



Financing mix and Financial Performance: Evidence from listed Consumer and Industrial Goods Sector in Nigeria

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Abstract

Financial management requires careful evaluation of the fund sources that will give the organization the best returns. Short-term debt, long-term debt, preferred stock, and common stock are always available to the firm. Financial managers have always struggled to choose the best fund source mix to minimize risk and costs and maximize shareholder wealth. Financing mix involves managing the best capital structure to balance company risks and profits. Many scholars have investigated what funding mix will achieve optimal capital structure. Despite their attempts, finance academics have not found a "sure" model that maximizes returns at minimum expense. This study examines the influence of financing mix on listed Consumer and Industrial Goods Companies in Nigeria to expand on prior contributions. The study spanned 2012–2021. The study used non-experimental ex-post facto design. Financial statements and corporate websites provided secondary data. The study's population is all 24 Stock Exchange-listed Consumer and Industrial Goods firms. The census sample strategy eliminated enterprises with incomplete data and prevented pollution data from skewing results. Return on Assets measures financial performance. The study's independent variable is a financing mix, proxied by debt-to-equity ratios. Debt to equity, a comprehensive measure of a firm's capital structure, is the key variable. Data analysis using OLS regression. The study indicated that short-term loan to equity decreases return on asset. Short-term debt to equity also affected Nigerian consumer goods companies' financial performance. The study found that long-term debt to equity had no impact on financial performance of listed consumer goods companies in Nigeria, contrary to predictions. The study found that listed consumer goods companies in Nigeria's financial performance decreases with long-term debt to equity.

Keywords: Financing mix, Debt to Equity (short-term debt to equity and long-term debt to equity), Firm performance and Firm Size

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I. Introduction

Corporate administrators, investors, analysts, and researchers in the finance field engage in an ongoing dialogue regarding the optimal financing arrangement to implement. This is evidently due to the effect that the financing combination has on business performance and firm value (Umobong and Ayeabanngiyefa, 2019). According to Dabo et al. (2019), capital structure is the method by which businesses finance their activities through the use of equity, debt, or a combination of the two. The capital structure decision is one of the most essential in the field of financial management, as it requires an evaluation of the appropriate combination of various sources of funds. This includes short-term debt, long-term debt, preferred stock, and common stock or equity stock financing, and determining the optimal combination of these sources is a difficult task for the financial manager of every business. The perfect or ideal combination is one in which risk and costs are minimised while profits and shareholder wealth are maximised.

The optimal financing decision is a continuous process that maximises the market value of the firm involved. Therefore, the continuous process of capital structure decisions involves striking a balance between risks and returns in the operation of the business. Managing the optimal capital structure is of the utmost significance because it impacts the firm's profitability and, ultimately, its value (Kafle & Ghimire, 2020). Investment and financing are two key decision areas for a business. In the financing decision, the manager determines the optimal capital structure or financing arrangement for his company. According to Umobong and Ayeabanngiyefa (2019), capital structure may have two effects. Initially, firms in the same risk class may incur a higher cost of capital with greater leverage. Second, capital structure may influence the valuation of the company,

with more leveraged firms, which are riskier, being valued at a lower price than firms with less leverage. Given that the objective of management is to maximise the wealth of shareholders, capital structure is a crucial decision because it can result in an optimal financing combination that maximises the market price per share of the firm.

Although there are contradictory opinions that a firm's financing structure has no bearing on its value or performance, there is consensus that it does. Due to the strategic role firms play in the provision of products and services, income generation, tax revenue generation for the government, and employment, the controversy generated by these arguments and opposing views dates back decades and has yet to abate. Many individuals are interested in the success and failure of a business, as it is typically the vehicle that propels economic growth. People invest with the goal of maximising their financial return. Therefore, managers should always have criteria for evaluating their financing decisions in order to ensure that the maximisation of shareholder wealth is achieved.

Numerous perspectives exist on the concept of financing *mélange*. According to Stephen, Westerfield, and Jordan (2003), a company's financing mix is the proportional use of debt and equity to fund production and business activities. In other words, the term "financing mix" refers to the combination of debt and equity that a company employs to fund its operations, implying a relationship between long-term debt and equity. Thus, it is typical for the structure of the correlation ratio to be proportional to a company's debt and equity (Dinh & Pham, 2020).

Umobong and Ayebanengiyefa (2019) explained that the finance mix decision is one of the most significant decisions in the field of financial management, requiring an evaluation of the selection of a combination of various sources of funds. This includes short-term debt, long-term debt, preferred stock, and common stock or equity stock financing, and determining the optimal combination of these sources is a difficult task for the financial manager of every business. The perfect or ideal combination is one in which risk and costs are minimised while profits and shareholder wealth are maximised. The optimal decisions regarding the combination of financing are made when they maximise the market value of the firm involved. Therefore, the continuous process of capital structure decisions involves striking a balance between risks and returns in the operation of the business. Managing the optimal capital structure is of utmost significance because it affects the firm's profitability and, ultimately, its value.

The objective of businesses is to establish a balance between equity and debt. How a company intends to maximise wealth and minimise the cost of capital is reflected in its financing composition (Sheikh & Qureshi, 2017). Incorporated into the financing blend for operational activities and asset acquisition are total debt and equity. Every company's objective is to maximise its value or the fortune of its owners by making sensible financial decisions. One of these decisions involves debt management. Debt is an economic action that a company must perform in the future as a result of past actions or transactions. Current liabilities, also known as short-term debt (STD), are distinguished from noncurrent liabilities, also known as long-term debt (LTD). Debt is one of the external funding considerations (Hayati et al., 2022).

The purpose of debt policy is to increase a company's operational fund base. The availability of sources of funds and capital has a significant impact on a company's chances of survival and growth. These funds can be obtained through either the issuance of company stock or debt financing. The decision regarding the combination of both is highly strategic. Debt can increase a company's value while also increasing its risk. Companies that rely on debt to finance operations and are unable to repay their debts will be threatened with liquidity issues.

Short-term debt is regarded as an essential source of financing for businesses, particularly those classified as Small or Medium. This is due to the fact that it is readily accessible and beneficial during times of sudden shortages of working capital (Henry et al., 2020). According to Gibson (2004), the largest proportion of financing in the capital structure of small and medium enterprises in emerging and developed economies is comprised of short-term debt. This characteristic is related to firms' lack of access to long-term debt and equity capital from equity markets due to a lack of collateralizable assets and information scarcity (Forte et al., 2013).

Short term debt financing must be repaid within four months and has a maturity of one year or less. In addition, short-term loans have a low interest rate, and businesses prefer them when seeking short-term financing (Yazdanfar & Ohman, 2015). Moreover, according to Mian and Santos (2018), short-term debts assist to resolve the immediate need for financing without requiring long-term commitment. Changing short-term obligations reduces the association's financial burden. Short-term advances typically have lower rates of interest, and the majority of loan providers do not charge interest until the entire credit period has expired (Kahl, Shivdasani, & Wang, 2015). Godswill, Ailemen, and Osabohien (2018) state that monetary choices of short-term obligations and liabilities are fundamental as they establish the firm's financial tenacity in the market.

Abor & Biekpe (2009) and Dawar (2014) have shown that the relationship between short-term debt and financial performance of firms is still developing in both developed and less developed economies. Although short-term debt has been studied the least among the primary components of capital structure, findings regarding the relationship between short-term debt and financial performance have been inconsistent and contradictory. Short-term debt has a significant and negative impact on financial performance as measured by return on assets, according to studies (Nwude, Itiri, Agbadua, and Udeh, 2016; Aziz and Abbas, 2019). Baum et al. (2006) and

Eton et al. (2017) reported that there is a positive correlation between short-term debt and financial performance. According to Ebaid (2009), short-term debt, long-term debt, and total debt had no effect on financial performance as measured by Return on Equity and Gross Profit Margin. Henry et al. (2020) discovered that short-term debt had a negative and significant impact on the return on assets of SME financial performance. This result provides empirical evidence to support the propositions in the existing literature that SME financial performance is substantially hindered by short-term debt.

