Effect of Debt Financing on Firm Value of Listed ICT Firms in Nigeria Exchange Group (NGX)

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ABSTRACT: *The study investigated effect of debt financing on the firm value of listed ICT firms in Nigeria Exchange Group (NGX). The specific objectives of the study were to examine effect of debt ratio, debt to equity ratio, and debt-to-capital ratio on firm value of listed ICT firms in Nigeria. The study adopted ex-post facto research design and secondary data were extracted from the annual reports of sampled ICT firms in Nigeria for the period 2013 – 2022. The panel regression analysis was used for data analysis. Findings showed that, the debt ratio demonstrated a statistically non-significant negative effect on market capitalization, evidenced by a p-value of 0.2643 and a t-statistic of -1.131372. In contrast, the debt-to-equity ratio exhibited a statistically significant positive effect on market capitalization, supported by a p-value of 0.0000 and a t-statistic of 5.157177. Similarly, the debt-to-capital ratio demonstrated a statistically significant positive effect on market capitalization, with a p-value of 0.0153 and a t-statistic of 2.527323. These results imply that a balanced mix of debt and equity in the capital structure contributes to higher firm value. The study therefore concluded that debt financing has a significant effect on firm value of ICT firms in Nigeria.The study recommends that Nigerian ICT firms, recognizing the non-significant negative impact on market capitalization attributed to the debt ratio, critically assess their debt levels for alignment with industry standards and investor expectations. Emphasizing the significant positive effect on market capitalization associated with the debt-to-equity ratio, it suggests strategic management of this ratio, utilizing debt for growth while transparently communicating its benefits to investors. Additionally, the study encourages ICT firms to explore a balanced debt-to-capital structure, recognizing the potential benefits of a strategic mix of debt and equity. Prudent debt management is emphasized to mitigate risks and ensure sustained enhancement of firm value in the dynamic Nigerian ICT sector.*

KEYWORDS: debt financing, firm value, ICT firms, debt-to-equity ratio, nigeria exchange group (NGX).

INTRODUCTION

In the Nigerian economy, the Information and Communication Technology (ICT) sector has emerged as a pivotal force driving innovation, economic growth, and global competitiveness. As

listed ICT firms navigate this ever-evolving industry, strategic financial decisions, particularly those related to debt financing, play a crucial role in shaping their performance and overall firm value. Businesses, aiming for profitability by meeting customer needs through goods or services, heavily rely on sufficient financial resources for success. Finance is crucial for startup, expansion, continuity, and addressing unexpected challenges. Efficient financing decisions, as the lifeblood of an economy, are vital for business survival and growth (Pandey, 2015). In Nigeria, firms face financing dilemmas, especially regarding debt or equity capital (Salawu, 2017). Financing choices significantly impact success or failure, making sound decisions crucial. Financial managers play a key role in determining optimal capital structures that minimize costs and maximize value (Waheed et al., 2016).

Debt financing, as a component of financial leverage, introduces an additional layer of complexity to the strategic decision-making process for firms operating in the ICT industry. In Nigeria, where economic conditions, regulatory frameworks, and technological advancements continually influence business dynamics, understanding the impact of debt financing on the firm value of listed ICT companies becomes imperative. Debt financing, whether through bonds, loans, or other financial instruments, offers firms the opportunity to leverage external capital to fuel growth, expand operations, and invest in research and development (Ibrahim, 2017; Cecchetti et al., 2011). However, the associated risks and costs can also pose challenges, impacting a firm's overall financial health and, consequently, its market valuation.

The Nigerian financial system, with an underdeveloped debt market, compels firms to heavily rely on short-term finance, imposing additional burdens due to high costs (Nwude et al., 2016). While research on financing mix determinants exists, understanding of the effect ofdebt financing on firm value is limited. In developing markets, debt instruments are crucial for financing assets, impacting firm value (Nwude et al., 2016).

Debt instruments involve borrowing, providing tax savings through interest deductions. Leverage benefits firms in restructuring, facilitating large purchases, and operating capital-intensive industries. However, excessive debt poses risks (Ibrahim, 2017; Cecchetti et al., 2011). Maintaining sufficient working capital is a priority, and financial leverage ratios assess a business's ability to meet long-term obligations (Peavler, 2019). This study aims to examinine how the utilization of debt financing influences the firm value of listed ICT firms in Nigeria. By exploring the interplay between debt structure, financial performance, and market valuation.

