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CAPITAL STRUCTURE CHOICES IN SERVICES FIRMS: EMPIRICAL RESULTS FROM NIGERIA LISTED COMPANIES

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ABSTRACT

The effects of the worldwide economic slump, which was largely triggered by SARS-CoV-2, have undermined the profitability of businesses. As a result, the overarching goal of this research is to look into the impact of capital structure choices on the financial performance of services firms quoted on the Nigerian Exchange Group (NGX). With an adjusted population of 11 listed services firms in Nigeria, the analysis spans from 2011 to 2020. The secondary data was collected from the annual reports of the selected enterprises and African financials, using an ex-post facto design. The generalised least square model was employed for the analysis of the data. While both retained earnings and total debt have a positive and significant influence on earnings per share, short-term and long-term debts, and equity were insignificant, according to the findings. The study, on the other hand, suggests that company executives save earnings to be spent solely on rainy days in order to minimize negative shocks that could harm a company's going-concern objective.

Keywords: Capital structure, Earnings per Share, Short-term debt, Long-term debt, Total Debt, Services

INTRODUCTION

Corporate sector vulnerabilities have been a central issue, drawing the attention of investors to the acute risks to the financial soundness of the services firms and the necessity of a strong regulatory policy response to neutralise the economic collapse due to the SARs-CoV-2, which resulted in a global economic recession, and different sectors of different economies were shut down as a precautionary step to avoid the pandemic's ramifications. The services sector was the hardest hit during the global economic crisis, resulting in a gap in the services sector's financing operations. Since Miller and Modigliani's seminal work in 1958, empirical and theoretical research around the world have argued that managers deliberately design a firm's capital structure in order to achieve optimization and increase firm performance (Ghasemi, Ab-Razak, & Dehghani, 2018; Chaleeda, Ahmad, & Ghazalat, 2019). As a result, the best profit is projected to be obtained by combining the right debt-to-equity proportions. The optimal capital structure theory explained this. For a company that has been in existence for a long time and has made a profit, this profit can be used to fund more operations in order to improve profits through higher sales. The new capital structure will be formed by the financial sources chosen. According to Arifin (2017) the 'Pecking Order Theory' supports this approach. Financial performance is a broad indicator of a company's overall financial health over time. Capital structure is one of the most confusing issues in financial literature, since it deals with the best debt-to-equity ratio. A decision to fund capital from the lowest sources to maximize income after taxes is essentially a mirror image of capital structure choice (Yazdanfar, 2012).

Several research on capital structure in the service sector has been conducted in Europe, the United States, the Middle East, and other parts of the world (Chakrabarti & Chakrabarti, 2019; Choi, Seoki, Kyuwan, & Kyung, 2018; Park & Jang, 2018; Sardo, Zelia, & Elisabete, 2020; Sermpinis, Serafeim, & Ping, 2019; Szemán, 2017). In comparison to other industries, capital structure research in the service industry is still in its infancy. To improve our understanding of the drivers of financial performance in this industry, we

argue that more research is needed. As a result, it is critical to comprehend how capital structure affects the performance of services firms in Nigeria, as Nigeria is an import-dependent economy where debt financing is the most common method of financing investment. This means that how leverage affects performance is highly dependent on the conditions (Le & Phan, 2017). Similarly, the services firms have experienced downward growth rates of -0.82%, -0.92%, 1.83%, 2.22%, and -2.22% for the years 2016 to 2020, respectively (NBS, 2021). This trend of inconsistent performance affirmed the position of the Ministry of Budget and Planning (2017), which maintained that the Nigerian business environment suffers from a number of challenges that made carrying out business operations costly and inefficient. This lopsided performance has impeded investment by firms due to the uncertainties that affect their performance, thus eroding the wealth of investors.

To that end, the general goal of this paper is to empirically investigate the impact of capital structure choices on the financial performance of Nigerian listed services organizations. The specific objectives are to determine the impact of retained earnings on earnings per share of listed services firms in Nigeria; to investigate the role of short-term debt on earnings per share of listed services firms in Nigeria; to assess the impact of long-term debt on earnings per share of listed services firms in Nigeria; to determine the impact of total debt on earnings per share of listed services firms in Nigeria; and to determine the effect of equity on earnings per share of listed services firms in Nigeria. Similarly, these precise objectives were operationalized and hypotheses were tested. The study's focus is confined to Nigeria's quoted services firms from 2011 to 2020. The services sector was chosen to represent the Nigerian economy's transition from a resource-based to a service-based economy. Since the Nigerian service sector encompasses a wide range of industries, including banking, retail and wholesale trade, tourism, real estate, telecommunications, ICT, entertainment, and education (Adetekunbo & Edioye, 2020). However, the service sector is currently the world's fastest growing industry (Khanna, Papadavid, Tyson, & Willem, 2016).