There are numerous factors that affect a company's financial performance. These variables could be either internal or external. Financial performance is a fundamental aspect of economic entities, and all companies must strive for the utmost financial performance possible. (Henry et al., 2020) To foster sustainable economic development, businesses must maintain high levels of financial performance. According to Naz et al. (2016), financial performance is a monetary measure of how well a company achieves its short- and long-term objectives through its operations over a given period of time. According to Karadag (2016), financial performance is crucial to the development and long-term survival of enterprises.

Financial performance is closely related to the value of a company. The firm's financial performance demonstrates its ability to manage the company's financial resources. Profitability is a leading indicator of a company's financial performance. The company's ability to generate substantial profits has a positive effect on the business. According to Putri and Suwitho (2015), an increase in a company's attractiveness in the views of investors can influence its stock price. According to Heder and Priyadi (2017), financial performance has a significant impact on firm value.

Numerous studies have demonstrated the impact of financing composition on the financial performance of businesses, but the results are inconsistent. Short-term and long-term debt are substantially and negatively related to financial performance, according to Aamir et al. In addition, each industry has its own characteristics and capital management, so the extent of impact is also quite diverse. This study seeks to investigate the impact of financing diversity on the financial performance of the Consumer and Industrial Goods Sector in Nigeria. To answer the question of what effect financing composition has on the financial performance of listed Consumer and Industrial Goods Sector in Nigeria, the following null hypotheses have been developed:

H0₁: Short-term debt to equity has no significant effect on financial performance of listed Consumer Goods Companies in Nigeria.

H0₂: Long-term debt to equity has no significant effect on financial performance of listed Consumer Goods Companies in Nigeria.

The study provides decision makers in the finance field with information as to how much influence debt has on the financial performance of Consumer and Industrial Goods companies in Nigeria. The result from this study adds to the existing body of literature in management's financial decision-making process.

II. Literature Review

2.1 Conceptual Framework

2.1.1 Financing Mix (Debt to Equity)

One of the most important decisions in the field of financial management is the selection of a combination of diverse sources of funds, which requires an evaluation (Kafle & Ghimire, 2020). According to them, these sources of funds consist of short-term debt, long-term debt, preferred stock, and common stock or equity stock financing, and determining the optimal combination of these sources is a challenging task for the financial manager of every business. The perfect or ideal combination is one in which risk and costs are minimised while profits and shareholder wealth are maximised. Financing combination decision is a continuous process that reaches its optimal state when it maximises the firm's market value. Therefore, the continuous process of financing blend decisions involves striking a balance between risks and returns in the operation of the business.

The debt to equity ratio is a measure of a company's long-term solvency. This ratio is a financial and liquidity measure that indicates the proportion of a company's funds that originate from creditors and investors (Nzotta, 2018). It also assesses the organization's ability to satisfy its long-term business obligations as they become due. The debt-to-equity ratio is mathematically defined as debt divided by equity (Akaji et al., 2012). According to Omaliko and Okpala (2020), a company's debt equity financing is the combination of its financial obligations. As stated elsewhere in this work, it has been an important issue from a strategic management perspective because it relates to a company's capacity to satisfy the needs of its various stakeholders. The financing combination is the most important aspect of business operations. It is a crucial decision with significant implications for the company's long-term viability (Akaji et al., 2021).

After liabilities are deducted, equity capital represents the shareholders' interest in the firm's assets and can take the form of common stock (share capital), preferred stock, share premium, revenues reserves, capital surplus, retained earnings, and reserves in financial statements (Choi, 2014). (Uremadu & Efobi, 2012) Share capital refers to the funds raised by a company through the issuance of shares in exchange for cash or other consideration and consists of ordinary shares and preferred stock. Pandey (2009) observed that a company's capital structure should be planned in order to maximise the use of funds and to be more adaptable to shifting conditions. As modern companies embrace a highly complex and competitive business environment, it is crucial that they consider the effect of capital structure decisions on the overall profitability of their respective businesses.

Numerous perspectives exist on the concept of financing *mélange*. According to Stephen, Westerfield, and Jordan (2003), a company's financing mix is the proportion of debt to equity used to finance production and business activities. In other terms, the financing mix refers to the combination of debt and equity used to fund an organization's operations. That is, there is a relationship between long-term debt and equity. Thus, it is typical for the structure of the correlation ratio to be proportional to a company's debt and equity. Due to its influence on the firm's profitability and value, the administration of the optimal financial balance is crucial. Nevertheless, the optimal financial blend remains an unanswered question. Despite the fact that numerous hypotheses have attempted to explain the optimal financing combination, researchers in finance have never discovered a model to determine it (Kafle & Ghimire, 2020).

Modigliani and Miller (1958) theorised that the combination of equity and debt financing has no effect on the firm's value, assuming no tax, no bankruptcy cost, and no transaction cost, as well as equal borrowing costs, flawless market information, and no arbitrage. Later, these assumptions were modified to exclude all tax conditions. They agreed, under the condition of corporate income taxes, that leverage has some effect on value. In a perfect capital market, Modigliani and Miller, two of the most frequently cited capital structure theorists and proponents of the no optimal capital structure school, demonstrated that financing decisions are irrelevant. They proposed that the firm could not alter the total value of its securities by first separating its cash flow into debt and equity streams. Therefore, they maintained that the firm's value is determined by its actual assets and not its issued securities. They argued that a company's investment decision is immaterial if it is assumed to be a given.

According to Lawal (1989), the Modigliani & Miller Proposition only holds if the supposition of an ideal market is made and there are no corporate taxes. In reality, however, there are imperfections in the market, such as corporate taxes, bankruptcy expenses, and the sort of assets a company holds. Corporate taxes, for instance, have an impact on the firm's value, the maximisation of shareholder wealth, and the firm's capital structure. A firm with gearing must pay interest on its debt. Interest is tax-deductible, so shareholders of a geared company enjoy a reduction in their tax burden. The risk of insolvency is also pertinent to the capital structure because there is a limit to how much a company can borrow because a lender would evaluate all risks before lending to a company. The type of assets to be acquired by a company is also pertinent to the decision regarding its capital structure. Numerous studies have examined the relationship between a company's value, scale, and leverage. According to Warner (1977) and Chua and McConnel (1982), the diversification of large firms' financial flows makes them less susceptible to bankruptcy. Myers (1977) argues that the present value of future growth opportunities accounts for a substantial portion of a company's market value. All of the above-mentioned market imperfections provide support for the school of thought that the capital structure decision is significant. One of the many goals of financial administrators is to maximise shareholder wealth. The maximisation of shareholders' wealth is contingent on factors such as lowering the cost of capital, generating tax shield advantages from debt financing, and lowering the agency costs of debt and equity, among others. And all of these issues are resolved by achieving an optimal capital structure

2.1.2 Long-term Debt to Equity

When a business improves its financial standing, it might increase its reliance on loan financing. While it is a good theoretical foundation and a valuable beginning step to think of debt as a homogenous source of money, the nature of the loan and its incentive qualities may change appropriately. To fund their capital development, many businesses choose to long-term debt financing, which has a payback or maturity duration of more than a year (Ifureze et al, 2022). Long-term debt financing refers to the proportion of a company's assets that are funded by loans and other forms of debt with terms of more than one year. This ratio is useful as a broad indicator of a company's long-term financial health, including its ability to satisfy its debt commitments. According to Graham and Harvey (2001), a decreasing long-term debt to total assets ratio over time may indicate that a corporation is growing less reliant on debt to expand its business. The debt-to-equity ratio measures the extent to which a company's long-term debts (such as loans) exceed its short-term debts (such as cash on hand). Since this ratio is evaluated once a year, any decline indicates that the company is flourishing and is using less debt to support its operations.

The financing expenses for long-term loans are often cheaper and more consistent. Long-term financing options for businesses are more likely to be available in nations with competitive banking systems and well-developed capital markets (Pelham, 2000). Long-term debt is less typical in poor nations because of the weak contractual framework. Lenders may favour short-term loans when they cannot rely on legal authorities to enforce their claims to repayment, as the constant need for renegotiation encourages borrowers to work hard and invest wisely (Ifureze et al, 2022).

