

# Solvency Management and Firm Growth of Listed Non-Financial Firms in Nigeria

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## Abstract

This study investigates the effect of solvency management on the growth of listed non-financial firms in Nigeria. Adopting an ex-post facto research design, the study utilized panel data from 73 non-financial firms listed on the Nigerian Exchange Group between 2020 and 2024. Short-term solvency management (liquidity) was measured using the current ratio, while long-term solvency management was proxied by the total liabilities-to-assets ratio. Firm growth, the dependent variable, was assessed using changes in profit after tax (PAT), with firm size included as a control variable. Panel least squares regression was employed for data analysis. The results revealed that both short-term solvency management (liquidity) and long-term solvency management have positive but statistically insignificant effects on firm growth. The study concludes that while financial soundness contributes to firm stability, it does not significantly drive growth. It is recommended that firms integrate short-term solvency management (liquidity) and long-term solvency management with broader strategic investment decisions to achieve sustainable growth.

**Keywords:** Firm Growth, Short-term Solvency Management (liquidity), Long-term Solvency Management, Current Ratio, Debt-to-Asset Ratio.

## 1. Introduction

In today's increasingly volatile economic environment, the sustainability and growth of firms depend significantly on sound financial management practices. One of the most critical aspects of such financial stewardship is solvency management, which encompasses a firm's ability to meet its short- and long-term financial obligations. This study examines the effect of solvency management on the growth of listed non-financial firms in Nigeria, a country characterized by persistent macroeconomic instability, inflationary pressures, and regulatory uncertainties. These conditions necessitate prudent financial strategies to enhance business performance, promote survival, and ensure long-term continuity.

Firm growth is not only a key indicator of organizational success but also a strategic goal for enhancing market share, profitability, and competitiveness (López-Gracia & Sogorb-Mira, 2020). According to Van Horne (2017), efficient financial resource management is essential for sustainable growth, and this includes effective solvency management. Solvency, often assessed through metrics such as the debt-to-asset ratio or debt-to-equity ratio, reflects a company's long-term financial stability and its reliance on debt relative to equity in financing its operations. When paired with effective liquidity strategies, though this study focuses on solvency, the result can be enhanced organizational performance and reduced financial distress (Pindado, 2017).

Solvency is not just a static measure of debt levels but a dynamic factor influencing the ability of firms to invest, expand, and maintain resilience in the face of economic shocks. As noted by Brealey et al. (2020), solvency is integral to determining a firm's capacity to pursue growth initiatives without compromising financial health. In this regard, Isanafa et al. (2015) argue that indicators such as liquidity, solvency, and

profitability are foundational to firm performance. Septiani and Suryana (2018) further explain that solvency involves not only debt obligations but also the broader financial strategy encompassing capital structure and asset financing, which directly affect growth trajectories. Despite the importance of solvency in business success, there exists a notable gap in empirical literature regarding its effect on firm growth, particularly in emerging economies like Nigeria. Several studies have explored this relationship globally, yet findings remain mixed and often inconclusive. For instance, research by Karmakar (2016), Nabeel and Hussain (2017), Laminfoday (2018), Sultan (2021), and Chibuike and Celestine (2022) reported negative effects of solvency on firm growth. Conversely, studies by Kamau and Njeru (2016), Muriithi and Waweru (2017), Otekunrin et al. (2019), Onyimba (2020), and Klein and Weill (2022) found positive and significant relationships. Meanwhile, others such as Dalci (2018), Abdioğlu (2019), Fukuzawa (2020), and Appah et al. (2021) reported no significant relationship. This inconsistency underscores the need for a focused study that can provide more clarity within the Nigerian context.

Additionally, much of the existing literature focuses on developed economies or specific sectors, leaving a gap in understanding how solvency management influences firm growth in Nigeria's non-financial sector. Notable international studies include Al-Shammari et al. (2018), Kyriazopoulos et al. (2021), Ozkan and Ozkan (2022), and Maryanti (2023). In contrast, only a few recent works, such as those by Iwedi and Onwumere (2019), Abiyodun et al. (2020), Odukwu (2022), Adenike (2024), and Talatu et al. (2024), focus on the Nigerian context, with most concentrating on the financial sector. The peculiarities of the non-financial sector, ranging from limited access to long-term financing to vulnerability to macroeconomic fluctuations, demand distinct attention. Moreover, there is a scarcity of research that considers an extended and up-to-date time frame in evaluating the relationship between solvency management and firm growth. Most recent studies, such as those by Akpan et al. (2024), Nguyen and Tran (2024), Thuy et al. (2024), and Septina et al. (2024), span periods ending in 2022 or earlier. This raises concerns about the continued applicability of their findings, given the evolving business environment in Nigeria. Therefore, this study intends to fill this time-based gap by covering data up to 2024, thereby ensuring the relevance and currency of its analysis. In addressing these gaps, the present study aims to examine the effect of solvency management (short term and long-term solvency) on the growth of listed non-financial firms on the Nigerian Exchange Group. The remainder of this paper therefore addresses the literature review, methodology and discussion of results.

