; reduce the total agency costs. The relationship between managerial ownership and agency costs is linear and the optimal point for the firm is achieved when the managers acquires all of the shares of the company (Jensen & Meckling, 1976). Thirdly, Ownership concentration is the other option of reducing agency costs by shareholders proactively taking active roles in monitoring. This is however dependent on the amounts of their equity stakes. The more the investor's stake, the more motivated they are to monitor and protect their investment (Gilson, John and Lang, 1990). According to Agrawal and Knoeber (1996) agents such as company managers will highly unlikely venture into behaviours that are strictly profit maximizing where shareholders are not strictly monitoring their activities. The implication therefore is that, if owner-controlled firms are high performers than manager-controlled firms. The assumption is that concentrated ownership of a firm provides better monitoring which leads to better performance.

METHODOLOGY

This study adopted correlational design. The design is considered appropriate, because it is better in determining the relationship and degree of ownership structure influence on performance in our study that permit prediction. This study obtained data from secondary sources which was extracted from the annual report and account of listed oil and gas firms in Nigeria. The population of the study consist of all the downstream sector which consist of the seven oil and gas firms in Nigeria that are listed on the Nigerian stock exchange as at 31st December, 2018. The listed oil firms operating in Nigeria as at 31st December, 2018 are: Conoil Plc, Eternal Plc, Forte Oil Plc, Mobil Oil Nig Plc, Mrs Oil Plc, Oando Plc, and Total Nigeria Plc. However, in order to get complete data for the time period and to collect data from firms of similar operations, this study employs a criteria that only listed oil and gas firms that have been in operation for the past 10 years and are engaged in petroleum marketing. On application of the criteria, the new population of the study is reduced to seven listed oil and gas firms that are engage in petroleum marketing which were used as sample of the study and name thus: The listed oil firms operating in Nigeria as at 31st December, 2018 are: Conoil Plc, Eternal Plc, Forte Oil Plc, Mobil Oil Nig Plc, Mrs Oil Plc, Oando Plc, and Total Nigeria Plc. The justification for choosing oil firms on the fact that the sector is characterized with various ownership structure. Data was extracted from the published audited annual reports and account of the selected firms from 2006-2018. This period under review is considered appropriate because it provides reasonable time frame of 10 years which relevant data can be collected and inference can be drawn (Gujarati, 2013). The data is quantitative and panel in nature. Multiple

regression technique was conducted in consistent with Saifullahi, Mohammed, Hassan, (2015) and Usman and Yero (2012). Panel data is used in investigating changes in variables over time and the difference in variables between subjects. Considering the nature of panel data (cross-sectional and time series) was adopted for the study, the study employs different regression models which include Ordinary Least Squares (OLS) Model, Fixed Effect (FE) Model and Random Effect (RE) Model. In order to know which, result to interpret between the OLS, FE and RE, this study applies the Hausman Specification Test and Breusch and Pagan Lagrangian Multiplier Test before arriving at the most suitable for the study (Gujarati 2013). Further, additional test for Heteroskedasticity, Autocorrelation and Multicollinearity have been conducted to comply fully with the classical assumption of OLS and the model of the overall study (Gujarati, 2013). The analysis is conducted using STATA 13 version.

Variable definition and Measurement

Variables for this study may be classified into three groups: financial performance variable, ownership structure and control variables. The variables are defined and measured thus:

Table 1: Variable definition and Measurement

S/No	Variable	Definition	Measurement	Source
1	PER	Firm Performance	Profit after tax over total asset	Saifullahi, Mohammed, Hassan (2015).
2	MGO	Managerial ownership	% of shares held by managers to total number of shares	Saifullahi, Mohammed, Hassan (2015), Shehu et.al. 2012
3	CNST	Concentrated ownership	% of shares held by major shareholders to total number of shares	Usman and Yero, (2012)
4	FRO	Foreign ownership	% of shares held by foreigners to total number of shares	Saifullahi, Mohammed, Hassan (2015).

Source: Compiled by author from past studies

Model Specification

The equation below represents the model of the study using balanced panel data. This equation is represented as follows:

$$PERF_{it} = \beta_0 + \beta_1 MGO_{it} + \beta_2 CNSTOWN_{it} + \beta_3 FRNO_{it} + \mu_{it}$$

Where:

PERF	=	Firm performance of firm i in year t
MGO	=	Managerial Ownership i in year t
CNST	=	Concentrated Ownership i in year t
FRNO	=	Foreign Ownership i in year t
$\beta_1 - \beta_3$	=	Coefficient of explanatory variables i in year t
β_0	=	Constant or Intercept
μ	=	Error Term
i	=	Individual firm identifier
t	=	time

From equation 1, the contribution of managerial ownership, foreign ownership and the control variable (concentration) is regressed on the performance measured by return on asset of oil and gas firms in Nigeria. Performance is the dependent variable while managerial ownership, foreign ownership are the independent variable and concentrated ownership is the control variable.

DATA ANALYSIS

This section presents the descriptive statistics and regression result of the study. Also, the chapter discussed the various robustness tests conducted for the purpose of ensuring that the sampled data meets the assumptions of the regression analysis. The section ends by testing the hypothesis and discussing result of the study.

Descriptive Statistics

The descriptive statistics is presented in table 2. The calculated minimum, maximum, mean and standard deviations of the data for the variables used in the study are presented.

Table 2: Summary of Descriptive Statistics

Variable	Min	Max	Mean	Std	Skewness
ROA	0.00006	0.0618	0.0232	0.0129	0.0460
MGO	0.001	1.1	0.1672	0.2439	0.0000
OWC	0.14	0.93	0.6895	0.192	0.0001
FRO	0.037	0.87	0.2508	0.1318	0.0000

Source: Researchers compilation, using Stata 13

Table 2 presents the descriptive statistic for both dependent and the independent variables of the study. It shows that, ROA represents return on asset, MGO represent, managerial ownership, OWS represent ownership concentration and FRO represent foreign ownership.

From the result, it can be seen that, the minimum level of return on asset among oil and gas industry in Nigeria stood at 0.00006. This level of return on asset implies that there are companies with relatively very low return on asset among the oil and gas industry in Nigeria. This value ranges from a minimum of 0.00006 to a maximum of 0.0618. This implies that, firms with high return on asset perform better compare to those with lower return on asset among the sampled companies. The average return on asset stood at 0.0232 among the oil and gas industry in Nigeria.

The descriptive statistics result in table 2 shows that managerial ownership has an average mean value of 0.1672. This indicate that, about 17% of share in this sector are held by managers of these companies. This may significantly improve the performance of companies in this sector. This value ranges from a minimum of 0.0010 to a maximum of 1.1 among oil and gas companies in Nigeria. In addition to this, ownership concentration revealed an average value of 0.6895. This value ranges from a minimum of 0.14 to a maximum of 0.93. This shows a significant improve in the ownership concentration from minimum to a maximum level during the period among Nigeria oil and gas industry from 14% to 93% respectively.

In addition, foreign ownership has a mean value of 0.25. This value ranges from minimum of 0.037 to a maximum of 0.87. This shows a significant increase in the proportion of shares held by foreign companies in the Nigerian oil and gas industry from 3.7% to 87% respectively. On the contrary, foreign ownership has the lowest standard deviation among the independent variables of 0.13, which shows its highest contribution in explaining the performance oil and gas companies in Nigeria. From the table 2, the Skewness values were used to test for normality of data of the study and they are all close to 0 and 1 which signifies that the data is normally distributed.

Correlation Matrix

Table 3 shows the correlation values between independent and dependent variables and among independent variables themselves. The values are gotten from the Person correlation of two- tailed significance. It shows the correlation matrix with the top values showing the Pearson correlation coefficient among all variables and the asterisk (*) beside the Person correlation coefficient showing the two- tailed significance of these coefficients.

Table 3: Summary of Correlation Matrix Result

	ROA	MGO	OWC	FRO
ROA	1			

MGO	-0.1406	1		
OWC	0.0436	0.1119	1	
FRO	0.1721	0.0172	-0.1167	1

Source: **Researchers compilation, using Stata 13**

A look at the pattern of the correlation among independent and dependent variables shows a value of 0.5221, none of the explanatory variables is approaching 0.8 or greater.

Table 3 indicates that return on asset is 0.0436 and 0.1721 positively correlated with the ownership concentration and foreign ownership, while managerial ownership is 0.1406 negatively related with return on asset. Managerial ownership is 0.0172 and 0.5221 related with foreign ownership, while ownership concentration is 0.1119 negatively related with managerial ownership. The relationship between the independent variables themselves was found to be significantly related with the exception of few that were found not to be significantly related, though, this may not be enough to conclude that harmful multicollinearity exist among the independent variables of the study until the variance inflation factor and the tolerance values are far and above the expected limit. The V I F and the tolerance are two advance measures of assessing multicollinearity between the regressors. The V I F and the tolerance are computed and are found to be consistently smaller than one and ten respectively, which clearly indicates absence of harmful multicollinearity. This shows the appropriateness and fitting of the study model with the independent variables and one control in ownership structure and performance of oil and gas industry in Nigeria.

Robustness Test of independent and dependent variables

In order to make ascertain the validity of statistical inferences of the study, this section present the result of the robustness test conducted. The robustness tests conducted includes:

- i. **Multicollinearity Test:** This was conducted to check whether there is a higher correlation between independent and dependent variables which will mislead the result of the study. Table 3 present the matrix of linear relationships among independent and dependent variable and among the independent variables themselves. From the observation, managerial ownership is having negative correlation, while ownership concentration and foreign ownership are having a very low but positive correlation among themselves. In order to prove and further substantiate the absence of harmful multicollinearity between the independent variables, colinearity and diagnostics test are carried out as the tolerance values and the variance inflation factor (V I F) values show absence of multicollinearity in the data.
- ii. **Heteroskedasticity Test:** Breusch- Pagan / Cook- Weisberg is used to test the null hypothesis that the error variances are all equal versus the alternative that the error variance are a multiplicative function of one or more variables. The alternative hypothesis states that the error variances increase or decrease as the predicted values of Y increase. That is the bigger the predicted value of Y, the bigger the error variance will be. A large chi-square would indicate that heteroskedasticity was present. In the result obtained from the heteroskedasticity test conducted in this study, the chi-square value is 4.36 with p-value of 0.0367, indicating heteroskedasticity was present and this shows the violation of assumption number four of the classical linear regression model which state that, there must be constant variance, that is, the distribution appearing in the population regression function are homoscedastic.
- iii. **Hausman Test:** In order to decide between Fixed Effect Model (FEM) output and Random Effect model Output (REM) which is the best, researchers often rely on the Hausman (1978) specification test. The Hausman test is design to detect the violation of the random effects modeling assumption that the explanatory variables are orthogonal to the unit effects. If there is no correlation between the independent variables and the unit effects then estimates of β in the fixed effects model should be similar to estimates of β in the random effect model. The Hausman test statistic H is a measure of the difference between the two estimates. Under the null hypothesis of orthogonality, H is distributed chi-square with degree of freedom equal to the number of independent variable in the model. A findings that $p < 0.05$ is taken as evidence that, at conventional level of significance, the two model are different enough to reject the null hypothesis, and hence to reject the random effect model in favor of the fixed effect model. If the Hausman test does not indicate significant difference ($p > 0.05$), however, it does not necessarily

follow that the fixed effects estimator is safely free from bias, and therefore to be preferred over the random effects estimator. Thus the study selected the robust OLS as the best estimator of the model.

Presentation and Interpretation of Regression Result

This section presents the result of the dependent variable and the independent variables of the study (managerial ownership, ownership concentration, foreign ownership). The presentation follows with the analysis of the association between the dependent variable and each individual independent variable. Robustness checks for multicollinearity and heteroskedasticity were first conducted on the data to ensure the reability and creadibility of the overall findings of the study. The result showed the absence of multicollinearity but heteroskedasticity was present. A FEM and REM were estimated after which the Hausman specification test was conducted to choose the most appropriate model for discussion between the two models. The Hausman test selected the GLS, consequently the Langrange Multilier was condusted and it showed no evidence of panel effect in the data (See Appendices attached). Therefore we settle for OLS as the best estimator over the GLS. However, due to the evidence of heteroskedasticity, the robust OLS was used to estimate the hypothesized relation for the study. The estimated model is as below:

$$ROA_{it} = \beta_{0it} + \beta_1 MGO_{it} + \beta_2 OWC_{it} + \beta_3 FRO_{it} + \mu_{it} \quad (1)$$

The summary of the regression results obtained from the robust OLS model estimated for the study is presented in table 4.3 below:

Table 4: Summary of Regression Result

Variables	Coefficient	T-statistics	P-values	Tolerance	VIF
Constant	0.0236699	2.18	0.033		
MGO	-0.001753	-1.89	0.063	0.773174	1.29
OWC	-0.001129	-0.16	0.871	0.883727	1.13
FRO	0.207763	1.77	0.081	0.93796	1.07
R-Square	0.17				
Adjusted R	0.12				
F Statistics	3.37				
Prob. (F. sig)			0.0144		

Source: Regression result Output, 2019 using Stata 13

Table 4 show the summary of the estimated regression model which can mathematically be transformed as:

$$ROA = 0.0236699 - 0.00175(MGO) - 0.001129(OWC) + 0.207763(FRO)$$

The regression result further substantiates the result in table 4 on correlation matrix which indicates absence of harmful multicollinearity. From table 4, the (VIF) are consistently less than 10 indicating complete absence of multicollinearity. In addition, the tolerance values are also consistently less than 1.00. From the regression result, the highest tolerance value and VIF is 0.94. This result shows that there is complete absence of harmful multicollinearity between the independent variables (Neter, Kutner, Nachtsheim& Wasserman, 1996; Tobachnick, &Fidell, 1996). This further provides evidence that harmful multicollinearity will not affect the inferences drawn from the results of this study.

The coefficient of determination represented by R^2 stood at 17% which constitutes the proportion of the variation in the dependent variable which is explained by the independent variable. Therefore, it signifies that 17% changes in financial performance of oil and gas companies are caused by the explanatory variables as used in the study, while the remaining 83% of the changes are caused by other factors outside the model of the study. The F- statistics which shows the overall level significance of the model is 3.37 showing the adequacy and fitness of the model of the study and is significant at 1% level.

Managerial Ownership and Performance

From the regression table above, the beta coefficient of managerial ownership is -0.001753 and its p-value is 0.063 (5%) which signifies that there is a negative significant impact between MGO and return on asset of quoted oil and gas

industry in Nigeria. The implication of the above result is that, for every one unit increase in the managerial ownership there is an approximately 0.001753 naira decrease in return on asset of quoted oil and gas industry in Nigeria. However, the finding is in line with expectation of the researcher. The policy implication of this finding is that, the management of the oil and gas companies should formulate policies aim at reducing the number of shares allocated to managers. This finding is in line with the findings of Sanda, Mikailu and Garba (2005), Faruk and Mailafia (2013), Saifullahi, Mohammed and Shehu (2015), Basyith, Fauzi and Idris (2015), Andow and David (2016) that found managerial ownership to be negatively and significantly affecting performance of firms and contrary to the findings of Adenikinju and Ayorinde (2001), Zakaria and Purhanudin (2014).

Ownership Concentration and Performance

From the regression table, ownership concentration has a beta coefficient of -0.001129 with a t-value of -0.16 which is insignificant at 87%. This signifies that, ownership concentration is negatively and insignificantly affecting the performance of listed oil and gas companies in Nigeria. However, the outcome is contrary to the prior expectation of the study that, as specific number of individuals hold a large portion of a company's share, they would be able to influence the decision making in the company and they would influence the decisions of managers toward achieving the shareholders' expectation/objective of wealth maximization and thereby increasing the performance of the firm in terms of profitability. This finding is contrary to the finding of Saifullahi, Mohammed and Shehu (2015) that found ownership concentration to be positive and significantly affecting the performance of conglomerate firms in Nigeria.

Foreign Ownership and Performance

From the regression table, foreign ownership has a beta coefficient value of 0.0207763 with a t-value of 1.77 and is significant at 10%. It signifies the existence of positive significant impact between the foreign ownership and return on asset of quoted oil and gas industry in Nigeria. The implication of the above result is that, for an increase in the number of foreign ownership the performance of quoted oil and gas companies in Nigeria increases with two kobo. This finding is in line with the researcher's expectation. The policy implication of this finding is that, the management of the oil and gas companies in the downstream sector should formulate policy that would boost the number of share allocated to foreigners since foreign ownership increases the companies' financial performance. This finding is in line with the finding of Zakaria and Purhanudin (2014) who found that, foreign ownership has a positive significant impact on firm performance and contrary to the findings of Andow and David (2016) who found that, foreign ownership has a negative significant impact on firms' performance while Abdulrahman and Reja (2015), Saifullahi et al (2015) found foreign ownership to be insignificantly affecting firms' performance.

Table 5: Summary of Predictions of Findings

Variable	Predictive Sign	Statistical Significance
Managerial Ownership	-	Significant
Foreign Ownership	+	Significant
Ownership Concentration	-	Insignificant

=Source: Researcher's findings

Hypotheses Testing

This sub section presents the data set which was estimated using a robust OLS in order to test the hypotheses of the study. The regression result used for the hypotheses testing is presented in the table 4.3.

H0₁: Managerial ownership has no significant impact on return on asset of quoted oil and gas industry in Nigeria.

Managerial ownership was found to be significant and negatively impacting on return on asset at 5% level of significance indicating that, an increase in the number of share held by managers will lead to a decrease on the return on asset of oil and gas industry in Nigeria. In view of the above result reported in respect of Managerial ownership showing that the variable is statistically significant in influencing return on asset, this therefore proved an evidence of rejecting null hypothesis one of the study.

H0₂: Ownership concentration has no significant effect on return on asset of quoted oil and gas industry in Nigeria.

Ownership concentration was found to be statistically insignificant, which means that, the variable is not significantly associated with return on asset of oil and gas industry in Nigeria. Therefore Ownership concentration has not significantly affected return on asset. Owing to this, the study fails to reject null hypothesis two of the study. Thus hypothesis 2, H0₂ is failed to be rejected.

H0₃: Foreign ownership has no significant impact on return on asset of quoted diversified industry in Nigeria.

Foreign ownership is found to be positive and significant at 5% level, this means that, it is significantly impacting on return on asset of quoted oil and gas companies in Nigeria. Therefore, foreign ownership has significantly affected return on asset. In line with this, the study rejects the third null hypothesis. Thus, for hypothesis 3, H0₃ is rejected.

CONCLUSION

This study concludes that managerial ownership contributes negatively to the performance of listed oil and gas companies in Nigeria. Managers taking the majority part in the ownership of oil and gas companies will only result in causing drawbacks to the firms, thereby reducing the total profits. If Managers are given higher number of shares and they have the opportunity to participate in the control and decision taking of listed oil and gas firms, it is assumed that their value will be decreasing as time goes by as a result of their influence, this is because the managers may not focus on maximizing profit as the shareholder expectation but rather they may focus on their own personal interest.

The study concludes from the regression result of this study that concentrated ownership has a negative insignificant impact on the financial performance of listed oil and gas companies in Nigeria. This study believes that if a particular portion of shareholders have the power to overrule the decision of all other shareholders and managers opinion i.e the opinion of the concentrated shareholders vote during decision making process is the ruling vote, the financial performance of listed oil and gas companies will invariably diminish in time to come.

This study has come to conclusion that, foreign ownership in the ownership structure of listed oil and gas companies in Nigeria has a positive impact on their financial performance. If foreigners have the majority portion of ownership of the listed oil and gas companies in Nigeria it is going to be of benefit to the firms financially. Statistics show that foreign ownership will favour the financial performance of firms in the industry at a reasonable and considerable point. Foreigners' mission and vision is to maximize profit as well as wealth of the company and also to be a leading company in providing services to business partners as their primary motive and intent is financial performance.

RECOMMENDATIONS

Based on the findings and conclusion, some recommendations emanate there from. One of such is that Managers should not be given the majority of shareholding in the ownership structure of the listed downstream oil and gas companies in Nigeria. But rather they should be given a small portion of the shareholding of the listed oil and gas companies in Nigeria, this will motivate and encourage them to perform better in order to achieve the desired company goals and objectives as well as comply with the laid down guide lines of the companies which will increase their financial performance and their integrity.

A particular group of individuals or companies should not be given the opportunity to hold the majority of the shareholding of listed downstream oil and gas companies in Nigeria. If in any way the ownership structure of listed oil and gas companies in Nigeria becomes one sided a lot of investors will have no option but to sell off their shares while prospective investors will not be convinced to come and invest their funds, this is because their opinions will never matter or make any difference since the ownership structure is one sided.

Contrary to managerial ownership and concentrated ownership, this study recommends that foreigners should be allowed to take the majority of the ownership structure of listed downstream oil and gas companies in Nigeria. As of the challenges faced by listed oil and gas companies in Nigeria in the Niger delta area such as destruction of company's assets, militancy and kidnapping of the company's personnel which will discourage foreigners to invest much funds in the firm, listed oil and gas companies in Nigeria should pay more attention to corporate social responsibility such as providing services to the people living in those communities. The listed oil and gas companies are also advised to make

more scholarships available to youths as this will help reduce the number of unemployed youths, they should also ensure that up to 50% of their staff are from the Niger delta region (East) and they should also provide social amenities and recreational centres.