Long debt can be employed to maximise shareholder return, but as Jensen and Meckling (1976) point out, it can also lead to agency difficulties. Businesses frequently employ long-term debt to finance investments with a long payback period, including the acquisition of machinery or other fixed assets. Credit supply shocks and the need to refinance in poor times are two risks that can be mitigated with long-term financing. Since it enables organisations to engage in initiatives that bring in profits over a relatively long time horizon, long-term debt financing is claimed to have a favourable impact on investment and performance for enterprises who require it. Long-term financing, however, might skew managers' incentives and reduce investment and business performance. There has been much dispute in the field of accounting over whether or not there is a correlation between a company's use of long-term debt financing and its bottom line, and the results have been inconsistent. Profitability is positively correlated with debt, according to research by Muhammad et al. (2022). According to Umobong and Ayebanengiyefa (2019), the ratio of long-term debt to total asset is positively correlated with Tobin Q and earnings yield. While Maniagi et al. (2013) claimed that long-term debt had a weak positive negligible connection with ROE, these research found the opposite to be true. In addition, Dang et al. (2019) discovered that high levels of long-term debt might have a major, detrimental effect on return on equity.

2.1.3 Short-term Debt to Equity

Short-term debt and a company's bottom line are rarely discussed in the academic literature (Dawar, 2014). Among the fundamental components of a company's financial mix, short-term debt has been the least examined so far (Danilevskaia, 2005). Despite this, empirical studies regarding the link between short-term debt and Financial performance have been mixed. Short-term debt, for instance, was found to negatively affect financial performance as assessed by return on assets by Aziz and Abbas (2019). Short-term debt was found to increase financial performance, as stated by Eton et al. (2017). According to Ebaid (2009), financial performance (as measured by Return on Equity and Gross Profit Margin) is unaffected by either short-term debt, long-term debt, or overall debt.

Financing on the short term often has a maturity of four months or less and a maturity of one year or less. In addition, businesses like short-term loans because of the low interest rates they provide (Yazdanfar & hman, 2015). According to Mian and Santos (2018), short-term borrowing also help with the immediate problem of finance without requiring long-term commitment. Association costs are reduced by the swapping out of short-term obligations. Most loan providers wait to collect interest until the conclusion of the credit remittance period (Kahl, Shivdasani, & Wang, 2015), making short-term advances a more affordable option. In order to establish the firm's financial tenacity in the market, financial decisions about short-term responsibilities and liabilities are fundamental (Godswill, Ailemen, & Osabohien, 2018).

Short-term debt availability in Nigeria has been empirically connected to a lack of information transparency between lenders and borrowers. A dysfunctional credit market marked by poor or lack of accurate financial information on enterprises makes financial institutions wary of extending loans to businesses. Some companies' financing mix decisions are still impacted by a lack of knowledge about their operations and the high cost of long-term borrowing (Kagame, 2014). Various academics and researchers have discovered that short-term debt reduces profits. A company's profitability may be affected by the cost of its short-term financing, as discovered by Aro and Pennanen (2017). According to Bendavid, et al. (2017), a company's finance structure that prioritises short-term obligations may help boost performance and profitability. Dombret, et al. (2019) found that companies with a high ratio of short-term to long-term debt outperformed their rivals. Since short-term sources of finance, such as trade payables and accruals, may be less expensive to the firm than longer-term sources of money, Kumar and Kaushal (2017) found that their utilisation might have a favourable influence on the productivity of the organisations.

In addition, because of the less contractual commitments associated with short-term sources of money, they may improve profitability. Nawaz and Ayele (2015) also argued that a company's cost of capital will rise due to the short maturity of short-term loans. Numerous studies show that short-term debt has a detrimental impact on a company's financial performance, although Benmelech and Dvir (2013) argue that this is more of a symptom than a cause. To what degree, therefore, may a downturn in the firm's performance be linked to its increased reliance on short-term debt?

2.1.4 Financial Performance

Since "performance" may signify so many different things, it is a contentious topic in the world of finance. The term "financial performance" might mean different things to different people. Financial activity is what constitutes "firm performance" (Metcalf & Titard, 1976). In a broader sense, financial performance is the extent to which financial goals are being or have been achieved, or it is used as a general measure of a firm's overall financial health over a given period of time, and it can be used to compare similar firms within the same industry or to compare industries or sectors in aggregate.

Maximising profits, returns to assets, and returns to shareholders are all measures of a company's financial performance (Umobong & Ayebanengiyefa, 2019). Their claim is that performance is not measured in any universally accepted way. To explain this discrepancy, Oladeji and Olokoyo (2014) point out that some writers favour accounting measurements while others favour market-based indicators. Others combine accounting with market-based metrics to evaluate business success. Consumers of the market-based technique typically argue that accounting-based methods are historical, but the market-based method is futuristic, and that consumers should judge the firm's capacity to exist as a going concern in addition to being interested in the firm's future prospects.

In business, profit maximisation is vital to maintaining and expanding operations (Kakanda, Salim, & Chandren, 2016). According to Marn and Romauld (2012), a company's performance may be defined as the extent to which its current and future potential are maximised through the efficient use of its finite resources. According to Berger (2002), a shareholder's assessment of a company's success is based on whether or not the shareholder is "better off" at the conclusion of the term compared to the beginning. According to Moya (2010), management believes that profitability is indicative of how efficiently the organisation has used its total and net assets.

Companies' profits can swing in reaction to the state of the economy and the competitive landscape (Gweji & Karanja, 2014). Profitability, as defined by Cherotich et al. (2015), is the amount by which revenue exceeds costs. The company's capacity to turn a profit and thrive in the long run is a key factor in whether or not it will remain in business (Siddik et al, 2017). Both internal and external elements contribute to a company's profitability (Kiplangat, 2017). While the corporation can influence internal elements, it has little say over external ones (Kariu, 2017). For the purposes of this analysis, profitability was determined by calculating returns on assets (ROA). Return on Assets (ROA) is a financial statistic that illustrates how profitable a company is relative to its entire resources. It is calculated by dividing a company's net income by its total assets.

2.1.5 Firm Size

Despite frequently being among the most significant factors, firm size is rarely discussed in research publications since its use as a control variable has become so standard in empirical corporate finance studies (Alexander & Ilya, 2005). Companies that have grown to be very large typically have attracted the attention of investors, who place a higher value on their holdings as a result of this expansion. A firm is considered larger when it has more assets and generates more revenue. The simpler it is for a firm to secure both internal and external capital, the larger it is. Larger businesses are presumed to be more emotionally invested and to share their money more freely than their smaller counterparts. The more a business sells, the more quickly it receives payment. According to Horne and Wachowicz (2009), the value of a corporation is affected by its size, which is a reflection of the size or amount of its assets.

Several studies have looked at the correlation between business size, profits, and valuation. Suffah and Riduwan (2016) shown that company size does not influence valuation. However, Manoppo and Arie (2016) shown that larger firms tend to be more valuable. According to Alexander and Ilya (2005), big businesses are more likely to use leverage than little ones. They argue that large enterprises benefit from lower interest rates on borrowed capital from external sources even when such expenses are non-trivial. Companies with a larger market presence are more inclined to spread their funding around. It has also been argued that larger businesses are more difficult to fail and liquidate, hence size may stand in as a proxy for the likelihood of default if a corporation is in crisis. However, small businesses are more likely to be startups in industries that are still in their infancy and, as a result, are inherently unpredictable.

As a company grows larger, fixed costs become less of an issue, allowing for shorter projected waiting times between refinancings and refinancing leverage to approach that of the no-fixed-cost situation. The ideal choice for a corporation is the same as the choice it would make if it had no fixed expenses in the long run (Hirdinis, 2019).

