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FIRM ATTRIBUTES AND FINANCIAL DISTRESS OF LISTED CONSUMER GOODS FIRMS IN NIGERIA

Charles Ndubuisi Ukoh[1] Onyinye Eneh[2] Chizoba M. Ekwueme[3]
[1,2&3]*Department of Accountancy, Faculty of Management Sciences, Nnamdi Azikiwe University, Awka, Anambra State, Nigeria.*
Emails: [1]charlesukohn@gmail.com; [2]o.eneh@unizik.edu.ng;
[3]cm.ekwueme@unizik.edu.ng
Correspondence: charlesujoha@gmail.com

ABSTRACT

The Nigerian consumer goods sector is central to the nation's economy and has contributed not only to the GDP but also to employment. However, economic difficulties such as currency fluctuations, changes in policies, and commodity price changes commonly occur and have contributed to financial distress in firms operating within this sector. This study adopts the Altman Z-Score as the measure in determining the influence of two main firm attributes – leverage and age – on financial distress among listed consumer goods firms in Nigeria. From panel regression analysis of 16 firms for a 12-year period, it is observed that leverage significantly and negatively influences the Altman Z-Score-that is, increased financial distress accrues with increased debt levels. On the other hand, firm age positively influences the Z-Score; this means that the older the firm, the more financial stability is obtained. These results depict the importance of prudent debt management and firm longevity toward improving financial health. This study provides valuable information to industry participants with the intention of alleviating financial distress and improving stability in the consumer goods sector of Nigeria.

Key words: *Financial Distress, Firm Leverage, Firm Age, Altman Z-Score, Nigerian Consumer Goods Sector*

1. INTRODUCTION

The consumer goods sector is one of the key drivers of the Nigerian economy. This is clearly evident in its contribution to the gross domestic product and job creation. However, firms in this sector are very susceptible to financial distress due to the present economic situation characterized by currency fluctuation and unstable policy changes (KPMG, 2023; Abanikanda & Dada, 2023). Global volatility in commodity prices, especially oil, has great repercussions on the economy of Nigeria through its impact on consumer spending and operating costs for firms. According to Igbinedion (2019), this leaves many consumer goods firms highly susceptible to financial distress, hence the need to understand important firm-specific factors influencing their financial health. Financial distress in Nigerian consumer goods firms may lead to, workforce reduction, negative investor sentiment, and overall disruptions in the supply of consumer staples (Pirdam & Mustapha, 2024). Large companies face more public

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exposure which may result in financial burdens if not successfully managed (Eneh & Amakor, 2019). Firm attributes are critical factors that explain the causes of this financial distress. The degree of leverage, or reliance on debt financing, can become problematic during an economic downturn because high levels of debt raise the financial risk and impact the ability of a firm to manage obligations effectively. Likewise, the firm's age shows experience, brand reputation, and operational stability. Older firms are expected to have accrued some advantages in established customer relationships and market knowledge that could help in their resistance to financial distress (Yusuf & Abudulkarim, 2020).

The most commonly applied model in measuring financial distress is the Altman Z-score model. This model integrates various financial ratios into one score, indicating bankruptcy (Altman, 1968). The model, therefore, serves as a useful tool in practice in the determination of the financial stability of a firm where a low Z-score represents distress while a high score proves the financial health of a firm (Marginingsih 2022; Singh & Singla 2023). The use of the Z-score model presents a platform through which the stakeholders of the economies make informed decisions on selected firm attributes such as leverage and age. Therefore, this study sought to determine the effect that leverage and firm age have on the Altman Z-score of listed consumer goods firms in Nigeria. Abanikanda and Dada (2023) noted that Consumer Goods firms in Nigeria operate in a very volatile economy characterized by high inflation, devaluation of currency, and incoherent regulatory policies. In such a potentially hostile environment, firms could experience financial distress that threatens their survival and dampens their potential contribution toward the economy through job provision and staple products. Apart from that, such a rise in the financial distress level influences companies to engage in downsizing. This leads to the loss of jobs and reduction of consumer purchasing power, disrupting supply chains and, even more generally, causing adverse economic consequences. While previous studies in Nigeria have focused on the issues related to leverage, liquidity, and profitability that influence financial stress; the age of the firm remains under-explored. Furthermore, available research does not include comprehensive data up to 2023. This updated evidence is vital to provide insights into the prevailing economic environment. Also, extant Nigerian-based studies have not employed predictive models such as the Altman Z-Score, which would be more robust in measuring financial distress.

