Capital Structure and Corporate Performance: An Empirical Study of Selected Telecommunication Firms in Nigeria

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Abstract: This study examined the impact of capital structure on firm performance of some selected telecommunication firms in Nigeria. The annual financial statements of five telecommunication firms listed on the Nigerian stock exchange ranging from 2016-2020 were used for this study. The study used fixed effect regression model to test the significant impact of capital structure on firm's performance, Hence, return on asset (ROA), return on equity (ROE) and earnings per share EPS were used as proxies for firms performance while equity ratio and debt ratio as indicators for capital structure. The finding reveal that capital structure has positive significant effect on corporate performance of selected telecommunication firms in Nigeria. The study recommends that the telecomm companies should implement policies that will encourage increase in their profit after tax, dividends and turnover as these variables can lead to a positive significant change in the company's performance as well as the market capitalization value.

Keywords: capital structure, equity, debt ratio and equity ratio

INTRODUCTION
The capital structure of a firm represents a mixture of the sources through which it is financed. It is one of the important decisions of a business because of its association with the risk and reward. Long-term liabilities and stockholders' equity add or the financial structure of a company less its current liabilities have direct relationship with the capital structure (Nieh and Lou, 2005; Yung-Chieh, 2013). According to Damodaran (2001) and Pais (2017), the capital structure is an amalgam of the equity and debt capital that a firm uses for its financing. If the financial manager makes any irrational decisions to raise funds through debt financing, it could be costly for the firm as the cost of capital could increase, which could eventually reduce the firm's value. Therefore, the financial manager's

irrational financing decisions could affect the business's stability and survival. Pinto et al. (2017) stated that the capital structure decision is vital to deal with the competitive environment because of the need to maximize the returns and because such decision has an impact on the financial condition and firm's stability.

Financial performance is a particular measure of how effectively a firm uses its resources and assets to maximize its profitability. Erasmus (2008) expressed that financial performance, liquidity, and profitability are essential tools for stakeholders and firms' current position and stated that financial performance depends on many factors, including, among many other variables, the structure of capital and macroeconomic factors.

The financing or capital structure decision is a management choice, as it influences the investors' return. The capital structure choice is additionally controlled by the market – firms need a capital structure fundamentally for their advancement. Therefore, regardless of whether the assets must increase, a capital structure choice is necessary. An interest in the finances raised entails an essential examination that produces another capital structure (Nirajini and Priya, 2013; Ruzben, 2003). The capital structure modern theory was proposed by Modigliani and Miller and states that, under the ideal capital market hypothesis, the association's esteem is autonomous with the construction of capital. Capital structure decisions have always been seen as very important for every business organization, especially in corporate firms where these decisions are taken by top management level with an aim to maximize firm value. It should be known that the aim of maximizing firm value is a very important one as it is concerned mainly with choosing a balanced ratio of debt and equity securities in a way that considers the expense and benefits associated with these securities. Also, a poor judgment in selecting the right mix of debt and equity could result in financial failure and may lead to bankruptcy eventually (Sheikh and Wang, 2011).

The financial decision of a firm is vital in determining the optimal capital structure mix. Measuring the firm managerial and financial prowess to adjust and direct its numerous leverages to maximize its value, growth, and generate optimum returns. Firms have a diverse level of leverage, the determination of the best mix to enhance performance by managers remains a puzzle to be solved in corporate finance theory and finance literature. The capital structure comprises long-term debt, specific short-term debt, common equity, preferred equity, and retained earnings. Firm performance is calculated by its capacity to generate optimum returns from its assets, maximize the value and wealth of the shareholders. The financing decisions of firms vary according to the rate of risk related to each financing option as well as the relationship between risk and return (Abu-Rub, [1]). Capital structure effect on firm performance varies proportionately in two ways; according to Desai, ([2]) highly leverage firms with similar risk level might have a higher cost of capital and leverage.

A list of factors relative to capital structure decisions such as profitability, growth of the firm, size of the firm, debt maturity, debt ratio, tax and tangibility have been identified; however, considerations affecting the capital structure decisions can be studied in the light of minimization of risk. A firm's capital structure must be developed with an eye towards risk because it has a direct link with the value (Krishnan and Moyer, 1997). Risk may be

factored for two considerations: (1) that capital structure must be consistent with the firm"s business risk, and (2) that capital structure results in a certain level of financial risk. Business risk may be defined as the relationship between the firm's sales and its earnings before interest and taxes (EBIT). In general, the greater the firm's operating leverage-the use of fixed operating cost- the higher its business risk. Although operating leverage is an important factor affecting business risk, two other factors also affect it-revenue stability and cost stability. Revenue stability refers to the relative variability of the firm's sales revenues. This behaviour depends on both the stability of demand and the price of the firm's products. Firms with reasonably stable levels of demand, and products with stable prices have stable revenues that result in low levels of fixed costs. Firms with highly volatile demand, products and prices have unstable revenues that result in high levels of business risk.