As a result, we argue that the urgent need to diversify Nigeria's economy cannot be overemphasised, especially given the fluid and fluctuating global oil freight, in order to reduce the country's vulnerability to macroeconomic risks such as declining production, falling demand and price, depletion of reserves, and the negative impact on the listed services sector's earnings. Apart from the year 2011, when the service sector contributed 49.24 percent to the gross domestic product, the sector has had reasonable contributions between 50.19 percent and 60 percent for the years 2012 to 2016. The sector has continuously witnessed a decline in its economic activities due to inadequate plans for economic priorities, which was further devastated (Plecher, 2020). In this regard, the service sector's economic activities have decreased to 49.73 percent in 2019 and less than 47 percent in October 2020 (CBN Purchasing Manager's Survey Report, 2020). This trend is projected to continue in the near future; therefore, it's critical to gain some insight into the impact of capital structure choices on services sector organizations, particularly as they impact on the sector's financial performance.

Firm performance is judged by earnings per share, and capital structure decisions are measured by short-term debt, long-term debt, debt-to-equity ratio, and equity ratio, respectively. The contribution of this research is that it adds to the Nigerian service industry context from very recent data to the recent body of knowledge on capital structure options. The remaining part of this article is organised as follows. The literature and prior studies are examined in section 2; the technique is discussed in section 3; the results and discussion of findings are discussed in section 4; and the paper is concluded with recommendations for future research in section 5.

LITERATURE REVIEW

The composition of a firm's capital structure, which is all about the mix of debt and equity employed by a firm in financing its assets, is referred to as capital structure or finance options. Previous research has interpreted the meaning of financial decisions using a variety of terms that all mean the same thing. For

example, Ibrahim (2017), highlighted capital structure decisions as being at the heart of many other corporate finance decisions, such as dividend policy, project financing, the issuance of long-term securities, mergers and acquisition financing, etc. One of the various goals of a corporate financial manager is to keep the cost of capital low and, hence, maximize shareholder wealth. Similarly, the company's capital structure, which comprises long-term debt, preferred stock, and shareholder money, is viewed as permanent financing. In the long run, the company's purpose is to maximize the company's value by lowering its capital costs. One of the key responsibilities of the company's management is to determine the appropriate goal of its capital structure. The leverage ratio, or the proportion of the company's debt financing, is the capital structure and the capital structure is critical for increasing productivity and firm performance. Szczman (2017) stated that the company's financial policy in defining the capital structure (mix of debt and equity) strives to maximize the firm's value on this basis. Capital structure, according to Sivalingam and Kengatharan (2018), is "the mechanism by which the firm finances itself through borrowing, equity, and securities". This means that a company's assets must be financed by a combination of debt and equity. As a result, a firm's capital structure is vitally significant because it is linked to the firm's ability to meet the needs of its stakeholders. In light of the foregoing, capital structure might be defined as a company's determination of its equity and debt funding requirements.

Existing literatures have investigated a number of hypotheses connected to capital structure and financial performance; nevertheless, this research uses three of the most renowned theories as its foundation, namely trade-off theory, pecking order theory, and agency theory. To begin, the Trade-off Theory, which was proposed by Modigliani and Miller in 1956, states that a corporation decides how much debt and equity financing to use by balancing the costs and advantages. One of the main goals of the theory is to explain why firms are typically financed in part with debt and partly with equity. It asserts that there is a benefit to financing with debt, namely the tax benefits of debt, cost to financing with debt, expenses of financial hardship, which include both bankruptcy and non-bankruptcy costs. According to trade off theory a firm's optimal leverage is accomplished by minimizing taxes, costs of financial distress, and agency costs.

According to proponents of trade-off theories, relatively profitable enterprises borrow more to take advantage of tax benefits because they have more income to shield. As a result, the link between debt levels and financial performance (both profitability and market value) of such enterprises is projected to be positive (Demirgunes, 2017; Sivalingam & Kengatharan, 2018; Ahmad, Bakar, & Islam, 2020). Also, assuming that tax returns are still greater than the costs of financial pressure and agency costs, the theory predicts a positive link between capital structure and firm financial performance. Reducing debt interest in the calculation of taxable income reduces the tax burden, resulting in a higher proportion of net income after taxes or a higher level of profitability (Sudiani & Wiksuana, 2018).