2.2 Empirical review

The relationship between debt finance and manufacturing business performance is investigated by Hayati et al. (2022). Twenty-one businesses trading on the Indonesia Stock Exchange were utilised as a sample for the years 2016-2020. Purposive sampling was utilised to collect data, and panel data regression was employed for analysis. According to the data presented here, there is no correlation between the short-term debt ratio (STDA) and the return on assets (ROA), but there is a negative and statistically significant correlation between the LTDA

and ROA, and a positive and statistically significant correlation between the ROA and sales growth (GROWTH). Similarly, the STDA has no effect on the nett profit margin (NPM), while the LTDA has a negative and statistically significant effect on the NPM. According to the findings, internal and external factors that impact a consumer products manufacturer's profitability should be taken into account by the company's financial management. The company's bottom line may be improved by paying attention to metrics like nett profit margins and return on assets. It was suggested that investors consider equities while making financial decisions like making an investment or applying for a loan. Information on elements that impact profitability, such as short-term debt ratios, long-term debt ratios, and sales growth, must be evaluated prior to making investment decisions.

Debt-equity financing was studied by Akaji et al. (2021) to see how it affected the productivity of Nigerian businesses. Equity financing (EF) and debt equity financing (DEF) were used to quantify the two types of debt equity financing in the study, while return on equity (ROE) was employed to quantify firm performance. To help direct the research, two hypotheses were created, and OLS Regression Model was used to statistically assess parameter estimations. Data for the study came from the NSE Factbook, Annual Reports, and Accounts, and the research method employed was an Ex Post Facto methodology. The study found that at the 5% level of significance, Debt Equity Financing significantly and positively affected the performance of firms in Nigeria. Debt-equity financing, the study found, is beneficial to a company's long-term success. According to the study's conclusions, businesses should prioritise using debt and equity to fund their investment operations, with the latter two options being considered only as backups. Therefore, the study concludes that Nigerian corporations would benefit greatly from a mix of debt and equity funding rather than just one or the other.

Henry et al. (2020) looked into how SMEs' exposure to short-term loans affected their bottom lines. Data were collected and analysed using a descriptive cross-sectional research approach in this study. The SMEs in Uganda were selected using a stratified random selection method, and one representative from each of the 452 surveyed SMEs was chosen using a purposive sampling method. Questionnaires were used to obtain the primary data. Descriptive statistics and a linear regression analysis were used to examine the data. As assessed by return on assets, the results showed that SMEs' financial performance suffered when they took on more short-term debt. This research lends empirical credence to the claims made in the existing literature that SMEs' use of short-term loan severely limits their financial performance. The research suggests that small and medium-sized enterprises (SMEs) can increase their profits by using cost-cutting measures. This would result in surplus cash flow, which could then be reinvested to spur SME expansion without the need for further debt financing.

Dinh & Pham (2020) looked into how different types of financing structures affected the bottom lines of Vietnamese pharmaceutical companies that went public. The return on equity (ROE) is used as the dependent variable in a regression model with four other factors—self-financing, financial leverage, long-term asset, and debt to assets—as the independent variables. Controlling factors also included things like company size, fixed asset growth rate, and expansion rate. Thirty pharmaceutical companies registered on the Vietnam Stock Exchange between 2015 and 2019 were evaluated. The relationship between capital structure and company performance was examined using ordinary least squares (OLS) regression. The investigation revealed a favourable association between company performance and financial leverage, long-term assets, and debt-to-assets ratios, whereas self-financing had a negative impact on ROE. Based on the results, it was suggested that the government work towards a more stable macro environment in order to provide a more welcoming setting for businesses. Companies should issue long-term bonds as part of a more balanced capital structure that includes a greater amount of debt than equity. In addition, businesses need to adequately extend their size if they want to continue to grow and be able to make their loan payments.

Using secondary data collected from the Nigerian stock exchange, Umobong and Ayebanengiyefa (2019) analysed the capital structure composition and financial performance of food and beverage companies. Earnings yield, price-earnings ratio, and Tobin Q were used as market performance proxies, and they were regressed on the leverage composition variables. The Hausmann test was used to analyse the data and determine which model best fit the data. The results show a positive and statistically significant correlation between the ratio of short-term debt to total assets and Tobin Q, as well as a positive and statistically significant correlation between the ratio of long-term debt to total assets and Tobin Q. The ratio of debt to equity has a strong positive correlation with the yield on investment. Long-term debt was shown to have a negative link with the P/E ratio and the Debt Equity Ratio was found to have a negative relationship with the Tobin Q. Short-term debt, as well as the debt-equity ratio and the price-earnings ratio, have a weakly negative correlation. Additionally, there is a statistically significant positive influence on TBQ when the capital structure composition changes from STD/TA to LTD/TA, and the same holds true when the capital structure composition changes from LTD/TA to STD/TA. The data indicated, however, that companies benefit more from increasing their proportion of long-term debt in their capital structure because of the greater impact it has on total market value. Earnings Yield increases significantly when TD/TA is

changed to LTD/TA, and increases little when LTD/TA is changed to STD/TA. The findings also indicated that companies may boost their profit margin by making the switch from STD to LTD. The study revealed that the market value of companies might be affected differently depending on the composition of their leverage. Businesses are urged to maximise their LTD's value-adding potential. In addition, the capital structure mix should be analysed to determine the most profitable options for the business.

2.3 Theoretical framework

2.3.1 Trade off Theory of Financing Mix

The approach works under the premise that most businesses use a combination of debt and equity financing. The key difficulty is determining the relative importance of stock and debt. It demonstrated the benefits of debt financing, including tax benefits, financing costs, and the price of financial hardship. With more debt, the marginal benefit declines. Therefore, a compromise must be reached in order to maximise the value for both debt and equity. Supporters of this paradigm argue that a superior capital structure actually does exist. A company will decide on an appropriate level of debt and work towards that goal over time. According to this theory, an organisation has found its optimal debt-equity ratio when the marginal present value of the tax on extra debt cancels out the rise in the present value of financial distress costs. A firm's goal leverage is influenced by (i) taxes, (ii) the costs of financial distress (bankruptcy costs), and (iii) agency costs, according to this hypothesis. Kraus and Litzenger (1973) argue that models based on taxes and models based on agency costs are both examples of static trade-off models.

2.3.2 Pecking Order Theory of Financing Mix

There is no well-defined target debt ratio, according to the Pecking Order Theory proposed by Myers & Majluf (1984), who captured the influence of asymmetric information on the mispricing of new securities. They contend that managers have a more accurate understanding of the firm's price-sensitive information than investors do. When overvalued, investors believe that managers will issue hazardous securities. Because of how investors see it, new stock issues are often priced too low. When this underpricing becomes bad enough, it might hurt current stockholders financially. To sidestep the issue of information asymmetry, businesses satisfy their funding requirements primarily through retained earnings, then through debt, and only as a last option through external stock financing. This hierarchy of preferred methods of raising money is known as the capital structure. The phrase "Pecking Order Theory" has been coined to describe this. To make up for insufficient internal cash flow, the idea suggests borrowing money rather than issuing new shares of stock. External financing is represented through debt. There is an inverse relationship between profitability and leverage since increased capital generation through retained earnings reduces the need for borrowed money. When it comes to determining the optimal financing structure for a business, Amidu (2007) argues that managers and investors do not have access to complementary sets of data. According to Abor (2005), a company's management often prioritises acting in the stakeholders' best interests. The focus of this research is the trade-off hypothesis. The variable of interest is the financing mix. Important aspects of capital structure and financial management theory including liquidity and profitability are directly impacted by this idea.

2.3.3 The Agency Theory

According to agency theory, management teams don't always make decisions that benefit shareholders. In 1976, Jensen and Meckling developed this idea further by identifying two fundamental conflicts inside a company: those between the management and shareholders, and those between the shareholders and the creditors. Managers, in the first place, might be tempted to put their own interests ahead of the shareholders' while pursuing the profits of the companies they oversee. In the latter case, stockholders are incentivized to make sub-optimal investments due to the presence of debt. The agency hypothesis states that managers, shareholders, and creditors may all find common ground by settling their differences through an agreement on how to finance the capital structure.