Cost stability is concerned with the relative predictability of input price. The more predictable and stable these input prices are, the lower is the business risk, and vice-versa. Business risk varies among firms, regardless of the line of business, and is not affected by capital structure decisions (Krishnan and Moyer, 1997). Thus, the level of business risk must be taken as given. The higher a firm's business risk, the more cautious the firm must be in establishing its capital structure. Firms with high business risk therefore tend toward less levered capital structure, and vice-versa (Stohs and Mauer, 1996). The firm's capital structure directly affects its financial risk, which may be described as the risk resulting from the use of financial leverage. Financial leverage is concerned with the relationship between earnings before interest and taxes (EBIT) and earnings before tax (EBT). The more fixed-cost financing, i.e. debt (including financial leases) and preferred stock, a firm has in its capital structure, the greater its financial risk. Since the level of this risk and the associated level of returns are key inputs to the valuation process, the firm must estimate the potential impact of alternative capital structures on these factors and ultimately on value in order to select the best capital structure.

The impact of capital structure on corporate performance of telecommunication industry in Nigeria has been an issue of concern to researchers and there is still no conclusive empirical evidence on the subject. Firms in Nigeria are faced with financing decisions on the suitable capital structure mix that will be appropriate for the organization and such financing decisions are crucial to the profitability of the firm. Investors in Nigeria rarely consider the importance of the details on the capital structure mix and how that mix eventually causes the performance of the firm. Financial constraints have been a major factor affecting corporate firms performance in developing countries especially Nigeria. The basis for the determination of optimal capital structure of corporate sectors in Nigeria is the widening and deepening of various financial markets. Akeem et al (2014) said that the corporate sector is characterized by a large number of firms operating in a largely deregulated and increasingly competitive environment. Since 1987, financial liberalization has changed the operating environment of firms, by giving more flexibility to the Nigerian financial managers in choosing their firms capital structure. This financing decision is crucial to the firm's performance and profitability.

This paper therefore examines the extent to which capital structure impacts on the profitability of selected telecommunication industry in Nigerian stock exchange during the period of 2011-2020. The findings will contribute to existing finance literature on the effect of capital structure on the performance of telecommunication firms in Nigeria.
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The main objective of this study is to determine the effect of capital structure on corporate performance of Nigerian telecommunication firms. The specific objectives derived from the major objectives are:
   i.   . To ascertain the relationship between capital structure and return on equity
   ii.   To determine the effect of capital structure on return on assets
   iii.   To ascertain the effect of capital structure on earnings per share.

The following hypotheses were formulated for this study.
   HO_1: capital structure has no significant impact on return on equity
   HO_2: capital structure has no significant impact on return on assets
   HO_3: capital structure has no significant impact on earnings per share.

LITERATURE REVIEW
Conceptual Review
A Company's capital structure is arguably one of its most relevant choices. From a technical perspective, the capital structure is defined as the careful balance between equity and debt that a business uses to finance its assets, day to day operations and future growth (Kateri, 2014). The capital structure of a firm is actually a mix of different securities (Abor, 2005). According to Kenon (2019), explained that there are two forms of capital: equity capital and debt capital. Each type of capital has its advantages and draw backs, and a substantial part of wise corporate stewardship and management is attempting to find the perfect capital structure regarding risk/reward payoff for shareholders. Capital structure points out the proportionate relationship between debt and equity. While debt is majorly made up of long term loans such as debentures, equity includes paid up share capital, share premium, reserves, and surplus or retained earnings (Owolabi and Inyang, 2012). The capital structure decision is crucial for any business organization. The decision is important because of the need to maximize returns to various organizational constituencies, and also because of the effect such a decision has on a firm's ability to deal with its competitive environment. It has been theorized in the literature that firms may actually have more debt in their capital structure than is appropriate, for two main reasons. First, higher levels of debt align the interests of managers and shareholders (Harris and Raviv, 1991). Second, managers may underestimate the costs of bankruptcy, reorganization or liquidation (Gleason et al., 2000). Both of these factors suggested higher than appropriate amounts of debt in the capital structure. If this is the case, then higher than appropriate levels of debt in the capital structure though may increase firms" value in the short run, could result in greater exposure to financial distress in the long run.

Capital structure means a combination of all long term sources of finance. It includes equity share capital, reserves and surplus, preference share capital, loan, debentures and other long term sources of finance. A company has to decide the proportion in which it should have its own finance and outsiders finance particularly debt finance, based on the

proportion of finance, weighted average cost of capital (WACC) and value of a firm are affected. There are four approaches to this, viz. net income, net operating income, traditional and M&M approach, Borad (2019). According to Borad 2019, Capital structure is the proportion of all types of capital viz. equity, debt, preference etc. it is synonymously used as financial leverage or financing mix. Capital structure deals with the question of what should be the ratio of debt to equity, this question answers the to meeting the objectives of the firm which is the financing decision to maximize shareholders wealth or increase the value of the firm and the question of if a change in the financing mix would have any impact on the value of the firm or not. This question is important because some theories believe that financial mix has an impact on the value and others believe it has no connection. Financial leverage is the extent to which a business firm employs borrowed money or debts. In financial management, it is a significant term and it is a very important decision in a business.