Furthermore, according to Szeman (2017), pecking order theory was initially noticed in a study conducted by Donaldson in 1961, and then updated by Myers and Majluf in 1984 (Ghasemi, Ab-Razak, & Dehghani, 2018). According to the hypothesis, if investors are less informed about a company's value than company insiders, the market may misprice shares. When companies seek to fund new projects, underpricing can be so severe that new investors capture more than the project's net present value, causing old investors' value to be diluted. This may result in underinvestment. To get around this problem, firms establish a preference for a financial pecking order to avoid this. Under typical market conditions, firms choose internal finance over external finance, secure debt over hazardous debt and convertibles, and lastly common stocks under normal market conditions (Sivalingam & Kengatharan, 2018; Ahmad, Hunjra, Qureshi, & Hanif, 2021). According to this hypothesis, there is no well-defined debt-to-equity ratio that is intended to reach and the measured debt-to-equity ratio shows a company's total external financing needs.

Finally, Jensen and Meckling's 1976 proposal of agency theory solves the fundamental challenges of managing a firm's capital structure using the inexpensive source of money. While common equity is an expensive source of capital and when equity holders insist on risk reduction through lower leverage, the firm's value suffers. It is exceedingly unlikely that managerial activities will ever result in optimal business value if managers' and shareholders' objectives are not aligned. Because of their risk perceptions, loan

holders are more likely to request debt covenants or other costly debt shielding measures. The tensions between the two owner groupings raise the risk of management monitoring, resulting in costly monitoring and, as a result, agency expenses. When debt and bankruptcy risks rise, a number of remedial steps can be implemented, such as a reduction in resource usage (Szema, 2017; Chaleeda, Ahmad, & Ghazalat, 2019; Ahmed & Bhuyan, 2020).

Empirical evidence on the relationship between financial choices and financial success is shown below. Siddik, Kabiraj, and Joghee (2017) recently conducted research into the impact of capital structure on bank financial performance in Bangladesh between 2005 to 2014, the study looked at 22 banks for a period of 10 years. The performance indicators were return on assets, return on equity, and earnings per share. The findings of their research revealed that capital structure had an inverse relationship with a bank's performance. A study on debt capital and financial performance was also carried out by Abewardhana and Magoro (2017), which was a comparative comparison of South African and Sri Lankan listed companies. The study found that debt financing in the form of short-term debt had a detrimental influence on company performance in Sri Lanka, whereas long-term debt had a favourable benefit. Furthermore, using panel econometric techniques for data analysis, Achieng, Muturi, and Wanjare (2018) investigated effect of equity financing options on financial performance of non-financial firms listed on the Nairobi Stock Securities exchange. The study findings revealed that capital structure has a significant but negative impact on financial performance, whereas retained earnings and total equity have a significant and positive impact.

Silvalingam and Kengatharan (2018) also defined the link between capital structure and financial performance between the period of 2007 to 2016, the study used panel data regression analysis with a sample size of 10 banks. The study's findings were characterized by Fixed Effect model as selected by the Hausman test, revealed that total debt to total asset ratio was significantly and negatively associated with ROA, whereas short- and long-term debt to total asset ratios had no significant relationship with ROA. Dalci (2018), for example, investigated the influence of capital structure on 1503 listed industrial firms on

the Chinese stock exchange from 2008 to 2016. They discovered an inverted U-shaped relationship between capital structure and profitability, as well as the reasons for negative and positive financial leverage (as a measure of capital structure) and profitability relationship. Similarly, Chakrabarti and Chakrabarti (2019) studied firm-specific and macroeconomic variables for seven years on 18 Indian non-insurance enterprises. Low insurance, low input costs, low inflation rates, a higher return on investment, liquidity, and profitability were all shown to be significant.

In addition, Dave, Ashwin, Ashishi, and Tejas (2019) determined the impact of capital structure on firm profitability in the Indian steel sector and found a substantial negative association between long-term and short-term indebtedness as a percentage of total assets and profitability. After establishing this, Hussein, Alrabba, Muhannad, and Mashhoor (2019) assessed publicly traded Jordanian companies from 2005 to 2017, they discovered a significant positive relationship between firm size, asset growth, and return on assets using three measures of firm performance: return on assets, Tobin's Q and return on assets, and total and short-term debt as a proxy for capital structure. They also discovered a significant negative relationship between short-term debt and long-term debt and return on assets using three measures of firm performance: return on assets, Tobin's Q and return on assets, and total debt and short-term debt as a proxy for capital structure. They did not, however, detect a significant relationship between short-term and long-term indebtedness and business performance as measured by return on equity. Helmy et al. (2020) investigated the impact of capital structure, internal governance mechanisms, and firm performance on 183 Malaysian businesses listed on Bursa Malaysia from 2007 to 2010. They discovered that capital structure has a beneficial impact on firm performance. Gharaibeh and Bani-Khaled (2020) investigated the factors that influenced the profitability of 46 Jordanian service sector businesses between 2014 and 2018. Results showed that debt as a percentage of total assets and tangible assets had negative associations with profitability, while tangible size and business risk had positive relationships.