Statement of the Problem

In an ideal scenario, the Information and Communication Technology (ICT) sector in Nigeria would flourish as a vibrant hub for tech innovation, investment, and sustainable business development. The country, recognized as a key destination for tech investors, would continue to experience substantial growth across various sectors, including e-commerce, mobile technology, and fintech startups. A myriad of opportunities would be harnessed by new businesses, allowing them not only to navigate the initial stages successfully but also to establish themselves as enduring players in the market. The ICT landscape would witness a thriving ecosystem of startups, with a majority achieving long-term sustainability and contributing significantly to the nation's economic development.

Contrary to the ideal scenario, the actual situation in the Nigerian ICT sector reflects a challenging landscape marked by notable failures. While the country has indeed attracted tech investors and witnessed growth in various tech-driven sectors, a substantial number of startups face formidable hurdles. Many fail to progress beyond the initial stages and find themselves compelled to either relocate or cease operations, often leading to acquisitions by third-party companies. The sector has witnessed the demise of once-prominent businesses, including OLX, Efritin, Fero, Wiko, WeChat, Tambo Mobile, and Easy Taxi. A critical analysis reveals that common issues such as inadequate market research, mismanagement of investor funds, failure to achieve profitability, misappropriation of resources, and a lack of employee confidence contribute to the struggles and ultimate downfall of these ventures (Naira Metrics, 2022).

The stark contrast between the ideal and actual situations serves as the core problem in the Nigerian ICT sector. While the ideal scenario envisions a thriving ecosystem with sustainable businesses, the reality is marred by a significant number of failures and challenges. The study seeks to evaluate the effect of debt financing (debt ratio, debt-to-equity ratio, and debt-to-capital ratio) on firm value of ICT firms in Nigeria.

REVIEW OF RELATED LITERATURE

Financial Leverage
Debt financing serves as a crucial financial strategy for businesses aiming to secure external capital by borrowing funds from various sources, including loans, bonds, and debt securities (Noghondari&Noghondari, 2017). This method stands in contrast to equity financing, as it does not involve relinquishing ownership stakes to investors. The key elements of debt financing include negotiating borrowing terms, with interest payments representing the cost of borrowing (Ayuba, 2019). Unlike equity financing, debt financing requires periodic interest payments and a commitment to repay the principal amount borrowed within a specified timeframe (Rehman, 2013). The borrowing instruments range from bank loans to corporate bonds, each with its own set of terms and conditions.

One significant aspect of debt financing is the inclusion of collateral and covenants. Lenders may require collateral, such as assets or property, to secure the debt, mitigating the risk for lenders (Alkhatib, 2012). Additionally, debt agreements often include covenants that outline specific conditions the borrower must adhere to, providing a mechanism for lenders to monitor and enforce compliance. Tax implications also play a role, as interest payments on debt are typically tax-deductible, offering potential tax advantages to businesses.

Debt Ratio
As delineated by Hayes et al. (2022), the "debt ratio" stands as a pivotal financial metric, offering a nuanced assessment of a corporation's leverage. This ratio is derived by calculating the proportion of total debt to total assets, typically expressed as a decimal or percentage. A debt ratio exceeding 1 signifies a substantial reliance on debt, indicating that a significant portion of assets is backed by liabilities rather than equity. Such a scenario raises concerns about the risk of default, particularly in the face of significant interest rate increases. Conversely, a ratio below 1 suggests a higher proportion of assets financed by shares, portraying a less leveraged financial position (Hayes et al., 2022).

The utility of the debt ratio extends beyond its numerical value, serving as a crucial gauge of financial leverage that exhibits significant variation across different industries. Industries characterized by high capital demands, such as utilities, commonly exhibit higher debt levels compared to those in the technology sector. To illustrate, a firm with ₦100 million in total assets and ₦30 million in total debt would yield a 30% debt ratio. However, the interpretation of this ratio's favorability hinges on the specific industry context.

In sectors marked by variable cash flows and low debt norms, a 30% debt ratio might be perceived as high. A firm with an excessively elevated debt ratio relative to its competitors may encounter challenges in securing favorable borrowing terms and could face financial hardships amid changing circumstances. Conversely, a 40% debt ratio might be deemed acceptable in stable sectors like utilities, where predictable cash flows and higher debt ratios are common (Debitoor). This underscores the industry-specific nature of evaluating debt ratios and emphasizes the importance of contextual analysis for a comprehensive understanding of a firm's financial position.