Important approaches to financial leverage or capital structure or financing mix are as follows:

i. *The Net operating income approach*: Durand also provided the Net operating income approach which is opposite of the net income approach and says that the weighted average cost of capital (WACC) remains constant. It believes in the fact that the market analyses a firm as a whole and discounts at a particular rate which has no relation to debt-equity ratio. If tax information is given, it recommends that with an increase in debt financing WACC reduces and the value of the firm will start increasing.

ii. *The net income approach:* This was propounded by David Durand in 1952. This approach states that firm can increase its value or lower the cost of capital by utilising debt capital. He was in favour of financial leverage decision. According to him, a change in financial leverage would lead to a change in the cost of capital. Hence, if the ratio of debt in the capital structure increases, the weighted average cost of capital decreases and in short the value of the firm increases.

iii. *The traditional approach:* Explains that the cost of capital is a function of the capital structure. It also believes in an optimal capital structure which implies that at a particular ratio of debt and equity, the cost of capital is at minimum and the value of the firm is maximized.

iv. *Modigliani and Miller approach:* This is a capital structure approach named after Franco Modigliani and Merton Miller. Their Seminal work was the genesis of the debate of relevance or non relevance theory amongst researchers in capital structure analysis. MM Theory had two propositions. First proposition stated that the capital structure is not relevant to the value of the firm. The value of two identical firms would remain the same and value would not be affected by the choice of finance adopted to finance assets. The value of a firm is dependent on the expected future earnings when there are no taxes. Second proposition states that the financial leverage increases the value of a firm and reduces WACC. This is when tax information is available.

Previous researches submitted that there is an optimum capital structure which maximizes the value of the firm and simultaneously minimizes the cost of capital, therefore striking a balance between risk and return. But giving a precise method for determining a firm's optimal structure has not yet been possible (Gitman & Zutter, 2010). After MM propositions, many studies based on the optimal capital structure stating that the MM theory is based on unrealistic assumptions such as perfect capital markets bringing about further research on the subject.

Firms Performance Measures

Bititei, Carrie and McDevitt (1997) described Performance management as a process wherein the organization manages its performance to match its corporate and financial strategies and objectives. The firm's value can be described as the benefits stemming from the firm's shares by the shareholders (Rouf, 2011). The company's performance can be viewed from the financial statement reported by the company. Consequently, a good performing company will reinforce management for quality disclosure (Herly & Sisnuhadi, 2011). Performance management is critical for effective management of any firm (Demirbag, Tatiglu, Tekinus and zaim, 2006). The theory of capital structure is closely related to the firm's cost of capital. The debate concerns whether or not there is an existence of optimal capital structure and the effect of the capital structure on the overall cost of capital on one hand and the value of the firm on the other hand. This view has been a major source of controversy among famous scholars in the field of finance. Those who assert the existence of an optimal capital structure are said to take to the traditional approach, while those who do not believe in optimal capital structure existence are referred to as supporters of the Modigliani and Miller (MM) hypothesis on capital structure.

The Net Income Approach Theory affirms that the use of debt will positively affect the value of the firm indefinitely, that is, the overall cost of capital or weighted cost can be increased or reduced through the changes in the financial mix or capital structure of the firm. According to Olowe (1998), the net income approach takes the view that leverage or capital structure can affect the value of the firm or its cost of capital. If a firm increases the debt in its capital structure, the value of the firm will increase while the overall cost of capital will be reduced. This approach is termed the dependent hypothesis, since the cost of capital value of the firm depends on the use of debt. This hypothesis assumes that the cost of debt is less than the cost of equity and that corporate income tax does exist (Pandey, 1999). This hypothesis simply calls for one hundred percent debt finance. Brigham (1999) criticizes this on the ground that it is artificial and incomplete, because there is no firm in the real world that operates on 100% debt finance.

There are many theories that explain how investors can build the best "capital structure", which improves the firm's market value by selecting the best mixture of equity financing and debt financing (Brigham and Gapenski, 1996), and theories on capital structure. Various studies have been conducted on the capital structure in developed countries and a few have been performed in developing countries. Logically, most of the authors have found a positive relationship while others have found a negative association between capital structure and firm performance. In developed countries,

According to Hagel, Brown and Davison (2010), say, most wall street analyst and investors tend to focus on Return on equity (ROE) as their primary measure of company performance, even though more sophisticated valuation techniques like internal rate of return (IRR), cash flow return on investments (CFRI), Discounted cash flow analysis (DCF) have come along. They also stated the return on assets (ROA) a better metric of financial performance, than income statement profitability measures like return on sales (ROS). No single metric is perfect and different metrics are appropriate depending upon the circumstances. Almatari, Al-Swidi, and Fadzil (2014), categorized measurements of performance into two: Accounting based measurement and marketing based measurement.

Accounting Based Measurement
According to Almatari et al, accounting based measurement is generally considered as an effective indicator of the company's profitability and the business when compared to bench mark rate of return equal to the risk adjusted weighted average cost of capital. The accounting based measurement indicators to the profitability of firms on the short term in the past years are: Return on assets (ROA), Return on Equity (ROE). Return on Sales (ROS), Return on Investment (ROI), Profit Margin (PM), Operating cash flow(OCF), Earnings per share (EPS), Operation Profit (OP), Growth in Sales (GRO), Return on Capital Employed (ROCE), Expense to Assets (ETA), Sales to assets STS) and others. For the purpose of this study, we will define a few of these measures.
- Return on Assets (ROA) is measured by net income over total assets at the end of the year.
- Return on Equity (ROE) is measured by profit after tax over total equity shares in issue.
- Return on sales (ROS) is determined by dividing net profit by sales.
- Return on investment (ROI) measured by the benefit. Return of an investment is divided by the cost of the investment.
- Earnings per share (EPS). This is evaluated by dividing the net income by total shares.
- Return on Capital Employed (ROCE) is analyzed by dividing the profit before tax over the total issued capital.