An ideal debt level in capital structure, according to agency theory, is one where the agency costs resulting from managers' conflicting obligations to shareholders and debt holders are kept to a minimum. In order to better align managers' interests with those of the owners, Jensen & Meckling (1976) recommend either encouraging the use of debt to restrict managers' inclination for excessive perk consumption or increasing managers' ownership in the organisation. The free-cash-flow agency dilemma is presented by Jensen (1986). He argues that the issue of free cash flow may be managed by limiting managers' access to "free" cash by raising their ownership interest in the company or by adding debt to the capital structure. Several theories of capital structure, such as signalling theory and pecking order theory, seek to explain the role of asymmetric information in choosing the best capital structure by using the concept of asymmetric information.

III. Research Methodology

The study uses an ex-post facto methodology since it is interested in already established facts and the observations collected on the parts of the sample pertain to previously established occurrences. This study uses a highly non-experimental methodology to examine how different types of financing affect the bottom line for Nigerian manufacturers and retailers of consumer goods and industrial machinery. The framework of this design is to gather data, measure data, and conduct an empirical analysis that will result in either a positive, negative, or no connection given the design's historical and dynamic data. The conclusion, whenever it may be, must further human understanding.

The financial statements of publicly traded Nigerian companies producing consumer and industrial goods served as the secondary data source for this analysis. Information was gathered from the NSE library as well as company websites. All publicly traded companies that produce consumer and industrial goods are included in the analysis. All of the companies that may be found in the Consumer and Industrial Goods Sector sample. The study's sample size wasn't calculated since it used a census sampling strategy. The used criterion was to weed out companies with insufficient data to prevent polluting the results with inaccurate information. Companies chosen to be included in the sample are statistically representative of all companies in the Consumer and Industrial Goods Sector in terms of headcount, funding, market value, assets, and profits.

Financial performance as measured by Return on Assets serves as the dependent variable here. The ratios of debt to equity, long-term debt to equity, and short-term equity are used as surrogates for the independent variable, "financing mix." The Debt to Equity Ratio is the most important metric because it provides a holistic evaluation of the mix of debt and equity in a company's capital structure.

MODEL 1

$$ROA_{it} = \beta_0 + \beta_1 LTDE_{it} + \beta_2 STDE_{it} + \beta_3 FSIZ_{it} + \epsilon_{it} \quad \dots\dots\dots (i)$$

Where,

ROA: Return on Assets

LTDE: Long-term debt to equity.

STDE: Short-term debt to equity.

FSIZ: Firm Size

β : Interception of the equations;

ϵ : The error term.

Table 2 Descriptive statistics for roa stde ltde fsiz

variable	N	mean	sd	min	max	skewness	kurtosis
roa	170	6.6376	9.5270	-44.16	26.52	-0.9704	7.6678
stde	170	0.4791	0.2438	.1	2.23	3.2964	20.7068
ltde	170	0.1464	0.1352	-.24	0.83	2.0837	10.9286
fsiz	170	7.4464	0.7763	5.25	8.68	-0.8457	3.2534

Source: STATA 16 output Results based on study data

According to Table 2, the mean return on asset (ROA) for consumer goods companies that are publicly traded in Nigeria was N6.6376, with a corresponding standard deviation (SD) of 9.5270. The observed result suggests that the return on assets (ROA) of the selected companies exhibit significant deviations from the mean on both ends, with a magnitude of N9.5270. This indicates that the data is characterised by a substantial degree of dispersion from its central tendency. The Return on Assets (ROA) exhibits a range of values, with a lower limit of -N44.16 and an upper limit of N26.52. The coefficient of skewness for the ROA data is -0.9704, indicating a negative skewness and a majority of the data points being located on the left side of the normal distribution curve. The non-normal distribution of the data is indicated by the kurtosis coefficient of 7.6678.

The presented Table indicates that the mean short term debt to equity (STDE) ratio of the consumer goods companies listed in Nigeria was 0.4791, accompanied by a standard deviation (SD) of 0.2438. This suggests that the STDE values of the selected firms exhibit significant deviation from the mean in both directions, with a dispersion of 0.2438, indicating a wide distribution of data from its central tendency. The STDE exhibits a range of values between 1 and 2.23, with the former representing the minimum and the latter representing the maximum. The data pertaining to STDE exhibits a positive skewness with a coefficient value of 3.2964, indicating that a majority of the data points are situated towards the right tail of the normal distribution curve. The non-normal distribution of the data is indicated by the kurtosis coefficient of 20.7068.

Similarly, the study period witnessed a mean long-term debt to equity (LTDE) value of 0.1464 among the firms sampled, accompanied by a standard deviation (SD) of 0.1352. The aforementioned observation indicates that the LTDE exhibits a deviation of 0.1351 from the mean on either side, thereby signifying a significant degree of dispersion of data from the central tendency. The LTDE exhibits a range of values between -0.24 and 0.83. The data pertaining to LTDE exhibits a positive skewness with a coefficient value of 2.0837, indicating that a majority of the data points are clustered towards the higher end of the distribution, to the right of the normal curve. The non-normal distribution of the data is indicated by the kurtosis coefficient of 10.9286.

Furthermore, Table 2 illustrates that the magnitude of the firms (FIZE) included in the sample has a mean of 7.4464 and a standard deviation of 0.7763. The analysis indicates that FIZE exhibits a deviation of 0.7763 on either side of the mean, suggesting that the data does not exhibit significant dispersion from the mean. The FIZE exhibits a range of values, with a lower bound of 5.25 and an upper bound of 8.68. The FIZE dataset exhibited a negative skewness of -0.8457, indicating that the majority of the observations are concentrated towards the lower end of the distribution. The non-normal distribution of the data is indicated by the kurtosis coefficient of 3.2534. The present study's data exhibits a dispersion that is not indicative of either normal distribution or skewness.

The following table, Table 3, displays the outcomes of the correlation analysis conducted to examine the relationship between short term debt to equity, long term debt to equity, and financial performance, while controlling for firm size. The dataset comprises the Pearson pairwise correlation coefficients of the variables being analysed. Table 3 displays the correlation matrix.

Table 3 Results of correlation analysis for roa stde ltde fsiz

	roa	stde	ltde	fsiz
roa	1.0000			
stde	-0.2550	1.0000		
ltde	0.0713	-0.2565	1.0000	
fsiz	0.2211	-0.1065	0.0518	1.0000
	0.0038	0.1669	0.5022	

Source: STATA 16 output Results based on study data

Correlation is a statistical metric that quantifies the degree of the relationship between two or more variables. Table 3 presented above displays the correlation existing between the dependent and independent variables under investigation. The study reveals a statistically significant negative correlation of -0.2550 (25.5%) between return on asset (ROA) and short term debt to equity (STDE) at a significance level of 5%, as indicated by the p value of 0.0000. This suggests that an increase of one unit in STDE will lead to a decrease of 0.2550 units in return on asset. The Long Term Debt to Equity (LTDE) ratio exhibits a weak positive correlation of 7.13% with Return on Assets (ROA). However, this correlation is not statistically significant at the 5% level, as evidenced by the p-value of 0.3558. This indicates that a unit increase in LTDE results in a 0.0713 unit increase in ROA. Conversely, Firm Size (FSIZE) demonstrates a positive correlation of 22.11% with ROA, indicating that a unit increase in FSIZE results in a 0.2211 unit increase in ROA. This correlation is statistically significant at the 5% level, as indicated by the p-value of 0.0038.

Table 4 displays the outcomes of the multicollinearity examination that was executed to establish the correlation among the independent variables and to verify the presence of significant multicollinearity among the explanatory variables.

Table 4 Results of VIF Test (Multicollinearity Test)

Variable	VIF	1/VIF
stde	1.08	0.925482
ltde	1.07	0.933585
fsiz	1.01	0.988017
Mean VIF	1.05	

Source: STATA 16 output Results based on study data

Table 4 displays the Variance Inflation Factor (VIF) and tolerance value of the independent variables. The VIF values were all below 10, and the tolerance levels were below 1, indicating the absence of Multicollinearity among the independent variables. The VIF mean value of 1.05 provides evidence that there is no issue of Multicollinearity present among the variables.