This study, therefore, attempts to fill these gaps by examining the firms' leverage and age as predictors of financial distress among consumer goods firms listed in the Nigerian Exchange, updating and adding relevant insights to the literature. It will also provide evidence-based

recommendations that could strengthen the financial resilience of the consumer goods sector in Nigeria and give grounds for further studies and policy decisions.

1.1 Objectives

1. to determine the effect of firm leverage on the Altman Z-Score of listed consumer goods firms in Nigeria.
2. to assess the degree to which firm age affects the Altman Z-Score of listed consumer goods firms in Nigeria.

The following hypotheses have been formulated for the purpose of this study:

H_{01}: Firm leverage has no significant effect on the Altman Z-Score of listed consumer goods firms in Nigeria.

H_{02}: Firm age does not significantly affect the Altman Z-Score of listed consumer goods firms in Nigeria.

2.1 LITERATURE REVIEW

2.1.1 Financial distress

Financial distress encompasses various underlying issues that can manifest in diverse forms and magnitudes, as outlined by Altman (1968). These challenges can arise from a multitude of sources and circumstances, posing a pervasive concern for both financial analysts and organizational managers (Anggraini & Verlandes, 2023). The specter of financial distress can manifest in several ways, underscoring the importance of identifying the warning signs, which may include liquidity challenges, declining profitability, or difficulty accessing capital markets or securing funding from traditional sources. Ramadani and Ratmono (2023) and Nursal et al. (2023) argued that each of these manifestations contributes to a broader comprehension of the concept, emphasizing the significance of early detection and intervention to prevent potential financial calamities. However, Dewianawati and Setiawan (2023) contested that financial ratios do not significantly indicate financial distress. The business and financial world today is marked by change and unpredictability at every turn. Operating in such a dynamic environment means that firms are constantly faced with diversified internal and external stresses that may potentially destabilise their finance (Kamkankaew et al., 2022). The pressures may come from changes in market demand, economic contraction, alteration of regulations, or changes in the consumers' behaviour. The

capacity to adapt and navigate these changes is crucial for a firm's financial well-being and resilience against the specter of financial distress (Liu et al., 2022).

The consequences of financial distress can be enormous and extend well beyond the financial statements, such as the statement of financial position and income statements. Tadmon and Njike (2022) identified that when an organization encounters financial distress, this threatens its ability to survive and may affect the entire economy as a whole. It has also been documented in the literature that the Altman Z-score possesses efficacy in ensuring financial distress among companies. Hantono, (2019) focusing on consumer goods companies, ascertained how Altman's model impacts their prediction of financial distress. Utami et al. (2022) in their research, also used financial ratios through the Altman Z-Score modification method to check the possibility of financial distress within PT Bali Kulina Utama. By their results, the company did not face financial distress during these years 2018-2020. Generally speaking, financial distress is a range of problems and difficulties which could jeopardize a firm from its financial position and its inability to pay its due debts (Toly et al., 2019). Being able to recognize signs of financial stress, comprehend the reasons behind it, and administer remedies to mitigate these effects is all part of prudent financial management in the dynamic world of business.