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THE IMPACT OF FOREIGN PORTFOLIO INVESTMENT INFLOWS ON STOCK MARKET PERFORMANCE IN NIGERIA FROM 1986 TO 2019.

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ABSTRACT

This study was designed to critically investigate the impact of foreign portfolio investment inflows on stock market performance in Nigeria from 1986 to 2019. The study used Autoregressive Distributed Lag (ARDL) since the unit root test results showed that the variables under study were of mixed level of integration. The results showed significant long-run relationship among the model variables. Specifically, foreign portfolio has negative and insignificant impact on stock market performance but was more significant in the short-run as shown by the error correction model. The study recommended among other things that government provide enabling business environment that will encourage foreign portfolio investment which will in turn enhance stock market performance.

INTRODUCTION

Based on the finance led hypothesis, it is generally accepted that a vibrant financial system guarantees economic prosperity (Kalim & Shahbaz, 2009). Hence, the stock market being an integral part of the financial system is seen as a source of long-term funds for investors. Succinctly put, it is a prominent source of finance for new ventures. In fact, the stock market is a replica of a country's economic strength. As such, to boost investments, savings accumulation and economic growth, existence of a well-functioning stock market is imperative. However, a well-functioning stock market is a function of many factors like macroeconomic fluctuations, political stability, financial globalization, investors risk return sentiment, etc. (Adebisi & Arikpo, 2017). Among these factors, a component financial globalization, which is, Foreign Portfolio Investments (FPI) is of great concern to this study. In this era of globalization, FPI is a prominent source of capital inflow in most of developing economies where it bridges the gap of capital, technology, managerial skill, human capital formation and more competitive business environment. The role of FPI in the recipient economy is the inflows of foreign capital through equity and bonds into the domestic stock market, thus transferring business processes that have thrived in developed countries into a developing stock market like Nigeria's (Akinmulegun, 2018). It then implies that capital flows through FPIs is an important determinant of stock market performance of a country.

Researches documenting the relationship between foreign capital inflows and stock market performance have been growing. Foreign capital such as FPIs plays a key role in promoting investments and facilitating macroeconomic goal attainment. FPI as a component of international capital flow comprises of transfers and financial assets such as stocks or bonds. It occurs when investors purchase non-controlling interest in foreign companies or buy foreign corporate or government bonds, short term securities or notes (Adebisi & Arikpo, 2017). Foreign investment create employment; provides knowledge and skills transfer in the area of management and technology; facilitates local firms' access to international markets and finance; enhances international trade integration; facilitates human capital development; provides avenues for risk and product diversification; encourages favourable competition among businesses and increases product diversity (Adaramola & Obisesan, 2015). Therefore, foreigners seeking returns maximization, move their accumulated assets to countries where they will be more productive. Hence, it is the productivity of capital that facilitates international investments which automatically help in the development of financial markets and economy of the host nation.

The core objective of the medium-term plan for stock markets under vision 2020 was to mobilize savings so as to attain a savings ratio (aggregate savings to GDP) of 25-28 percent (World Bank, 2018). Unfortunately, this height has not

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been attained as data from the Central Bank of Nigeria (CBN) indicate that savings to GDP ratio has been declining and was reported at 13.49 % in 2014 and persistent decreased to 11.82% in 2019 (CBN, 2019). This could be attributed to inefficiencies in the Nigerian stock market occasioned by poor macroeconomic environment arising from series of economic crisis such the global financial crisis in 2008 as well as the economic recession of 2016. In the period 2009-2019, the all share index (ASI) of the Nigerian Stock Exchange (NSE) increased marginally from 20,827.17 in 2009 to 26,842.07 in 2019 which is very low in comparison to other African Markets such as the Egyptian and Johannesburg Exchange markets (World Bank, 2018). The worst decline was experienced in the year 2008 with a loss of 84.38% in ASI and 37.84% in market capitalization as the market capitalization declined from ₦13,181.69 billion in 2007 to ₦9,562.97 billion in 2008 and ASI declined from 57,990.20 in 2007 to 31,450.78 in 2008 due to the global financial crisis that deterred FPIs to Nigeria and caused macroeconomic instability (CBN, 2019). With the Nigerian stock market struggling to peak after the aforementioned crisis, foreign investors' flight from the Nigerian stock market was triggered (Onyele & Ikwuagwu, 2020). Such flight of FPIs to other countries that has better and stable economic environment intensified the market risk that made the Nigerian stock market unpredictable and unattractive to both foreign and domestic investors.

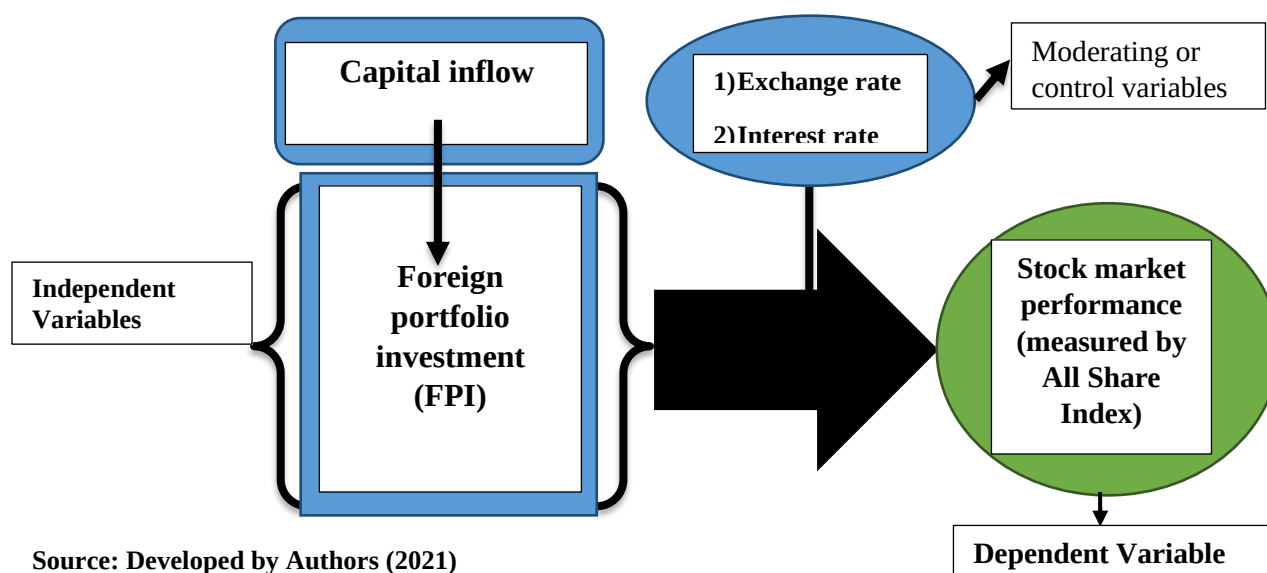
Despite the theoretical linkages between foreign capital inflows and development of domestic stock markets, the nature of relationship in the context of Nigeria remains an issue of empirical investigation and therefore forms the motivation of the current study. Most empirical studies conducted globally on the effect of foreign capital inflows on stock market performance indicate a significant relationship with a few studies indicating insignificant relationship (Shah, 2019). Also, the few Nigerian studies on the subject showed mixed findings (Agu, Ogu & Ezeanyaji, 2019; Adebisi & Arikpo, 2017). This implies that previous studies have therefore failed to reach a consensus on the question regarding the effect of FPI on stock market performance. Besides, a significant number of previous studies were conducted in developed stock markets. Understandably, the context in these markets are different from that of Nigeria. Consequently, these problems emphasized the need to investigate the effect of FPI inflows on stock market performance in Nigeria from 1986 to 2019. The period under review is so significant because of the effect of global financial crises of 2008 as well as Nigerian economic recession of 2016 which was triggered by so many factors.

REVIEW OF RELATED LITERATURE

Conceptual Framework

According to Lipsey (1999) FPIs are liquid and matures within a short period. In this light, Osaze (2011) likened FPI to one-night-stand with no long-term commitments. Furthermore, it is stated that the Nigeria stock market crash of 2008-2010 was as a result of the exit of FPI and foreign investors whose control of transactions on the Nigerian Stock Exchange (NSE) averaged 68 percent per annum during that period. The 2008 collapse in securities' values across stock markets and in particular the near collapse of the Nigerian stock market has accentuated the concern for the call for foreign private investment in form of portfolio investment in the market (Eniekezimene, 2013). Portfolio inflows lower the cost of capital in emerging markets and help in financing their growth (Henry, 2000). However, the change in investor composition affects equity prices when foreign investors buy shares to lower risk premium and by foreign investors offering domestic investors an inducement to sell. This compensation only affects prices in the short-run and its size depends on the liquidity of the market. However, foreign portfolio is reversible and tends to leave as fast as they come in an economy (Obadan, 2004). Due to this, portfolio flows might have a drastic impact on the economy and on the value of shares of companies in which foreign investors offload their holdings and hence the stability of the stock market in general. For instance, much of the volatility experienced in developing countries originates from financial shocks from global financial markets, mainly due to globalization of the financial sector (Frankel, 2011). Most of the financial shocks are depicted by the behavior of foreign investors in emerging markets as a response to financial crisis in their home countries.

The linkages between FPIs and stock market performance have been presented diagrammatically below in Figure 1:



Source: Developed by Authors (2021)

THEORETICAL REVIEW

Studies on portfolio investments stems from the theoretical postulations of Harry Markowitz in 1952. Markowitz (1952) was the first who engineered the model of portfolio optimization. He established that adding an asset to a group of assets (portfolio) that have low correlation leads to the improvement of risk and return profile of assets. Moreover, studies by Evans & Archer (1968), also confirmed the advantages of optimized portfolio diversification model. Grubel (1968) reasoned that despite the criticism made by different studies regarding portfolio diversification model, it is preferred and got fame in investment management industry. Grubel (1968) tested the model in international settings in the context of claims regarding foreign currencies and the impact of the analysis made by the model. He used the stock market indices of eleven countries and came to the conclusion that US stock market has been ruled by a well-diversified international portfolio in terms of *ex-post* returns and risk.

Also, the neoclassical financial theory lends support to the nexus between portfolio investments and domestic financial markets. This theory was propounded by Greenwood & Smith (1996) with focus on interest rate differentials. Theory lies in interest rate differentials between countries. According to this theory, portfolio investment moves in response to changes in interest rate differentials between countries, regions and multinational companies which are simply viewed as arbitrageur of capital from countries where return is low to countries where it is high. This explanation, however, fails to account for the cross movements of capital between and across countries. In practice, capital moves in both directions between countries. In addition, the theory posits that capital is only a complementary factor in direct investment.

Similarly, the cheap financial capital hypothesis was propounded by Barker, Foley & Wurgler (2009) based on the assumption of opportunistic use of the temporarily low-cost financial capital. It views foreign capital inflows as an opportunistic use of the temporarily low-cost financial capital (relative to the theoretical world benchmark cost of capital) available to overvalued firms in the source country. Here cheap capital is the underlying factor that pushes foreign capital into a target country; hence, acquirers with relatively easy access to financial capital seek to invest their capital in target countries with relatively higher domestic cost of capital. The theory assumes market imperfections in the host and source countries.

Similarly, Tobin (1958) in his famous article “liquidity preference as behavior towards risk” formulated the risk aversion theory of liquidity preference based on portfolio selection. This theory took off two main drawbacks of the Keynesian theory of liquidity preference. Keynes’s liquidity preference function depends on the inelasticity of expectation of future interest rate; and that, individuals hold either money or bonds. His theory does not depend on elasticity of expectation of future interest rate but on the assumption that expected value of capital gain or loss from

holding interest. Moreover, it explains that an individual's portfolio hold could be in money and bonds rather than one at a time. Money neither brings any return nor imposes any risk on the individual, but bonds yield interest and also bring income. However, income from bonds is uncertain because it involves risks, capital gains or losses. The greater the investment in bonds, the greater the risk of capital from them and an investor can bear the risk if he is compensated by an adequate return from bonds (Jhingan, 2002).

EMPIRICAL REVIEW

Osoro, Simiyui & Omagwa (2020) established the effect of foreign capital inflows on stock market capitalization at the Nairobi Securities Exchange, Kenya. The study adopted a causal research design and time series data for the period 2008-2018 was analyzed using correlation analysis, and the Autoregressive Distributed Lag Model. The findings from correlation analysis indicated that FDI had a negative and significant effect on stock market capitalization while foreign equity portfolio inflows had negative but insignificant effect on stock market capitalization at the Nairobi Securities Exchange, Kenya. In view of the foregoing findings, there is need for the Kenyan government to reconsider its foreign investment policy to target only productive foreign capital.

Nwaogboso & Nwala (2019) investigated the impact of capital market development on foreign portfolio investment volatility in Nigeria between 2007M1 and 2018M12. Techniques of analysis employed were Exponential Generalized Conditional Heteroscedasticity (EGARCH) and Autoregressive distributive lag (ARDL) approach. The study revealed that stock market capitalization has no significant impact on foreign portfolio investment volatility in Nigeria. The implication of this result is that information asymmetries that existed within capital market operations, as well as the unpredictability of the activities of the Nigerian capital markets hugely contributes insignificantly to volatilities of foreign portfolio investment. However, it was discovered from the study that all share index had a significant impact on foreign portfolio investment volatility in Nigeria. The Stock market return was also found to have a significant impact on foreign portfolio investment volatility in Nigeria.

Shah (2019) studied the relationship between stock market indicators and net foreign portfolio investment (NFPI). Long-term and short-term relationships of five stock market indicators namely stock market capitalization, market returns, market turnover, market risk and market indices with NFPI are analyzed through co-integration and vector error correction models (VECM). Three co-integrated vectors are found to show long term relationships and three variables are found to have short term relationships. Similarly, past values have an impact on current values. Regression analysis displayed the impact of stock market indicators on NFPI. The results demonstrated that all the stock market indicators have positive and significant impact on NFPI except the market risk which has a negative relation with NFPI.

Ikezam (2018) examined the effect of foreign portfolio investment on the performance of Nigerian capital market. The required data were sourced from Central Bank of Nigeria (CBN) Statistical Bulletin and Stock Exchange Annual Report. The study has All Share Price Index and Market Capitalization as proxy for Capital market performance while Net Foreign Portfolio Investment (NFPI), Equity Investment (PIE), Bond Investment (PIB), Portfolio Investment in Government Securities (PIGS) and Exchange Rate as predictors variables. Cointegration test, Granger Causality Test, Augmented Dickey Fuller Test and Error Correction Model were used to examine the variables and its relationship to the dependent variables. FPIs in bonds and foreign portfolio investment in government securities have negative relationship with ASI while FPIs in equities had a positive relationship with ASI. Also, FPIs in Bonds and Government securities had negative relationship with market capitalization while equity investment and exchange rate had positive relationship with market capitalization.

Arikpo & Ogar (2018) examined foreign direct investment and capital market development in Nigeria for the period 1972 to 2016. The study was specifically designed to assess the relationship between foreign direct investment and market capitalization, foreign direct investment and number of listed companies, foreign direct investment and all share index, foreign direct investment and turnover ratio and foreign direct investment and value of transaction FDI in Nigeria. Secondary time series data were collected using desk survey approach and analyzed using Vector Auto Regression (VAR) method. The result of the analysis revealed that there is a significant positive relationship between foreign direct investment and market capitalization; also, there is a significant positive relationship between foreign direct investment and number of listed companies; again, the study shows that foreign direct investment has a

significant positive relationship with all share index; lastly it was revealed that foreign direct investment has a significant positive relationship with turnover ratio and value of transaction in Nigeria.

Orji, Orji & Ogbuabor (2018) estimated the impact of stock market development and foreign private investment on economic growth in Nigeria over the period of 1985–2016, using secondary data from various publications of the Central Bank of Nigeria. The ordinary least square (OLS) technique was employed in this study, while the Engel and Granger cointegration approach was applied to determine the long-run relationship between the variables. The result showed that market capitalization, all share index and real exchange rate have statistically significant impact on economic growth, while foreign direct investment, trade openness and gross national savings have insignificant impact on growth. The study also showed that there is a long-run relationship among stock market development, foreign private investment and economic growth in Nigeria. The error correction model (ECM) results showed that the model adjusts to equilibrium in the short run and that about 51 per cent of the disequilibrium between gross domestic product and the independent variables is corrected each year.

Shanab (2017) showed the effect of foreign portfolio investment (FPI), both in buying of shares or sale of shares by foreign investors, inflation and gross domestic product on the market capitalization in the Amman Stock Exchange for the period 2005-2016. The financial data were collected through the official website of the Amman Stock Exchange and the reports issued by the Central Bank of Jordan. To achieve the purpose of the study, the financial data were analyzed utilizing statistical methods offered by SPSS package. The study concluded that there is a statistically significant effect on both the purchases and sales by foreign investors on market capitalization. The study also found no statistically significant effect between inflation and market capitalization.

Haider, Khan, Saddique & Hasmi (2017) investigated the impact of stock market performance and inflation on foreign portfolio investment (FPI) in China. For this purpose, time series quarterly data from 2007Q1 to 2015Q4 is used. On the basis of stationarity results, auto regressive distributed lag model was used to examine the impact of the stock market prices and inflation on FPI. The results showed that there was significant positive impact of stock market performance on the FPI, whereas inflation is found to be negatively associated with the FPI. The study also revealed that some historical events like Asian financial crisis of 2008, and the Shanghai Composite Stock Index crash of 2015, significantly affected the FPI in China. The investors should consider these two factors while investing in foreign financial markets.

Adebisi & Arikpo (2017) examined the relationship between financial market performance and foreign portfolio investment in Nigeria. They sought to study whether there is a long run and short run causal relationship running from financial market performance to foreign portfolio investment in Nigeria. The data for the study were sourced from the CBN statistical bulletin for the period 1984 to 2015 and they employed Autoregressive Distributive Lag (ARDL) technique for data analysis. Findings from the analyses showed that financial market performance has no long run causal relationship with foreign portfolio investment in Nigeria. Also, stock market performance and stock market liquidity have no short run causal relationship with foreign portfolio investment in Nigeria.

Ohiaeri (2017) investigated the nature and direction of causality existing among foreign portfolio investments, capital flight and capital market performance in Nigeria using *ex post-facto* and descriptive research designs. He employed Vector Error Correction models and co- integration test subject to the outcome of the preliminary tests for conformity with econometric assumptions. The study showed a unidirectional causality between capital market performance on one hand and foreign portfolio investment and capital flight on the other hand at 5% and 10% levels of significance respectively.

Omodero & Ekwe (2016) in a study examined the impact of foreign direct investment (FDI) on the stock market performances in Nigeria, from 1985 –2014. The secondary data used were collected from IMF, International Financial Statistics (2015), CBN Statistical Books (2015). Multiple regression of least square estimation was the tool used to analyze the data. In the model, the FDI was regressed on RGDP, Consumer Price Index, Real effective exchange rate, Money supply (M2), Share price index, Treasury bill, Nigerian stock exchange transactions. The study revealed that FDI has an insignificant and negative impact on the economy and the macroeconomic variables that determine the performances of the Nigerian stock market.

Onyeisi, Idenyi & Anoke (2016) determined the impact of foreign portfolio investment inflows on stock market growth in Nigeria from 1986 to 2014. The study used co-integration, vector error correction model and Granger Causality econometric tools. The results obtained includes the following: the trace statistics indicates one(1) co-integrating equation at 5% level of significance, the vector error correction model indicates long-run significant impact of foreign portfolio investment on stock market growth in Nigeria, and the Granger Causality shows there is no causality between foreign portfolio investment and stock market growth in the Nigerian economy. The implication of the results is that foreign portfolio investment (FPI) inflows may not contribute positively to the increase in stock market when there is no conducive business environment for foreign investments to thrive in Nigeria. The study recommended that Federal Government of Nigeria should strengthen the Security and Exchange Commission (SEC) to promote constant inflows of foreign portfolio investment to Nigeria.

Koskei, Kibet & Nyan'au (2016) examined the effect of foreign portfolio equity and exchange rate risk on stock market returns on commercial banks in Kenya. They argued that uncertainties in the flow of foreign portfolio investments result in unpredictable behaviour of stock returns in Kenya's economy and also at the firm level. Thus, they studied the effect of foreign portfolio equity and exchange rate risk on stock returns of listed commercial banks in Kenya. The target population of the study was 11 commercial banks listed on the Nairobi Securities Exchange. The study used purposive sampling technique and concentrated on 10 commercial banks. This study employed a panel data regression using the Ordinary Least Squares (OLS) method where the data included time series and cross-sectional. Hausman test was carried out and findings indicated that random effects model was preferable for this study. Results from panel estimation showed that exchange rate risk affect stock returns of listed financial institutions in Kenya. They recommended that policies that would attract FPIs should be pursued.