Market-Based Measurements
The second type of measurement is the market based measurement which is categorized as long term like Tobin's Q, Market value added (MVA), Market –to-book value (MTBV), Abnormal returns, Annual stock Returns (RET), Dividend Yield (DY), Price-Earnings Return (PE), Log of Capitalization, Stock Repurchases and others. The measurements are briefly explained:
- Tobin's Q can be calculated by the ratio of the market Capitalization plus total debt divided by total assets of the company
- Market Value Added (MVA) can be Calculated by getting the difference between the market value and book value of Equity
- Abnormal Returns (RET) is calculated by annual abnormal returns from the market model

- Dividend Yield (DY) is evaluated by the dividend per share over price per share.
- Price Earnings Ratio: is measured as the ratio of price per share to earnings per share.

The Tobin's Q is widely used to measure the ratio of the market capitalization plus total debt divided by total asset of the company. The above are measurements for firm performance are widely used.

Theoretical Review: Capital Structure Theories.

The revised version of MM Theory, incorporating tax benefit argued that under market imperfection where interest payments are tax deductable, firm value will increase with the level of financial leverage (Modigliani &Miller, 1963). MM by incorporating tax benefits as determinants of the capital structure of firms, proposed that since interest is a tax deductible expense, firms should use as much debt capital as possible in order to maximize their value. Miller (1977) argued that a firm could generate higher tax income by increasing the debt-equity ratio and this additional income would result in a higher pay-out to stock holders and bond holders but the value of the firm need not increase. Higher taxes on interest payments than on equity returns reduce or eliminate the advantage of debt finance to the firm.

This works anchored on the following major theories of capital structure,

i. Trade off Theory:

The trade-off theory was first developed by Modigliani and Miller, (1958). It states that target debt-equity ratio is approached at the point where the tax advantage of debt is offset by the costs of prevailing market imperfection. A firm's optimal debt ratio is usually viewed as determined by a trade off of the costs and benefits of borrowing. Firms balance tax savings from debt against dead weight bankruptcy costs. The key implications of the theory is that leverage exhibits target adjustments so that deviations from the target are gradually eliminated (Myers, 1984).

Myers (1984) proposed the Static Trade –off Theory that supports the relevance of capital structure. This theory suggests that firms have optimal capital structure and they move towards the target, it further emphasized that when debt is employed in capital structure, firms are faced with the challenges of tax benefit and bankruptcy cost, thus the need for trade- off between the two.

ii. Pecking Order Theory:

Pecking order theory proposes that companies prioritize their sources of financing from internal financing to equity according to the law of least effort or of least resistance, preferring to raise equity as a financing means of last resort. The theorists argued that there is an asymmetric information problem between managers and investors. Investors would like to discount firms' new securities when they are issued, and thus managers can anticipate price discounts in advance. (Myers & Majluf, 1984). The conclusion drawn from the asymmetric information theories is that there is a hierarchy of firms' preferences with respect to the financing of their investments. (Myers & Majluf 1984) "This Pecking order" theory suggests that firms will initially rely on internally generated funds i.e. undistributed

earnings, where there is no existence of asymmetry they will turn to debt if additional funds are needed and will issue equity to cover any remaining capital requirements. The order of preferences reflects the relative costs of various financing options. The Pecking order hypothesis suggests that firms are willing to sell equity when the market overvalues it. (Myers, 1984, Chittenden et al 1996). This is based on the assumption that managers act in favor of the interest of existing shareholders, Myers and Majluf, (1984), maintain that firms will prefer internal sources to costly external finance. Thus, according to the Perking order hypothesis, firms that are profitable and therefore generate high earnings are expected to use less debt capital than those that don't generate high earnings.

iii. Agency Cost Theory

Another theory to be considered is the Agency cost Theory propounded by Hunsaker (1999) which hinges firm's capital structure on agency costs. The costs related to equity issue may include; the monitoring expenses of the principal (the equity holders) the bonding expenses of the agent (the manager), reduced welfare for principal due to the divergence of agent's decisions from those, which maximize the welfare of the principal.

iv. Market Timing Theory

Recently, Baker and Wurgler (2002) have recommended a new theory of capital structure, "Market timing theory of Capital structure" which suggests that managers can increase current shareholders wealth by timing the issue of securities. Therefore, firms time their equity issues by selling new stocks when the stock price is perceived to be overvalued. From the above discussion, one can see that the basic drive of all theories of capital structure is to recognize whether the capital structure has any impact on firms' performance or not.

Empirical Review

Graham and Harvey (2001) reveal that firms issue equity rather than debt when their stock prices are high. Baker and Wurgler (2002) also find out that the level of a firm"s stock price is a major determinant of which security to issue and Welch (2004) establishes that firms let their capital structure change with their stock prices rather than issuing securities to counter the mechanical effect of stock returns on capital structure. Hadlock and James (2002) studied 48 US firms from 1981 to 1990 and found a positive relationship between capital structure and profitability. Champion (1999), Ghosh et al. (2000), and Hull and Dawar (2014) reported that firms that use more debt earn more profit. Margaritis and Psillaki (2010) found a significant progressive relationship between debt and the performance of the organization. They used data from French organizations from 2003 to 2005 as a sample.