2.1.2 Altman Z-Score

The Z-score is useful in financial analysis because it provides a means for investors and creditors to measure the financial position of a firm along with its risk profile (Hamdani et al., 2023; Nanayakkara & Azeez, 2015). This allows them to make adequate decisions regarding the investments and credit decisions. Generally, the Altman's Z-score is considered an essential and reliable tool; this helps in the decisions made within the domain of corporate finance. Göktürk and Yalçinkaya (2023) noted in their study that Altman's Z-score is widely applied by investors, creditors, and financial analysts in assessing the financial status of a firm, especially firms experiencing financial distress. Wu et al. (2022) discussed how the Z-score represents one of the most successful early warning systems and is well capable of detecting companies that may run at risk from bankruptcy or insolvency in the near future. Robust empirical investigations undertaken by Utami, et al., (2022); Makini (2015); Manaseer and Al-Oshaibat (2018); and Pramudita, (2021) have tested and confirmed the efficiency of Altman's Z-score regarding correctly predicting the failure of an enterprise. Its robustness and precision have already been recognized by regulatory bodies and financial institutions as one of the preferable methods to conduct an independent assessment of the going concern of

business enterprises. This study also chose the Altman Z-score due to its historical importance and acceptance regarding the analysis of the financial health and risk of corporate bankruptcy. Altman Z-Score is calculated as follows:

$AZS = 1.2X_1 + 1.4X_2 + 3.3X_3 + 0.6X_4 + 1.0X_5$ ……...…eqn i

Where:

X1 = working capital/total assets

X2= retained earnings to total assets ratio

X3 = Profit before interest and tax to total assets

X4 = market value of equity/book value of total liabilities

X5 = Revenue / total asset

2.1.3 Firm Age and Financial Distress

The firm age can be explained as the period a business has existed. It is calculated by the difference between the date of incorporation or registration and the present date. Firm age (Coad, Holm, Krafft & Quatraro, 2018). It serves as an important proxy for experience, stability, or maturity of the firm in the particular industry. Besides being chronological, the age of the firm encapsulates the knowledge accumulated, resources developed, and relationships a business has cultivated over time. Older firms tend to enjoy rich experience in dealing with economic cycles, market demands, and operational challenges. The stock of accumulated expertise can create a perception of dependability and trust among a range of stakeholders that includes customers, suppliers, and investors, who might favor established firms with experience over newer ones (Coad et al., 2018).

Reputation play a major role in developing their market position as the firms get older. More established businesses are usually perceived as more credible and hence more trustworthy, which may translate into customer loyalty and repeat business (Aurelia & Leon, 2023). This is particularly crucial in competitive markets, where several options exist for consumers. In addition, the relational network for older firms is usually larger, benefiting the firm in finding partners, accessing resources, and getting better terms from suppliers. Such relationship benefits, accruing over time, often confer advantages that are difficult for younger firms to match because they are still in the process of building their reputation and trust in the marketplace.

The relationship that exists between firm age and financial distress is one of the most important areas of study in corporate finance, as represented by the Altman Z-score, a widely used metric for predicting the likelihood of bankruptcy. This study examines firm age and its impact on financial distress, resting on various empirical studies that collectively highlight how maturity influences financial health. As Aurelia and Leon (2023) stated, the age of a firm is positively related to financial distress because increasing age would have been associated with the decline of distress. This supports the notion that the age factor allows firms to build up experience and resources that act as buffers against financial instability, as reflected in their Altman Z-scores. In depth, drawing from backward experiences enables them to arrive at decisions which protect their financial health. In the end, firm age significantly reduces the level of financial distress, as evidenced by the fact that higher levels of profitability, better liquidity management, governance structures, and experienced leadership are usually associated with older firms and contribute to lower levels of distress. This fact is reflected in their Altman Z-scores, which tend to be an efficient predictor of their financial health.

2.1.4 Firm Leverage and Financial Distress

Excessive financial leverage is viewed as a burden for companies to carry. The major constituents of this burden include periodic interest payments, usually semi-annual or annual, and the repayment of principal. The size of this burden increases directly with the magnitude to which debt has built up. In other words, the larger the debt, the more the financial burden the company bears (Kolte et al., 2017). High levels of debt, therefore, when combined with other financial challenges, may expose a firm to increased financial risk, as observed by Yegon and Koske (2018). Such risk has been proven to precede financial distress, a condition whereby the firm is unable to meet its obligations on financial liabilities and which might also prompt insolvency or bankruptcy (Kolte et al., 2017). Excessive debt can also result in an increased risk of causing financial distress. In this process, excessive financial leverage becomes a signal of warning for the investors, creditors, and financial analysts who estimate the financial health status of an organization. High-interest expenses can also wear down profitability over time and, in that process, limit the capability of the firm to efficiently earn profits and build capital.