The work of Loncan & Caldeira (2015) analyzed the effect of foreign portfolio capital flows on stock returns in Brazil. The Brazilian listed firms through a 6-factors APT model in which an additional risk factor for foreign portfolio capital flows was used. First, an aggregate analysis was conducted. The partial effect of foreign portfolio capital flows on the IBOVESPA index's returns was statistically significant and positive. Next, a disaggregate analysis was also implemented, in which portfolios of stocks were sorted by sector of economic activity, level of risk and level of corporate governance. The result showed that foreign portfolio capitals caused increases in returns especially for sectors related to commodities, industry and cyclical consumption. For the portfolios sorted by risk (in which the stocks' betas were used as a risk parameter for sorting), foreign capitals increased the returns of mid-high and high beta portfolios, but decreased the returns of low and low-mid beta portfolios. For corporate governance portfolios, the firms listed on the Novo Mercado segment (according to BMF & Bovespa criteria) experienced a statistically significant revaluation effect. Overall, the results of the study provide support to the revaluation effect hypothesis.

Omoruyi & Osariemen (2015) assessed the impact of foreign portfolio investment on stock market performance in Nigeria using annual time series data for the period 1986 – 2013. In addition to foreign portfolio investment, other intermittent variables such as exchange rate, inflation rate and interest rate were also included in our model as independent variables. The findings of the study provided strong evidence that foreign portfolio investment (FPI) is an important factor in determining stock market performance in Nigeria. However, other factors such as exchange rate, inflation rate and interest rate were found not to be important factors that influence stock market performance in Nigeria. Finally, the causality test indicates the absence of any causal link between FPI and stock market performance while a unidirectional causality was found running from stock market performance to real interest rate. Based on the findings of the study, it was recommended that the ongoing reforms in the Nigerian capital market should be continued and pursued to the latter, especially in the area of investors' protection, infrastructural development, and accounting disclosure requirements.

Eniekezimene (2012) examined the impact of foreign portfolio investment (FPI) on capital market growth by x-raying the growth of FPI in the market as well as the transmission channels through which changes in FPI affect growth of the market. Using Ordinary Least Squares (OLS) methodology with a Parsimonious Error Correction Model Specification, after testing for the stationary status (unit root) and long-run relationship (co-integration) of the variables, the result shows that foreign portfolio investment has a positive impact on capital market growth with the speed of adjustment from short run to long run as indicated by the ECM having a relatively high value of 66% in absolute terms.

Gap in Empirical Literature

There are numerous empirical studies on the effect of FPI on stock market performance but most of these studies were carried out in foreign countries. However, few studies like Eniekezimene (2012); Ohiaeri (2017) and Ikezam (2018) directly assessed the effect of FPI on stock market performance while Omodero & Ekwe (2016) and Arikpo & Ogar (2018) focused on foreign direct investments (FDI) and their effects on stock market performance in Nigeria. To bridge the gap in knowledge, this study applied the Autoregressive Distributed Lag (ARDL) on annual time series data from 1986 to 2019. This made a difference in the methodological approach used by Eniekezimene (2012); Ohiaeri (2017) and Ikezam (2018) to unravel the effect of FPI on stock market performance in Nigeria. The use of ARDL model for the current study was informed by the fact that the variables were of mixed integration while those of the aforementioned studies were integrated at first difference probably due to difference in the periods covered.

METHODOLOGY

The study area covered the Federal Republic of Nigeria. The study focused on the impact of FPI on the stock market performances in Nigeria, (1986-2019). Here, the study highlighted methods and procedures that were used in collecting data, analysing them and hypothesis testing. The research method used in this study is *ex post facto* design. The *ex post facto approach* which used secondary information or data of previously existing events. The data used for the study were sourced from CBN Statistical Bulletin Vol. 30, 2019 while the data analysis was based on the Autoregressive Distributed Lag (ARDL) approach to regression modeling.

In ARDL estimation, long-run and short-run coefficients are given simultaneously when the series are mixed of 1(1) and 1(0), but not I(2) (Pesaran *et al.*, 2001). The ARDL bounds testing specification of the model is as expressed below:

$$\Delta \text{LNASI}_t = \delta_0 + \sum_{i=1}^p \delta_1 \Delta \text{LNASI}_{t-i} + \sum_{i=0}^p \delta_2 \text{LNFPI}_{t-i} + \sum_{i=0}^p \delta_3 \text{LNEXR}_{t-i} + \sum_{i=0}^p \delta_4 \text{LNINT}_{t-i} + \beta_1 \text{LNFPI}_{t-1} + \beta_2 \text{LNEXR}_{t-1} + \beta_3 \text{LNINT}_{t-1} + \mu_t \quad \text{Eqn. 1}$$

Where,

- LNASI = natural log of all share index
- LNFPI = natural log of foreign portfolio investments
- LNEXR = natural log of exchange rate
- LNINT = natural log of interest rate

After cointegration is established, the estimation of the long-run relationship is specified, thus:

$$\Delta \text{LNASI}_t = \delta_0 + \beta_1 \text{LNFPI}_{t-1} + \beta_2 \text{LNEXR}_{t-1} + \beta_3 \text{LNINT}_{t-1} + \mu_t \quad \text{Eqn. 2}$$

The short-run relationship was estimated using an error correction mechanism as shown below:

$$\Delta \text{LNASI}_t = \delta_0 + \sum_{i=1}^p \Delta \delta_1 \Delta \text{LNASI}_{t-i} + \sum_{i=0}^p \Delta \delta_2 \Delta \text{LNEXR}_{t-i} + \sum_{i=0}^p \Delta \delta_3 \Delta \text{LNINT}_{t-i} + \theta \text{ecm}_{t-i} + \mu_t \quad \text{Eqn. 3}$$

Where,

- δ_0 = Constant
- $\delta_1 - \delta_6$ = short-run elasticities (coefficients of the first-differenced explanatory variables)
- $\beta_1 - \beta_6$ = long-run elasticities (coefficients of the explanatory variables)
- θ = Speed of adjustment
- ecm_{t-i} = Error correction term lagged for one period
- Δ = First difference operator
- p = Lag length

Prior to ARDL estimation, the time series data was tested for stationarity. The test for stationarity of data was carried with Augmented Dickey Fuller (ADF) unit root test (Dickey & Fuller, 1979). This particular stage is very necessary, because most macroeconomic time series contains unit root and any regression involving non-stationary series almost

always produce significant relation where in fact no relationship exist between the variables. The general model for Augmented Dickey-Fuller unit root test could be represented, thus:

$$\Delta y_t = \beta_0 + \beta_1 t + \beta_2 y_{t-1} + \sum_{j=1}^p \delta_j \Delta y_{t-j} + \mu_t \quad \text{Eqn. 4}$$

Where,

y_{t-1} = Lagged value of y_t at first difference

Δy_{t-j} = A change in lagged value

δ = Measure of lag length

Δy_t = First difference of y_t

μ_t = Error term

DATA ANALYSIS AND DISCUSSIONS

Descriptive Statistic

The basic features of the data used for the analysis was presented on Table 1 below:

Table 1: Descriptive Statistic

	LNASI	LNFPFI	LNEXR	LNINT
Mean	8.838268	10.32748	4.039497	2.906053
Median	9.506978	10.67790	4.785511	2.877336
Maximum	10.82824	13.83142	5.726589	3.394508
Minimum	5.009412	5.021245	0.703382	2.351375
Std. Dev.	1.826614	2.891632	1.416923	0.193206
Skewness	-0.876709	-0.400272	-0.758607	0.126088
Kurtosis	2.413809	1.735420	2.345663	4.633832
Jarque-Bera	4.842304	3.173380	3.867638	3.871751
Probability	0.088819	0.204602	0.144595	0.144298
Observations	34	34	34	34

From Table 1 above, all the series displayed a high level of consistency as their mean and median values were within the maximum and minimum values of the series. It could be deduced from the table that all the variables were normally distributed. This is evident from the probability value of the Jarque-Bera which accepted the null hypothesis that the series are normally distributed and supported by Skewness (< 1) and Kurtosis (< 3) for the series. The values for the skewness are within the acceptable range and the Kurtosis values were either less than 3 or approximately 3. It then implied that the variables would be well fitted in a regression model.

Unit Root Test

The Augmented Dickey-Fuller (ADF) approach to unit root testing (stationarity) was employed to test for the existence of unit roots in the data using trend and intercept. The results are presented in Table 2 below:

Table 2: Unit root test results

Series	t-Statistic @ level	Prob. @ level	t-Statistic @ first difference	Prob. @ first difference	Order	Remark
LNASI	-0.717785	0.9632	-4.905754	0.0033	I(1)	Non-stationary
LNFPFI	-2.116564	0.5123	-6.352671	0.0001	I(1)	Non-stationary
LNEXR	-2.437876	0.3547	-5.932686	0.0001	I(1)	Non-stationary
LNINT	-5.305589	0.0008	-	-	-	Stationary

The test for unit root shows that LNASI, LNFPFI and LNEXR were non-stationary at levels but achieved stationarity after first difference while LNINT was stationary at level. The unit root results showed that the data were a mixture of

non-stationary, that is, $I(1)$ and stationary, that is, $I(0)$ variables. This condition supports the application of ARDL model.

ARDL Estimation

The estimation began with the bounds testing for long-run relationship among the model variables. The outcome of the bounds test was presented in Table 3 below:

Table 3: Bounds test results

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	4.815431	10%	2.37	3.2
K	3	5%	2.79	3.67
		1%	3.65	4.66

The ARDL bounds test for produced a calculated F-statistic of 4.815431 for Nigeria, 4.288392 which was greater than the lower bound $\{I(0)\}$ and the upper bounds $\{I(1)\}$ values at both 1% and 5% level of significance, leading to the rejection of the null hypothesis of “no cointegration”. This implies that the model exhibited a long-run relationship. It then implied that LNASI, LNFPI, LNEXR and LNINT were bound by a long-run relationship or that they followed a long-run path.

Having confirmed that existence of long-run relationship among the model variables, the long-run coefficients were presented in Table 4 below:

Table 4: Long-run estimates

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNFPI	-0.196660	0.106526	-1.846128	0.0847
LNEXR	1.115487	0.205590	5.425781	0.0001
LNINT	-0.585830	0.927863	-0.631376	0.5373
C	8.913849	2.860996	3.115645	0.0071

From the long-run estimates, it can be seen that the variable of interest, LNFPI, had a negative and a weak impact on stock market performance (measured by LNASI). On the other hand, LNEXR emerged with positive and significant coefficient while interest rate was negative and insignificant in the long-run. The negative and insignificant (or weak) long-run impact of LNFPI on LNASI could be attributed to the fact that foreign investors often lose confidence on developing stock markets like Nigeria’s due to its vulnerability to both domestic and external shocks.

Diagnostic Tests

The diagnostic tests of serial correlation, heteroskedasticity and normality of residuals were based on the following hypothesis and decision rule:

H_0 : There is no serial correlation, heteroskedasticity and abnormal distribution of residuals.

H_1 : There is serial correlation, heteroskedasticity and abnormal distribution of residuals.

Significance Level: $\alpha = 5\%$ or 0.05

Decision Rules: Reject H_0 if p-value of the Chi-squared is less than α , which mean that there are serial correlation, heteroskedasticity and abnormal distribution of residuals problems. Otherwise, do not reject H_0 :

Table 4.4: Diagnostic test results

	F-statistic	Prob.
Breusch-Godfrey Serial Correlation LM Test:	0.963474	0.4072
Heteroskedasticity Test: Breusch-Pagan-Godfrey:	1.309435	0.3049

Normality Test:	2.21128	0.3310

These diagnostic test results demonstrated that the ARDL model passed the diagnostic tests. There was no evidence of autocorrelation at 5% confidence level and that the model passed the test for normality, the error term is also proved to be normally distributed. There was no presence of heteroscedasticity in the model.

To test the stability of the long-run and the short-run estimates, the cumulative sum (CUSUM) and the cumulative sum of squares (CUSUMSQ) are applied. A graphical illustration of CUSUM and CUSUMSQ is exposed in Figures 1 and 2.

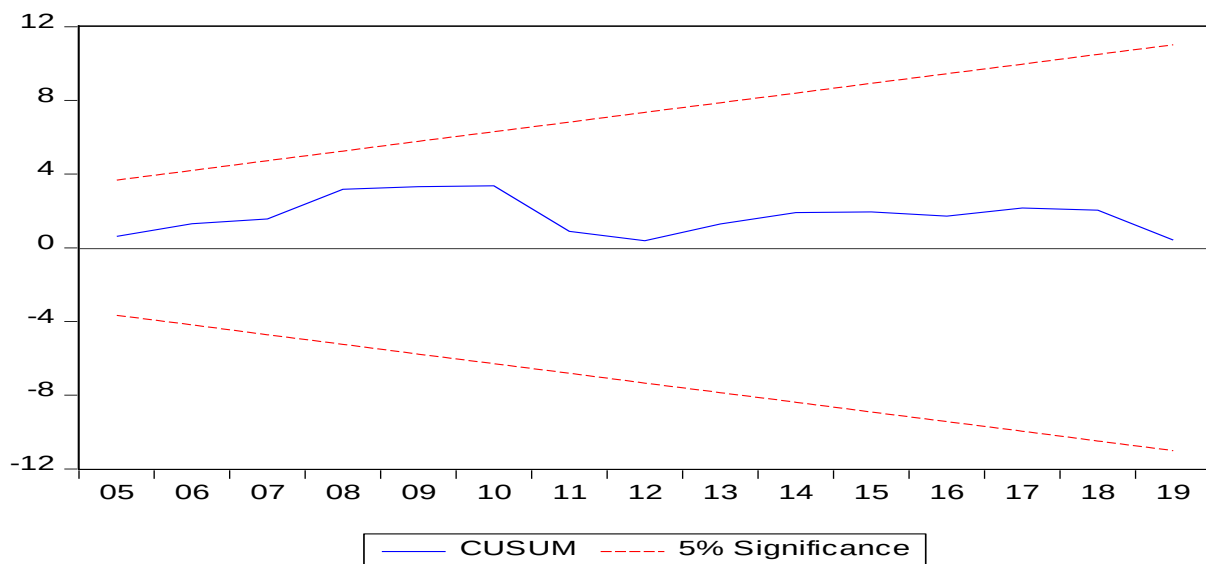


Fig. 1: CUSUM test

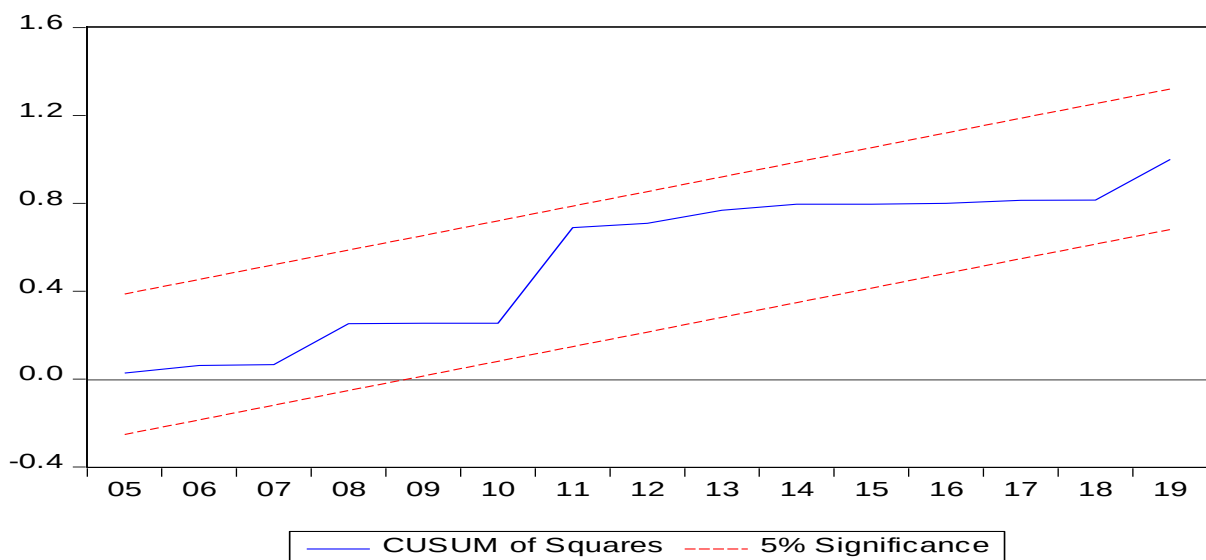


Fig. 2: CUSUMSQ

The plots of both the CUSUM and the CUSUMSQ are within the boundaries, and, hence these statistics prove the stability of the long-run coefficients of the repressors that have an impact on LNASI. The model appeared to be stable and properly specified given that none of the two tests statistics go outside the bounds of the 5% level of significance.

CONCLUSION AND RECOMMENDATIONS

The broad objective of this study is to determine empirically the impact of foreign portfolio (FPI) investments on stock market performance in Nigeria from 1986 to 2019. Specifically, the research investigated if FPI inflows have any significant impact on stock market performance in Nigeria within the period under review. The empirical results of the ARDL model showed a negative and insignificant impact of foreign portfolio investment on performance of Nigerian stock market within the period under review. Finally, that exchange rate depreciation explained the performance of stock market in the long-run and short-run in Nigeria. Hence, it was concluded that FPI has a significant impact on stock market performance in Nigeria.

The following recommendations are made on the basis of the findings of this study:

- 1) Government should provide enabling business environment that will encourage foreign portfolio investment which will in turn enhance stock market performance. Hence, the ongoing reforms in the Nigerian stock market should be continued and pursued to the latter, especially in the area of investors' protection.
- 2) The government should try to enhance the value of the local currency in order to ensure that foreign investors always have value for their investments in portfolios and firms listed on the stock exchange will not continually have their share prices devalued.
- 3) There should be a harmony between the official Central Bank lending rate and that of the deposit money banks in the country. When this is reconciled and kept under check, the volatility of interest rate in the country will reduce and investors will not have to pay so many prices for getting credits for foreign portfolio investment in the Nigerian stock exchange.

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MARKETING STRATEGY AND CONSUMER LOYALTY IN OANDO NIGERIA PLC

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ABSTRACT

This study examines the effects of marketing strategy on consumer loyalty in Oando Plc Kaduna. In this study, a survey research design was adopted and attention was paid to the variables of study which are Marketing Strategies (independent variable) measured with Product, Price, Place and Promotion Marketing Strategies and the dependent variables such as Customer Loyalty. Data was collected from 550 purposively selected registered customers. A multiple regression model based on Ordinary Least Square (OLS) technique was employed in determining the effect of Marketing Strategies on customer loyalty of Oando Plc in Kaduna Metropolis. The findings indicate a positive relationship between marketing strategies and customer loyalty in Oando Plc. Based on the findings of the study, it is recommended that Managers of Oando Plc should pay more attention to their marketing strategies to improve their implementation and the performance-related outcomes across the company.

Keywords: Product, Price, Place, Promotion, Customer Loyalty

INTRODUCTION

Over the last two and a half decades, marketing has witnessed a paradigm shift. The literature reveals that marketing has shifted from “transaction marketing to relationship marketing” (Lindgreen, 2018). Researchers have recognized the need to hold customers to have an upper hand in the market. Satisfaction is a phenomenon expressing that the performance and benefits of the products exceed the expectations of the customers (Peter, 2015). Customer satisfaction increase the existing customer loyalty, repurchase process, awareness of the people about the firm, decrease the price flexibility, the cost of gaining new customers and prevent the customer being affected from competitive enterprise (Peter, 2015). As a result, the positive word of mouth occurs in contrast negative word of mouth is destroyed. Customers’ satisfaction on their purchase is a significant factor that leads business to success. In recent times, customer satisfaction has gained new attention within the context of the paradigm shift from transactional marketing to relationship marketing. Customers who are satisfied with a purchased product will buy the same product again, more often (Reichheld 2015), and will also recommend it to others. Customer satisfaction is commonly related to two fundamental properties, including the customer’s judgment of the quality of the product and his evaluation of the interaction experience he or she has made with the product provider. Kotler sums this up when he states: “The key to customer retention is customer satisfaction” (Kotler 1994). Even it is agreed in the literature that price and quality has high effect on customers’ satisfaction; still there is little empirical evidence exploring this relation. Almost nothing is known about the human neural mechanisms through which it affects the decisions made by individuals.

The term customer loyalty “is a physical and emotional commitment given by customers in exchange for their needs being met” (Stone, 2015). It is related to the behavior of the customers who visit the supermarkets repeatedly. It is very important keeping a customer happy so he/she will have more business with the supermarkets she made purchase in. In order to keep the customer for more businesses the customer satisfaction needs to be warranted by the market. In a competitive market place, whoever provides quality product and better services will have advantage over the others. The customer satisfaction can be thought as a key element of the strategies that supermarkets can gain loyalty with. Companies operating in the downstream oil and gas sector are faced with a changing competitive environment (Akeke, Akeke and Awolusi, 2019). They are competing in creating the conditions that will enable them to be competitive in both domestic and international markets. Accordingly, oil and gas companies seek to adopt and implement a set of marketing strategies

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that have been successful elsewhere and that will help them to identify changes in their environment and to respond proactively to customers' needs (Ibrahim and Najjar, 2018; Osu, 2019).