Contrary to these studies, Rajan and Zingales (1995) conducted thorough research in the US that indicated that the link between profitability and debt is negative. This relationship will be more definite if the observed organization is more prominent. In Turkey, Nassar (2016) studied the relationship between fixed capital and financial performance. He found a significant negative relationship between capital structure and firm performance. Gleason et al. (2000) found that leverage at a higher level in the capital structure, to some extent, becomes the cause of decreased performance of organizations. Fama and French (2002)

reported two findings: first, a negative connection of debt in performance matrixes; and second, a negative association between capital structure and performance. They concluded that high-profit firms with a low amount of risk of debt payment and less leverage pressure are linked with trade-off theory. Titman and Wessels (1988) reported on the influence of the capital structure on firms' financial performance in developed and developing countries' markets. He determined that the capital structure negatively affected the performance of firms in China, whereas Germany and Sweden's relationship was positive. The recent contribution by Vijayakumaran (2018) expressed concern over the corporate structure decisions and corporate performance of listed companies in China using 4181 firm-year observations. He found a positive relationship between firm performance and leverage. The findings indicate that large firms enjoy economies of scale and have a significant relationship. He concluded that financing through debt is one of the mechanisms of governance suggested by agency theory to mitigate equity capital agency costs and enhance firm performance. In developing countries, Gill and Mathur (2011) assessed the components that influence the impact of the organizations and the information utilized separately for the 166 organizations recorded on the Toronto Stock Exchange from 2008 to 2012. The final product allowed them to realize that the leverage impact positively affects the business in the administration division while it is adversely connected with the activity in the assembly division. The relationship between capital structure and firm performance was investigated by Salim and Yadav (2012), and their findings describe a negative relationship between firm performance and leverage. An examination in India by Goyal (2013) uncovered a positive relationship between a transient obligation and its benefit, while on the contrary it found a connection between gainfulness and long-haul necessity. Seyed and Pejman (2013) reported on the capital structure link with firm performance on the Tehran Stock Exchange and established a positive relationship between the two. Pinto et al. (2017) expressed the relationship between capital structure and firm performance from 2011 to 2015 in India by using regression analysis. The measurement variables were the debt to total assets and debt to equity leverage ratios and the return on capital employed (ROCE). They found a significant relationship between capital structure and firm performance. Sheikh and Wang (2010) examined the financing behaviour of textile companies in Pakistan. The regression model was used to analyse the data of 75 textile companies listed from 2002 to 2007, and the results indicate a negative impact of debt on profitability in the capital structure.

A primary survey conducted in the building division of Pakistan reported that the ROE is adversely influenced by the obligations at all levels (Khan, 2012). Mirza and Javed (2013) examined the determinants of money-related outcomes in Pakistan. The examination of the settled impacts was connected to the information on 60 organizations from 2007 to 2011, and the outcomes demonstrated that the execution of the organization (RE) is decidedly influenced by the debt to equity ratio and contrarily influenced by the short term debt to total assets (STDTA) divided by long term debt to total assets (LTDTA). Hijazi and Tariq (2006) described the capital structure determinants of Pakistan's real business. The result demonstrates that the benefit and the measure of the board have a negative link with leverage, while there is a noteworthy association with incarnations, development, and exploitations. The overview by Amara and Aziz (2014) expressed concerns about the spread of the converse relationship with the return on equity by the level of obligation of

the capital structure in the sustenance segment of Pakistan. The volume of debt in the capital structure of organizations has a reverse association with their performance (Hasan et al., 2014).

METHODOLOGY
This study evaluated if there is an impact of Capital structure on firm performance: evidence from selected telecommunication firms listed in Nigeria stock exchange.

Capital structure of a firm is measured by different accounting based methods like short term liability to total assets, long term liability to total assets and total debt to total assets. However, this study takes total debt to total assets and total equity to total assets as a proxy for capital structure of a company.
Debt Ratio (DR) = Total Debt/Total Assets
Equity Ratio = total shareholders' equity/total assets

Firm corporate performance has number of variables measuring it and common ones are accounting based measures of performance calculated from financial statements as return on equity (ROE), return on assets (ROA) and Net Profit Margin etc. while stock market return and volatility in returns are also used as performance measures of firms. Earnings per share (EPS) and Tobin's Q measurement of performance are also used by some studies to measure market base performance. This study adopts a mix based measure of performance which includes: return on assets (ROA), return on equity (ROE), and earnings per share (EPS). They are computed as follow:
Return on Equity (ROE) = Net Income/Equity
Return on Assets (ROA) = Net Income/Total Assets
Earnings per Share EPS =(Net income - Dividends on preferred stock)/average outstanding share

Data Collection
Data for this study is collected from annual financial statements of selected telecommunication firms listed in the capital market. Ratios of firms are calculated manually by the authors for the period of 2011-2020 for the selected 5 companies.

DATA AND RESULTS
Descriptive Statistics
Table 1.Descriptive statistics

	ROA	ROE	EPS	DTR	EQR
Mean	0.105320	0.271080	89.50760	0.555720	0.443840
Median	0.080000	0.221000	10.00000	0.525000	0.474000
Maximum	0.264000	0.856000	562.0000	0.840000	0.648000
Minimum	0.022000	0.043000	0.320000	0.352000	0.160000
Std. Dev.	0.073220	0.218804	169.3525	0.158199	0.158213
Skewness	0.763926	1.390007	1.835914	0.610507	-0.607705
Kurtosis	2.332340	3.994168	4.784251	2.159799	2.156080
Jarque-Bera	2.895940	9.080045	17.36028	2.288345	2.280650

Probability	0.235047	0.010673	0.000170	0.318487	0.319715
Sum	2.633000	6.777000	2237.690	13.89300	11.09600
Sum Sq. Dev.	0.128669	1.149000	688326.1	0.600645	0.600755
Observations	25	25	25	25	25

Table 1 gives the details of descriptive statistics of the variables used in this paper. First row of the table shows the mean of the variables as: return on assets (ROA) with mean value of 0.105, return on equity (ROE) with mean value of 0.271, earnings per share (EPS) with mean value of 89.508, debt Ratio (DTR) with mean value of 0.556 and equity ratio (EQR) with mean value of 0.444.