As pointed out by Mburu (2018), excessive leverage may drive a firm's Z-Score towards its critical point of distress. For every decrease in the Z-Score due to the negative influence of greater leverage, the firm gets closer and closer to that critical point, which reflects an increased likelihood of facing financial difficulties. The firm needs to consider balancing the

use of leverage as a growth accelerator with maintaining a strong financial position. Too much borrowing has an associated risk with financial fragility because the enterprise might be drawn into financial distress, as reflected by a falling Z-Score. The research explaining the relationship between leverage and financial distress provides mixed explanations. The inverse relationship between leverage and financial distress is supported by the studies of Ramadani and Ratmono (2023) in Indonesian manufacturing firms. They clarify that the higher the debt-equity ratio, the higher would be the probability of financial distress, which then increases the risk for such entities. Their findings are similar to those of Kalash (2023), as they extend by stating how financial leverage influences financial performance negatively, especially in firms with a high vulnerability to financial distress. Dewianawati and Setiawan (2023) investigated Indonesian transportation sector firms and found an inconclusive result when they failed to establish a significant predictive relationship between debt ratios and financial distress. This also agrees with Saputri and Asrori (2019), who, in their study of mining companies, established that debt ratio did not have a statistically significant effect on the mining sector's financial distress during the period under study.

On the other hand, some researcher documented a positive effect of debt ratio on financial distress. For example, Rivanda et al. (2023) found leverage to be a significant variable with a positive impact on financial distress risk within the property, real estate, and construction service industry. Destriwanti et al. (2022) found the strong influence of ratio debt on financial distress in the manufacturing industry, while Atang et al. (2022) proved, in the Hotel and Tourism domain, that the Debt-to-Equity Ratio had a negative effect, which proved statistically significant for financial distress. The higher the level of debt compared to equity, the higher the risk. In the mining industry, Supriyanto and Darmawan (2018) identified that leverage-related financial ratios significantly influence financial distress positively. The influence of the measures of leverage was also found to positively and significantly affect financial distress in the retail industry, as Susanti et al. (2020) focused on the debt-to-equity ratio as the indicator used in the analysis. Leverage is basically the strategic utilization of debt or borrowed money to support part of the activities or investments undertaken by a company. Though leverage might increase the chances of return in good economic conditions, it also raises risks and vulnerability to adverse economic changes. Mburu, (2018) points out that excessive leveraging multiplies a firm's financial risks in several ways. High debt level translate to high interests and financial obligations. These obligations put a heavy burden on the company's cash flows especially when interest rates on the borrowed money are high. This implies that a large chunk of the profit made in the company might be required for servicing

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its debt, hence reducing the bank account balance for core operations, much-needed investments, and expansion projects. The relationship between leverage and financial distress can, therefore, be significantly different depending on the sector and particular circumstances.

2.2. Theoretical Framework

2.2.1 Financial Distress Theory

Purnanandam (2008) developed the theory of financial distress, which conceptualized the occurrence and conditions that bring a firm to financial deterioration. In this theory, key financial ratios within a firm indicate distress using the Altman Z-score Model for considering financial stability of firms. High-leverage, inefficient use of assets may make it impossible for a firm to generate cash flow necessary for settling short-run obligations (Yegon & Koske, 2018; Ahmad, 2013). The distress signals identified reflect the significance for every healthy firm to avoid insolvency and accrue benefit to stakeholders and the economic environment as a whole (Kristanti et al., 2016). The relevance of the application of this theory in the study could be attributed to the volatile nature of the consumer goods sector in Nigeria. This theory looks at the specific firm attributes wielding an influence on financial instability. Adoption of such a framework will help the current study to explore what kinds of characteristics can be exhibited by a firm with regard to firm age and size, which may indicate the risk of distress and therefore provide awareness among investors and policymakers about proactive financial management.