Marketing strategies are aimed at improve performance substantially on key factors that impact customer loyalty (Koys and De Cotiis, 1991; Budhwar, 2000; Teo, 2017; Cunningham and Deborah, 2019). While customer loyalty is trying to accomplish for advertisers and to clarify by scientists, it in any case keeps on being an incredible significance and intrigue. In this study, the focus is on customer loyalty, and the marketing mix (Lee and Green, 2019).

However, despite the significant adoption of various marketing strategies in the Nigerian downstream sector, not all organisations setting out on it to accomplish their planned outcome. This may be attributed to the poor implementation of the various marketing strategies (Abdulkadir, 2012; Ibrahim and Najjar, 2018; Osu, 2020). In other words, very few studies have examined the impact of marketing strategy on customer loyalty (Lee and Green, 2011; Ibrahim and Najjar, 2018; Osu, 2011). This relationship is supported in the theoretical literature (McCarthy, 2007; Oliver, 2017; Zeithaml, 2018), and has been tested in various empirical studies (Bloemer & Odekerken-Schröder, 2002; Cronin, Brady, & Hult, 2018; Yoo, Donthu, & Lee, 2019). In addition, studies consider have not been comprehensive of all factors that better portrays and clarifies the marketing strategy and customer loyalty relationship, as decided by, and proposed in this study. In this study, the focus is on customer loyalty and the marketing mix of Oando Plc, Kaduna. The main objective of this study is to determine the effects of marketing strategy on consumer loyalty in Oando Plc Kaduna. Based on the objective of the study, the following null hypotheses are raised for the study:

H0₁: Product Marketing strategies have no influence on customer loyalty in Oando Plc Kaduna.

H0₂: Price Marketing strategies have no influence on customer loyalty in Oando Plc Kaduna.

H0₃: Place Marketing strategies have no influence on customer loyalty in Oando Plc Kaduna.

H0₄: Promotion Marketing strategies have no influence on customer loyalty in Oando Plc Kaduna.

LITERATURE REVIEW

Marketing Strategies

The accomplishment of an organization is dictated by the marketing ability to decide and execute proper marketing policy in the correct conditions as well. The notion of marketing according to Kotler translation of Nirwono and Taufik (2017) is an activity that is directed to meet the needs and desires of human beings through the exchange process.

Marketing Strategy for Product

Product is the most attention in the marketing mix to another. While the notion of products by Stanton, (2017) translation Swasta and Irawan that the product is anything that is offered into the market for attention, used or consumed to satisfy consumers'wants or needs which consumed to satisfy consumers'. Products can be goods and services consumed by final consumers or industrial consumers. Order of merchandise as indicated by the reason for use by consumers can be isolated into two gatherings, to be specific: Consumer goods, namely the final consumer of goods bought for consumption. There are three sections of consumer goods: Convenient Goods; Shopping Goods; Speciality Goods

Industrial goods, that is, goods that are purchased to be processed again or to help the business. Industrial goods can be grouped into Raw materials; Equipment operation; Components and semi-finished goods; Installation; Extra Equipment. The opinion of Kotler (2000) that the service product is everything that can be offered by manufacturers to note, requested, purchased, or consumed by the market as the fulfillment of needs or wants a significant market. needs offered include physical goods, services, people or individuals, places, organizations and ideas. So, the product can be tangible and intangible benefits that may satisfy the customer. According to Cravens (2018) performance and the excellence of a product is very important in influencing the level of customer loyalty. This means that if the product is offered in a response from customers and meet customer demands and in line with their expectations. Conversely, if customers disappointed with what is given then they will not repeat it again.

Marketing Strategies for Price

After the creation of the product then the price is the second element because if the pricing is right for the product will affect the continuation of the development of these products' target market. The definition of the price by Swastha (2017) is the amount of money (plus a few things if possible) required to obtain several combinations of goods and services. In setting strategy prices there are a few strategies that guided the plan:

- i. The price, given the direction of the producer to demand that set the selling price as per a foreordained price. A strategy is typically well above contemplations of price separation among different memberships contrasts, contrasts over the place, and contrasts after some time.
- ii. Determination of cost-oriented pricing that is setting the selling price based on costs incurred to produce a product so that the goods to consumers. In this case, the price is a way for sellers to distinguish one offering from competitors. Meanwhile, pricing goods are considered as a function of differentiation in marketing.

Several kinds of pricing objectives, namely: Pricing to grab market share; Pricing for maximum revenue; Pricing for promotional purposes; Pricing for profit targets. Furthermore, Cravens (2013) states set prices for goods and services is a key strategy for the company as a consequence of the deregulation of increasingly fierce global competition, low growth in many markets and opportunities for companies to establish market positions. The cost factors in the product is in the form of bank profit (interest/services) obtained from the customer on deposits money in an account managed by banks, interest/services specified may be greater, lower or equal to competitors. Customers feel satisfied with the price set according to the value or benefits and meet customer expectations.

Marketing Strategy for Place

The location is an industrial product distribution channel service. The location is a place that is used in supplying services to the customer. The location associated with the decisions made about where the operating company and its staff will be involved. For the type of interaction where the customer came to service providers is like the Bank, where the location is very important. Other than that, as indicated by Hurriyati (2015) in decision place or location requires cautious thought of a few elements: Access, for example, location, easily accessible public transportation; Visibility, such as the location which can be seen clearly from the roadside; Traffic, where there are two things to consider, which is the number of people passing by can be a member a great chance of impulse buying, density and traffic congestion can also be a barrier; The parking lot is spacious and safe; Expansion, available space in which to expand business in the future; Environment, namely the area around the support; Competition, was the location of competitors and Government Regulation. Factors affecting the company in determining the alternative distribution channels, among others: Market Considerations; Consideration Goods; Company Considerations; Consideration Broker and Promotional Consideration.

Marketing Strategy for Promotion

Promotion is a way to influence consumers prefer to buy directly for certain goods and services. In addition, promotions are also driving purchases act fast so as a whole will determine the success of the campaign, because of its attraction gets the message delivered. According to Alma (2018) campaign is a kind of marketing communication is a marketing activity that endeavors to spread information, impact, convince, and additionally remind the objective market or organization and its items to ready to acknowledge, purchase and faithful to the items offered by the organization concerned. According to George (2009) which be interpreted by ASRI, the nature of sales promotion are: Sales promotions generate faster response than ads; Sales promotion tends to attract a new buyer is not a long-term interest only been established, because the promotion only to attract consumers, who are always moving between various kinds of brand depends on the special offers available and The buyers of certain brands that each tends to not change the pattern of the buyers, although there is a competitive campaign.

Based on the above definition means that the promotion is a to communicate and convey information to consumers or prospective purchaser of a marketed product. Communications that the company is often called a campaign. Wisdom of this campaign cannot walk alone, because it is part of marketing wisdom. So, the implementation must also be supported by other marketing wisdom. Such as product policy, sales policy, distribution policy. To increase the volume of sales, the company doing various forms of promotion such as advertising, which is a form of presentation of the

promotion of non-personnel of ideas, goods and services by a specific sponsor and paid by these sponsors. Usually advertising often uses media such as billboards, banners, radio, television, newspapers, magazines and so forth. Personal selling is a form of promotion using sales force where they entered into an oral agreement in the negotiation of one or more potential buyers to sell something. Direct sales force to deal with customers. This activity requires a large cost, if its use is expanding. Also requires a quality sales force. Sales Promotion which includes a variety of promotional tool as an incentive for short-term that is designed in such a way to invigorate marketing faster and stronger. Space for sales promotion include exit and into the company. To get out of sales promotion through a broker. As for all employees into the cover that is connected directly to the consumer.

Customer loyalty

In a competitive market, customer loyalty has been a subject of great interest and importance to business organizations and researchers. There is a large body of knowledge on the subject matter. Oliver (2017) sees customer loyalty as the behaviour of customers to re-patronize a specific commodity repeatedly in the future. Thereby purchasing the same brand repeatedly, despite the availability of other competing alternatives. Oliver (2017) believes the customer is a continuum, starting from some cognitive beliefs followed by effective cognitive loyalty, and finally actual purchase behaviour. For Humbert and Giering (2001) customer loyalty is a behavioural concept entailing repeat buying of commodity measured as the series or share of purchase referrals, greatness of connections or the entirety of the above blended together. Similarly, Aloke and Medha (2013) asserted that sustained satisfaction of the customer coupled with emotional attachment formed with the service provider that leads to a condition of energetically and reliably being in the relationship with preference, support and premium. Walsh, Groth and Wied Mann (2018) emphasize that customer loyalty is a deeply held commitment to re-buy a preferred product or service consistently in the future, which causes dull same-brand buying, despite any circumstance influences and marketing efforts that may cause fitting behaviour. Jacob and Chesnut (1979) defined the concept of customer loyalty as the based, behavioural reaction communicated after some time by some decision-making unit as for at least one option out of a set and is a function of psychological (decision making) process. In the same vein, Lee and Green (2017), Kotler and Armstrong (2018) said that customer loyalty includes, word-of-mouth, price insensibility, repurchase intention and compliant behaviour.

On the other hand, Reichheld and Susser (2000) emphasize that loyal customers are willing to rebuy products despite the fact there are attractive competitive alternatives to cause switching; recommend the firms products or services to the customer; spend money on trying products across the firms' product line offerings, and give the company sincere feedback as to their needs and expectations. Customer loyalty could be ordered into four sections: cognitive loyalty, affective loyalty, conative loyalty and action loyalty (Oliver, 2017). Accordingly, Dave Day (2016) added two indicators, action and affection for customers make a repeated purchase only because the brand they purchase is the only available choice. Meanwhile, truly loyal customers show both psychological and affective commitments in addition to repurchase consistency. Dick and Basu (2014) also classified loyalty into four; true loyalty, spurious loyalty, latent loyalty and no loyalty. Customer loyalty is essential to both the association and the customer. Kotler and Keller (2015) guaranteed that the top 20% of customers may make 80% profit for the organization. So, a long relationship and its customers may create more profit and benefit for the company. From studies (Oliver, 2017; Kotler & Keller, 2005; Lee & Green, 2011) it can be shown that loyal customers may increase company's profit because they buy more products; they are less price delicate and give less consideration to contenders publicizing, servicing existing customers, who know about the contributions and procedures is less expensive; loyal customers spread positive informal exchange and refer other customers (Reichheld and Sasser, 2019). To emphasize the above assertion, Khan (2013) posited that it cost more than six times as much to obtain a new customer than to keep existing and improvement of five percent to customer retention led to an increase of 25% to 125% in profit.

This study views customer loyalty as the behaviour of customers to re-patronize a specific commodity repeatedly in the future. Thereby purchasing the same brand repeatedly, despite the availability of other competing alternatives.

Conceptual Model for the Study

Much has been composed on promoting procedures and its significance in improving customer loyalty of marketing companies in created and emerging economies. Developing a marketing mix requires two strategic steps: the selection of the target market and the development of a marketing mix (the 4 Ps) strategy to satisfy the needs and wants of target

customers wherein the 4Ps (product, price, place, promotion) are coordinated, interrelated and equally important (McCarthy, 1971). In operationalizing this study, a conceptual model is presented in Figure 1. The marketing mix includes product, price, place, and promotion. In the marketing mix elements, products are either tangible or intangible that includes services quality, service facilities, branding, packaging, standardization and grading (McCarthy, 1971); while price is defined as “any transaction in our modern economy can be thought of as an exchange of money for something” (McCarthy, 1971). The place refers to the supply capabilities in responding to the demands of the many target markets and the satisfaction of the target customers” (McCarthy, 1971). Lastly, promotion is the communication between seller and buyer” (McCarthy, 1971) which includes advertising, personal selling, sales promotion, public relations, direct marketing, and various other forms of consumer communications (Kerin, 2019).

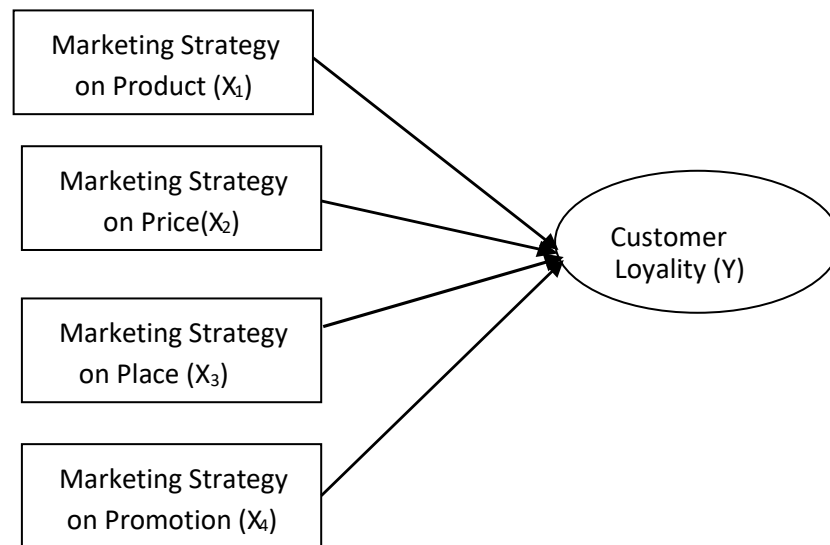


Figure 1. Proposed model for the effects of marketing strategy on Customer loyalty.

Loyalty strategies, in this manner, are made by having the appropriate smarketing mix – product, price, place, promotions (McCarthy, 1971) – and an offer (Kotler & Armstrong, 2008) to support the target segments and to have the appropriate positioning in the minds of the targeted consumers in comparison to competitors (Kotler & Armstrong, 2008). Several empirical studies have been conducted to establish the link between marketing strategies and customer loyalty (Lee & Green, 2018; Cronin, 2000; Dodds, Monroe, & Grewal, 1991; Monroe, 2020). The results of these studies indicated that there are various measures of performance. As adapted in this study, Lee and Green (2018) measured performance in Customer loyalty. Customer loyalty includes word-of-mouth, price insensitivity, repurchase intention, and complaint behavior (Lee & Green, 2018; Kotler & Armstrong, 2008). Loyal customers provide firms a consistent source of revenue and for cost reduction, thus increasing profitability (Customer loyalty includes word-of-mouth, price insensitivity, repurchase intention, and complaint behavior (Lee & Green, 2018). According to Reichheld and Sasser (1990), loyal customers are willing to: re-buy products even though there are attractive competitive alternatives to cause switching; burn through cash on attempting products over the association's product offering contributions; prescribe the company's goods or services to different consumers; and give the organization earnest criticism with regards to their requirements and desires. The consequence of a customer loyalty strategy leads to customer retention. With loyal customers, companies can maximize their profits (Reichheld & Sasser, 1990).

For this study, a conceptual model is presented in Figure 1. The marketing mix includes product, price, place, and promotion.

Theoretical Frameworks

In this study, the resource dependency theory was adopted as the theoretical framework.

The Resource Dependency Theory (RDT)

Formal conversation of dealing with the serious condition in the marketing literature began with (Zeithaml and Zeithaml 1994) with the term “Environmental Management”. However, its elements have been around for much longer, embedded in the assumptions undergirding many strategic marketing tools. The principal accomplishment of (Zeithaml and Zeithaml 1994) was to challenge the deterministic inclination in many marketing tools, contending that organizational environment can be sure to be impacted and that marketing strategies are vital to accomplishing this (Stein 1997; Akinyele, 2010a; Zeithaml and Zeithaml 1994). Resource dependency theory has its origins in open system theory as such organizations have varying degrees of dependence on the outside condition, especially for the assets they require to work (Aldrich 1999; Ulrich and Barney 1984) and raises the issue of company's reliance on nature for basic assets (Dwyer et al 1987; Grewal and Dharwadkar 2002; Pfeffer and Salancik 1998). When gone up against with the costly situation of this nature, the executives effectively guides the organization to deal with the outer reliance for its potential benefit (Allaine and Firstrotu 1989; Ulrich and Barney, 1984). Much of RDT is fixed upon (Grant 1991)'s insight that power and dependency are intimately related as such. As needs are, Akinyele (2010b) proposed and contended for explicit arrangements of techniques to deal with the outside condition and talk about the conditions under which they are proper (Pfeffer and Salancik 1998; Onikoyi and Awolusi, 2015; Aina., Awolusi. What's more, Odunlami, 2015). The essence of RDT is that whenever improved customers' loyalty results basically from overseeing conditions and vulnerability, picking the proper strategies in which to proactively influence and thereby control the environment to its advantage should be a consideration in strategic decision- making, as this would then open an alternative for the firm to contribute or retain a significant asset in input which would then be able to be utilized as an influence in bargaining with its customer (Stein 1997; Akinyele, 2010a).

Empirical Review

Several studies have addressed the relationship between marketing strategies and customer loyalty in the developed economies of the world. However, such studies have been inadequate in developing economies of the world. Since this study is conducted in Nigeria, special effort has been made to review some of the empirical studies carried out in some developing economies of the world with some from developed economies. A few exact investigations have been directed to set up the connection between marketing strategies and customer loyalty (Lee and Green, 2011; Cronin et al., 2000; Dodds, Monroe, & Grewal, 1991; Monroe, 1990). The results of these studies indicated that there are various measures of performance.

Magaji et al (2015) carried out a study on the effect of marketing strategy on customer loyalty in the Nigerian Oil and Gas industry. The study employed a survey of research design. A sample of 550 customers often customers of Oil and Gas companies were randomly selected to participate in the study. A self-developed questionnaire adjusted from Lee and Green (2011) was utilized to gather information for the study. The data were analysed using regression and correlation analysis. The findings from the study show that marketing strategies such as product ($B=0.37$), price ($B=0.26$), place ($B=0.23$) have a positive relationship with customer loyalty. Hence, they influence customers' loyalty. However, findings from the study show that promotion ($B=0.10$) has no influence on customer loyalty. The study's finding provides predictive implications on improved customer loyalty given some factors manifesting marketing strategies. Hence, the key recommendation from the study is that to improve customer loyalty, Oil and Gas companies should control their marketing strategies. This study is one of the few that aims at investigating marketing strategies in Nigeria by proposing a model and attempting to validate it. However, the weakness of the study is that data provided by customers was perceptual which may not provide clear measures of performance. This weakness could be remedied in future studies by using multiple methods to collect data.

Kiyani, Niazi, Rizvi and Khan (2012) researched the relationship between brand trust, customer satisfaction (product, price, place and promotions) and customer loyalty in the automobile sector of Pakistan. The survey research design was employed and data was collected from 131 customers through a self-administered questionnaire. The correlation and Regression analyses were used to measure the results of the data collected. With respect to product, price, place and promotion (product satisfaction) there was a positive relationship between them and customer loyalty. This validated one of the study's models which proposes a positive relationship between customer satisfaction (with respect to a product, price, place and promotion) and customer loyalty. Some weaknesses of the study include the fact that only customers from two cities in Pakistan were considered for the study and convenience sampling was used to select

respondents for the study. However, it was an imported study as it was the first of its kind in the context of the Pakistani market. Hence, giving insightful information from Pakistan on the subject matter. A recommendation arising from companies should focus on their marketing strategies to satisfy more customers. Hence, companies should maintain price fairness, product quality availability/accessibility of product and promotional activities such as sales promotions and free maintenance services occasionally. The main limitation of the study was that it was carried out in only one city (Yangon) in Myanmar and hence, the result of the study cannot be generalised for the whole country.

Rahman, Hossain, Mitu Mustafi and Miah (2017) investigated the effects of customer expectation, perceived quality, customer satisfaction on customer loyalty in KFC Restaurants in Dhaka city of Bangladesh. The survey research design was adopted for the study. The sample of 210 respondents was used for the study. The sample was arrived at using the convenient sampling technique. Data was collected using a self-constructed questionnaire, the collected data were analyzed using a multivariate analysis technique and structural equation modelling (SEM). Amongst others, the findings from the studies show that product, price, place and promotion has a significantly positive relationship with customer loyalty. Recommendations from the studies in that the management of companies should place study emphases on their marketing strategies (product, price, place and promotion) to maintain their customers and improve profitability.

Pasha and Waleed (2016), they study the components influencing customer loyalty in the financial segment of Punjab, Pakistan. Being a descriptive study, the survey research design was adopted for data collection. Data were collected from respondents through questionnaires on a 5- point likert scale. Correlation and regression techniques were used to analyse the data. Findings from the study indicate amongst others perceived price, product (service quality), place and promotion (customer satisfaction) have a significant influence on customer loyalty. The study implies that companies would be guided to focus on the variables affecting customer loyalty. Hence, it was recommended that companies should incorporate the significant factors affecting customer loyalty in their business models.