The following table, Table 5, displays the outcomes of the heteroskedasticity examination that was performed to determine the presence of unequal variance in the data. The test's null hypothesis posits that the variance is homoscedastic, whereas the alternative hypothesis suggests that the variance is heteroskedastic. The accepted decision rule in hypothesis testing is to reject the null hypothesis if the P value is less than or equal to 0.05, and to accept the alternative hypothesis if the P value is greater than 0.05.

Table 5 Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

chi2 (1)	0.19
Prob>chi2	0.6600

Source: STATA 16 Output Result

The information presented is derived from empirical research. The results presented in Table 5 indicate that the Hetttest Chi2 value for the fitted values of ROA is 0.19, which is not statistically significant at the 5% level (P-Value = 0.6600). Consequently, the research dismissed the alternative hypothesis and validated the null hypothesis that the data pertaining to fitted values of ROA exhibits homoscedasticity.

The following table, Table 6, displays the outcome of a spam test that was conducted to ascertain the suitability of either Pooled OLS regression or fixed effect regression. The test's null hypothesis posits that the Pooled Ordinary Least Squares (OLS) Model is the most suitable, whereas the alternative hypothesis suggests that the Fixed Effect Model is the most appropriate. The prescribed criterion for decision-making is to reject the null hypothesis in favour of the alternative hypothesis when the P value is less than 0.05, whereas the null hypothesis is retained when the P value is greater than or equal to 0.05.

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Table 6: Results of F test

	F	Prob.> chi ²
Test parm	26.00	0.0000

Source: STATA 16 Output Results based on study data

Table 6 presents findings indicating an F value of 26.00 and a corresponding P value of 0.000, which is below the predetermined threshold of 5% (0.05). As a result, the null hypothesis is rejected, and the alternative hypothesis is accepted, leading to the conclusion that fixed effect regression is the most suitable method.

The findings of the Wooldridge test for autocorrelation in panel data are presented in Table 8. The purpose of this test was to ascertain the presence of serial correlation. The test's null hypothesis posits the absence of serial correlation, while the alternative hypothesis proposes the presence of serial correlation. The accepted decision rule in hypothesis testing is to reject the null hypothesis if the p-value is less than or equal to 0.05, and to accept the alternative hypothesis if the p-value is less than 0.05.

Table 7 Wooldridge test for autocorrelation in panel data

F (1, 16)	23.284	
Prob > F	0.0002	

Source: STATA 16 Output Results based on study data

Table 7 displays the statistical findings of a f value of 23.284, which is accompanied by a probability value of 0.0002. This suggests that the alternative hypothesis has been accepted, leading to the conclusion that serial correlation exists in the study. The issue of serial correlation was addressed through the utilisation of Regression with Driscoll-Kraay standard errors.

The findings of the Breusch and Pagan LM test are displayed in Table 8. The objective of the test was to ascertain the most suitable regression method between pooled OLS regression and Random effect regression. The

hypothesis being tested in this analysis posits that Pooled Ordinary Least Squares (OLS) represents the most suitable approach, as opposed to the alternative hypothesis which suggests that Random Effect Regression is the more appropriate method. The accepted decision rule in hypothesis testing is to reject the null hypothesis if the p-value is less than or equal to 0.05, and to accept the alternative hypothesis if the p-value is less than 0.05.

Table 8: Breusch and Pagan Lagrangian multiplier test for random effects

chibar2	164.47
Prob > chibar2	0.0000

Source: STATA 16 Output Results based on study data

Table 8 presents the chi-square value of 164.47, which is associated with a probability value of 0.0000. This statement suggests that the null hypothesis has been refuted, leading to the conclusion that the random effect model is the most suitable.

The results of the Husman test are presented in Table 9, indicating the suitability of either random effect regression or fixed effect regression. The test's null hypothesis posits that the random effect model is the most suitable, whereas the alternative hypothesis suggests that the fixed effect model is the most appropriate. The accepted decision rule in hypothesis testing is to reject the null hypothesis if the calculated P value is less than or equal to the predetermined level of significance, typically set at 5% (0.05), and to accept the alternative hypothesis in such cases. Conversely, if the P value is greater than the level of significance, the null hypothesis is accepted.

Table 9: Results of Hausman test

Chi ²	7.90
Prob > chi ²	0.0482

Source: STATA 16 Output Results based on study data

Table 9 above presents the outcome of the Hausman test, indicating a chi-squared value of 7.90 and a corresponding probability value of 0.00482. This probability value is lower than the predetermined significance level of 5% (0.05). This suggests that the fixed effect regression model is the most suitable for the research.

The following table, Table 10, displays the outcomes of the fixed effect regression analysis utilised to elucidate the correlation and impact of capital employed and structural capital on financial performance.

Table 10 Fixed effect Regression Results

Fixed-effects regression with Driscoll-Kraay standard errors

	Coef.	Drisc/Kraay Std. Err.	t	P> t	[95% Conf. Interval]	
stde	-18.4789	3.0520	-6.06	0.000	-25.3807	-11.5771
ltde	-9.6576	7.0075	-1.38	0.201	-25.5098	6.1946
fsiz	-2.9335	1.6413	-1.79	0.108	-6.6465	0.7793
_cons	38.7485	13.9475	2.78	0.021	7.1970	70.3001
R-squared						0.3421
Prob > F						0.0011
F statistics						13.53
Number of obs						170

Source: STATA 16 Output Results based on study data

The F statistics of 13.53 and a corresponding Prob.>F of 0.0011 indicated that the model is fit to explain the relationship expressed in the study. The nature and extent of the relationship between the dependent variable and each of the independent variables of the study in terms of coefficients, z- values, and p- values are explained further:

H₀₁; short term debt to equity has no significant effect on return on asset of listed consumer goods companies in Nigeria

The study period revealed a negative correlation between return on asset and short term debt to equity (STDE) among the consumer goods companies listed in the sample. This was demonstrated by the coefficient value of -.18.4789. The findings indicate that a one-unit increase in Short-term Debt to Equity (STDE) is associated with a reduction of 18.4789 units in Return on Assets (ROA). The findings indicate that the financial performance of consumer goods companies listed in Nigeria is significantly impacted by the short term debt to equity ratio of the sampled firms. The statistical significance at a 5% level was demonstrated by a t-value of -6.06 and a P-value of 0.000. The study's findings led to the rejection of the null hypothesis and the acceptance of the

alternative hypothesis. The conclusion drawn from the study was that the return on asset of listed consumer goods companies in Nigeria is significantly affected by short term debt to equity.

Ho₂: long term debt to equity has no significant effect on return on asset of listed consumer goods companies in Nigeria

The study period revealed a negative correlation between the long-term debt to equity (LTDE) ratio of the sampled listed companies and their return on assets, as evidenced by the coefficient of -9.6576. The analysis indicates that there exists a negative correlation between long term debt to equity ratio and return on asset, whereby a unit increase in the former results in a decrease of 9.6576 units in the latter. The findings indicate that the long-term debt to equity ratio of the selected firms does not have a significant impact on the financial performance of consumer goods companies listed in Nigeria. The statistical insignificance at a 5% level was demonstrated by a t-value of -1.38 and a P-value of 0.201. The study arrived at a conclusion that the null hypothesis was accepted and the alternative hypothesis was rejected. This implies that there is no significant impact of long term debt to equity on the return on asset of consumer goods companies listed in Nigeria. The findings are consistent with the study conducted by Hayati et al. (2022), which also reported that STDE does not have a statistically significant impact on financial performance.

IV. Discussion of Findings

The present research investigated the impact of financing composition on the financial performance of consumer goods firms that are publicly traded in Nigeria. The objective of this study was to investigate the impact of short-term and long-term debt-to-equity ratios on the financial performance of consumer goods companies that are publicly listed in Nigeria. The a priori hypothesis posited that there would be a positive and statistically significant impact of both short-term and long-term debt-to-equity ratios on financial performance.