2.2.2 Agency Theory

Agency theory focuses on the relationship that is formed between the principal or the shareholders and the agents, which are the managers, and how their conflicting interests impact corporate decisions and performance. According to Saputri and Asrori (2019), some of the measures that could be employed in displaying managerial efficiency along with appetite for risk include profitability and leverage. These measures reflect the possible impacts of agency conflict on financial distress. This view was identified in the work of Mburu (2018), who noted that high leverage may signal the risk-taking behaviour of the managers at the expense of the shareholders, hence raising the likelihood of distress as captured by Z-Score. Agency-related decisions do relate to liquidity and may suggest short-run weaknesses of a firm (Susanti et al., 2020). In this research, agency theory has been used to explain how firm-specific attributes like firm age and size might influence managerial decisions that eventually precipitate corporate financial distress. Agency theory is applied here to show the

way in which internal governance and managerial incentives affect resilience within firms facing economic challenges and, hence, provide guidelines on the practices of corporate governance in Nigeria's consumer goods sector.

2.3 Empirical Review

Ordue et al. (2024) studied the effect of firm size, leverage and board size on banks' financial performance in Nigerian Deposit Money Banks. A sample composition of 12 banks was considered using the random effect model between 2012 and 2021. The results proved that leverage and the board size negatively influence performance, although firm size proved insignificant to affect performance. This study highlights the dynamics of governance and offers strategic approaches to governance in terms of optimization of board composition and leverage toward improved financial performance.

Ubesie, Ani, and Ezikanyi (2024) assessed the effect of corporate governance on the financial distress of pharmaceutical firms in Nigeria. They arrived at an insignificant result between board size and composition. Based on their studied using Altman Z-Score for the period spanning 2013 to 2022, governance does not significantly impact distress. This therefore calls for specific governance mechanisms that would cater to improving financial health, more so for the pharmaceutical sector in Nigeria.

Mohammed, Yahaya, and Tauhid (2024), researched the influence of gender as a moderator on the CEO's effect on financial distress in Nigerian banks. Their findings revealed that CEO gender heightens the risk of distress, while tenure mitigates this risk after more than 15 years. The gender setup in the risk committee proved insignificant in the performance of their moderating effects. This study shed light on the dynamics of the CEOs and distress in informing diversity at the board and considerations of tenure that could assist management in dealing with distress at financial institutions.

Ndunda (2024) presents an investigation into the impact of financial management practices on financial distress in county governments in Kenya. In a survey across five counties, they established that revenue management, debt levels, auditing, and financial information systems are significant factors that influence distress. This therefore means that county governments in Kenya need to formulate policies and practices that ensure the collection of sufficient revenue, its prudent use, enhancement of public financial management systems, and lowering the risks of distress as vital ingredients toward regional financial stability and sustainability.

Amede and Ilaboya (2024) explored case studies on the role of corporate governance in distressed firms. The study found that corporate governance may serve as a remedy for distress. They pointed out that active stakeholder participation is part of good governance and suggested that specific governance practices would alleviate financial distress. The conduct of this research has given emphasis on the role of governance as a corrective measure in the resilience of firms in precarious financial conditions within a distressed business setting.

Tsegaye and Tesfaye (2024) examined the determinants of financial stability in commercial banks. They found that profitability, liquidity, and previous stability positively influence the stability of commercial banks, while size and credit risk negatively affect the bank's stability. From the GMM analysis, they recommended that the strategies for achieving this objective need to be intensified. The result will be helpful for the banks and regulators that have ambitions toward ensuring that the banks are financially healthy through proper liquidity management and credit risk that supports the continuous growth of the banking industry in a way that is sustainable.

According to Pratiwi, Wahyuni, and Adrianto (2024), cash flow has an impact on financial distress in Indonesian hospitality firms from operating, investing, and financial cash flows. Their study underlines comprehensive cash flow management as a potentially effective way of reducing financial distress. These are important for the hospitality industry in preserving its financial health and against economic uncertainties, pointing to a balanced approach toward cash flow management for stability.

Hartono (2024) examined the influence of profitability, leverage, size, growth, and liquidity on distress in Indonesia's chemical industry and proved that they were insignificant. According to the investigation that included 20 companies between the years 2017-2022, the author concluded that different industries exhibit distinct characteristics, each with a specific effect on financial stability. The findings also prove that general financial indicators cannot fully predict financial distress; therefore, unique approaches towards individual industry sectors are needed to help investors make better decisions.