Cengiz and Yayla (2018) tests the relationship between marketing mix, perceived quality, customer satisfaction, and customer loyalty. Findings from the study revealed that marketing mix elements have an important influence on customer loyalty; specifically, price, place, and perceived quality (product) have positive effects on customer loyalty. A significant goal for conveying an incentive to customers is to create loyal customers who can build buy recurrence, buy amount, and abstain from exchanging conduct (Rust, Lemon, and Zeithaml, 2004). In this way, conveying customer esteem is an essential strategy to construct an association's competitive advantage (Kanagal, 2009; Lee & Overby, 2004).

METHODOLOGY

In this study, a survey research design was adopted. The study adopted correlation survey design and attention was paid to the variables of study which are Marketing Strategies (independent variable) measured with Product, Price, Place and Promotion Marketing Strategies and the dependent variables such as Customer Loyalty. For this study, the population consists of all the registered Oando Plc customers in Kaduna Metropolis numbering 6,650. This number was recorded from the loyal customers' promotion for the 2019 loyal customers reward Promo (Oando, 2019). These degrees of customers have been utilized in past research (Awolusi and Akinruwa, 2019; Ibrahim and Najjar, 2019; Osu, 2019), in light of the reason that they were among the most knowledgeable informants on marketing strategies. Yamane Taro formula will be adopted for determining an adequate sample size at confidence level 95% and $P = 0.05$.

Below is the formula:

$$n = \frac{N}{1 + N(e)^2}$$

Where:

n = Sample size

N = Population size

e = Sample error Level of significance

1 = Constant

$$\begin{aligned} \text{Therefore, } &= \frac{6,650}{1 + 6,650 (0.05)^2} \\ &= \frac{6,650}{1 + 6,650 \times 0.0025} \\ &= 550 \text{ Approx.} \end{aligned}$$

550 respondents were selected from the registered customers.

To select the 550 respondents, a purposive sampling technique was utilized. Based on the nature of the research study, the researcher made use of both the primary and secondary data to ensure the reliability of the information resulting from the research. A multiple regression model based on Ordinary Least Square (OLS) technique was employed in determining the effect of Marketing Strategies on customer loyalty of Oando Plc in Kaduna Metropolis. Ordinary least square (OLS) is extensively used in regression analysis primarily because it is intuitively appealing and mathematically much simpler than any other econometric techniques (Gujarati, 2003).

Model Specification and Description of Variables

The following model specification is developed:

$$\text{Customer Loyalty (CL)} = f \text{ Marketing Strategies (MS) } (P_1 + P_2 + P_3 + P_4) \dots \dots \dots (1)$$

Therefore,

$$\text{Customer Loyalty (CL)} = \beta_0 + \beta_1 \text{MSP}_1 + \beta_2 \text{MSP}_2 + \beta_3 \text{MSP}_3 + \beta_4 \text{MSP}_4 + \varepsilon \dots \dots \dots (2)$$

Where:

MSP₁ = Marketing Strategy for Product; MSP₂ = Marketing Strategy for Price; MSP₃ = Marketing Strategy for Place; MSP₄ = Marketing Strategy for Promotion.

DATA ANALYSIS

To measure the internal consistency of variables (Hair, 1998), Cronbach's alpha scores were computed for each construct and to indicate how different items can reliably measure the construct. In this research, all scales have reliability coefficients greater than 0.7. Thus, the scales used in this research could be considered as reliable (Khong and Richardson, 2003). Specifically, from the results of the reliability analysis, the cronbach's alpha, CR and AVE of all the six constructs measuring marketing strategies and customer loyalty were well above the recommended minimum of 0.70, 0.70 and 0.50 respectively (Hair, 1998). In addition, Principal Component's extraction was the technique used to test discriminate Validity. This was done by applying an Orthogonal Varimax rotation with Kaiser's normalization (Khong, 2005).

Table 1: Inferential analysis on marketing strategies and customer loyalty

Construct Association	alpha level	Beta	p-value
Product with Customer loyalty	0.05	0.34	0.01442
Price with Customer loyalty	0.05	0.25	0.0332
Place with Customer loyalty	0.05	0.18	0.0331

Promotion with Customer loyalty	0.05	0.10	0.0510

R²= 0.6654 R= 0.4513 Sig <.0001; Durbin Watson= 2.001

Source: Researcher's Computation, 2021

Test of Hypothesis and Discussion of Findings

In this study, the underlying hypotheses were analyzed using regression analysis. This analysis followed a regression procedure to assess the hypotheses, as suggested by Baron and Kenny (1986), Frazier (2004) and Hair (1998): Regression between Dependent Variable and Independent Variables.

Table 2: Testing the Hypotheses

Regression between Dependent Variable and Independent Variables.

R ² = 0.6666 R= 0.4555			
Durbin Watson= 2.111Customer loyalty			
Construct Association	' α ' Level	Beta	p-value
Product with Customer loyalty	0.05	0.37	0.032
Price with Customer loyalty	0.05	0.26	0.015
Place with Customer loyalty	0.05	0.23	0.037
Promotion with Customer loyalty	0.05	0.12	0.055

Source: Researcher's Computation, 2021

Findings based on the survey revealed that marketing strategy positively affected customer loyalty in Oando Plc. Specifically, apart from promotion ($\beta=0.12$), in descending order, the results suggest that, product ($\beta=0.37$), price ($\beta=0.26$), and place ($\beta=0.23$) are the key marketing strategies that influenced customer loyalty in Oando Plc. As shown in Table 2 below, there is a positive relationship between marketing strategies and customer loyalty with a multiple correlations (R) of 0.4555. It therefore, implies that managers operating in Oando Plc should pay more attention to their marketing strategies to improve their implementation and performance-related results over the business. The main surprising result of this investigation was the failure to verify the impact of advancement on customer loyalty, because of the different marketing strategies implemented in Oando Plc. This unique finding was contrary to many empirical findings (Chowdhury, 1998; Haelsig, 2007; Yoo, 2000). This may be due to the poor promotional tools used in the sector (Cronin, 2000). In addition, many Nigerian companies often failed to attract the needed personnel or consultants for their various promotional efforts (Moliner, 2007). One possible explanation could be due to the success of the various marketing strategies, as measured by product, price, place and promotion, and the consequential improvements in customers' loyalty (Chowdhury, 1998; Haelsig, 2007).

CONCLUSION

The study concludes that marketing strategy positively affected customer loyalty in Oando Plc. Marketing strategies were symbolized by improvements in the performance measure customer loyalty in Oando Plc during the study period. This study therefore answered the question, what is the influence resulting from marketing strategy on customer loyalty. This perception is created by the firm's marketing strategy by having the appropriate marketing mix for the right position in the intended target market. Value leads consumers to become a firm's customers, and with higher levels of value for customers to be loyal customers. This examination explores the impact of promoting which encourages us better comprehend the idea of the connection between marketing strategies and customer loyalty. Likewise, this examination seems to be among the few examining the outcome of marketing strategies, in the perspective of how organizations fare after its implementation. Another contribution of this study is the measurement of performance, which was not limited to or focused on financial metrics, but encompasses diverse business indicators and perspectives,

like customer loyalty (Khong and Richardson, 2003). Besides, this study seems to be one of the few that aims at investigating marketing strategies success in a developing economy, like Nigeria, by proposing a model and attempting to validate it empirically.

RECOMMENDATIONS

The following recommendations were made for the study:

- i. The findings indicate a relationship between marketing strategies and customer loyalty. The model gives prescient ramifications on improved customer loyalty, given the exercises of certain elements showing marketing strategies. Hence, to improve customer loyalty, Oando Plc could control their marketing strategies.
- ii. Managers of Oando Plc should pay more attention to their marketing strategies to improve their implementation and the performance-related outcomes across the company.
- iii. The management should formulate policies that would boost customer loyalty by developing more customer-friendly marketing strategies.

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EFFECT OF EMPLOYEE MOTIVATION ON ORGANISATIONAL PRODUCTIVITY IN BEVERAGE MANUFACTURING COMPANY IN NIGERIA

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ABSTRACT

The issue of motivation has continually posed a big challenge to business organizations around the globe especially in the manufacturing industries where high levels of productivity affect or play a major role in determining the profitability, growth, development, stability and future success of an organization. Therefore, an organization in a bid to achieve success in maintaining a competitive edge over its rival as well as avoid a steady decline in the productivity levels of its employees, must ensure members of the workforce are adequately motivated. The primary purpose of this study is to examine the effect of employee motivation on organizational productivity. This study adopted a descriptive and causal research design as well as the survey method in investigating the effects of motivation on organizational productivity levels. The entire population of the study was 217 while 124 constituted the sample size of the study. A well-structured self-administered questionnaire was used as the main tool for data collection and was administered to 124 respondents out of which 113 were retrieved and appropriately filled. Data were analyzed using multiple regression analysis. From the hypotheses tested, the result indicated that there is a significant relationship between employee motivation and organizational productivity. Findings also revealed that employee compensation, training and career development and employee wellbeing have a positive effect on organisational productivity while relationship with co-workers have an insignificant effect on organisational productivity in Nigeria. Furthermore, this study also recommended that management of organizations should take appropriate measures in figuring out those factors that motivate their employees and seek ways of ensuring that they are adequately motivated in order to improve their performance and productivity levels.

Keywords: Motivation, Profitability, Productivity, Growth, Development

INTRODUCTION

Generally, most business organizations and their managers are faced with numerous challenges. One of such challenges is in the area of management which refers to the utilization of resources effectively and efficiently in order to achieve an organizations goals and objectives. Some of these managerial challenges are obvious in matters concerning employees such as reimbursement, recruitment, performance management, training and career development, health and safety, benefits, motivation and administration amongst others. The human resource is the most vital of all resources among other factors of production and the human capital is what distinguishes one organization from the other (Maimuna & Rashad, 2013). Therefore, for organizations to survive and remain relevant and competitive, it is essential for them to be able to entice and maintain efficient and effective employees in a bid to enhance productivity (Sunia, 2014). This study however is centered on the aspect of motivation and focuses on the effects of employee motivation on organizational productivity. Also, Jennifer and George (2006) averred that employee productivity is the level of effort put forth by the workforce of an organization towards achieving organizational goals and objectives. There are several ways by which a workforce can be motivated so as to enhance organizational productivity. George and Jones (2012) stated that motivation can be categorized into two classes namely intrinsic and extrinsic. Intrinsic motivation arises from an employee's internal cravings to execute a task out of self-interest rather than a need or wish for some external reward.

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External motivation (extrinsic) is the type of motivation that arises when an employee is compelled to act in a specific way either as a result of that employee's desires for external rewards or to avoid punishment.

Consequently, the need to ensure a good motivation standard for employees at all level in the organisation cannot be over emphasized. This is based on the fact employees constitutes one of most significant capital that is vital in achieving organisational goals. This assertion is substantiated by James (2014), who cited three warning signs of a demotivated workforce which include poor workplace atmosphere, slipping job standards and decreased productivity. He further stated that if any of these factors is observed to be trending downwards then there is a great chance that the organization is dealing with a demotivated workforce. Most businesses and organizations especially manufacturing industries have failed to recognize the importance of motivation as a concept be it intrinsic such as employee well-being, relationship with co-workers, relationship with managers, organizational policies etc. or extrinsic such as training and career development, good working conditions, compensation, promotion amongst other factors that enhance or improve employee performance as well as organizational productivity levels. This in turn has continued to represent major managerial concerns for decades as employee productivity levels has relatively declined which has been acknowledged as a subject of growing concern in the aspect of business and management research (Akerere, 2001). Although a lot of factors may also be responsible or even cause a decline in productivity such as poor strategic and structural changes in decisions and executions, lack of infrastructure, leadership styles and organizational culture amongst others. Contemporary investigations that connect the concept of workforce motivation and productivity has laid an emphasis on employee perspective, needs and expectations as factors affecting their performance and productivity levels respectively. As such investigating those factors of importance to employees in the discharge of their duties at work has taken a new dimension.

Motivation through factors such as employee wellbeing, adequate compensation, promotion, good relationships with co-workers and relationships with managers can enhance an employee's level of effectiveness and efficiency in the workplace. This is because good relationships with co-workers promote unity and gives the employee a sense of belonging and acceptance which in turn boosts employee performance and productivity levels. Employees who enjoy such relationships both within and outside the work environment tend to be more effective and efficient as such very productive in discharging their duties. Therefore, an organization's best strategy is to provide suitable work environs that allow their workforce to meet or exceed expectations as well as offer a range of motivators to improve enthusiasm, performance and productivity levels. The motivation for this study is based on the fact that most of the studies in literature are foreign based and their findings cannot be used to take informed business decisions. The few domestic studies are not tailored specifically, to food and beverages companies which gives us the problem of external validity. Again, the results of the domestic studies are seen to be inconsistent, contradictory and portends mixed findings. Also, that the food and beverages companies in Nigeria needs adequate attention due to its importance to customers and economic growth generally. Given the articulated problems and the gaps existing in literature, this current study examined the effect of employee motivation on organisational productivity with specific focus on Adama Beverages Ltd, Yola, Adamawa State as the case study.

The study is based on the following hypotheses:

HO₁: Employee compensation has no significant effect on organisational productivity in Nigeria.

HO₂: Training and career development has no significant effect on organisational productivity in Nigeria.

HO₃: Relationship with co-workers have no significant effect on organisational productivity in Nigeria.

HO₄: Employee well-being has no significant effect on organisational productivity in Nigeria.

LITERATURE REVIEW

Employee Motivation

James and Stoner (2009) Suggested that motivation can be seen as those psychological characteristics of humans that contribute to an individual's level of commitment towards a goal. It comprises several elements that causes, directs, and sustains an individual's behavior in a specific way. He went further to say that motivation is one of a number of elements that affect an organization's productivity and performance levels respectively. Jennifer and George (2006)

defined motivation as a mental force that governs the direction of an individual's behavior in an organization, an individual's level of effort, and an individual's level of determination when faced with obstacles. In addition, she stated that even with appropriate strategies and administrative structures in place, an organization can only be productive if its employees are sufficiently motivated to perform at higher levels.

Also, Hellriegel (1996) viewed motivation as any impact that brings out, guides, or sustains a person's goal-directed behaviors. Ivancevich (1994) suggested that motivation refers to those set of forces that triggers certain behaviors and regulates its form, course, intensity and duration. Obikeze (2005) viewed motivation as the process of guiding an employee's actions towards a particular end via the manipulation of rewards. Kreitner (1995) described motivation as the mental process giving behaviors the will-power, drive, and tendency to act in a certain way in order to attain certain unsatisfied needs. Young (2000) also suggested that motivation could be defined in relation to forces within employees that justifies the levels, directions, and resolution as regards efforts they expend in the workplace. George and Jones (2012) termed work motivation as self-induced forces that control the directions and behavioral patterns of the workforce in an organization taking into account their levels of commitment and enthusiasm towards the successful accomplishment of set goals. Berelson and Staines (2003) opined that motivation is an inner state that inspires actions as well as direct and channel behavior towards a goal. Guay, Chantal, Ratelle, Marsh, Larose & Boivin (2010) argued that motivation deals with "the motives underlying behaviors". In addition, (Broussard & Garrison, 2004) defined motivation simply as "those elements that pushes an individual to act or not to act".

Types of Motivation

Lin (2007) proposed that motivation can either be intrinsic or extrinsic. In the workplace as well as other settings, motivation is often classified as being naturally extrinsic or intrinsic (Martocchio, 2006). Lin, 2007; Ryan & Deci (2000) also identified several classes of motivation namely; extrinsic and intrinsic motivation. Intrinsic motivation: can be referred to as motivation derived from within the individual or from the activity itself, it can be said to have an affirmative outcome on the conduct, performance and well-being of an individual (Ryan & Deci, 2000). In the workplace, it springs from impulses that are characteristic of the work itself. It is what workers derive because of their success in completing a task. Such Intrinsically motivated rewards comprise the chance to showcase expertise and abilities, receive gratitude, good recognition, freedom, responsibility and mutual respect. A worker that is inherently inspired, according to George and Jones (2012) would be devoted to his job for as long as he believes the job is able to satisfy his wants. Intrinsically driven work conduct are behaviors performed for one's own sake, that is, the inspiration to work emanates from within the individual. Here the worker is motivated because he derives happiness in doing the job. For instance, a domestic worker in an organization whose pay is quite low compared to other workers cleans the surroundings every time and even put in extra hours to clean not because of an increase in pay but because of the happiness derived in doing it. Such a motivation originates from rewards that are considered inherent to a job or activity itself such as the pleasure an individual derives from a game of chess or the love of playing soccer. Therefore, when an individual engages in activities without any apparent inducements with the exception of the activity itself such an individual is said to be motivated intrinsically.

On the other hand, extrinsic motivated behaviors are those that are external to the activity or the work, such as compensation, conditions of work, welfares, safety, and elevation etc. these motivators are usually determined by the company the individual works for. Extrinsic behaviors require workers to work hard or put in extra hours so as to get the reward that comes with it. Workers may not like the task but are inspired by the additional benefits, awards etc. It is a behavior that is put up to obtain substantial or social rewards and to evade chastisement. For instance, a receiver in a guesthouse is aware that working hard and diligently would bring about additional benefits and even promotion may not be happy putting in extra hours but the incentive forces him/her to work harder. George and Jones (2012) an extrinsically inspired individual will be dedicated for as long as external rewards are available. For example, good pay has been perceived over time to be an effective strategy business utilize to motivate their workforce to perform thereby improving organizational performance. Also, most employers of labor have understood the point that for businesses to contend well in a business setting, the performance of their workforce is very essential and crucial in influencing the result in terms of the success of the business. Hence, it can be presumed that the performance of a workforce is not only key to the progress, solidity and enlargement of the business alone but also for personal advancement of the workforce as a whole.

Motivation that is considered extrinsic stems from outside of the performer. Money can be said to be the greatest example, nevertheless coercion and the fear of punishment are also common extrinsic motivations. In various organizations, Competition is seen as extrinsic since it encourages the performers to win and outwit their rivals, rather than appreciate the intrinsic rewards associated with the activity. However, it is also imperative to note that extrinsic rewards may result in over justification and a later a decrease in intrinsic motivation. The universal difference between intrinsic and extrinsic motivation is that whereas intrinsic motivation is triggered by internal forces or those within oneself, extrinsic motivation is determined by external forces (Giancola, 2014). This study used employee compensation, training and career development, relationship with co-workers and employee well-being and motivation dimensions.

Productivity

Glen (2014) stated that the manufacturing sector is an ever-changing beast and every year, the industry is faced with fresh challenges. The author stated that virtually all media houses constantly report the closure of industrial units, labour disputes between employers and their employees or reductions in the labour force due to recession and other economic dynamics. As a result, the image of manufacturing industries have been marred by low wages, high labour turnover, inadequate working conditions, poor performance and productivity (Githinji, 2014). Productivity can be referred to as the quantity of work that is attained in a unit of time by means of the factors of production. These factors include technology, capital, entrepreneurship, land and labour. It is the link between inputs and outputs and increases when an increase in output occurs with a lesser than comparative increase in input. It also occurs when equal amount of output is generated using fewer inputs (ILO, 2005). Bhatti (2007) and Qureshi (2007) were of the perspective that productivity can be seen as a measure of performance that encompasses both efficiency and effectiveness. It can also be referred to as the ratio of output or production capacity of the workers in an organization. It is the correlation that exists between the quantity of inputs and outputs from a clearly defined process. The performance of a business which determines its continued existence and development is largely dependent on the degree of productivity of its workers. Yesufu (2000) stated that the prosperity of a nation as well as social and economic welfare of its citizens is determined by the level of effectiveness and efficiency of its various sub components.

Productivity is a total measure of the efficiency or capacity to transform inputs that is raw materials into finished products or services. More precisely, productivity is a measure that indicates how well essential resources are used to accomplish specified objectives in terms of quantity and quality within a given time frame. It is suitable when measuring the actual output produced compared to the input of resources, taking time into consideration. Hence, productivity ratios indicate the extent at which organizational resources are effectively and efficiently used to produce desired outputs. Efficiency takes into account the time and resources required to execute a given task. Therefore, it can be concluded that effectiveness and efficiency are significant predictors of productivity.

Employee Productivity

Jennifer and George (2006) Argued that the performance of workers contribute directly to an organization's level of effectiveness, efficiency and even towards the achievement of administrative goals. It also stated that a corporation's failure to certify that its workers are motivated has a negative influence on its organizational effectiveness and efficiency thereby affecting employee's productivity levels concerning expected goals and objectives. According to Antomioni (1999) a worker's level of productivity is reliant on the extent at which workers believe that certain motivational desires will be fulfilled stating that workers become demoralized as such less productive once they perceive that their desires can't be met or gratified. Mathis and John (2003) suggested that productivity refers to a measure of the quantity and quality of work done, bearing in mind the cost of capital used. The greater the level of organizational productivity, the greater the competitive edge. This is because the costs associated with the production of goods and services are lesser. Better productivity ratios do not automatically mean that more output is manufactured; it could also mean that less workers or less financial resources and time were utilized in producing the similar output. McNamara (2003) stated that productivity may be denoted in form of quality, quantity, time and cost. He also stated that evaluating productivity has to with measuring the length of time it takes an average employee to produce a specified level of output. Although measuring productivity may seem difficult, it is however very significant since it directly affects organizational profitability.