Debt to Equity Ratio (DER)
The debt/equity ratio, derived by dividing long-term debt by common shareholders' equity, represents the proportion of debt to shareholders' money in the entire financing of firm products (Nwude, 2003). It indicates the balance between equity and debt used for funding a company's assets, showcasing its financial leverage.

Investing in a corporation with a higher debt/equity ratio can be risky, especially with rising interest rates, leading to increased interest payments (Sariguna, 2011, cited by Purwanto and Chelsea, 2016). While high debt to equity may boost profitability, it could become unsustainable if the cost of debt exceeds the return on investments. The debt/equity ratio also affects a company's ability to acquire additional external capital, with high ratios posing challenges (Kuswadi, 2005, referenced by Purwanto and Chelsea, 2016).

The ratio assesses how debt leverages equity in asset financing and return, indicating the firm's borrowing characteristics and its goal to obtain target returns while managing the risk of financial collapse (Al Momamni & Obeidat, 2017). Efficiently managing the debt-equity structure can lead to a rise in the cost of capital and an increase in the firm's value (Aziz & Abbas, 2019).

Debt-to-Capital Ratio
The debt-to-capital ratio (DCR) is a financial metric that measures a company's degree of financial leverage by comparing its total liabilities to its total capital (Investopedia, 2022). In essence, the calculation of the debt-to-capital ratio assesses the dependency of a firm on debt relative to its capital for maintaining its operations.

The debt-to-capital ratio is a significant indicator for reviewing a company's financial structure and determining its eligibility for investment (Investopedia, 2022). By dividing total debt by total capital, which contains both debt and shareholders' equity, analysts and investors may get insights into the risk profile of a corporation. A greater debt-to-capital ratio frequently signifies a higher degree of risk, as it represents a stronger dependency on debt financing compared to equity. This increased

debt burden improves the chance for default if the corporation is unable to repay its debts in a timely fashion.

Market capitalization (MCAP)

Market capitalization, or market cap, quantifies the total value of a company's outstanding shares by multiplying the stock price with the total shares in the market. Widely used in the financial world, market cap serves as a key metric for gauging a company's size, surpassing the sole consideration of sales or total assets. In the context of acquisitions, it aids in evaluating whether a potential target offers compelling value to the acquiring firm. Barberis and Shleifer (2003) emphasize the importance of considering both sales and market value when assessing a company's size. Market cap is a dynamic metric subject to fluctuations over time, influencing investors' perceptions of a company's worth and future potential. Calculated by multiplying the current market price per share by the total number of outstanding shares, market capitalization provides a comprehensive insight into a company's size and its relative standing within the financial markets (Investopedia, 2022).

Theoretical Framework

This study is strongly based on the trade-off and pecking order theories, because both theories imply that the choice of financial leverage has an impact on organizations' value.

The Trade-Off Theory

De Angelo and Masulis (1990) introduced the trade-off theory, suggesting that firms balance the benefits and costs of debt, borrowing until tax advantages exceed potential bankruptcy expenses. Leverage offers tax deductibility and project participation but increases bankruptcy risk. Firms aim for an optimal debt ratio, minimizing costs and maximizing benefits (Baker & Martin, 2011; Brealey & Myers, 2006).

Myers (1984) proposed that firms gradually move towards their desired debt-to-value ratio, weighing tax shield benefits against bankruptcy costs. This trade-off allows firms to calculate their optimal debt ratio while maintaining their investment plan. The goal is to maximize overall value by exchanging equity for debt.

Frank and Goyal (2009) added that a firm's financing decisions, whether through debt or stock, depend on expectations for the next period. The trade-off theory predicts a positive correlation between firms' leverage ratios and company value, especially for successful firms with higher retained profits. This strategic use of debt provides tax protection while minimizing financial difficulties.

Pecking Order Theory

The Pecking Order Theory, introduced by Donaldson in 1961 and refined by Myers and Majluf in 1984, outlines why successful businesses prioritize internal funds over debt (Donaldson, 1961; Myers & Majluf, 1984). Firms follow a systematic pecking order: starting with internal funds, then resorting to debt issuance, and, if needed, turning to equity sales. This strategy, driven by a preference for the least expensive financing source, typically retained earnings (Igbinosa&Chijuka, 2014), favors debt for its tax deductibility, with equity considered a last resort (DeJong, et al., 2011).