Overall, the aforementioned empirical studies come from a variety of industries and cover a wide range of firm year and cross-sectional observations. However, there are few studies that looked at the relationship between financial performance and capital structure choices in the services sector, and they are hardly noteworthy in Africa, particularly in Nigeria.

METHODOLOGY

The ex-post factor research design method was used in this study. This is because the study's goal is to examine the impact of capital structure on the financial performance of Nigeria's quoted services companies. The data for this study is collected from secondary sources, such as audited annual reports and accounts of Nigeria's quoted services companies. The study's population consists of Nigeria's 25 quoted services companies as of December 31, 2020. A comprehensive database from the Nigerian quoted services companies from 2011 to 2020 was used and the data was gathered from the annual reports and accounts of the selected quoted companies and African Financials for the years 2011 to 2020. Although the study's initial population was 25 quoted companies, due to inconsistencies in variable definition and the availability of all data related to variables selected and connected to the study domain, filter firms delisted within the study period and the non-availability of data for the variables of interest, to shorten the data to 11 quoted services firms that have the same data set for the study time period for the years under consideration; thus, the study used an adjusted population, which eventually became the study's sample size. Based on the availability of the dataset, a total of 11 selected quoted services firms were examined for the period 2011 to 2020.

The variables listed in Table 1 is used to explore the research questions based on the literature reviewed.

Table 1

Measurements of Variables

S/N	Variables	Definitions	Measurements	Source
1.	EPS	Earnings per Share	Ratio of PAT to No. of shares outstanding	Waheed, Fawad, Shahid, & Ahmad (2016)
2.	RE	Retained Earnings	Ratio of RE to Total Assets (TAs)	Dioha & Kamulga (2017)
3.	STD	Short term debt	Ratio of STD to TAs	Onchong'a, Muturi, & Atambo (2016); Waheed, Fawad, Shahid, & Ahmad (2016)
4.	LTD	Long term debt	Ratio of LTD to TAs	Onchong'a, Muturi, & Atambo (2016); Waheed, Fawad, Shahid, & Ahmad (2016)
5.	Debt ratio	Total debt ratio	Ratio of total debt to TAs	Huong & Nhon (2018); Aziz and Abbas (2019)
6.	EQ	Equity	Ratio of total number of shares to TAs	Huong & Nhon (2018); Aziz and Abbas (2019)
7.	FS	Firm Size	Natural logarithm of TAS	Ganiyu, Adelepo, Rodionova, & Samuel (2019)
8.	PROF	Profitability	Ratio of operating profit to TAs	Ganiyu, Adelepo, Rodionova, & Samuel (2019)
9.	AT	Asset Turnover	Ratio of Turnover to TAs	Chaleed, Ahmad, & Ghazalat (2019)
10.	LIQ	Liquidity	Ratio of Current assets to Current liabilities	Kedzior, Grabinska, Grabinski, & Kedzior (2020)

Source: Researcher's Compilation (2021)

One dependent variable (earnings per share), four treatment factors (retained earnings, short-term debt, long-term debt, debt-to-equity, and equity ratios), and four control variables were included in the panel regressions (firm size, profitability, asset turnover ratio, and liquidity). For these variables, the generalized least square (gls) model was employed, as well as diagnostic tests are applied to ensure the model adequacy (Dalci, 2018; Mayuri & Kengatharan, 2019; Sivalingam & Kengatharan, 2018; Suntraruk & Liu, 2017). The model specification was developed based on the study of Khan, Shamim, and Goyal (2018) and Ahmed and Bhuyan (2020). Therefore, the model of the study is:

$$EPS_{it} = \beta_{0it} + \beta_1 RE_{it} + \beta_2 STD_{it} + \beta_3 LTD_{it} + \beta_4 TD_{it} + \beta_5 EQ_{it} + \beta_6 FS_{it} + \beta_7 PROF_{it} + \beta_8 AT_{it} + \beta_9 LIQ_{it} + \varepsilon_{it} \quad (1)$$

Where EPS is the Earnings per Share (a proxy for financial performance); RE is the Retained Earnings; STD is the Short-term Debt; LTD is the Long-term Debt; TD is the Total Debt ratio; EQ is the Equity; as

the choices of capital structure proxies; FS is the firm size; PROF is the profitability; AT is asset turnover ratio; and LIQ is the Liquidity; $\beta_0 - \beta_9$ are the Coefficients (Slope of the regression line) of the model; and ε_{it} is the Error term.

RESULTS

The data collected for the study is presented, discussed, and analyzed using descriptive and inferential statistics. Following the examination of the descriptive statistics of the variables comes the examination of the correlation matrix of the variables included in the study. The subsequent steps consisted of the presentation, analysis, and discussion of the results of the regression, as well as the testing of hypotheses related to the study. The final part of the paper is devoted to a discussion of the most important findings from the study and how those findings should be interpreted in terms of policy implications. The descriptive statistics are reported in Table 2.