Brady (2000) claimed that none of the resources utilized for production in the workplace are so thoroughly examined as the human capital. Most of the activities carried out in HR Systems are intended to influence worker or organizational productivity. Compensation, evaluation systems, training and development, recruitment, job characteristics are HR responsibilities directly aimed at productivity. Bernardin (2007) clearly stated that the importance of motivational factors cannot be underestimated by an organization in increasing the productivity levels of a workforce especially when trying to gain competitive advantage. He also stated that productivity may be hard to measure, but it can be evaluated in terms of effectiveness and efficiency of workers.

Motivation and Productivity

Generally, studies conducted on the impact of motivation as it relates to workplace productivity has drawn significant attention in the aspect of management; however, it has been basically disregarded by most establishments. This may be due to the fact that the concept of motivation is complex and relative in the sense that what may appeal to an individual may not appeal to another (Reilly, 2003). Generally, most organizations through the use of incentives seek out ways to motivate their work force. These incentives could be in form of good working conditions, work environment and compensation amongst others. Incentives are regarded as variable payments (monetary and non-monetary) made to workers or a team of workers based on the quantity of output or results attained. On the other hand, it can be seen as payments made with the purpose of stimulating workers' performance and productivity levels towards achieving greater objectives (Banjoko, 2006). Incentives can also be described as any compensation with the exception of basic wages or salaries that varies based on the capacity of the workforce to attain certain standards, such as pre-determined procedures and stated organizational goals and objectives (Martocchio, 2006). Therefore, one can conclude that there is a link between motivation and productivity this is due to the fact that a lack of motivation leads to a decrease in productivity and vice versa. Also, previous studies has revealed that at various points in time, low productivity levels have been documented in virtually all establishments be it government or private sectors in Nigeria (Mbogu, 2001; Ezulike, 2001; Iheriohanma, 2006); also conclusions from further studies show that low levels of productivity can be elevated if workers are provided with adequate motivation which may or may not be financial (Tongo, 2005).

In terms of productivity, members of a workforce may vary in terms of how much value they bring to the organization, which is certainly not limited to the activities they perform but also how well they perform such activities; generally organizational performance is largely dependent on the level of productivity of the workers and various departments that make up the organization. Therefore, it is imperative that organizations fairly reward their workforce based on relative productivity and performance levels (Martocchio, 2006). Finally, for workers to perform at higher levels, the organization has a crucial part to play in ensuring that it highly motivates the members of its workforce in order to attract, retain, and improve productivity levels of both workers and the organization as a whole (Reilly, 2003).

Empirical Review

Nwannebuife (2017) examined the effect of employee motivation on organizational productivity. This study adopted a descriptive and causal research design as well as the survey method in investigating the effects of motivation on organizational productivity levels. The entire population of the study was 475 as a result the sample size determined is 217. A well- structured self-administered questionnaire was used as the main tool for data collection and was administered to 217 respondents out of which 185 were retrieved and appropriately filled. Data were analyzed using multiple regression analysis. From the hypotheses tested, the result indicated that there is a significant relationship between employee motivation and organizational productivity. Bawa (2017) conducted a literature review and analysis on theories and empirical evidence on the relationship between employee motivation and organizational productivity with a view to drawing important lessons for managerial practice. To achieve this, the paper conducted a review of some of the key theories and empirical studies on motivation and its impact on employee productivity drawing experiences from diverse organizational settings in Nigeria and several other countries. The study revealed that there are different factors to consider in motivating employees: some monetary or financial such as pay and others are non-financial like recognition and challenging jobs.

Olatunji, Lawal, Badmus and Tejideen (2016) examined the influence of motivational packages on productive prospect of employees using workers of CNSSL, Ilorin as the case in point. Survey design was adopted to achieve the objectives

of the study. Data for the study were generated through the use of questionnaire. Frequency Distribution was used for descriptive analysis while chi-square (X^2) was used as the inferential statistical tool. The study found that motivational factors have significant influence on productivity prospects of the employees. The study thus concluded that motivation is an important determinant of employee's productivity and it thus recommended that employers of labour should take the motivational packages of their employees into cognizance because it (motivation) goes a long way in making them to support the organizational objectives and also improve their general productivity level. Aderibigbe (2017) aimed at examining the relationship between employee motivation and productivity among 95 male and female bankers in Nigeria, using the ex-post facto research redesign, purposive and convenient sampling techniques. Data was collected from the participants, using a validated questionnaire. Two hypotheses (H_0 and H_1) were stated and tested respectively. The results showed that there is a significant positive relationship between employee motivation and productivity ($r = 0.60$, $p < .05$). Hence, the hypothesis H_1 was confirmed and accepted. Based on the results, the study concluded that employee motivation is a significant factor in ensuring higher level of productivity in the banking section. The study therefore, recommends that the personal needs of employees must be given a consideration when applying motivation so that each employee will be able to concentrate at work and consequently, give their best to the organizational outputs.

Maduka and Okafor (2014) aimed at looking into the importance of motivation in the management of people at work, no system moves smoothly without it, and no organization achieve its objective without motivating its human resources. The study therefore is to study and come out with the effect and ways of motivating worker in organization, hence comparative study of Manufacturing firms in Nnewi, Chicason group Nig Ltd, Ibeto group of company Nig Ltd, Capital Oil and Gas Nig Ltd, Cultix Cable Nig Ltd, and Innoson Motors Nig Ltd. Descriptive and inferential statistics were used in the analysis of the data. Necessary literatures were reviewed. During the analysis of the data it was discovered that the goal of motivation is to cause people to put fourth their best efforts with enthusiasm and effectiveness in order to achieve and hopefully surpass organizational objective. It is evidence that workers of manufacturing firms in Nnewi are poorly motivated; hence low productivity. Findings from the research on productivity of manufacturing firm's staff are reported. Two sets of questionnaires were employed in the study. One set was administered on management staff and the other on junior staff. The study reveals that salaries paid to junior staff in the company were very below the stipulations of Nigerian National Joint Industry Council. It further shows that the junior staff is rarely promoted and the junior staff prefers financial incentives than non-financial incentives. The study recommended that increase in salary via promotion; overtime allowance and holiday with pay should be used as motivational tools.

Theoretical Framework

It is adequately documented in the literature that several thinkers from Adam Smith to Abraham Maslow and others have studied human behaviour from different perspectives – economic, psychological, behavioural, etc., to understand what motivate people to do the things they do. In the process, they developed several theories of motivation. This section presents a brief review of some of the theories and empirical evidences on the relationship between motivation and productivity. Broadly speaking the theories of motivation can be classified in to content theories and process theories. The former deals with what motivate and are concerned with identifying people's needs and their relative strengths, and the goals they pursue in order to satisfy these needs. The main content theories include Maslow's hierarchy needs; Herzberg's two factor theory and McClelland's achievement motivation theory. Process theories on the other hand, place emphasis on the actual process of motivation. These theories are concerned with the relationships among the dynamic variables which make up motivation and with how behaviour is initiated, directed and sustained. Examples are expectancy-based models, equity theory goal theory and attribution theory (Uzonna, 2013). The most popular theory of motivation in the classical literature is perhaps that of a United States psychologist, Abraham Maslow's Hierarchy of Needs Theory. Maslow (1943) discussed five levels of employee needs: physiological, safety and security, social, esteem or ego and self- actualization. According to this theory, people have many needs which motivate them to work, that those needs are arranged in a hierarchical manner in such a way that lower-level needs (physiological and safety) had to be satisfied before the next higher level social need would motivate employees to work hard and increase productivity.

The second theory of motivation is the two-factor theory or motivator and hygiene theory developed by Frederick Herzberg (Herzberg, 1966). Motivators or intrinsic factors such as drive for achievement and advancement, being treated in a caring and considerate manner and receiving positive recognition are inherent in the job itself and which

the individual enjoys as a result of successfully completing the task, produce job satisfaction and motivate employees to work harder. Hygiene or extrinsic factors, such as salary, benefits and job security are external to the task and often determined at the organizational level can lead to dissatisfaction and lack of motivation if not present in positive degrees. Uzonna (2013) argues that one important element of Herzberg's theory is that knowing employee needs can help us motivate today's young, ambitious and knowledge and technology-based workers. Given the fact that these workers already command high paying jobs, we can infer that money or cash rewards alone does not provide enough of an incentive as a motivator for performance. This implies that to motivate workers, organizations need to look beyond monetary rewards. Victor Vroom developed the expectancy theory based on the belief that employee effort will lead to performance and performance will lead to rewards. Rewards may be either positive or negative. The more positive the reward the more likely the employee will be highly motivated. Conversely, the more negative the reward the less likely the employee will be motivated to work harder (Vroom, 1964, as cited in Malik, et al, 2011: 39). This theory was further developed by Porter and Lawler (1968).

Another theory is the equity theory of motivation developed in the early 1960's by J. Stacey Adams, a psychologist. The theory proposes that a person's motivation is based on what he or she considers being fair when compared to others (Redmond & Housell, 2015). It recognizes that motivation can be affected through an individual's perception of fair treatment in social exchanges. When compared to other people, individuals want to be compensated fairly for their contributions to the organization. A person's beliefs regarding what is fair and what is not can affect his motivation, attitudes and behaviours which will in turn affect subsequent performance. When applied to the workplace, equity theory focuses on an employee's workcompensation relationship or "exchange relationship" as well as that employee's attempt to minimize any sense of unfairness that might result. According to the theory, underpayment inequity induces anger and distress while overpayment induces guilt. (Redmond & Housell, 2015). Lastly, B.F. Skinner's reinforcement theory states that those employee behaviours that lead to positive outcomes will be repeated and behaviours that lead to negative outcomes will not be repeated (Malik, 2011). A reinforcer can therefore be seen as a reward or incentive to behave in a certain way. Reinforcers may be tangible like food or money and they can be intangible like approval or praise. The implication is that organizations should reinforce employee behaviours that lead to positive outcomes and discourage those behaviours that lead to negative outcomes. This can be achieved through staff training and development, among other strategies.

METHODOLOGY

For the purpose of this study a positivist research paradigm and a descriptive survey as well as causal research designs are adopted. The survey approach is preferred, according to Carmichael and Sweieringa (1968), on the grounds of relevance and efficiency. The focus of the study concerns perceptions of a comprehensive range of stakeholders thus enabling generalization of its findings and external comparison of its result; and as previous global studies of the phenomena adopted the same technique. The population of the study comprised of all the 217 staff Adama Beverages Ltd. The sample size of the study is restricted to the 124 staff with a qualification of secondary school certificate and above. The 124 staff are considered for the purpose of data collection. This study collected data from primary and secondary sources. Primary data are collected through questionnaires. The survey questionnaire comprised of a set of questions. The response pattern is 'Strongly Agree' (SA), 'Agree' (A), 'Disagree' (D), and 'Strongly Disagree' (SD).

Reliability Test

The reliability of an instrument refers to its ability to produce consistent and stable measurements. Reliability of this instrument will be evaluated using Cronbach Alpha which measured the internal consistency of a construct. Cronbach Alpha value is widely used to verify the reliability of the construct. The reliability is expressed as a coefficient between 0 and 1.00. The higher the coefficient, the more reliable is the test.

Alpha Test

Variable	α =Alpha	Comment
Employee Compensation	0.9746	Reliable
Training and Career Development	0.9714	Reliable
Relationship with Co-Workers	0.8756	Reliable
Employee Welbeing	0.9460	Reliable
Organisational Productivity	0.9680	Reliable

Source: STATA Output, 2021.

The result indicated that all the variables have no reliability constraint because the widely acceptable threshold is 0.7 and since all variables depicted an Alpha value above 0.7 the instrument is considered reliable. This represents significant degree of reliability and on this basis, it is supported that the scales used for the study are reliable to capture the variables. The most common reliability coefficient is Cronbach's alpha which assesses internal dependability by defining how all variables on a test relate to each other and to further test- internal consistency or coherence of data. The reliability is expressed as a coefficient between 0 and 1.00. The higher the coefficient, the more dependable is the test. The study adopted a multiple regression model to test the relationship between the variables in employee motivation measured by Employee Compensation (EC), Training and Career Development (TCD), Relationship with Co-Workers (RCW) and Employees Wellbeing (EWB). The model for the study is specified thus:

$$OP_{it} = \beta_0 + \beta_1 EC_{it} + \beta_2 TCD_{it} + \beta_3 RCW_{it} + \beta_4 EWB_{it} + U_{it} \dots \dots \dots (i)$$

Where:

OP = Organisational Productivity

EC= Employee Compensation

TCD = Training and Career Development

RWC = Relationship with Co-Workers

EWB= Employees Welbeing

β_0 = intercept/constant term

$\beta_1, \beta_2, \beta_3, \beta_4$ = coefficients of determination

U_{it} = error term.

RESULTS AND DISCUSSIONS

The number of questionnaires distributed was 124 out of which 113 were appropriately completed and returned. Indicating a response rate of 94% percent which according to Mugende and Mugende (2003), is considered very good for the study. The results for the response rate are displayed below.

Result of Descriptive Statistics

A descriptive statistic explains the behavior of data used for any study. For the purpose of this study, the behavior of primary data collected from the sampled respondents expressed in mean, standard deviation, minimum and maximum is explained below.

Questions	MEAN	STD. DEV.	MIN.	MAX
Organisational Productivity	2.5712	1.0905	1	4
Employee Compensation	2.4796	1.0372	1	4
Training and Career Development	2.7384	1.1487	1	4
Relationship with Co-Workers	3.0272	0.8327	1	4
Employee Welbeing	2.8691	0.9243	1	4

Source: STATA OUTPUT, 2021.

From the table above it can be seen that organisational productivity has a cumulative mean of approximately 3 with a corresponding standard deviation of 1.0905 which showed that the respondents were almost equally divided in their opinion concerning the questions raised on organisational productivity. The mean figure indicated that majority of the respondents agree with statements raised under organisational productivity. It was also, found that employee compensation had mean of approximately 2 and a standard deviation of 1.0372 which also, show that most of the respondents showed a negative view on the assertions on employee compensation. Based on the likert rating the mean value showed that majority of the respondents disagree with these assertions. The study elicited the opinion of respondents on the issues concerning training and career development and the outcome depicted an average of approximately 3 and a corresponding standard deviation of 1.1487 which clearly shows a certain level of agreement with the fact that training and development exerts influence organisational productivity. Respondents were also, quizzed on the relationship with Co-Workers with results showing a mean of about 3 and a standard deviation of 0.8327 which evidence that the level of satisfaction expressed by stakeholders regarding the effect of relationship with co-workers and organisational productivity. Based on the likert scale, it shows that respondents agree with this assertion. Finally, the effectiveness of employee wellbeing with respect to organisational productivity was also checked, the results indicated a mean of 3 and a standard deviation of 0.9243 which shows that the employee wellbeing was satisfactory given the opinion of the respondents. The result also, showed that minimum and maximum had an output values of 1 and 4 respectively for all variables which shows a complete absence of outliers.

Correlation Coefficient Matrix

The table below show the pearson correlation coefficients between all combinations of dependent and independent variables. The correlation matrix is used to determine the relationship between the dependent and independent variables of the study.

Variables	OP	EC	TCD	RWC	EWB
OP	1.0000				
EC	0.9407	1.0000			
TCD	0.9607	0.9686	1.0000		
RWC	0.7386	0.7055	0.7734	1.0000	
EWB	0.9048	0.9208	0.9233	0.5673	1.0000

Source: STATA Output, 2021.

A correlation matrix shows the correlation coefficients between sets of variables. Each random variable in the table is correlated with each of the other corresponding values in the table. This allows you to see which pairs have the highest correlation. In this table the correlation between the dependent variable (organisational productivity) and the employee motivation explanatory variables (Employee Compensation (EC), Training and Career Development (TCD), Relationship with Co-Workers (RCW) and Employees Welbeing (EWB)) is presented. The result indicates an all positive correlation between the dependent and independent variables with training and career development having the highest correlation with the dependent variable.

Multicollinearity Test

Multicollinearity is a statistical situation where some independent variables in a multiple regression model are highly auto-correlated. When multi-collinearity occurs, the correlated predictors provide redundant information about the responses (Lauridsen & Mur, 2005). It is important to undertake a multi-collinearity test to help reduce the variables that measure the same things (Robert, 2007). According to O'Brien (2007), the Variance Inflation Factor (VIF) measures the impact of collinearity among the variables in a regression model. Values of VIF that exceed 10 are often regarded as indicating multi-collinearity problem.

Variable	VIF	1/VIF
EC	1.26	0.790524
TCD	1.21	0.827585
RCW	1.13	0.887705
EWB	1.05	0.954342
MEAN VIF	1.46	

Source: STATA OUTPUT, 2021.

Table above showed that VIF and tolerance value for all the variables had mean VIF of less than 10 and tolerance of higher than 0.05. It therefore, implies that there was no multi-collinearity among the independent variables.

Homoscedacity Test for Organisational Prodcutivity

Homoscedascity means that the previous error terms influence other error terms and hence violating the statistical assumption that the error terms have a constant variance. A test for homoscedascity is made to test for variance in residuals in the regression model used. If there exists equal variance of the error terms, we have a normal distribution. Lack of an equal level of variability for each value of the independent variables is known as hecteroscedastitcity, the Breusch-pagan test developed by Breusch and pagan (1979) was used to test for homogeneity in a linear regression mode. The rule is that if p-value is greater than 0.05, Ho is accepted and H1 is rejected, if the p-value is less than 0.05, Ho is rejected and H1 is accepted.

Test for Hecteroscedastitcity in the response and residuals.

1.003	3	0.2080
Test – Statistics	Df	Sig

The result of the test shown in the table above indicate that the test statistic is 1.003 p-value = 0.2080. since the p-value is greater than 0.05. The null hypothesis was accepted and concluded that the data is homogeneous in nature (that is, the data is not heterogeous in variance), which satisfies the assumption of the regression.

Summary of Regression Results

This section analyses and presents the regression results of the model of the study. The study specifically, presented the summary of the regression result, the result of the individual explanatory variables and discussion of findings.

R Square	0.9269		
Adj. R square	0.9258		
F. statistics	890.22	0.000	

Source: STATA OUTPUT, 2021

The result of the multiple regression in the table above indicates an $R^2=0.9269$. The R-squared value of 0.9269, gives an indication that there is a strong linear relationship between the dependent and independent variable. The R-squared indicates that the explanatory power of the independent variables is 93%. This means that about 93% of the effectiveness of organisational productivity can be explained by the independent variables while the remaining 7% is explained by variables not included in the model. The adjusted R-squared which is slightly lower than the R-squared value is a precise indicator of the strength of the relationship between the dependent and the independent variables because is sensitive to the addition of irrelevant variables. The table above also, showed that the model is fitted as indicated by the F-Statistics of 890.22 which is significant at 1% level of significance (as evidenced by the p-value of 0.0000).

HO₁: Employee Compensation has no significant effect on organisational productivity in Nigeria.

Variables	Coefficient	P-Value
Empolyee Compensation	0.1335198	0.039
Constant	-.1351196	

Source: STATA OUTPUT, 2021.

The result from the table above shows that empolyee compensation has a coefficient of 0.1335198 and a p-value of 0.0039. Based on the p-value which is less than the t-statistic of 0.05, the study therefore, rejects the null hypothesis which states that, employee compensation has no significant effect on organisational productivity in Nigeria.

HO₂: Training and career development has no significant effect on organisational productivity in Nigeria.

Variables	Coefficient	P-Value
Training and career development	0.6297243	0.000
Constant	-.1351196	

Source: STATA OUTPUT, 2021.

From the table above, training and career development has a coefficient of 0.6297243 and p-value of 0.0000. Based on this finding which is evidenced by a p-value of 0.0000 we reject the null hypothesis which states that training and career development has no significant effect on organisational productivity in Nigeria.

HO₃: Relationship with Co-Workers have no significant effect on organisational productivity in Nigeria.

Variables	Coefficient	P-Value

Relationship with Co-Workers	0.143175	0.057
Constant	-.1351196	

Source: STATA OUTPUT, 2021.

The result in the table above showed a coefficient of 0.143175 and a p-value of 0.0057. Considering the p-value which is greater than the t-statistics 0.05, the study accepts the null hypothesis which states that Relationship with Co-Workers have no significant effect on organisational productivity in Nigeria.

HO4: Employee Wellbeing have no significant effect on organisational productivity in Nigeria.

Variable	Coefficient	P-Value
Employee Wellbeing	0.1795519	0.003
Constant	-.1351196	

Source: STATA OUTPUT, 2021.