Correlation Analysis
Correlation is concern describing the strength of relationship between two variables. In this study the correlation co-efficient analysis is under taken to find out the relationship between capital structure and financial firm performance. It shows the degree of relationship that exists between capital structure and firm performance.
Table 2.Correlation Test Results

	ROA	ROE	EPS	DTR	EQR
ROA	1	0.87133	0.01134	0.00892	-0.01081
ROE	0.080000	1	10.00000	0.525000	0.474000
EPS	0.264000	0.856000	1	0.840000	0.648000
DTR	0.022000	0.043000	0.320000	1	0.160000
EQR	0.073220	0.218804	169.3525	0.158199	1

The Table 2 above shows the relationship between Performance variables (ROA, ROE, and EPS) and capital structure variables (DTR and EQR). Therefore, debt ratio (DTR) and return on assets (ROA) has a positive weak relationship of 9%, DTR and return on equity (ROE) has a positive semi strong relationship of 44% while DTR and earnings per share (EPS) has a negative relationship of 7%. Secondly, equity ratio (EQR) and ROA as well as ROE has a negative insignificant correlation of 1% and a negative significant relationship of 44% respectively while EQR and EPS has a positive weak relationship of 7%. The positive relationship infer that the variation increase in one variable will lead to that percentage change in the other variable while the negative relationship suggest that the percentage increase in the independent variable will result to the same proportion decrease in the dependent variable, vice versa.

Table 3. Panel Fixed Effect Regression Model 1
Dependent Variable: ROA
Method: Panel Least Squares
Date: 07/27/21 Time: 13:35
Sample (adjusted): 2011 2020
Periods included: 10
Cross-sections included: 5
Total panel (balanced) observations: 20

	Coefficient	Std. Error	t-Statistic	Prob.
C	-91186.35	394485.6	-0.231153	0.8184
DTR	1.106611	0.255841	1.287507	0.1208
EQR	7.974261	0.344541	23.14461	0.0000
ECM(-1)	4.406021	0.255841	1.587007	0.1208

R-squared	0.939107	ependent var	4515249.
Adjusted R-squared	0.935902	ɔendent var	7949449.
S.E. of regression	2012613.	info criterion	31.93812
Sum squared resid	1.545314	z criterion	32.06351
Log likelihood	-651.7315	ı-Quinn criter.	31.98378
F-statistic	4.120206	-Watson stat	2.661247
Prob(F-statistic)	0.000000		

The summarized model in table 3 shows that 94% of the systematic variation in return on assets is explained by the two independent variables of debt ratio and equity ratio. The adjusted R^2 value of 93% gives us the degree of freedom after adjusting for error. The F value of 4.12 is significant at 5% level. This reveals that there is a significant relationship between debt ratio, equity ratio and return on assets. The Durbin-Watson value of 2.661 indicates that there is no problem of autocorrelation.

Table 4. Panel Fixed Effect Regression Model 2
Dependent Variable: ROE
Method: Panel Least Squares
Date: 07/27/21 Time: 13:48
Sample (adjusted): 2011 2020
Periods included: 10
Cross-sections included: 5
Total panel (balanced) observations: 20

	Coefficient	Std. Error	t-Statistic	Prob.
C	-91186.35	394485.6	-0.231153	0.8184
DTR	1.106611	0.255841	1.287507	0.1208
EQR	7.974261	0.344541	23.14461	0.0000
ECM(-1)	4.406021	0.255841	1.587007	0.1208

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.779107	ependent var	0.260050
Adjusted R-squared	0.645902	›endent var	0.229494
S.E. of regression	0.136814	info criterion	-0.86312
Sum squared resid	0.225314	z criterion	-0.462345
Log likelihood	16.57315	ı-Quinn criter.	-0.787313
F-statistic	5.810206	-Watson stat	2.481800
Prob(F-statistic)	0.003120		

The summarized model in table 4 shows that 78% of the systematic variation in return on equity is explained by the two independent variables of debt ratio and equity ratio. The adjusted R2 value of 64% shows the degree of freedom after adjusting for error. The F value of 5.810 is significant at 5% level. This reveals that there is a significant relationship between debt ratio, equity ratio and return on equity. The Durbin-Watson value of 2.481 indicates that there is no problem of autocorrelation in the second model as well.