The analysis by Thinwa and Matanda (2023) targeted the causes of distress in Kenyan agricultural firms: firm size and liquidity. Firm size is seen to reduce while liquidity enhances the risk of distress. Recommendations, in this view, include sustaining manageable sizes and keeping appropriate levels of liquidity to minimize the chances of distress. A study like that may provide valuable inputs about the financial strategies of agricultural firms on the scaling

up and liquidity balance that would result in reduction of financial risks and hence resilience against volatile markets.

Ayinaddis and Tegegne (2023) deduced the determinants of financial distress in Ethiopian insurance by adopting the Altman model. According to them, liquidity and profitability positively influence distress while larger firm size decreases the risk of distress. Furthermore, the results also identify the correlation of inflation with distress. The findings are very useful for the insurance firms to maintain adequate liquidity and size so that they can overcome financial distress. Also, the external factors such as inflation may be considered in the distress prediction model by the insurance firms belonging to Ethiopian insurance.

Issak and Oluoch (2023) investigated the effect selected firm attributes have on distress within the manufacturing sector in Kenya. It turned out that size, turnover, profitability decreases the various levels of distress, while leverage increases. The results of the study highlight that leverage is balanced, meaning firm characteristics should be managed with great care so as to avoid chances of developing distress.

Pratiwi et al. (2022) analyzed the financial ratios in the Altman Z-Score Model and found that net working capital and book value equity had positive significant influences on distress probability but no other financial ratios. This indicates that these might be the financial ratios playing the role of distress indicators in manufacturing firms.

Nazar et al. (2022) evaluated the predictors of distress for Malaysian airport operators and found out that a decline in financial leverage would reduce the occurrence of risk; while liquidity and net operating margin promote stability. The findings also helped identify that regaining balanced financial ratios is one of the most potent facilitators in operational resilience management during the running of airports.

Most of the existing literature in this regard has focused on the generic predictors of financial distress and very often excluded firm-specific attributes such as leverage and firm age, especially within the Nigerian consumer goods sector. Therefore, the present study develops a critical scholarly gap by investigating the effect of these firm characteristics as predictors of financial distress using the Altman Z-Score and hence contributes valuable insight into financial health and distress within the consumer goods sector.

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3. METHODOLOGY

The ex-post facto research design was adopted since the research will be looking into already existing firm attributes such as leverage and age related to financial distress through the Altman Z-score. The study also involved purposive sampling, targeting 16 firms listed on the consumer goods sector of the Nigerian Exchange Group. The basis of selection is on those continuously listed and maintaining comprehensive financial records spanning 2012-2023. These firms' annual reports served as the primary data source, from which information on leverage, age, and Altman Z-score were extracted.

The Altman Z-score, serving as the dependent variable, was calculated using standard ratios (X1, X2, X3, X4, X5) to categorize firms into financially distressed ($Z < 1.81$) and non-distressed ($Z \geq 1.81$) groups. Data analysis was conducted using panel regression in EViews 12, which allowed the study to capture both cross-sectional and time-series variations across firms. Descriptive statistics were produced for an initial overview of each variable's distribution, and inferential analysis was performed to test the relationships between leverage, age, and financial distress. This study adopted and modified the linear regression model used by Dewianawati and Setiawan (2023).

The model for this study is specified as follows:

$$FDI_{it} = \alpha_0 + \beta_1 LEV_{it} + \beta_2 AGE_{it} + \mu_{it} \quad \text{.....Eqn 2}$$

Where:

FDI = Financial distress (Altman Z-Score),

LEV = Firm Leverage (Debt-Equity Ratio),

AGE = Firm Age

α_0 = Constant,

β_1, β_2, β_3 = Coefficients,

μ = Error term.