According to the study's findings, there exists a negative correlation between the return on asset and the short term debt to equity of the consumer goods companies sampled during the study period, at a significance level of 5% (0.05). The findings of the study indicate that the financial performance of consumer goods companies listed in Nigeria is significantly impacted by the short term debt to equity ratio of the sampled firms. The findings are consistent with Henry et al's (2020) study, which similarly observed that STDE has a statistically significant adverse impact on financial performance. The findings presented herein are contradictory to the research conducted by Hayati et al (2022), which concluded that STDE does not have a statistically significant impact on financial performance.

The research revealed that the impact of long-term debt to equity on the financial performance of consumer goods companies listed in Nigeria was found to be insignificant, contrary to the anticipated outcome. The findings suggest that an increase of one unit in long-term debt to equity ratio is associated with a decrease of 9.6576 units in the financial performance of consumer goods companies listed in Nigeria.

The present study's findings are akin to those of Hayati et al. (2022), who similarly reported that LTDE has a non-significant impact on financial performance. The findings were contrary to Akaji et al's (2022) study, which reported a significant impact of STDE on performance. Results

V. Conclusion and Recommendation

The study came to the following conclusions as a result of findings:

Specifically, the study concluded that short and long term debt to equity (STDE) has a negative effect on financial performance. This depicts that progressive increase in short and long term debt to equity brings about a decrease in financial performance of listed consumer goods companies in Nigeria. Based on the findings of this study, the following recommendations were made:

- i. Management of consumer and industrial goods firms should focus on the use of short term debt equity (STDE) instrument as a source of funding its operations. This is because reducing its short-term debt equity would increase financial performance by reducing the finance cost associated with the instrument.
- ii. Similarly, the management should pay little or no attention to long-term debt equity instruments. This is because, it was found to insignificant effect on financial performance.

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Appendix A

YEAR	CROSS	ROA	LTDE	STDE	FSIZ
2012	1	-4.9	0.14	0.36	7.4
2013	1	4.12	0.16	0.39	7.45
2014	1	10.91	0.09	0.41	7.53
2015	1	8.6	0.08	0.42	7.6
2016	1	13.95	0.11	0.33	7.64
2017	1	5.25	0.11	0.49	7.46
2018	1	4.06	0.16	0.41	7.45
2019	1	-1.04	0.16	0.45	7.45
2020	1	1.06	0.15	0.44	7.45
2021	1	2.99	0.17	0.37	7.44
2012	2	-44.16	0.01	2.23	6.45
2013	2	-17.16	0.04	1.26	6.84
2014	2	-19.66	0.01	1.5	6.83
2015	2	-12.89	0.01	1.5	6.96
2016	2	-7.87	0.01	0.37	6.98
2017	2	0.75	0.01	0.3	7.01
2018	2	5.32	0.01	0.22	7
2019	2	5.13	0.03	0.16	7
2020	2	-2.52	0.02	0.22	7.02
2021	2	4.29	0.01	0.63	7.84
2012	3	8.67	0.01	0.55	7.8
2013	3	3.88	0.06	0.55	7.85
2014	3	0.75	0.07	0.58	7.94
2015	3	-2.92	0.19	0.48	7.89
2016	3	-10.27	0.18	0.54	7.82
2017	3	-11.46	0.12	0.71	7.74
2018	3	-25.69	0.05	1.01	7.69
2019	3	13.38	0.09	0.6	7.9
2020	3	11.7	0.04	0.68	8.11
2021	3	-0.96	-0.12	0.69	8.08
2012	4	17.03	0.03	0.44	7.89
2013	4	18.11	0.03	0.31	7.79
2014	4	10.17	0.05	0.41	7.86
2015	4	13.01	0.05	0.39	7.92
2016	4	13.04	0.08	0.36	7.92
2017	4	12.54	0.07	0.38	7.97
2018	4	11.24	0.05	0.38	8.01
2019	4	8.07	0.06	0.56	8.25
2020	4	20.39	0.03	0.49	8.29
2021	4	12.55	0.04	0.4	8.24

2012	5	3.14	0.26	0.47	8.14
2013	5	2.71	0.26	0.37	8.16
2014	5	5.79	0.35	0.34	8.21
2015	5	3.6	0.33	0.32	8.37
2016	5	2.76	0.29	0.41	8.45
2017	5	1.81	0.29	0.43	8.47
2018	5	2.47	0.23	0.52	8.54
2019	5	4.18	0.19	0.53	8.54
2020	5	1.83	0.15	0.64	8.68
2021	5	3.33	0.14	0.49	8.61
2012	6	18.33	0.15	0.42	7.87
2013	6	17.52	0.17	0.39	7.89
2014	6	19.44	0.17	0.4	7.96
2015	6	13.41	0.21	0.43	8.03
2016	6	9.8	0.2	0.42	8.08
2017	6	7.23	0.33	0.33	8.12
2018	6	6.38	0.23	0.38	8.09
2019	6	-1.47	0.21	0.49	8.14
2020	6	1.32	0.27	0.44	8.16
2021	6	4.38	-0.24	0.28	8.19
2012	7	0.92	0.14	0.63	7.37
2013	7	3.92	0.1	0.45	7.48
2014	7	8.55	0.1	0.38	7.46
2015	7	6.01	0.19	0.44	7.65
2016	7	5.13	0.17	0.5	7.74
2017	7	5.25	0.24	0.44	7.81
2018	7	1.65	0.23	0.47	7.83
2019	7	-3.98	0.2	0.58	7.88
2020	7	3.8	0.3	0.23	8.05
2021	7	3.55	0.32	0.23	8.1
2012	8	-5.61	0.83	0.23	6.71
2013	8	2.01	0.76	0.25	7
2014	8	1.02	0.21	0.7	7.16
2015	8	1.02	0.21	0.7	7.16
2016	8	10.88	0.25	0.34	7.36
2017	8	8.64	0.27	0.27	7.39
2018	8	6.45	0.27	0.33	7.48
2019	8	7.92	0.11	0.48	7.52
2020	8	2.3	0.11	0.58	7.65
2021	8	-1.25	0.5	0.38	8.49
2012	9	-3.64	0.01	0.25	5.25
2013	9	2.68	0.19	0.2	5.35
2014	9	3.5	0.21	0.13	5.42
2015	9	7.29	0.23	0.18	5.51

2016	9	10.72	0.12	0.29	5.58
2017	9	14.36	0.07	0.31	5.62
2018	9	12.17	0.06	0.31	5.68
2019	9	7.09	0.13	0.26	5.73
2020	9	9.04	0.78	0.35	5.64
2021	9	-6.08	0.01	0.99	5.39
2012	10	22.59	0.09	0.34	6.91
2013	10	21.95	0.07	0.27	6.88
2014	10	21.93	0.08	0.35	7
2015	10	25.88	0.07	0.32	7.03
2016	10	23.62	0.06	0.33	7.06
2017	10	14.87	0.07	0.43	7.1
2018	10	12.92	0.08	0.49	7.21
2019	10	9.82	0.06	0.61	7.39
2020	10	17.74	0.07	0.55	7.48
2021	10	14.6	0.08	0.53	7.48
2012	11	22.11	0.33	0.43	7.65
2013	11	20.88	0.43	0.32	7.78
2014	11	21.22	0.38	0.32	7.89
2015	11	23.76	0.33	0.28	7.95
2016	11	20.57	0.32	0.31	8.03
2017	11	20.96	0.25	0.42	8.03
2018	11	19.91	0.18	0.5	8.08
2019	11	4.67	0.1	0.71	8.23
2020	11	22.97	0.17	0.52	8.17
2021	11	26.49	0.12	0.57	8.21
2012	12	26.09	0.17	0.4	8.03
2013	12	26.52	0.17	0.39	8.06
2014	12	16.14	0.28	0.39	8.37
2015	12	15	0.29	0.34	8.4
2016	12	17.04	0.16	0.4	8.4
2017	12	12.18	0.18	0.33	8.54
2018	12	10.68	0.12	0.39	8.55
2019	12	7.74	0.16	0.39	8.56
2020	12	8.65	0.13	0.41	8.58
2021	12	5.01	0.21	0.36	8.59
2012	13	6.2	0.27	0.82	6.01
2013	13	5.25	0.01	0.83	6.15
2014	13	8.65	0.02	0.69	6.01
2015	13	4.06	0.52	0.31	6.34
2016	13	3.36	0.15	0.31	6.34
2017	13	2.79	0.1	0.49	6.49
2018	13	1.48	0.06	0.68	6.7
2019	13	2.94	0.07	0.62	6.66