The result of the regression indicated a coefficient of 0.1795519 and a p-value 0.003. Considering that the p-value is less than the t-statistics we reject the null hypothesis which states that employee wellbeing have no significant effect on organisational productivity in Nigeria.

CONCLUSIONS

Based on the result of the study, it was concluded that employee compensation has a positive influence on organisational productivity in Nigeria. The study also, concluded that training and career development go a long way in ensuring that employees acquire the require skill and development process necessary to create inputs that translate to organisational productivity. The study again concluded that relationship with co-workers does not exert any significance influence on organisational productivity. Finally, the study concluded that employee wellbeing has significant on organisational productivity in Nigeria.

RECOMMENDATIONS

The following recommendations are made based on the findings of the study;

- i. The organisation should design a payment and compensation system that keep the employee motivated and by paying employee commensurate with the kind of job they do.
- ii. Managers must ensure employees are adequately motivated. Employee well-being should be given due consideration and health and well-being programs should be organized to cater for the needs and welfare of employees.
- iii. Management should encourage interpersonal relations amongst co-workers and their managers to promote a sense of belonging and unity amongst staff. Also, managers should ensure employees are involved in decision making processes and given a chance to air their views.
- iv. Management must also strive to ensure that all employees engage in training programs to acquire new skills and also have equal opportunity to utilize their skills and competencies. Management should make sure that career development opportunities are clearly communicated to employees.

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EFFECT OF SMALL AND MEDIUM SCALE ENTERPRISES ON EMPLOYMENT GENERATION IN JALINGO METROPOLIS, TARABA STATE

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ABSTRACT

One of the major problems facing Nigeria today is unemployment. Establishment of Small and Medium Scale Enterprises (SMEs) is largely seen as a possible panacea to ameliorating the impact of unemployment in the society. Given this assertion, this study examined the effect of SMEs on employment generation in Jalingo Metropolis. Specifically, the study examined the combined effects of SMEs orientation, finance and technical support, policy formulation and implementation and socio-economic environment on employment generation in Jalingo Metropolis. The study adopted a survey research design. Population included all the 717, 909 registered SMEs in Taraba State while the sample size of 400 respondents was determined using Taro Yamane sampling size determination technique. A four-point likert scale questionnaire was used to elicit the opinion of the respondents after the test for reliability was conducted. The study adopted the use of multiple regression analysis technique to analyse the data and results showed that SMEs orientation, finance and technical support and socio-economic environment have positive and significant effect on employment generation while policy formulation and implementation have an insignificant effect on employment generation in Jalingo metropolis. Based on the findings the study concluded that SMEs have significant influence on employment generation. In view of this, the study made some useful and practical recommendations to be adopted in order to encourage SMEs for greater employment generation. Among these are implementation of power sector reforms and stabilization of the power sector; control of religious, ethnic and political crisis; development of infrastructure such as roads, schools and vocational training and orientation centres.

Keywords: SMEs, Employment Generation, Vocational Training, Orientation Centres.

INTRODUCTION

The role of small and medium enterprises (SMEs) in the economic and social development of a nation cannot be overemphasized. The SME sector is considered as the starting point of entrepreneurship, which is often driven by its efficiency, flexibility, individual creativity and in general its innovative entrepreneurial spirit. It is a key indicator of the overall performance of an economy where it is responsible for most of the employment opportunities realized and jobs created. The sectors' dynamic nature makes it exposed to a high mortality rate occasioned by sudden shifts in economic policy, global trends, global shocks in international markets and many unforeseen situations (Udoh, Gbade & Acha, 2018). In overall economic development, a significant role is played by the small and medium enterprises where it promotes its resistance level in competition, productivity growth and as well have external benefits on the economy at large. When this level is attained efforts are however directed towards government support and involvement in exploiting countries social benefits. According to the Nigeria official definition of SMEs, and in line with 2019 data released by Small and Medium Enterprise Development Agency of Nigeria (SMEDAN), the Nigerian enterprise is predominantly microenterprise, with 96.81% of the total enterprises being microenterprise; 3.12% small enterprise and 0.07% were medium enterprise in the distribution of small businesses in Nigeria. This tends to suggest that the level of enterprise development is still relatively at the rudimentary level. The enterprise we have on the ground can be described as being owned by more of a proprietor than an entrepreneur. Also, one of the problems confronting Africa and Nigeria in particular is the issue of rising unemployment. The incidence of unemployment in Nigeria in this 21st century has become alarming (Gbam, 2017).

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The rates keep rising without any clear and appreciable efforts made by policy makers to cushion the effects. It is believed that if SMEs, are well attended to, they can mitigate against this rising unpleasant phenomenon. A substantial percentage of the enterprises in the world are MSMEs and they require a number of supportive structures, provisions and policies to facilitate their development (Mohammed. 2017).

The world has come to recognize the significant role SMEs (Small and Medium Enterprises) play in any economy's development to include employment generation, increase in output and source of export (IFC, 2013). At the same time, the literature explains that 50% or more of these SMEs do not survive beyond five years of establishment (Smallbone, 1998). Haltiwanger (2013) posited that the prowess of small firms' job creation lies in the start-up and young businesses. Juxtaposing these last two statements implies that some of the employment generated and output and export created by these SMEs are rather unsustainable because of the higher failure rates associated with the young small enterprises. If this is the case, then there is the need to ascertain if SMEs is actually fulfilling the role purported to it by the literature, and specifically, in the Nigerian economy.

In literature several studies have addressed the issue of the influence of SMEs on employment generation in different economies of the world with results advancing mix reactions. Apart from the inconsistent and mixed findings, most of these studies are done in advanced economies with viable policies. The findings of such studies cannot be used to take decisions in Nigeria due to ontological, methodological and behavioral complexities. Another fundamental gap is that the Nigerian studies centers on effect of SMEs on economic growth ignoring its micro contribution to employment generation. The very few on employment generation were carried out in big cities such as Lagos, Abuja etc without particular attention to developing states like Taraba. The studies also failed to consider SMEs orientation to be an important factor in SMEs growth and survival. This study is unique in relation to all other studies in the Nigeria economy, in terms of the area covered, the unique combination of variables and the method of data analysis technique to be used (multiple regression analysis technique). Given the operational problem stated and the gap existing in literature this study seeks to access the effect of SMEs on employment generation in Jalingo Metropolis. The outcome of this study will be of benefit to business owners, managers and organizations especially in the locality where this study is being conducted. This is to enable them understand the importance and contribution of SMEs to employment generation. Furthermore, aid government agencies in making and implementing policies that would enhance the stability, growth and development of SMEs throughout the country especially, in matters concerning their growth and survival by seeking ways to ensure that the necessary incentives and atmosphere is created to enable SMEs succeed. The rest of the study is structured in such a way that the next section discusses the literature review, methodology, results and conclusion. The following hypotheses will guide the study;

HO₁: SMEs orientation has no significant effect on employment generation in Jalingo Metropolis.

HO₂: SMEs finance and technical support have no significant effect on employment generation in Jalingo Metropolis.

HO₃: SMEs police formulation and implementation have no significant effect on employment generation in Jalingo Metropolis.

HO₄: Socio-economic factors have no significant effect on employment generation in Jalingo Metropolis.

LITERATURE REVIEW

Small and Medium Scale Enterprises (SMEs)

The term 'small business' covers a variety of firms (Hertz, 1982; Nguyen & Bellehumeur, 1983) and it is used loosely in most of the literature. According to Peterson, Albaum and Kozmetsky (1986), a small business is one which is independently owned and operated and which is not dominant in its field of operation. Researchers and other interested parties have used specific criteria to operationalize the small business, from the perspective of value added, value of assets, annual sales, and number of employees. Annual sales and number of employees are most often used to delimit the category. The problem of definition confronts all researchers as well as operators in the field. A review of the literature on Small and Medium Enterprises (SMEs) shows that the definition of SMEs significantly varies from country to country depending on factors such as the country's state of economic development, the strength of the industrial and

business sectors, the size of SMEs and the particular problems experienced by SMEs (Harabi, 2003). Hence, there is no uniform or universally accepted definition of SMEs (Investment Climate Assessment (ICA), 2009).

In Nigeria, parameters such as asset base (excluding land), the number of workers employed and the annual turnover are used for the classification of SMEs. Carpenter (2001) maintains that there is no one definition for SMEs; they are defined in Nigeria and other countries based on one or all of the following: the size or amount invested in assets excluding real estate; the annual turnover and the number of employees. The 1992 review by the National Council on Industrial Standards (NCIS) defined small and medium scale enterprises (SMEs) as enterprises with total cost (including working capital but excluding cost of land) of more than N31m, but not exceeding N3,150million, with a labour size of between 11 and 100 employees. There is, however, a consensus of opinions when it comes to defining SMEs in terms of asset base than on any other parameter. This is because in case of an economic depression, the impact on turnover and employment base would be greater than the impact on asset base. For instance, during a depression, there is a tendency for turnover and the number of people employed to fall substantially, while the asset base may be unaffected (NCIS, 1992).

Definitions of SMEs by Nigerian Institutions

Parameter	Total Assets N'M			Annual Turnover N'M			No. of Employees		
Nigerian Institutions	MSE	SSE	ME	MSE	SSE	ME	MSE	SSE	ME
Fed. Ministry of Industry	<200	<50	n.a	n.a	n.a	n.a	<300	<100	<10
CBN	<150	<1	n.a	<150	<1	n.a	<100	<50	n.a
NERFUND	n.a	<10	n.a	n.a	n.a	n.a	n.a	n.a	n.a
NASSI	n.a	<40	<1	n.a	n.a	n.a	n.a	3-35	n.a
NASME	<150	<50	<1	<500	<100	<10	<100	<50	<10
Nigerian Industrial Policy	n.a	<2	<1	n.a	n.a	n.a	n.a	n.a	n.a

Source: World Bank, SME Country Mapping 2001

The World Bank Group prescribed the following definition based on number of employees, total assets and turnover. The body defined SMEs as follows; Micro-enterprise: Employs 10 or less, with total assets of \$100,000 or less, and turnover of \$100,000 or less. Small enterprise: Employs between 11 – 50 people, with total assets of \$100,000.00 - \$3m, and turnover of \$100,000.00 - \$3m. Medium enterprise: Employs 51 – 300 staff, total assets of \$3m - \$15m, and turnover of \$3m - \$15m.

The Nigerian Industrial Policy (1989), defined SMEs as those with total investment of between \$13,000 and \$260,000 (N100, 000 and N2m) excluding land and working capital, while micro enterprises and cottage industries were defined as those with investments not exceeding \$13,000 (N100,000) excluding land but including working capital (Naira/Dollar exchange rate 1989 is N7.6/\$1, CBN Statistical Bulletin, 2005).

The SMEs of the World Bank Group proposed the following definitions: Micro Enterprises: Employment, 10 or less, Total assets; \$100,000 or less, and Turnover; \$100,000 or less. Small Enterprises: Employment, 10 – 50, Total Assets; \$100,000 - \$3m, and Turnover; of \$100,000 - \$3m. Medium Enterprises: Employment; 50 – 300 staff, total assets; of \$3m - \$15m, and Turnover; \$3m - \$15m (World Bank, 2007).

Small and Medium Enterprise Equity Investment Scheme (SMEEIS), a private initiative by the Bankers Committee defined SME as enterprises with an asset base not exceeding \$3.85 million (N500 million) excluding land and working capital with staff strength of not less than 10 and not more than 300 (Sanusi, 2003).

A common feature of these definitions is that SMEs are usually small, owner or family managed businesses with basic goods and services. SMEs also tend to lack the organizational and management structures, which characterize large-scale enterprise. Urban SMEs tend to be more structured than their rural counterparts. The National Policy on SMEs adopts a classification based on the dual criteria: of employment and assets (excluding land and buildings), as follows:

SMEs Orientation

Entrepreneurial orientation represents strategy making processes that provide organizations with a basis for entrepreneurial decisions and actions (Rauch & Wiklund, 2009). It encompasses specific organizational-level behavior to perform risk-taking, self-directed activities, engage in innovation and react proactively and aggressively to outperform the competitors in the marketplace and hence enhances firm performance (Lumpkin & Dess, 1996; Hakala, 2011). Entrepreneurial orientation is defined as the process, practice and decision-making that lead to new business ventures (Lumpkin & Dess, 1996). It is a set of behaviors including willingness to take risks, innovativeness, proactiveness, autonomy and competitive aggressiveness (Bolton and Lane, 2012). Unarguably, entrepreneurial orientation is an inherent trait for entrepreneurs with five dimensions (Beattie, 2016). According to Rauch et al. (2009), the dimensions of risk taking, innovativeness and proactiveness are widely cited by the researchers. In the present study, creativity and innovativeness, risk taking propensity, proactiveness and autonomy are the four dimensions of entrepreneurial orientation to associate with entrepreneurial competencies and enterprise performance. Besides that, it is also possible to fit other dimensions into the broad boundaries of entrepreneurial orientation.

An entrepreneurial orientation is defined as the dimensions of entrepreneurial behaviour along which opportunity is pursued, these consisting of proactiveness, innovativeness, competitive aggressiveness, autonomy and risk-taking propensity: the processes of entrepreneurial behaviour as developed by Lumpkin and Dess (1996). This process is considered analogous to the “how” of entrepreneurship, a learnable orientation as offered by Stevenson and Jarillo (1990). The use of an entrepreneurial orientation construct is fundamentally undertaken in order to resolve certain of the contradictions inherent in attempts at the operationalisation of entrepreneurial behaviour and particularly the measurement of the contribution of entrepreneurship as firm behaviour (Lumpkin & Dess, 1996) to performance. An example of this contradiction is that according to certain theorists many critical characteristics are not evident in different individuals described as entrepreneurial by other theorists (Stevenson & Jarillo, 1990). According to Naldi (2007) entrepreneurial orientation (EO) is an established construct that has attracted substantial research. Generally, this research finds support for positive relationships between all dimensions of EO (including risk taking) and performance.

SMEs Finance and Technical Support

Financial support was given to SMEs through the establishment of Development Finance institution (which include the Nigerian Agricultural Cooperative and Rural Development Bank, the Bank of industry, etc.), the introduction of the Small and Medium Industries Equity Investment Scheme (SMIEIS) that enable batiks to invest in equity of SMEs. Others are the establishment of the National Directorate of Employment (NDE), the SMEs Loan Scheme, and the Fund for Small Industries Credit Scheme. Over the years the Central Bank of Nigeria has through its credit guidelines required deposit money banks to allocate a stipulated minimum credited to the preferred sectors (including the SMEs.). Most recently, the CBN has directed that all Community Banks in the country should be converted to Micro Finance Banks institution to grant loans to Small and Medium Scale Enterprises in the country. Today, community banks have thus been changes to micro-finance banks.

Lack of credit facilities is another major factor that affects entrepreneurship development, SMEs productivity and Nigeria's business environment. According to Mishra, Igwe and Lean (2014), lack of finance is the main issue that confronts African youths striving to establish and build their business. The authors defined inaccessibility of finance as a situation in which poor people were unable to obtain formal financial services due to their vulnerability. In Nigeria, it has been observed that financial issues are the commonest distinctive, confronting young Nigerians that want to establish and grow their own business. An academic research by Igwe, Newbury and Icha-Ituma (2018) indicated that financial service landscape of Nigeria is generally characterized by the absence of safe, affordable and reliable financial services. Less privileged and poor Nigerians have been unable to access formal financial services from the Central Bank of Nigeria and the traditional banking system. This is due to the loan requirements, which are beyond the scope and ability of an average Nigerian citizen. Consequently, many prospective entrepreneur and ordinary Nigerians are left with no other option than to patronize the informal credit lenders, most of whom charge an extremely high interest rate. Igwe et al (2016) observe that the situation is further compounded by the fact that these informal credit lenders typically offer just short-term loans.

SMEs Policy Formulation and Implementation

In every country, the existing governmental policies have the potential to affect the operation as well as performance of every SME. Such impacts can be explained from the technical point of view. Base on this perspective, the specific governmental policies that can have direct or indirect effects on businesses include taxation, subsidies, interest rates and exchange rates. The government taxation policy has been widely recognized as one factor that can affect the performance of every business. For instance, the imposition of high taxes on specific imported products will ultimately encourage local businesses to produce more of such goods. But if the taxation on raw materials required for local production is high, then the local entrepreneurs may be discouraged to commence or continue production. Any increase on corporation tax will have the same impact as rising production cost. In order to cover such costs, entrepreneurs may be forced to increase the price of their finished products. Other taxes that can have the same effects include: value added tax (VAT) and environmental taxes. Even though VATs are specifically for the final consumers, the business may incur considerable costs when administering the VAT system. The government's financial policy and banks' interest rates can also have considerable effects on economy as well as the business environment (Okojie, 2013).

For instance, if the bank's lending rate is high, then SMEs will be discouraged to borrow from the financial institution. Unfortunately, such trend will result to a considerable fall in the rate of investments, as companies will not have enough money for more investments. It is important to note that the government is primarily responsible for the creation of frameworks and rules that guide business operations in the country. Such rules are not always constant, and may change from time to time, thereby forcing entrepreneurs to change how they operate their businesses. Thus, government policy can have huge effects on the operations as well as performance of SMEs establishments. In every country, the government's contribution to the nation's economy remains the most essential aspect of its economic policy. After the Second World War, several governments of the world became increasingly involved in the economy, through the establishment of state-run industries. Many of these industries exist in form of public corporations. But the 1999 saw an era of massive privatization, as many private investors took over the government owned corporations. Nigeria is not left out in this trend. However, these private acquisitions make the business environment to become even more competitive (Okojie, 2013).

The interest rate is another prominent aspect of economic policy that depends largely on the government's specifications (Ocampo & Vos, 2008). In Nigeria, this responsibility is overseen by the Monetary Policy Committee, which has monthly meeting with the primary objective of determining the exact level of interest to adopt in the country's economy. Unarguably, whatever decision they take will be felt instantly by entrepreneurs that operate in the country. For example, any increment of interest rates will result to a complementary rise in the costs of doing business. It can also have considerable negative impacts on the consumers' purchasing power, thereby triggering massive fall in the volume of business sales. The government's spending policy is another factor that can have significant impact on business operations (Wallace, 2000).

Socio-Economic Environment

Nigeria since independence has been undergoing some economic strangulation that has impoverished the nation and its citizenry over the years. The Centre for Gender and Social Policy Studies (CGSPS), in a communiqué early in the year 1999 observed that the general socio-economic situation in Nigeria over the years had deteriorated and consequently, poverty has increased. It was agreed that Nigeria has descended to join the group of low-income countries and poverty is pervasive and deep-seated in the country. It also pointed out that there a lot of unrecognized poor in Nigeria today especially in the rural areas (which of course included the several riverine fishing communities), which have not benefited economically from government agricultural development policies.

The Vanguard newspaper of May 15, 1997 (page, 6) depicts the situation by reporting that many Nigerian families can no longer provide enough food, adequate shelter, comfortable accommodation, decent clothing and proper Medicare for family members. In some cases, the breadwinner, father or mother is out of job. In several other cases both father and mother and even the children have jobs but their incomes fall flat in the face of inflation and high cost of living. People die of hunger and starvation for lack of money to buy foods and drugs. Individuals in the rural communities (especially in the riverine areas) live in shacks and houses with leaky roofs because of their inability to pay house rents. The same report has it that poverty level in Nigerian family rose to about 75% in 1997. Polygamous marriage was prevalent in these rural areas as well as the high numbers of children per family contribute to family poverty. Nigeria's demographic profile in 1995 indicated a population of 111.7 million with an average household size of 5.0, population growth rate of 2.83%, rural population of 64% compared to 36% urban population and a 6.2% urban growth rate. It estimated that the mean age of marriage is 16.9 years (a common situation of the in the rural areas among the young girls and adolescent women as a result of their lack of adequate educational background and/or education training institutions. The total fertility rate (National average) is 6.0%, 15-49-year female population is 25.2 million- and 15-49-year male population is 22.9 million. Children 6-11 year population is estimated to be about 19.3 million, under five population is 17.1 million and under one population is 2.5 million and doubling time with the quoted growth rate (2.83%) is 25 years, hence, the socio-economic potentials of individuals (for example the women in the riverine) in the small-scale enterprises is significant. Some characteristics like age, gender, and individual background such as education and former work experience have an impact on entrepreneurial intention and endeavour (Kristiansen, et al, 2003) found that human capital or human resource such as age, gender, education and experience is a further influence on the decision to become self-employed.

Employment Generation

Job creation is simply the provision of new opportunities for paid employment, especially for those who are unemployed. It is also a term used in various definitions of economic development indicating that one objective for its practice is to indirectly produce job opportunities. The creation of replacement jobs for the unemployed and underemployed is one of the keys to sustainability. There has been a pooled expression of entrepreneurship and small-scale enterprises as a process of job creation. Job creation can occur when the unemployed become ambitious and start their own business in easy entry industries and markets. This is usually accomplished when an unemployed person turns into an entrepreneur and goes into business to compete in the industry his is familiar with for many years. These new businesses create jobs simply by innovating and implementing the ideas that were ignored when he was employed. Job creation through ideas is also observed. Innovate, create, invent, and invest. The most difficult but the most effective way to create long-term employment is to create new industries. It truly is the hardest way but the best way to continually grow an economy that can support its citizens with employment. There are many opportunities on the horizon. Ideas that will lead to innovation are alive and waiting somewhere. Entrepreneurship enlivens them.