Table 1 Operationalization of Variables

Variable	Type	Measurement	Source
Financial Distress (FDI)	Dependent	Altman Z-Score ($Z = 1.2X1 + 1.4X2 + 3.3X3 + 0.6X4 + X5$)	Papadopoulos (2017)
Firm Leverage (LEV)	Independent	Debt-Equity Ratio = Total Liabilities / Total Equity	Atang et al. (2022)
Firm Age (AGE)	Independent	Years since incorporation	Coad et al. (2018)

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4. RESULT AND DISCUSSIONS

4.1 Descriptive Analysis of Data

Table 2 Descriptive Statistical Analysis

	FDI	LEV	AGE
Mean	0.691686	2.051254	51.68750
Median	1.000000	1.438782	51.00000
Maximum	1.803791	47.92299	100.0000
Minimum	0.000000	-10.73813	7.000000
Std. Dev.	0.471130	4.559419	19.06798
Skewness	-0.734919	6.511347	0.107658
Kurtosis	1.756944	61.81518	3.338734
Jarque-Bera	29.64492	29030.52	1.288811
Probability	0.000000	0.000000	0.524975
Sum	132.8038	393.8408	9924.000
Sum Sq. Dev.	42.39508	3970.565	69445.25
Observations	192	192	192

Source: Eviews 12 Output (2024)

The descriptive statistics showed that the leverage ratio (LEV) has a high mean of 2.0513. This suggests that most firms are heavily leveraged, with skewness (6.5113) indicating a few highly leveraged firms. Profitability (PRO) has a mean of 0.0385, with a rightward skew (5.4457) indicating mostly low-profit firms with a few highly profitable outliers. Firm age (AGE) has a mean of 51.6875, suggesting firms are well-established, with a near-normal distribution (skewness 0.1077), implying an even age spread among firms.

Table 3 Data Analysis Summary

Test / Variable	Null Hypothesis	Test Statistic / Coefficient	p-Value
Heteroskedasticity	Residuals are homoskedastic	112.4537	0.0000
Cross-Sectional Dependence	No cross-sectional dependence in residuals	2.879623	0.0041
Multicollinearity	No significant multicollinearity (VIF $\leq$ 10)	VIF values (all < 1.5)	-
Panel Data Regression	Model has explanatory power	R^2 = 0.8425, F-stat = 0.0000	0.0000
Hypothesis Tests		Coefficient	p-Value

Firm Leverage (H_{01})	Firm leverage has no significant effect on Altman Z-Score	-0.0155	0.0000
Firm Age (H_{02})	Firm age does not significantly affect Altman Z-Score	0.0029	0.0004

Source: Researchers' compilation (2024).

In this study, both firm leverage and firm age significantly affect the Altman Z-Score, with leverage having a negative effect and firm age with a positive effect. The negative coefficient for leverage indicates that higher levels of debt are associated with increased financial distress, while older firms tend to have greater financial stability. These results reinforce the importance of debt management and longevity as factors influencing financial health.

CONCLUSION AND RECOMMENDATIONS

This study aimed to assess the impact of firm leverage and age on the financial distress of listed consumer goods firms in Nigeria, as measured by the Altman Z-Score. Using panel data regression analysis, the model demonstrated significant explanatory power (R^2 = 0.8425, F-stat = 0.0000). The results indicated that firm leverage negatively influences financial stability, with a coefficient of -0.0155 at p = 0.0000, meaning that high debt increases the likelihood of financial distress. On the contrary, firm age positively influenced the Altman Z-Score, with a coefficient of 0.0029 with p = 0.0004, indicating that the older the firm, the more financially stable it is. These findings brought out leverage and age as the most critical characteristics that influence the financial health of consumer goods firms in Nigeria.

To alleviate financial distress, the focus of firms should be on a conservative attitude toward debt management through prioritization of debt sustainability with a view to avoiding financial stress. The management should seek ways of decreasing undue leverage, since the lower the debt level, the stronger the financial stability. Firms should also use their advantage in market familiarity and experience to entrench financial stability, since the older the firm is, the more stable it is. Moreover, it is important that younger firms create a sound market foundation based on reputation structure and customer loyalty during the early stages of their corporate lives. This

would ensure that the firms survive in the long run and the possibilities of financial distress are minimized over time.

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