Table 2
Summary of Descriptive Statistics

Variables	Obs.	Mean	Standard Deviation	Min.	Max.
EPS	110	0.202	0.790	-6.350	2.610
RE	110	0.176	0.329	-1.221	0.731
STD	110	0.343	0.151	0.039	.699
LTD	110	0.221	0.338	0.001	3.204
TD	110	0.504	0.199	0.152	1.129
EQ	110	0.511	0.201	0.101	1.409
FS	110	13.616	24.703	0.316	112.246
PROF	110	0.058	0.069	0.149	0.234
AT	110	0.660	0.329	0.087	1.722
LIQ	110	1.451	1.018	0.149	8.588

Note: EPS means earnings per share; RE means retained earnings; STD means short-term debt; LTD means long-term debt; TD means total debt; EQ means equity; FS means firm size; PROF means profitability; AT means asset turnover; and LIQ means liquidity.

Table 2 illustrates the descriptive statistics of the factors that were considered. The selected companies have earnings per share (EPS) that are approximately 0.20, and their standard deviation is nearly 0.79. This

indicates that the data varies by 0.59 percentage points from the mean figure. A potentially substantial disparity in the EPS of the selected organisations may be revealed by the wide gap that exists between the mean and the standard deviation. The selected organisations have an EPS that ranges from a low of -6.51 all the way up to a high of 2.61, with an average of 0.20. The low number of earnings per share (eps) reported in annual reports may be an indication that earnings fell as a result of SARs-CoV-2 coupled with the economic slowdown. Similarly, the mean value of retained earnings (re) is 0.1857 whereas the standard deviation is 0.33. Its minimum and highest values are -1.22 and 0.73 respectively. This indicates that the retained earnings for the selected businesses range from less than 1.22 billion to more than 1.62 billion, with the minimum retained earnings being less than 1.22 billion and the maximum retained earnings being more than 1.62 billion.

In addition, the lowest and maximum values for short-term debt (std) were 0.04 and 0.70, respectively. The average value of the selected firms for standard deviation is 0.34, with a standard deviation of 0.15. This indicates that the selected enterprises had a minimum standard value of \$0.03 billion and a maximum standard value of \$0.70 billion. Similarly, the minimum and maximum values for long-term debt (LTD) were 0 and 3.20, respectively. The average value of the selected firms is 0.22 (roughly), with a standard deviation of 0.34. This shows that the selected enterprises kept a minimum balance of zero and a maximum balance of 3.20 billion for LTD.

Furthermore, according to the descriptive statistics in table 1, the average total debt ratio during the study period was 0.51, with a standard deviation of 0.20. This indicates that the data is 0.31 standard deviations off the mean. Because it is closer to the mean, the standard deviation indicates that the data is not widely spread. The measured minimum and maximum values for TD are 0.15 (roughly) and 1.13 (nearly). This shows that the selected enterprises' total debt to total assets ratio must be less than 0.15 billion, with a maximum of 1.13 billion. Finally, table 3 shows that equity (EQ) has a minimum and maximum value of 0.01 and 1.41, respectively, with an average value of 0.51 (roughly) and a standard deviation of 0.20

(approximately). This means that the selected enterprises' minimum equity ratio is 0.01 billion, with a maximum of 1.41 billion. The selected firms' average equity ratio is 0.51 billion, with a variation of 0.20 billion.

As a result, having completed the examination of the descriptive statistics of the data obtained for the study's variables, it can be concluded that the data is normally distributed.

Table 3
The Pairwise correlation matrix

	EPS	RE	STD	LTD	TD	EQ	FS	PROF	AT	LIQ
EPS	1.0000									
RE	.1947	1.0000								
STD	-.0098	-.4929	1.0000							
LTD	-.0443	.0438	.1793	1.0000						
TD	.1332	.4294	.6538	.3093	1.0000					
EQ	.1202	.4443	-.4524	-.1964	-.6334	1.0000				
FS	.0137	.3657	-.3947	.0115	-.1254	.0713	1.0000			
PROF	.2874	.3797	-.1915	-.1673	-.2009	.2155	-.0735	1.0000		
AT	.0580	-.0000	.3898	-.1714	.1951	.0481	-.4622	.2757	1.0000	
LIQ	.1444	.2748	-.2810	-.0734	-.4618	.2125	-.1516	.1911	-.0633	1.0000

According to Table 3, there is a positive correlation between retained earnings and total debt of around 13% and earnings per share of approximately 19%. It implies that the higher the retained earnings, the more money that are available to compensate for the shortfall caused by SARs-CoV-2 and, as a result, improve the value of the earnings per share of the companies that are under consideration. Similarly, the information presented in table 3 showed that when confronted with severe economic constraints such as SARs-CoV-2, service providers would rather go for total debt than either short-term debt or long-term debt. In addition to that, we carried out a multi-collinearity test with the help of VIF. Table 4 displays the results of the test that was performed.