Table 5. Panel Fixed Effect Regression Model 3
Dependent Variable: EPS
Method: Panel Least Squares
Date: 07/27/21 Time: 14:01
Sample (adjusted): 2011 2020
Periods included: 10
Cross-sections included: 5
Total panel (balanced) observations: 20

	Coefficient	Std. Error	t-Statistic	Prob.
C	-91186.35	394485.6	-0.231153	0.8184
DTR	1.106611	0.255841	1.287507	0.1208
EQR	7.974261	0.344541	23.14461	0.0000
ECM(-1)	4.406021	0.255841	1.587007	0.1208

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.909107	ependent var		82.60050
Adjusted R-squared	0.845902	›endent var		151.2494
S.E. of regression	59.1314	info criterion		11.86312
Sum squared resid	42065.43	z criterion		11.462345
Log likelihood	-106.5315	ı-Quinn criter.		12.87313
F-statistic	15.8106	-Watson stat		1.981800
Prob(F-statistic)	0.00020			

Thirdly, the model in table 5 shows that 90% of the systematic variation in earnings per share is explained by the two independent variables of debt ratio and equity ratio. The adjusted R2value of 85% reveals the degree of freedom after adjusting for error. The F value of 16.810 is significant at 5% level. This reveals that there is a significant relationship between debt ratio, equity ratio and earnings per share. The Durbin-Watson value of 1.965 reveals that there is also no problem of autocorrelation in the third model.

SUMMARY, CONCLUSION AND RECOMMENDATIONS
This study examined the effect of capital structure on firm performance of some selected telecommunication firms listed in the capital market. Five selected telecommunication firms listed in the capital market ranging from 2011-2020 were used for this study to determine the relationship between Performance variables (ROA, ROE, and EPS) and capital structure variables (DTR and EQR). Debt ratio (DTR)) showed a positive weak relationship with return on assets (ROA), DTR had a positive strong relationship with return on equity (ROE) while DTR had a negative relationship on earnings per share (EPS). Secondly, equity ratio (EQR) and ROA as well as ROE had a negative insignificant correlation and a negative impact relationship respectively while EQR and EPS had a

positive weak relationship. The positive relationship infer that the variation increase in one variable will lead to that percentage change in the other variable while the negative relationship suggest that the percentage increase in the independent variable will result to the same proportion decrease in the dependent variable, vice versa.

The results reveal that there is a high significant relationship between debt ratio, equity ratio and return on assets, return on equity, as well as earnings per share.

Conclusively, the study shows that capital structure has a positively significant relationship on ROA, ROE, and EPS, but EPS has a better measure of firm performance than ROA and ROE. This is in line with the works of Abor, (2005); Lawal, et al (2014); Hassan, Ahsan, Rahama, Alam. (2014). Telecom companies should therefore use more of equity financing than debt as a source of finance to increase firms' performance. Management of telecomm industry should avoid using debt but rather use retained earnings to finance their activities. This is in agreed with perking order theory that firms should utilize their capital structure with the appropriate debt -equity mix. This study will contribute to finance literature of emerging and developing economies.

REFERENCES

Abor, J. (2005). The effect of capital structure on profitability: an empirical analysis of listed firms in Ghana. *The Journal of Risk Finance* 6(5), 438 – 445.

Abu-Rub, N. (2012) Capital Structure and Firm Performance: Evidence from Palestine Stock Exchange. *Journal of Money, Investment and Banking*, 23(1):109-117,

Akeem, L. B., Teres, E. K., Kiyanjui, M. W. & Kayode, A. M. (2014). Effect of capital structure on firms performance: empirical study of manufacturing companies in Nigeria. *Journal of Finance and Investment Analysis*, 3(4), 39 – 57.

Al-Malari, E. M., Al-Swidi, A. K., & Fadzil F. (2014). The measurements of firm performance's dimensions. *Asian Journal of Finance & Accounting* 6(1), 24 – 49.

Baker, M. and J. Wurgler (2002), "Market Timing and Capital Structure", *Journal of Finance*, 57, 1 – 32.

Borad, S. (2019). Capital Structure and its theories retrieved 31st Aug. 2019 from https://efinancemanagement.com.

Brigham, E., Gapenski, L., 1996. Financial Management. The Dryden Press, Dallas, TX.

Brigham, E.F., & Ehrhardt, M.C. (2002). Corporate Finance: A focused Approach. Natorp Blvd. Mason: South Western College Publishers.

Champion, D., (1999). Finance: the joy of leverage. *Harv. Bus. Rev*. 77, 19–22.

Chang, C.C., Batmunkh, M.U., Wong, W.K., & Jargalsaikhan, M., (2019). Relationship between capital structure and profitability: evidence from four Asian Tigers.

Chen, H.C., Mai, C.C., Yu, C.H., (2006). The effect of export tax rebates on export performance: theory and evidence from China. China Econ. Rev. 17 (I2), 226–235.

Chittenden, F., Hall, G. and Hutchinson, P. (1996). Small firm growth, access to capital markets and financial structure: review of issue and empirical investigation, *Small Business Economics*, 8(1), 5 9-67.

Chung, J.E., Yang, H., Won, J.H., (2018). Relationships between the Capabilities and export performance of Korean clothing and textiles SMEs and the moderating effects of export mode on these relationships. Cloth. Text. Research Journal of Management. 11, 18-23

Damodaran, 2001. *Corporate Finance Theory and Practice*, second ed. Wiley: New York.
Demerbag, M., Tatoglu, E., Tekinus, M. & Zaim, S. (2006). Analysis of the relationship between TQM implementation and organizational performance: Evidence from Turkish SMEs. *Journal of Manufacturing Technology Management*, 17(6), 829 – 847.

Erasmus, P.D., 2008. Evaluating Value-Based Financial Performance Measures.

Fama, E.F., French, K.R., (2002). Testing trade-off and pecking order predictions about dividends and debt. Rev. Financ. Stud. 15 (11), 1–33.