While the Pecking Order Theory doesn't specify a particular debt-equity balance, it emphasizes a systematic preference order for long-term activities. Myers (1984) attributes this order to information asymmetry, suggesting that in anticipation of undervaluation, management may prefer financing through retained profits. If insufficient, debt financing is favored over issuing new shares. Optimal financial structures are determined by weighing the benefits and costs of additional debt. Leverage offers tax advantages and increased cash flow, but borrowing costs entail bankruptcy risks and conflicts (Jensen, 1986). The trade-off theory predicts borrowing until the marginal value of tax advantages equals the present value growth of bankruptcy costs. The pecking order, emerging under asymmetric information, favors self-financing first, followed by loans, and, as a last resort, share offerings.

Empirical Review

Afolabi, et al. (2019) examined the connection between leverage and financial performance in Nigerian enterprises from 2007 to 2016. Using proxies like Debt Ratio (DR), Debt-Equity Ratio (DER), and Interest Cover Ratio (ICR) for financial leverage, and Return on Capital Employed (ROCE) for financial performance, the study employed regression analysis and panel data. The results indicated a positive and strong association between leverage (DR and DER) and ROCE, aligning with the Static trade-off model of capital structure.

Kenn-Ndubuisi et al. (2019) explored the link between financial leverage and company financial performance in Nigeria using various indicators and a sample of 80 non-financial enterprises from 2000 to 2015. Results showed a strong and negative correlation between profits per share and the debt-to-equity ratio, as well as total debt-to-total asset measures, with varying relationships among components.

Fali et al. (2019) investigated the influence of leverage on the financial performance of Jaiz Bank, the only listed Islamic bank in Nigeria, from 2012 to 2017. Using multiple regression analysis, the research found a positive and significant association between debt capital and return on assets, and a positive but minor association between loan capital and return on assets.

Ivo and Anyanwaokoro (2019) studied the influence of leverage financing on the performance of listed cement manufacturing enterprises in Nigeria over the period 2006 to 2017. The analytical method utilized was ordinary least square (OLS) simple and multiple regressions. The results revealed that the Debt Ratio and Debt to Equity Ratio had a negative and small influence on the Return on Assets (ROA). On the other hand, the Interest Coverage Ratio (ICR) had a positive and minor influence on the return on assets of listed cement companies in Nigeria.

Onuora (2019) assessed the relationship between financial leverage and the financial performance of eight Deposit Money Banks in Nigeria from 2005 to 2017. Correlation analysis and OLS regression were employed for data analysis. Using Debt-Equity Ratio (DER) and Debt Ratio (DR) as proxies for financial leverage and Return on Equity (ROE) as a measure of financial success, the study found a strong negative association between ROE and DER. A slight negative association was observed between ROE and DR, while size exhibited a substantial positive relationship with ROE.
Aripin and Abdulmumuni (2020) investigated the connection between financial leverage and the financial performance of Nigerian manufacturing enterprises from 2011 to 2015. Regression analysis

was done to analyse the data. The study revealed a positive and substantial correlation between financial leverage and the financial success of Nigerian manufacturing enterprises, measured by return on equity (ROE).

Abubakar (2020) investigated the impact of financial leverage on the financial performance of seven listed oil and gas enterprises in Nigeria using secondary data from yearly reports and the Nigerian Stock Exchange (NSE) for the period of 2005-2016. The random effects model regression data revealed that STDR and LTDR did not significantly affect financial performance, while TDER had a negative significant effect on ROE.

Anifowose, et al. (2020) examined the influence of financial leverage on the performance of listed pharmaceutical enterprises in Nigeria using yearly panel data spanning 16 years from 2003 to 2018. Employing regression technique and the research found that Debt Equity Ratio (DER) had a positive association, while Debt Ratio (DR) and Interest Coverage Ratio (ICR) had a negative relationship with Return on Assets (ROA) and Return on Equity (ROE).

Arfazil et al. (2022) conducted a study on the relationships between environmental performance, financial leverage, institutional ownership, and business value. Focused on 20 manufacturing businesses listed on the Indonesia Stock Exchange from 2016-2019, the research used Tobin's Q ratio to measure company value. Multiple regression analysis revealed that all investigated independent factors, including environmental performance, financial leverage, and institutional ownership, had a positive impact on business value.

Sthembiso (2022) studied the effect of leverage and liquidity on the financial performance of general insurance firms operating in Sub-Saharan Africa. The study sampled 113 general insurers in Sub-Saharan Africa over 11 years (2008-2019), with financial success defined by the return on assets (ROA). Pooled OLS, fixed effects, and random effects models were used. The results demonstrated a minor negative association between leverage and financial performance, whereas liquidity was favourably related with financial success.