Table 4
Variance Inflation Factor (VIF)

Variables	VIF	1/VIF
TD	3.01	0.3321
STD	2.48	0.4024
RE	2.21	0.4528
AT	1.95	0.5115
EQ	1.93	0.5192
FS	1.90	0.5264
LIQ	1.48	0.6762
PROF	1.37	0.7311
LTD	1.35	0.1743
Mean	1.96	

The variance inflation factor (VIF) is a multi-collinearity test that determines how all explanatory variables are related. Before using the panel regression technique, to make sure there is no multi-collinearity between the independent variables. It describes how much a coefficient's variance is exaggerated because of its linear dependence on other explanatory variables. Multi-collinearity between explanatory variables is reduced when the VIF is lower, and the general rule is that any variable with a VIF larger than 10 is a cause for concern (Gujarati, 2009, as cited in Khan, Shamim, & Goyal, 2018). The VIF values of the variables in this investigation are within the prescribed limits, as indicated in Table 4.

Generalized Leasr Square (GLS) was conducted based on the study's panel characteristics, since the cross section is greater than the time period as defined by the data availability. On this premise, the GLS test result was chosen for analysis and logical inference derivation. The result in Appendix (1) yields a chi-square value of 174.75 with a probability of 0.0000, which is statistically significant at 1%. The regression summary result is shown in Table 5.

Table 5
Cross Sectional GLS Regression Results

	Coefficient	Std. Error	P-Value	Sig.
Constant	0.1007	0.1329	0.0000	***
RE	0.2051	0.1166	0.0790	*
STD	0.2011	0.1329	0.1300	
LTD	0.0592	0.1750	0.7350	
TD	0.3349	0.1775	0.0590	*
EQ	-0.0603	0.1474	0.6820	
PROF	2.8587	0.3016	0.0000	***
AT	0.0083	0.0838	0.9210	
LIQ	0.0125	0.0169	0.4600	

Note:

1. No of Groups = 11, No of Observations 110, Wald Chi2 (9) = 174.75, Prob > Chi2 = 0.0000
2. Note: *** P-Value < 1%; ** 1% < 5%; 5% < P-Value < 10%
3. EPS= earnings per share; RE= retained earnings; STD= short-term debt; LTD= long-term debt; TD= total debt; EQ= equity; FS= firm size; PROF= profitability; AT= asset turnover; LIQ= liquidity.

From the overall coefficient of GLS determinations, Table 6 revealed that the variables of finance choices (retained earnings, short-term debt, long-term debt, total debt and equity ratio) explained around 32.92 percent of the variations in earnings per share of listed Services Firms in Nigeria.

According to the GLS results, which can be considered the Best Linear Unbiased Estimators (BLUE), the study investigated the hypotheses set for the study. The coefficients of the study variables from which the hypotheses were tested are shown in Table 6. As a result, retained earnings and total debt were adjudged to have a strong and positive influence on the earnings per share of quoted services firms in Nigeria, as evidenced by the coefficient of 0.1007, which is significant at 1% from a p-value of 0.000. This indicates that retained earnings and total debt played key role in alleviating the financial constraints faced by these firms, especially during the SARs-CoV-2 of quoted services organizations in Nigeria and had a significant impact on the level of earnings per share distributed to potential investors. As a result, the analysis disproves the null hypothesis that retained earnings have no effect on earnings per share of quoted services firms in Nigeria. Thus, the study concludes that retained earnings have a positive influence on earnings per share of Nigerian listed services firms. The findings of Siddik, Kabiraj, and Joghee (2017), Achieng, Muturi, and Wanjare, (2018) are consistent with these findings. The findings of the study revealed that capital structure

choices have an impact on financial performance. Secondly, the positive and statistically significant relation between total debt ratio and earnings per share also corroborated the findings of Ganiyu, Adelopo, Rodionova, and Samuel (2019), Chaleeda, Ahmad, and Ghazalat- (2019); Hussein et al. (2019) but in contrast with the findings of Abewardhana and Magoro (2017); Dave et al. (2019); Hussein et al. (2019), as they all reported negative influence of total debt ratio on financial performance.