Gleason, K.C., Mathur, L.K. & Mathur, I. (2000). The inter-relationship between Culture, Capital Structure and performance: Evidence from European Retailers. *Journal of Business Research*, 50(2), 185-191**.**

Goyal, A.M., 2013. Impact of capital structure on performance of listed public sector banks in India. *Int. J. Business Manag. Invent.* 2 (10), 35–43.

Graham, J.K. (2000). How big are the tax benefits of debt? *Journal of Finance*, 55, 1901-1941.

Hagel, J., Brown, J.S., & Davison L. (2010). The Best Way to Measure Company Performance. Assessed 1st Sept. 2019 from https://hbr.org.

Harris, M. & Raviv, A. (1991). The theory of capital structure. *Journal of Finance*, 46(1), 297-355.

Hasan B. Ahsan M., Rahaman A. & Alam N. (2014) Influence of capital structure on firm performance: Evidence from Bangladesh. *International Journal of Business and Management* 9(5), 184 – 194.

Iyoha A. O. and Umoru D. (2017). Capital structure and firm financial performance in Nigeria: empirical evidence of the causal link. *The Journal Contemporary Economy.* 2(4), 69 – 83.

Kanhuna C. W. and Waweru G. (2015). Does Capital Structure matter? effects on profitability of firms listed at the Nairobi Securities exchange, *Journal of Business, Economics and Finance* 4(3), 316 – 330.

Kanu C. (2019). The Impact of Capital Structure on Corporate Performance in Nigeria: A study of selected Companies. Available: https://futospace.futo.edu.ng

Kateri, Z. (2014). Capital Structure: What it is and why it matters. Available: https://www.axial.net (August 31, 2019).

Krishnaswami, S., Spindt, P.A & Subramaniam, V. (1999). Information asymmetry, monitoring and the placement structure of corporate debt. *Journal of Financial Economics*, 51(3), 407-434.

Miller, M. H. (1977).Debt and Taxes, *Journal of Finance*, 32, 261 – 276.

Modigliani F. and Miller, M. (1958). The cost of capital, corporate finance and the theory of investment. *American Economic Review*, 48, 261 – 297

Modigliani, F. and Miller, M. (1963). Corporate income taxes and the cost of capital: A correction, *American Economic Review*, 53, 443 – 53.

Myers, S. C. (1984).The capital structure puzzle, *Journal of Finance*, 39, 575 – 592.

Myers, S. C. and Majluf N. S. (1984).Corporate financing and investment decision when firm have information that investors do not have, *Journal of Finance, Economics*, 12, 187 221.

Oladele S. A., Omotosho O. & Adeniyi S. O., (2017). Effect of capital structure on the performance of Nigerian listed manufacturing firms. *European Journal of Business Management* 9(7), 22 – 32.

Olowe, R.A. (1998). Financial Management: Concepts, Analysis and Capital Investments. Lagos: Brierly Jones Nigeria Ltd, 361-391.

Owolabi S. A. & Inyang U. E. (2012). Determinants of capital structure in Nigerian firms: A theoretical review. *Canadian Journal of Accounting and Finance*. 1(1), 7-15

Rouf, M. A. (2011). The relationship between Corporate Governance and Value of the Firm in Developing Countries: Evidence from Bangladesh. *The International Journal of Applied Economics and Finance*, 5(3), 237 – 244.

Salim, M., Yadav, R., (2012). Capital structure and firm performance: evidence from Malaysian listed companies. Proc.-Soc. Behaviour Sci. 65, 156–166.

Schwartz, E. (1959), Theory of the capital structure of the firm, *The Journal of Finance* 14(1), 18-39.

Sheikh, A.A., Shahzad, A., Ishaq, A.K., 2017. The growth of e-marketing in the businessto-business industry and its effect on the performance of businesses in Pakistan: marketing success. *Int. Multidiscipl. J. Soc. Sci.* 6 (2), 178–214.

Titman, S. (1984).The effect of capital structure on a firm's liquidation decisions, *Journal of Financial Economics,* 13, 137 – 51

Sheikh, A.N., Wang, Z., 2010. Financing behavior of textile firms in Pakistan. *Int. J. Innovat. Manag. Technol.* 1 (2), 121-133

Seyed, A.,R., Pejman, M., 2013. The relationship between capital structure decisions with firm performance: comparison between big and small industries in firms listed at Tehran stock exchange. *World Sci. J.* 1 (9), 83–92.

Titman, S., Wessels, R., 1988. The determinants of capital structure choice. *J. Finance* 43 (1), 1–19.

Ullah, Atta, Kashif, M., Ullah, Saif, 2017. Impact of capital structure on financial performance of textile sector in Pakistan. *KASBIT Bus. J.* (KBJ) 10, 1–20.

Vijayakumaran, R., 2018. Capital structure decisions and corporate performance: evidence from Chinese listed industrial firms. *Int. J. Account. Financ. Report.* 7, 12-22

Vu, T., Le, T., Nguyen, T., 2020. The impact of capital structure on the performance of construction companies: a study from Vietnam stock exchanges. *Accounting,* 6 (2), 169–176.

Yung-Chieh, C., 2013. The effects of capital structure on the corporate performance of Taiwan-listed photovoltaic companies: a moderator of corporate innovation activities. J. *Glob. Bus. Manag.,* 9 (1), 92.

Zeitun, R., Tian, G.G., 2007. Capital structure and corporate performance: evidence from Jordan. *Australia. Account. Bus. Finance J.* 1(4), 40–61.