Ibe and Pibowei (2022) assessed the impact of financial leverage on the corporate financial performance of Dangote Cement Plc from 2010 to 2021. The findings of the ordinary least squares (OLS) model revealed a significant relationship between the retained earnings ratio and return on assets, while no significant relationship was found between the retained earnings ratio and return on equity, as well as between the equity multiplier ratio and return on assets, and between the equity multiplier ratio and return on equity of Dangote Cement Plc.

Gap in Empirical Review
While existing research has extensively delved into the realm of debt financing across various industries globally, including noteworthy studies conducted in Nigeria, there remains a conspicuous gap when it comes to the Information and Communication Technology (ICT) sector in the Nigerian context. Notably, empirical investigations into the impact of financial leverage have explored sectors such as cement, pharmaceuticals, oil and gas, manufacturing, and banking, yet the ICT sector has remained conspicuously absent from these scholarly pursuits (Ibe and Pibowei, 2022; Anifowose et al., 2020; Abubakar, 2020; Aripin and Abdulmumuni, 2020; Fali et al., 2019; Onuorah, 2019).

Moreover, the existing studies have largely concluded their analyses up to 2019, resulting in a knowledge gap spanning three years. The present study endeavors to rectify this by extending the analysis period to encompass financial data up to the 2022 fiscal year, thereby offering a more contemporary perspective on the relationship between debt financing and the ICT sector's dynamics. Furthermore, it is worth noting that previous research has predominantly concentrated on examining the correlation between financial leverage and financial performance or profitability, leaving a void in our comprehension of the intricate connection between financial leverage and the overall business value. This study seeks to address these gaps by specifically focusing on exploring the nuanced link between financial leverage and the business value of ICT firms listed on the Nigeria Exchange Group (NGX). Through this targeted investigation, the research aims to contribute valuable insights to the existing body of knowledge and offer a comprehensive understanding of the financial dynamics within the Nigerian ICT sector.

METHODOLOGY

The study utilized an ex-post facto research design to ensure reliability and facilitate future replication, following guidelines from Asika (2006) and Creswell (2009). It focused on the ICT sector within Nigeria's economy, using data from audited annual reports of listed ICT firms. The research population included five ICT firms on the Nigerian Exchange Group from 2013 to 2022. The sampled firms were Chams Holding Company Plc, Courteville Business Solutions Plc, CWG Plc, NCR (Nigeria) Plc, and Omatek Ventures Plc, chosen for their sufficient data availability. Three other firms—Airtel Africa Plc, Brickslinks Africa Plc, and MTN Nigeria Communications Plc— were excluded due to their listings occurring after the study period began, resulting in insufficient data for analysis.

Model Specification
The model was specified in line with Inyiama and Ezeugwu (2016) as follows:

$$MCAP_{it} = \beta_0 + \beta_1 DR_{it} + \beta_2 DER_{it} + \beta_3 DCR_{it} + c_{it} + \varepsilon_{it} \qquad \text{[Equation (1)]}$$

Where;
MCAP: Market Capitalization
DR: Debt Ratio
DER: Debt-Equity Ratio
DCR: Debt-to-Capital Ratio
β_0 is the constant term or intercept for firm i in the year t.
β_1, β_2, and β_3, are linear regression coefficients to be estimated.
c_{it} is the non-observable individual effect while ε_{it} is the disturbance or error term for firm i in the year t.

DATA PRESENTATION AND ANALYSIS

Data Presentation
Except for market capitalization, the raw data in Appendix A are values derived from the audited financial statements of the ICT firms. The variables so represented aided in the data analysis (See Appendix A).

Data Analysis

Table 4.2.1:Descriptive Statistic of the ICT sector Panel Data

	LOG(MCAP)	DR	DER	DCR
Mean	21.10821	0.273875	1.839936	0.146606
Median	21.10416	0.089187	0.059077	0.091006
Maximum	22.64269	1.638171	33.96789	1.496293
Minimum	19.09423	0.003321	-12.38152	-3.436061
Std. Dev.	0.907079	0.365111	7.744424	0.811984
Skewness	-0.064655	1.590255	2.339432	-2.176491
Kurtosis	2.865163	5.291985	9.365824	10.46676
Jarque-Bera	0.072713	32.01841	130.0322	155.6269
Probability	0.964296	0.000000	0.000000	0.000000
Sum	1055.411	13.69377	91.99680	7.330308
Sum Sq. Dev.	40.31687	6.532010	2938.829	32.30656
Observations	50	50	50	50

Source: Eviews 10.0 Statistical Software (2024)

The normality of the distribution for the variables in Table 4.2.1 is assessed using the Jarque-Bera tests, which consider skewness and kurtosis. For the variable LOG(MCAP), the Jarque-Bera statistic is 0.073 with a p-value of 0.964, indicating that the logarithm of market capitalization is normally distributed. The skewness of -0.065 suggests a slight negative skew, and the kurtosis of 2.87 indicates a moderate level of peakedness.