2020	13	0.77	0.05	0.71	6.77
2021	13	-0.07	0.05	0.63	6.66
2012	14	2.44	0.14	0.57	6.37
2013	14	5.81	0.18	0.34	6.41
2014	14	11.02	0.13	0.49	6.62
2015	14	0.15	0.1	0.49	6.53
2016	14	6.21	0.11	0.45	6.56
2017	14	7.15	0.09	0.36	6.51
2018	14	-4.85	0.24	0.76	6.61
2019	14	-5.01	0.03	0.1	6.59
2020	14	-0.37	0.03	0.69	6.64
2021	14	-1.03	0.23	0.57	6.77
2012	15	9.71	0.08	0.27	7.74
2013	15	9.47	0.08	0.26	7.77
2014	15	8.27	0.09	0.32	7.84
2015	15	3.94	0.07	0.27	7.81
2016	15	7.36	0.06	0.3	7.86
2017	15	7.16	0.06	0.3	7.85
2018	15	6.78	0.09	0.29	7.83
2019	15	2.86	0.05	0.36	7.87
2020	15	4.09	0.03	0.47	7.95
2021	15	2.17	0.03	0.46	7.95
2012	16	17.29	0.13	0.52	7.37
2013	16	16.12	0.12	0.56	7.41
2014	16	17.1	0.12	0.59	7.51
2015	16	15.34	0.11	0.61	7.56
2016	16	10.99	0.14	0.64	7.64
2017	16	5.27	0.14	0.7	7.66
2018	16	2.38	0.15	0.69	7.7
2019	16	4.24	0.1	0.74	7.86
2020	16	6.15	0.07	0.3	8.08
2021	16	6.93	0.04	0.33	8.12
2012	17	9.5	0.09	0.51	6.73
2013	17	8.64	0.06	0.53	6.77
2014	17	5.58	0.09	0.61	6.97
2015	17	4.82	0.08	0.62	7.02
2016	17	4.12	0.11	0.58	7
2017	17	3.64	0.11	0.64	7.08
2018	17	1.72	0.16	0.52	7.16
2019	17	-0.24	0.14	0.6	7.13
2020	17	-0.95	0.11	0.64	7.13
2021	17	3.75	0.21	0.55	7.21

Appendix B

Notes:

```
. . tabstat roa stde ltde fsiz, statistics( count mean sd min max skewness
kurtosis ) columns(statistics)
      variable |          N      mean          sd          min          max  skewness
kurtosis
-----+-----
      roa |          170  6.637588  9.527004   -44.16         26.52  -.9704188
7.667849
      stde |          170  .4790588  .2437946          .1         2.23  3.296369
20.70683
      ltde |          170  .1464118  .135199          -.24          .83  2.083737
10.92855
      fsiz |          170  7.446353  .7762607          5.25          8.68  -.8457179
3.253355
```

```
. swilk roa stde ltde fsiz
      Shapiro-Wilk W test for normal data
      Variable |      Obs      W          V          z      Prob>z
-----+-----
      roa |      170  0.92437      9.800      5.208  0.00000
      stde |      170  0.74300     33.303      7.999  0.00000
      ltde |      170  0.82920     22.132      7.067  0.00000
      fsiz |      170  0.93765      8.079      4.767  0.00000
```

```
. pwcorr roa stde ltde fsiz, sig
      |      roa      stde      ltde      fsiz
-----+-----
      roa |      1.0000
      |
      stde |     -0.5550      1.0000
      |           0.0000
      |
      ltde |      0.0713     -0.2565      1.0000
      |           0.3558      0.0007
      |
      fsiz |      0.2211     -0.1065      0.0518      1.0000
      |           0.0038      0.1669      0.5022
      |
```

```
. regress roa stde ltde fsiz

      Source |          SS          df          MS              Number of obs =
170
-----+-----
28.58
      Model |  5224.63529           3      1741.5451              F( 3, 166) =
0.0000
      Residual | 10114.4471          166      60.9304043              Prob > F      =
0.3406
-----+-----
0.3287
      Total | 15339.0824          169      90.7638013              R-squared      =
7.8058
                                           Adj R-squared =
                                           Root MSE      =
```

```

-----
---
      roa |      Coef.   Std. Err.      t    P>|t|     [95% Conf.
Interval]
-----+-----
---
      stde |   -21.8044   2.560151    -8.52   0.000   -26.85906   -
16.74975
      ltde |    -5.67099   4.596459    -1.23   0.219   -14.74604
3.404065
      fsiz |    2.035652   .778187     2.62   0.010    .4992323
3.572071
      _cons |    2.755298   6.122456     0.45   0.653   -9.332621
14.84322
-----

```

```
. estat hettest
```

```

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of roa

      chi2(1)      =      0.19
      Prob > chi2  =      0.6600

```

```
. estat vif
```

```

-----
Variable |      VIF      1/VIF
-----+-----
      stde |      1.08   0.925482
      ltde |      1.07   0.933585
      fsiz |      1.01   0.988017
-----+-----
      Mean VIF |      1.05

```

```
. xtreg roa stde ltde fsiz, fe
```

```

Fixed-effects (within) regression           Number of obs   =
170                                         Number of groups =
Group variable: cross                       Number of groups =
17                                           Obs per group: min =
R-sq:  within  = 0.3421                     Obs per group: max =
10                                           between  = 0.0412           avg =
10.0                                         overall  = 0.1626           max =
10                                           F(3,150)           =
26.00                                         Prob > F           =
corr(u_i, Xb) = -0.1247                     Prob > F           =
0.0000
-----

```

Financing mix and Financial Performance: Evidence from listed Consumer and ..

```

      roa |      Coef.   Std. Err.      t    P>|t|     [95% Conf.
Interval]
-----+-----
-----+-----
      stde |   -18.4789   2.096363    -8.81   0.000   -22.62111   -
14.33668
      ltde |    -9.657602  4.138993    -2.33   0.021   -17.83586   -
1.479343
      fsiz |    -2.933585  2.032279    -1.44   0.151    -6.949177
1.082006
      _cons |    38.74857  15.45602     2.51   0.013    8.208926
69.28821
-----+-----
-----+-----
      sigma_u |  7.2551467
      sigma_e |  5.5101284
      rho    |  .63419275   (fraction of variance due to u_i)
-----+-----
-----+-----
F test that all u_i=0:      F(16, 150) =      11.45      Prob > F =
0.0000

. estimate store fe

. xttest3

Modified Wald test for groupwise heteroskedasticity
in fixed effect regression model
H0: sigma(i)^2 = sigma^2 for all i
chi2 (17) =      1894.57
Prob>chi2 =      0.0000

. xtserial roa stde ltde fsiz
Wooldridge test for autocorrelation in panel data
H0: no first-order autocorrelation
      F( 1,      16) =      23.284
      Prob > F =      0.0002

. testparm roa stde ltde fsiz
( 1)  stde = 0
( 2)  ltde = 0
( 3)  fsiz = 0
      F( 3,      150) =      26.00
      Prob > F =      0.0000

. xtreg roa stde ltde fsiz, re
Random-effects GLS regression
170      Number of obs      =
Group variable: cross      Number of groups      =
17
R-sq:  within = 0.3336      Obs per group: min =
10
      between = 0.3452      avg =
10.0
      overall = 0.3047      max =
10
      Wald chi2(3)      =
80.74

```