CONCLUSION

The study concludes that the total debt ratio had a substantial impact on earnings per share, which is consistent with the trade-off hypothesis, which stated that while loans have benefits, they also have costs to consider. As a result, the positive link could be attributed to the tax benefit of debt financing, which is caused by a rise in the likelihood of bankruptcy since debt financing requires a corporation to make fixed-term interest and principal payments. On this ground, the reason for this is that using debt may cause majority shareholders to exert more control and monitoring to ensure that those they have appointed to manage the firm on a day-to-day basis strive to achieve better performance to meet debt repayment obligations and use debt to finance positive net present value projects in order to maximize their investment returns. Furthermore, the use of debt reduces agency difficulties in situations where the majority shareholders control the minority shareholders. In listed services organizations in Nigeria, higher usage of both short- and long-term debt may mean better protection of minority shareholders' financial interests. Also, the influence of retained earnings on earnings per share was similarly large; however, the positive link could be significant to addressing some of the negative earnings on shareholders' wealth. The analysis supports with the pecking order idea, which suggests that retained earnings, debt, and finally equity financing should be used in that sequence. This is because, despite the positive coefficient, the equity ratio has no influence on earnings per share, which could be linked to the expense of employing equity as a financing option.

The study, on the other hand, suggests that company executives save earnings to be spent solely on rainy days to minimize negative shocks that could harm a company's going-concern idea. The study has limitations; notably, the sample size may be questioned due to two factors: the number of firms from Nigeria's listed services firms and the years covered in the data. Eleven out of the twenty-five firms were subjected to scrutiny due to inadequacy associated with data availability. As a result, future researchers should explore creating a robust dataset that includes all other industries not addressed in this work.

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REFERENCES

- Abewardhana, D.K.Y. & Magoro, K.M.R. (2017). Debt capital and financial performance: A comparative analysis of South African and Sri Lankan listed companies. *Asian Journal of Finance & Accounting*, 9 (2), 103-127.
- Achieng, B.O., Muturi, W., & Wanjare, J. (2018). Effect of equity financing options on financial performance of non-financial firms listed at the NSE, Kenya. *Applied Economics and Finance*, 5 (4), 1-14.
- Adetokunbo, A.M. & Edioye, O.P. (2020). Response of economic growth to the dynamics of service sector in Nigeria. *Future Business Journal*, 6 (27), 1-10. <https://doi.org/10.1186/s43093-02000018-9>
- Ahmad, M.M., Hunjra, A.I., Qureshi, S.A., & Hanif, M. (2021). Impact of asymmetric information on capital structure decisions of Agriculture-Allied and non-financial firms. *Pakistan Journal of Social Sciences*, 41 (1), 1-12.
- Ahmad, S.M., Bakar, R., & Islam, A. (2020). The effect of debt financing on firm value: A panel data approach. *Albukhary Social Business Journal*, 1(2), 33-45.
- Ahmed, R. & Bhuyan, R. (2020). Capital structure and firm performance in Australian service sector firms: A panel data analysis. *Journal of Risk and Financial Management*, 13(9), 214. <https://doi.org/10.3390/jrfm13090214>
- Arifin, A.Z. (2017). Interactions between capital structure and profitability: Evidence from Indonesia stock exchange. *International Journal of Economic Perspectives*, 11, 117-21.
- Aziz, S. & Abbas, U. (2019). Effect of debt financing on firm performance: A study on nonfinancial sector of Pakistan. *Open Journal of Economics and Commerce*, 2(1), 8-15.
- Central Bank of Nigeria. (2020). *Purchasing manager's (PMI) survey report*. https://www.cbn.gov.ng/out/2020/std/pmi%20report%20for%20dec%202020_.pdf
- Chakrabarti, A. & Chakrabarti, A. (2019). The capital structure puzzle: Evidence from Indian energy sector. *International Journal of Energy Sector Management*, 13, 2–23.
- Chaleeda, A.I., Ahmad, T.S.T., & Ghazalat, A.N.M. (2019). The effects of corporate financing decisions on firm value in Bursa Malaysia. *International Journal of Economics and Finance*, 11 (3), 127-135.
- Choi, S., Seoki, L., Kyuwan, C., & Kyung-A, S. (2018). Investment–cash flow sensitivities of restaurant firms: A moderating role of franchising. *Tourism Economics*, 24, 560-75.
- Dalci, I. (2018). Impact of financial leverage on profitability of listed manufacturing firms in China. *Pacific Accounting Review*, 30, 410–32