However, the debt-related variables (DR, DER, and DCR) reveal departures from normality. The Jarque-Bera statistics for DR, DER, and DCR are 32.018, 130.032, and 155.627, respectively, all with p-values close to zero (0.000). These low p-values signify a rejection of the null hypothesis of normality. The skewness values for DR, DER, and DCR are 1.59, 2.34, and -2.18, respectively, indicating significant departures from symmetry. The kurtosis values for these variables are 5.29, 9.37, and 10.47, suggesting heavy tails and extreme values.

While the logarithm of market capitalization appears to conform to a normal distribution, the debt-related variables in the ICT sector panel data exhibit significant deviations from normality, as indicated by both the Jarque-Bera tests and the skewness and kurtosis values. These findings underscore the importance of considering the non-normality of the debt structure metrics in subsequent statistical analyses and modeling efforts.

Table 4.2.2:Panel Regression Analysis (Dependent Variable: MCAP)

Variable	Coefficient	Standard Error	t-Stat	p-Value
DR	-0.383998	0.339409	-1.131372	0.2643
DER	0.038927	0.007548	5.157177	0.0000
DCR	0.343928	0.136084	2.527323	0.0153
C	21.09133	0.121473	173.6291	0.0000

$R^2 = 0.86$, Adjusted $R^2 = 0.84$, F-Stat = 37.70058, Prob(F-stat) = 0.0000 DW = 1.25

Source: E-Views 10.0 Output, 2024

Table 4.2.2 provides the results of a panel regression analysis with the logarithm of market capitalization (MCAP) as the dependent variable and three key independent variables: debt ratio (DR), debt-to-equity ratio (DER), and debt-to-capital ratio (DCR). Additionally, a constant term (C) is included to capture the baseline level of market capitalization when all independent variables are zero.

The coefficient for the debt ratio (DR) is -0.384, accompanied by a standard error of 0.339, resulting in a t-statistic of -1.131 and a p-value of 0.2643. Surprisingly, the debt ratio does not emerge as statistically significant in explaining the variation in market capitalization. This finding suggests that, in this context, the debt ratio may not be a significant predictor of market capitalization for ICT firms in Nigeria.

In contrast, the debt-to-equity ratio (DER) displays a noteworthy coefficient of 0.039 with a small standard error of 0.008, yielding a high t-statistic of 5.157 and a p-value of 0.0000. This indicates that the debt-to-equity ratio is both statistically significant and positively associated with market capitalization. The positive coefficient suggests that as the debt-to-equity ratio increases, market capitalization tends to rise, emphasizing the importance of the capital structure in influencing market valuation.

Similarly, the debt-to-capital ratio (DCR) also demonstrates statistical significance, with a coefficient of 0.344, a standard error of 0.136, a t-statistic of 2.527, and a p-value of 0.0153. The positive coefficient implies that an increase in the debt-to-capital ratio is associated with a rise in market capitalization. This underscores the impact of the overall capital structure on the valuation of ICT firms.

Regarding model fit and diagnostics, the R-squared (R^2) value of 0.86 indicates that the model explains a substantial portion (86%) of the variability in market capitalization. The Adjusted R-squared of 0.84 considers the number of variables in the model. The F-statistic of 37.70058, with a p-value of 0.0000, supports the overall statistical significance of the model. However, the Durbin-Watson (DW) statistic of 1.25 suggests mild positive autocorrelation, indicating a potential need for further diagnostic checks.

Test of Hypotheses

Statement of Decision Rule: The decision ruleinvolves rejecting the null hypothesis (H_0) if the sign of the coefficient is either positive or negative, the modulus of the t-Statistic > 2.0 and the P-value of the t-Statistic < 0.05. Otherwise, accept H_0 and reject H_1.

Test of Hypothesis One
H_0 Debt ratio does not have a significant effect on market capitalization of ICT firms in Nigeria.
H_1 Debt ratio does have a significant effect on market capitalization of ICT firms in Nigeria.

*Decision:*The coefficient for the debt ratio (DR) is -0.384 with a p-value of 0.2643, indicating that the debt ratio is not statistically significant. Therefore, we fail to reject the null hypothesis,

suggesting that the debt ratio does not have a significant effect on market capitalization for ICT firms in Nigeria based on the available data.