Unemployment is generally regarded as a symptom of basic microeconomic disequilibrium. What is, however, controversial is the appropriate conceptualization of the subject matter. Much controversy over the definition of unemployment revolved around the distinction between "voluntary" unemployment. Voluntary unemployment is said to exist when persons choose not to work or accept job for which they are qualified at the going wage rate and conditions probably because they have means of support other than employment. On the other hand, involuntary unemployment exists when persons cannot obtain work/job for which they are qualified even if they are willing to accept lower real wages or poor conditions than similar qualified workers who are currently in employment (Anyanwu & Oaikhena,

1995). The International Labour Organisation (ILO) defines the unemployed as members of the economically active population, who are without work but available for and seeking for work, including people who have lost their jobs and those who have voluntarily left work (World Bank, 1998).

According to Casson (1979), an unemployed person is someone who is actively seeking a job of certain specification and would be willing to accept such a job if it were offered at the prevailing market wage. Jhingan (2010) defines unemployment as “involuntary idleness of a person willing to find work”. This implies that voluntarily unemployed persons who do not want to work are not considered unemployed. In the view of Douglass and Gbosi (2006), unemployment is the difference between the amount of labour employed at current wage levels and working conditions and the amount of labour not hired at these levels. Employment is not just a simple term denoting the mere holding of a job, in which a wage is paid or the operating of one’s business venture. Rather, it entails the state of someone who is working under the circumstances he most wants. Such a person is said to be gainfully employed. Douglass and Gbosi (2006) defines employment as a situation in which people who are willing to work at the prevailing wage rate are able to find jobs. In his view, Mouly (1972), perceived employment as a situation in which remuneration in cash or in kind is received in exchange for active, direct participation in the production process. Wikipedia, the free encyclopedia defines employment as a relationship between two parties, usually based on a contract where work is paid for, where one is the employer and the other is the employee.

Empirical Review

Al-Haddad, Sial, Ali, Alam, Khuong and Khanh (2019) examined how SMEs contribute to the economy in terms of employment generation and economic growth of the country Pakistan. The total number of employees was 255 being selected randomly from Swat marble industries. A questionnaire was constructed and distributed to the selected respondents. The responses were collected and analyzed using the Statistical Package for Social Sciences (SPSS) analytical tool. The study exposes that SMEs play a vital role in employment generation. There is a positive relationship between SMEs and unemployment reduction. Alabi, David and Aderinto (2019) evaluated the impact of government policies on business growth of small and medium enterprises that operates in six states that made up the South-west geopolitical zone of Nigeria. The study adopted descriptive ex-post facto type and involved both primary and secondary data. Structured questionnaires were used as the main tools data collection. Both the descriptive and inferential analytical techniques of the SPSS packaged were used to analyze the data obtained from the respondents. The result of this research shows that there is a significant relationship between government policy and business growth of Small and Medium Enterprises (SMEs) in South Western Nigeria.

Udoh, Gbande and Acha (2018) investigated the impact of monetary policy and growth of SMEs in Nigeria from 1986 to 2016. The research design adopted for this study is ex-post facto research design, and the Error Correction Model (ECM) was used to analyze the time series data, whereas the Johansen co-integration approach was employed to test for the long-run relationship among the series. The findings reveal that there is a slight significant effect between interest rate (INR) and growth of SMEs in Nigeria, but no significant effect between both exchange rate and inflation on the growth of SMEs in Nigeria. Pessu and Agboma (2018) examined the impact of trade-related policies on SMEs fabric manufacturers operating in the Nigerian textile industry. In identifying and addressing the issues posed by trade policies as part of achieving the research objective, a qualitative mode of inquiry with a case study approach was employed. Semi-structured In-depth interviews were conducted with the managers of three formally registered SMEs fabric manufacturing firms in Lagos State, Nigeria. The findings were interpreted using thematic analysis. The findings indicate that the challenges faced by SMEs in the Nigerian textile industry are linked to the lack of supportive and measurable policy and regulatory frameworks to accompany the implementation of liberal policy in the country.

Aigbedion, Anefu-Apochi, Ezulike and Madaki (2018) examined the impact of Small and Medium Scale Enterprises in Nigeria: A Case Study of Abuja Municipal Area Council (AMAC). The study adopted primary method of data collection using structured questionnaire with three sections for data collection from the respondents. Three hundred and thirty-three (333) were distributed out of which three hundred and fifteen (315) were properly filled and returned by the respondents. The chi-square was used to test the research hypotheses. From the result it was shown that SMEs activities in Abuja Municipal Area Council (AMAC) have positive impact on the wellbeing of citizens, job creation, availability of goods and services in meeting the needs of citizens and also income generation for entrepreneurs. Gbam

(2017) examined the impact of SMEs on employment generation in Plateau State, Nigeria. Survey research method was adopted. A sample of one hundred and thirty-three (133) small business owners was drawn from the population. The chi-square technique was employed for the analysis of the data collected. The findings show that SMEs have significant impact on employment generation in Plateau State through increased expansion of markets for local goods and services, improved economic growth and development, and a reduction in the unemployment problems of the state.

Mohammed (2017) assessed the impact of SMEs on employment generation in Nigeria. It covered SMEs employing below 200 persons in all the 36 States of the Federation including the Federal Capital Territory, Abuja. The results of the study revealed that most of the constraints hindering SME business growth in Nigeria are lack of financial support, poor management, corruption, insecurity in Nigeria. Obunike (2016) explored the roles of the SMEs in economic development, employment creation and promotion of inclusive growth. Fifty (50) questionnaires were administered in relatively lowly-staffed-companies because of their nature- SMEs; the target employees were supervisors upward in the hierarchy of management. Out of 50 questionnaires sent to the selected population used for the study, 47 were filled and returned to the researcher. Findings among others showed that 68.07% of the study population confirmed that lack of access to finance is a major factor/challenge militating against the SMSs from playing their roles in employment creation and inclusive growth.

Theoretical Framework

Entrepreneurship Theory

Entrepreneurship theory is a blueprint or road map that guides the entrepreneur toward the achievement of expected goals. Thus, the theory of entrepreneurship is the synthesis of the concepts and principles of entrepreneurship. Entrepreneurship theory attempts to present in a concerted manner loose fact about creating, sustaining and/or expanding existing organizations. It attempts to present reasons why people engage in entrepreneurship. Some scholars believe that people become entrepreneurs because of intermediating psychological motives. Examples of such scholars are Schumpeter (1934), McClelland (1961), and Everett (1963). Another school contains the views of scholars who belief that entrepreneurs are created by social, cultural and religious variables found in the society. Some of such scholars are Weber (1958), and Cochran (1965). Yet another school of thought is made up of scholars who see reasons for people becoming entrepreneurs, as purely economic. Some of such scholars are Papanek (1997); Harris, (1968), and Yanamura (1968). While the model shares the cannon of resource-based approach, it emphasizes the principle of demand and supply. Here, the supply of entrepreneurial services is a function of social-psychological variables and to some extent, the past amount of entrepreneurial training received. If an individual has been trained by a successful entrepreneur, he would be willing to supply or use the knowledge or experience he has gathered. If an individual is naturally talented and can create things needed by the society, such individual will be pushed into entrepreneurship by his talent, especially, the need to supply what is needed by the society and its members. This is called supply push.

On the other-hand, demand is a function primarily of investment opportunities. Under this model, changes in the structure of social incentives will attract more individuals into entrepreneurial pursuits like the establishment of small business. The more business opportunities that are created in a society, the more the individuals who would want to exploit such opportunities at a profit. Whatever school of thought one adopts, it leads to opportunity identification, product/service creation and value addition.

METHODOLOGY

This study adopted a positivist research philosophy or approach and a descriptive survey research design. The population of the study comprised of 717, 909 (SMEDAN 2019) registered SMEs in Taraba State Nigeria. In selecting the sample size, the study adopted the sample size determination formula in social sciences propounded by Taro Yamane (1967). The formula takes into consideration 95% confidence level and 5% sampling error level. To get the sample population for the study therefore the equation is substituted with the population as shown in Table below.

The formula is:
$$n = \frac{N}{1 + N(e)^2}$$

Where n = Sample size or respondents for the study.

N = Population size

e = the level of precision (95% confidence level or 5% error of sampling)

$$\text{Therefore, } n = \frac{N}{1 + N(e)^2}$$

Where n = Sample size

$N = 717,909$

$e = 0.05$

$$\begin{aligned} \text{Hence, } n &= 717,909 / 1 + 717,909 (0.05)^2 \\ &= 717,909 / 1 + 717,909 (0.0025) \\ n &= 717,909 / 1 + 1794.77 \\ n &= 717,909 / 1795.77 \\ n &= 399.777 \end{aligned}$$

$$n = 400$$

The study used non-probability sampling technique - purposive sampling in selecting the samples. The study used purposive sampling because the researcher has a particular purpose in choosing the respondents with specific characteristic that will participate in the study. Some of the characteristics considered within this sample are those involved fashion, designing, restaurants, printing press with formal education and have their businesses situated within Jalingo Metropolis. This study collected data from primary and secondary sources. Primary data will be collected through questionnaires. The survey questionnaire will comprise of a set of questions. A four-point Likert rating scale was used to measure all variables. The response pattern was 'Strongly Agree' (SA), 'Agree' (A), 'Disagree' (D), and 'Strongly Disagree' (SD). The lowest rating of 1 will signify a low rating by the respondents while a rating of 4 will signify the highest rating by the respondents.

Reliability Test

The reliability of an instrument refers to its ability to produce consistent and stable measurements. Reliability of this instrument was evaluated using Cronbach Alpha which measured the internal consistency of a construct. Cronbach Alpha value is widely used to verify the reliability of the construct. The reliability is expressed as a coefficient between 0 and 1.00. The higher the coefficient, the more reliable is the test.

Table 1: Alpha Test

Variable	α =Alpha	Comment
SMEs Orientation	0.8746	Reliable
SMEs Financing	0.9214	Reliable
SMEs Policies	0.8756	Reliable

Socio-Economic Environment	0.8460	Reliable
Employment Generation	0.9680	Reliable

Source: STATA Output, 2021.

The result indicated that all the variables have no reliability constraint because the widely acceptable threshold is 0.7 and since all variables depicted an Alpha value above 0.7 the instrument is considered reliable. This represents significant degree of reliability and on this basis, it is supported that the scales used for the study are reliable to capture the variables. The most common reliability coefficient is Cronbach's alpha which assesses internal dependability by defining how all variables on a test relate to each other and to further test- internal consistency or coherence of data. The reliability is expressed as a coefficient between 0 and 1.00. The higher the coefficient, the more dependable is the test.

The study used regression analysis to assess causal relationship between SMEs operating dimensions and Employment Generation. The model for the study is specified thus:

$$EG_{it} = \beta_0 + \beta_1 SO_{it} + \beta_2 FTS_{it} + \beta_3 PFI_{it} + SEE_{it} + U_{it} \dots \dots \dots (i)$$

Where;

EG= Employment Generation

SO = SMEs Orientation

FTS = SMEs Finance and Technical Support

PFI = SMEs Policies Formulation and Implementation

SEE= Social Economic Environment

β_0 = intercept/constant term

$\beta_1, \beta_2, \beta_3, \beta_4$, = coefficients of determination

U_{it} = error terms

RESULTS AND DISCUSSIONS

This chapter covers the presentation and analysis of the data collected for the study. Four hundred (400) questionnaire were administered to managers and owner managers of registered SMEs in Jalingo Metropolis. The study hypotheses were tested at 5% level of significance. The number of questionnaires distributed was 400 out of which 326 were appropriately completed and returned. Indicating a total response rate of 74% which is considered very good for the study (Babie, 2004).

Descriptive Statistics

A descriptive statistic explains the behavior of data used for any study. For the purpose of this study, the behavior of primary data collected from the sampled respondents expressed in mean, standard deviation, minimum and maximum is explained below.

Table 2 Descriptive Statistics

Variables	MEAN	STD. DEV.	MIN.	MAX
Employment Generation	2.5712	1.0905	1	4
SMEs Orientation	2.4796	1.0372	1	4
SMEs Finance and Technical Support	2.7384	1.1487	1	4
SMEs Policy Formulation and Implementation	3.0272	0.8327	1	4
Socio-Economic Environment	2.8691	0.9243	1	4

Source: Researchers Computation, 2021.

From the table above it can be seen that employment generation has a cumulative mean of 2.5712 with a corresponding standard deviation of 1.0905 which show that the respondents were almost equally divided in their opinion concerning the questions raised on employment generation and SMEs in Nigeria. It was also, found that SMEs orientation had mean of 2.4796 and a standard deviation of 1.0372 which also show that most of the respondents showed a negative view on the assertions concerning SMEs orientation. The study elicited the opinion of respondents on the issues concerning SMEs finance and technical support as an antidote of employee generation and the outcome depicted an average of 2.7384 and a corresponding standard deviation of 1.1487 which clearly shows a certain level of agreement with finance and technical support as a viable tool for employee generation but standard deviation figure evidence that respondents may not fully understand the concerns raised that area. Respondents were also, quizzed on the viability of SMEs policy formulation and implementation as a means of enhancing employment generation through SMEs with results showing a mean of 3.0272 and a standard deviation of 0.8327 which evidence the level of satisfaction expressed by stakeholders regarding the instituted SMEs policies. Finally, the effectiveness of socio-economic environment with respect to employment generation was also checked and the results indicated a mean of 2.8691 and a standard deviation of 0.9243 which shows that the socio-economic environment was satisfactory given the responses from the respondents. The result also, showed that minimum and maximum had an output of 1 and 4 respectively for all variables implying a complete absence of outliers.

Correlation Coefficient Matrix

The table below show the pearson correlation coefficients between all combinations of dependent and independent variables. The correlation matrix is used to determine the relationship between the dependent and independent variables of the study.

Correlation Matrix of the Independent and Dependent Variables

	EG	SO	FTS	PFI	SEE
EG	1.0000				
SO	0.9407	1.0000			
FTS	0.9607	0.9686	1.0000		
PFI	0.7386	0.7055	0.7734	1.0000	
SEE	0.9048	0.9208	0.9233	0.5673	1.0000

Source: STATA Output, 2021.

A correlation matrix shows the correlation coefficients between sets of variables. Each random variable in the table is correlated with each of the other values in the table. This allows you to see which pairs have the highest correlation. In this table the correlation between the dependent variable (Employment Generation) and the SMEs explanatory variables (SMEs orientation, finance and technical support, policy formulation and implementation and Socio-economic environment) is presented. The result indicates an all positive correlation between the dependent and independent variables with finance and technical support having the highest correlation with the dependent variable.

Multicollinearity Test

Multicollinearity is a statistical situation where some independent variables in a multiple regression model are highly correlated. It is important to undertake a multicollinearity test to help reduce the variables that measure the same things (Robert, 2007). According to O'Brien (2007), the Variance Inflation Factor (VIF) measures the impact of collinearity among the variables in a regression model. Values of VIF that exceed 10 are often regarded as indicating multicollinearity problem.

Variance Inflation Factor Measure of Multicollinearity Test

Variable	VIF	1/VIF
SO	1.26	0.790524
FTS	1.21	0.827585
PFI	1.13	0.887705
SEE	1.05	0.954342
MEAN VIF	1.46	

Source: OUTPUT Using STATA, 2021

Table above shows that VIF and tolerance value for all the variables have mean VIF of less than 10 and tolerance of higher than 0.05 it therefore implies that there was no multicollinearity among the independent variables.

Homoscedacity Test for Employment Generation

Homoscedascity means that the previous error terms influence other error terms and hence violating the statistical assumption that the error terms have a constant variance. A test for homoscedascity is made to test for variance in

residuals in the regression model used. If there exists equal variance of the error terms, we have a normal distribution. Lack of an equal level of variability for each value of the independent variables is known as heteroscedasticity, the Breusch-pagan test developed by Breusch and Pagan (1979) was used to test for homogeneity in a linear regression model. The rule is that if p-value is greater than 0.05, H_0 is accepted and H_1 is rejected, if the p-value is less than 0.05, H_0 is rejected and H_1 is accepted.

Test for Heteroscedasticity in the response and residuals.

1.003	3	0.2080
Test – Statistics	Df	Sig

The result of the test shown in the table below indicates that the test statistic is 1.003 p-value = 0.2080. Since the p-value is greater than 0.05. The null hypothesis was accepted and concluded that there is homoscedasticity in the data (that is, the data is not heterogeneous in variance), which satisfies the assumption of the regression.

Summary of multiple Regression Results

Variables	Statistics	p-values	
R Square	0.8269		
Adj. R square	0.8258		
F. statistics	890.22	0.000	

Source: STATA Output, 2021

This section analyses and presents the regression results of the model of the study. The result of the linear regression in the table below indicates $R^2=0.8269$. The R-squared value of 0.8269, gives an indication that there is a strong linear relationship between the dependent and independent variable. The R-squared indicates that the explanatory power of the independent variables is 83%. This means that about 83% of employment generation can be explained by the independent variables while the remaining 17% is explained by variables not included in the model. The adjusted R-squared which is slightly lower than the R-squared value is a precise indicator of the strength of the relationship between the dependent and the independent variables because it is sensitive to the addition of irrelevant variables. The table above also showed the model is fitted as indicated by the F-Statistics of 890.22 which is significant at 1% level of significance (as evidenced by the p-value of 0.0000).

Variables	Coefficient	P-Value	Decision @ 5%
SMEs Orientation	0.1335198	0.039	Accepted
Finance and Technical Support	0.6297243	0.000	Accepted
Policy Formulation and implementation	0.143175	0.067	Rejected
Socio-Economic Environment	0.1795519	0.003	Accepted

Source: STATA Output, 2021.

Hypothesis One

HO₁: SMEs Orientation has no significant effect on employment generation in Jalingo Metropolis.

The result from the table above shows that SMEs Orientation has a coefficient of 0.1335198 and a p-value of 0.0039. Based on the p-value which is less than the t-statistic of 0.05, the study therefore rejects the null hypothesis which states that SMEs Orientation has no significant effect on employment generation in Jalingo Metropolis. This implies that SMEs orientation exerts a significant influence on employment generation.

Hypothesis Two

HO₂: Finance and Technical Support has no significant effect on employment generation in Jalingo Metropolis.

From the table above, finance and technical support has a coefficient of 0.6297243 and p-value of 0.0000. Based on this finding which is evidenced by a p-value of 0.0000 we reject the null hypothesis which states that finance and technical has no significant effect on employment generation in Jalingo Metropolis. This means that SMEs finance and technical can be used an antidote for employment generation in the area covered by the study.

Hypothesis Three

HO₃: policy formulation and implementation has no significant effect on employment generation in Jalingo Metropolis.

The result in the table above showed a coefficient of 0.143175 and a p-value of 0.067. Considering the p-value which is greater than the t-statistics 0.05, the study accepts the null hypothesis which states that policy formulation and implementation has no significant effect on employment generation in Jalingo Metropolis. This infers that policy formulation and implementation cannot be said have any influence on employment generation in the area covered by the study.

Hypothesis Four

HO₄: Socio-economic environment has no significant effect on employment generation in Jalingo Metropolis.

The result of the regression indicated a coefficient of 0.1795519 and a p-value 0.003. Considering that the p-value is less than the t-statistics we reject the null hypothesis which states that Socio-economic environment has no significant effect on employment generation in Jalingo Metropolis. This result has statistical evidence to proof that socio-economic environment is a good predictor of employment generation in Nigeria.

CONCLUSION

Based on the result of the study, it was concluded that SMEs orientation has a positive influence on employment generation in Jalingo Metropolis. The study also, concluded that finance and technical support go a long way in ensuring that entrepreneur's source for the right source of finance and technical support to start and effectively run their businesses. The study again concluded that SMEs policy formulation and implementation does not play any significant role in generating increased employment in the area covered by the study. Finally, the study concluded that socio-economic environment has significant impact on employment generation.

RECOMMENDATIONS

Based on the findings and the conclusion of this study, the following recommendations were made;

1. It is very important for the government to establish Small and Medium Enterprise clusters in relevant sectors in areas that have comparative advantage for such sectors.
2. The Central Bank of Nigeria with the government should establish the Much-awaited National Credit Guarantee Scheme for SMEs, which should guarantee at least 80 percent of loans needed by small and medium enterprises in Nigeria.

3. The government should tackle accelerated development and upgrade of rural/urban road and rail network, water and air transport system and other infrastructural facilities to assist SMEs owners to have access to distribution and marketing of their goods and services.
4. There is an urgent need to review tariff in favour of local and semi-urban manufacturers especially the SMEs.

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