- Dave, A., Ashwin P., Ashish, J., & Tejas.D. (2019). A study of capital structure and profitability of Indian steel sector companies. *International Journal of Advanced Science and Technology*, 28, 866–73.
- Ganiyu, Y.O., Adelopo, I., Rodionova, Y., & Samuel, O.L. (2019). Capital structure and firm performance in Nigeria. *African Journal of Economic Review*, 7 (1), 31-56
- Gharaibeh, O. K. & Bani-Khaled, M.H. (2020). Determinants of profitability in Jordanian services companies. *Investment Management and Financial Innovations*, 17, 277-90.
- Ghasemi, M., AbRazak, N.H., & Dehghani, K. (2018). Determinants of debt structure in ACE Market Bursa Malaysia: A panel data analysis. *Journal of Social Sciences Research*, 6, 390–95.
<https://doi.org/10.32861/jssr.spi6.390.395>
- Helmy, M.H.Z.N., Goh, C.F.T.O.K., Ong, C.H., Tan, S.T., Lim, K.Y., & Wong, C.H. (2020). Capital structure, internal governance mechanisms and firm performance. *International Journal of Psychosocial Rehabilitation*, 24, 7313–21.
- Huong, P.T.Q. & Nhon, Q. (2018). Macroeconomic factors and corporate capital structure: Evidence from listed joint stock companies in Vietnam. *International Journal of Financial Research*, 9(1), 31-40.
- Hussein, M. J., Alrabba H., Muhannad, A. A., & Mashhoor, H. (2019). Capital structure and firm performance: Evidence from Jordanian listed companies. *International Journal of Scientific and Technology Research*, 8, 364–75.
- Ibrahim, M. (2017). Capital structure and firm value in Nigerian quoted manufacturing companies: An empirical investigation using Tobin’s Q mode. *International Journal of Innovative Research in Social Sciences & Strategic Management techniques*, 4 (2), 112-125
- Kedzior, M., Grabinska, B., Grabinska, K., & Kedzior, D. (2020). Capital structure choices in technology firms: Empirical results from Polish listed companies. *Journal of Risk and Financial Management*, 13 (121), 1-20. <https://doi.org/10.3390/jrfm13090221>
- Khan, T., Shamim, M., & Goyal, J. (2018). Panel data analysis of profitability determinants: Evidence from Indian telecom companies. *Theoretical Economics Letters*, 8, 3581-93.
- Khanna, A., Papadavid, P., Tyson, J., & Willem, V. D (2016). *The role of services in economic transformation with an application to Kenya*. Supporting Economic Transformation (SET). https://set.odi.org/wp-content/uploads/2016/02/The-Role-of-Services-in-Economic-Transformation_Kenya.pdf
- Mayuri, T. & Kengatharan, L. (2019). Determinants of capital structure: Evidence from listed manufacturing companies in Sri Lanka. *SCMS Journal of Indian Management*, 16, 43-56.
- Ministry of Budget and National Planning (2017). *Economic recovery and growth plan 2017-2020*. https://nigeriaembassygermany.org/mosaic/M_userfiles/Economic Recovery Growth-Plan 2017-2020.pdf

- National Bureau of Statistics (NBS) (2021). *Nigerian Gross Domestic Product Report*.
<https://nigerianstat.gov.ng/>
- Onchong'a, E.A., Muturi, W., & Atambo, W. (2016). Effects of debt financing on business firms financial performance. *International Journal of Social Sciences and Information Technology*, 2(7), 723-737.
- Plecher, H. (2020). *Distribution of gross domestic product (GDP) across economic sectors Nigeria 2019*. www.statista.com
- Sardo, F., Zelia, S., & Elisabete, G.S.F. (2020). Does venture capital affect capital structure rebalancing? The case of small knowledge-intensive service firms. *Structural Change and Economic Dynamics*, 53, 170-79. <https://doi.org/10.1016/j.strueco.2020.02.003>
- Sermpinis, G., Serafeim, T., & Ping, Z. (2019). What influences a bank's decision to go public? *International Journal of Finance and Economics*, 24, 1464–85.
- Siddik, N.A., Kabiraj, S., & Joghee, S. (2017). Impact of capital structure on performance of banks in a developing economy: Evidence from Bangladesh. *International Journal of Financial Studies*, 5(2), 13.
- Sivalingam, L. & Kengatharan, L. (2018). Capital structure and financial performance: A study on commercial banks in Sri Lanka. *Asian Economic and Financial Review*, 8 (5), 586-598.
<https://doi.org/10.18488/journalaefr.2018.85.586.598>
- Sudiani, N.K.A. & Wiksuana, I.G.B. (2018). Capital structure, investment opportunity set, dividend policy and profitability as a firm value determinants. *RJOAS*, 9(81), 259-267.
<https://doi.org/10.18551/rjoas.2018-09.30>
- Suntraruk, P. & Liu, X. (2017). The impacts of institutional characteristics on capital structure: evidence from listed commercial banks in China. *Afro-Asian Journal of Finance and Accounting*, 7, 337–50.
- Szeman, J. (2017). Relevance of capital structure theories in the service sector. *Club of Economics in Miskolc*, 13 (1), 53-64. <https://dx.doi.org/10.18096/TMP2017.01.05>