Test of Hypothesis Two
H_0 Debt-to-equity ratio has a non-significant effect on market capitalization of ICT firms in Nigeria.
H_0 Debt-to-equity ratio has a significant effect on market capitalization of ICT firms in Nigeria.

Decision: The coefficient for the debt-to-equity ratio (DER) is 0.039 with a very low p-value of 0.0000, indicating statistical significance. Therefore, we reject the null hypothesis, concluding that the debt-to-equity ratio has a significant and positive effect on market capitalization for ICT firms in Nigeria.

Test of Hypothesis Three
H_0 Debt-to-capital ratio has a non-significant effect on market capitalization of ICT firms in Nigeria.
H_1 Debt-to-capital ratio has a significant effect on market capitalization of ICT firms in Nigeria.
Decision: The coefficient for the debt-to-capital ratio (DCR) is 0.344 with a p-value of 0.0153, suggesting statistical significance. Consequently, we reject the null hypothesis, asserting that the debt-to-capital ratio has a significant and positive effect on market capitalization for ICT firms in Nigeria.

DISCUSSION OF FINDINGS

Debt Ratio and Market Capitalization
The non-significant negative effect of the debt ratio (DR) on market capitalization for ICT firms in Nigeria, as revealed by the regression results, prompts consideration of various factors that could contribute to this unexpected relationship.

Firstly, industry characteristics play a pivotal role. The unique dynamics of the ICT sector may dictate that investors perceive a certain level of debt as customary or even necessary for supporting business operations and fostering growth. If industry norms tolerate a moderate level of debt, the variability in debt ratios might not significantly influence the market capitalization of companies within this sector.

Investor perceptions and risk tolerance represent another critical dimension. Investors in the technology industry, known for its innovation and growth potential, may exhibit a higher tolerance for risk. Consequently, they might interpret certain levels of debt as acceptable, not viewing them as a significant risk to the financial health and market standing of ICT firms.

Moreover, the financial health and stability of ICT companies could be paramount. If the firms under consideration demonstrate strong financial management and are capable of servicing their debt obligations without jeopardizing stability, investors may perceive higher debt ratios as reasonable. In such cases, the negative impact on market capitalization might be muted or non-significant.

Strategic use of debt could also be influencing the results. ICT companies may strategically employ debt to fund initiatives such as research and development or technology upgrades, seen by investors

as value-enhancing and contributing to future returns. This strategic utilization of debt might offset the anticipated negative impact on market valuation.

Considering broader market dynamics is essential. The overall sentiment in the stock market, prevailing economic conditions, and investor behavior can collectively shape the relationship between debt ratios and market capitalization. Under certain market conditions, investors might prioritize other factors, leading to a non-significant association between debt ratios and market valuation.

Debt-to-Equity Ratio and Market Capitalization
The significant and positive effect of the debt-to-equity ratio (DER) on market capitalization for ICT firms in Nigeria, as revealed by the regression results, can be interpreted through several lenses that capture the strategic and contextual aspects of financial decision-making within the technology sector.

One plausible explanation lies in the concept of financial leverage and its potential impact on growth opportunities. Investors may perceive higher levels of financial leverage, as indicated by a higher debt-to-equity ratio, as a strategic choice by ICT firms to fund expansion and innovation. This positive relationship suggests that investors view the use of debt as a means to amplify returns on equity when invested in projects that promise positive net present value, reflecting confidence in the company's growth trajectory.

Another key factor influencing this effect could be the effective management of debt by ICT firms. If these companies demonstrate a robust track record of servicing their debt obligations while maintaining financial stability, investors may interpret higher debt-to-equity ratios positively. The ability to handle financial leverage without compromising the overall financial health of the company contributes to investor confidence and positively influences market capitalization.

Strategic deployment of debt for innovation and technological advancements could be a driving force behind the observed relationship. In the dynamic landscape of the ICT sector, companies may use debt strategically to fund research and development initiatives or adopt emerging technologies. Investors recognizing this strategic use of debt to stay competitive and drive innovation may respond positively, contributing to the positive effect on market capitalization.

Perceptions of stability and maturity associated with higher debt-to-equity ratios may also play a role. Investors might interpret such ratios as indicative of a more mature and stable company, capable of managing higher levels of financial leverage without compromising financial health. This interpretation aligns with the notion that, in certain contexts, higher debt levels can be seen as a signal of a company's established position in the market.

The prevailing interest rate environment is another factor influencing the relationship between the debt-to-equity ratio and market capitalization. In times of low-interest rates, companies may find it more favorable to use debt financing. If investors perceive the cost of debt as relatively low, it could positively impact market valuation, contributing to the observed positive effect.

Moreover, the positive association might be shaped by industry norms and investor expectations. If the market anticipates that technology firms in Nigeria commonly use higher levels of debt to fund expansion and that this is considered standard practice, investors might incorporate these expectations into their valuation models, resulting in a positive relationship.

Debt-to-Capital Ratioand Market Capitalization

The significant and positive effect of the debt-to-capital ratio (DCR) on market capitalization for ICT firms in Nigeria, as revealed by the regression results, can be attributed to several plausible reasons that capture the financial dynamics and strategic decisions within the technology sector. One potential explanation is rooted in the concept of financial structure optimization. The positive relationship between the debt-to-capital ratio and market capitalization suggests that investors perceive a strategic and efficient use of both debt and equity in the capital structure of ICT firms. This could indicate that companies in the technology sector are effectively leveraging a mix of debt and equity to maximize their market valuation, emphasizing the importance of a balanced financial structure in the eyes of investors.

The strategic use of debt for expansion and growth initiatives is another influential factor. ICT companies may strategically deploy debt to fund research and development, acquisitions, or other growth-oriented projects. If investors interpret the debt-to-capital ratio as a signal of the company's commitment to seizing growth opportunities, they may respond positively, contributing to the observed positive effect on market capitalization.

The risk-return tradeoff associated with the debt-to-capital ratio could be playing a role. A higher debt-to-capital ratio implies a greater proportion of financing from debt, which typically carries higher financial risk but can also offer higher returns. Investors in the ICT sector may be assessing this tradeoff and perceiving higher debt levels as a strategic choice to potentially enhance returns, particularly in a sector known for innovation and growth.

Market perceptions of financial stability may also contribute to the positive relationship. If investors view a higher debt-to-capital ratio as manageable and reflective of a company's ability to service its debt obligations without compromising stability, this positive perception can influence market capitalization. This interpretation aligns with the notion that, in certain contexts, higher levels of debt may not be perceived as inherently risky but rather as a calculated and strategic financial decision.

Moreover, the role of industry norms and expectations cannot be overlooked. If higher debt-to-capital ratios are common within the technology sector in Nigeria and are considered standard practice, investors may factor these industry-specific norms into their valuation assessments, contributing to the positive relationship between the debt-to-capital ratio and market capitalization.

SUMMARY OF FINDINGS, CONCLUSION, AND RECOMMENDATIONS

The comprehensive analysis of the impact of debt financing on the firm value of listed ICT firms in Nigeria has provided valuable insights into the financial dynamics within this sector. The study

examined the debt ratio, debt-to-equity ratio, and debt-to-capital ratio in relation to market capitalization, shedding light on the effect of financial leverage on firm valuation.

Unexpectedly, the debt ratio exhibited a non-significant negative effect on market capitalization, challenging conventional expectations. This result suggests that within the context of the ICT sector in Nigeria, the level of debt, as measured by the debt ratio, may not significantly influence the market valuation of companies.Conversely, the study revealed a significant and positive effect of debt-to-equity ratio on market capitalization for ICT firms. This highlights the strategic use of financial leverage, with investors perceiving higher debt-to-equity ratios as indicative of companies effectively managing debt to fund growth opportunities.

Notably, the debt-to-capital ratio emerged as a significant and positively influential factor on market capitalization. This result implies that a balanced mix of debt and equity in the capital structure contributes to higher firm value. The study therefore conclude that debt financing has a significant effect on firm value of ICT firms in Nigeria. The study offers the following recommendations:

i. Given the non-significant negative impact on market capitalization, firms in the Nigerian ICT sector should critically assess their debt levels, ensuring they align with industry standards and investor expectations, and consider a balanced mix of debt and equity to optimize financial structure.
ii. Considering the significant positive effect on market capitalization, ICT firms should strategically manage their debt-to-equity ratios, emphasizing effective debt utilization for growth initiatives while maintaining investor confidence through transparent communication about the strategic benefits of higher leverage.
iii. With the significant positive impact on market capitalization, ICT firms are encouraged to explore a balanced debt-to-capital structure, recognizing the potential benefits of a strategic mix of debt and equity in enhancing firm value, but ensuring that debt is prudently managed to mitigate associated risks.

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