## 2. Literature Review

### *Conceptual Review*

The study reviewed extant literature as they relate to dependent and independent variables, as well as their interrelationships. Firm growth is generally viewed as a positive change in a firm's operational scale, commonly reflected in increases in total assets, revenue, or the firm's capacity to generate revenue. According to Saraswathi et al. (2016), firm growth enhances profitability, while Abbasi and Malik (2015) conversely observed that it may negatively impact profitability, revealing the nuanced dynamics involved. Mai (2016) offered a broader perspective, noting that firm growth represents a consistent expansion in a firm's revenue or asset base, driven by investment in projects with positive net present value. While growing firms often retain resources for future investment, those with limited growth may issue long-term payables to manage risk exposure. Several studies (Kasmir, 2018; Oyimba, 2020; Maryanti, 2023) consider firm growth primarily from sales and asset perspectives, suggesting that a growing firm will likely maintain a high level of liquid resources to support obligations and sustain goodwill. Michaelas et al. (2019) argue that firms with promising growth options tend to maintain lower gearing ratios by holding more liquid assets, positioning themselves to exploit investment opportunities. Importantly, they emphasize that this relationship may differ across sectors.

Solvency management refers to the firm's strategic ability to meet both its short-term and long-term financial obligations, which is fundamental to sustaining operations and achieving business growth. In this study, solvency management is conceptualized in two dimensions: short-term solvency and long-term solvency. These dimensions reflect the firm's capacity to meet obligations that arise in the immediate and extended future, respectively. Short-term solvency, often aligned with liquidity management, assesses a firm's ability to meet its maturing obligations as they fall due in the ordinary course of business. It reflects the firm's immediate financial health and its capacity to manage current assets and liabilities efficiently. In the context of this study, short-term solvency is a crucial component of overall solvency management, as the inability to meet short-term liabilities can jeopardize operations and stakeholder confidence, even if long-term prospects remain stable. Ajose and Solape (2021) defined short-term solvency as the firm's capability to preserve adequate cash balances and liquid resources necessary to honor short-term obligations. According to Ware (2015), short-term solvency management involves decisions and policies affecting cash flows, receivables, inventories, and payables. When firms manage these elements effectively, they minimize operational disruptions, avoid costly external financing, and maintain operational efficiency (Onyekwelu et al., 2019). Eze and Agu (2020) emphasized that optimal short-term solvency practices include swift cash recovery from receivables and controlled disbursements, reducing reliance on short-term borrowing. Adegbie and Adesanmi (2020) also argued that strong short-term solvency allows firms to handle unforeseen liquidity shortages and fund urgent capital expenditures. In line with this, the current ratio, calculated as current assets divided by current liabilities, is used in this study to measure short-term solvency. As noted by Kasmir (2018) and Hery (2016), the current ratio is a vital metric for evaluating a firm's ability to settle near-term obligations using its most liquid assets.

Long-term solvency, on the other hand, pertains to a firm's financial structure and its ability to meet obligations extending beyond one year. It reflects how well a company can sustain its capital commitments and financial leverage without compromising its asset base or risking insolvency. This dimension of solvency is especially relevant for evaluating a firm's resilience and growth potential over time. Azis (2017) explained that long-term solvency provides insight into the stability and sustainability of a company's financial structure. It shows whether a firm is excessively reliant on debt or maintains a balanced mix of debt and equity financing. The higher the proportion of debt in total financing, the greater the financial risk associated with repayment commitments and interest burdens, which may threaten long-term survival. This study adopts the total liabilities-to-total assets ratio (also known as the debt-to-asset ratio) as the proxy for long-term solvency. Kasmir (2018) defines this ratio as the proportion of a firm's assets financed through liabilities, indicating how much of the firm's operations are dependent on borrowed funds. A high debt-to-asset ratio suggests greater financial leverage and potential vulnerability in the event of declining earnings or tightening credit markets. According to Hery (2016), this ratio is useful in determining the firm's ability to meet long-term obligations and in evaluating the balance between borrowed capital and owner's equity. A well-managed long-term solvency position ensures that the firm does not become overleveraged, which could impair its ability to pursue strategic growth opportunities or weather economic downturns. In summary, short-term solvency ensures that a firm remains operationally stable in the near term, while long-term solvency supports strategic sustainability and growth. Both dimensions are integral to effective solvency management and, ultimately, to the firm's ability to grow in a dynamic and often unpredictable financial environment.

The concept of firm size has been a topic of interest in the field of business and management for several decades. Firm size is a relevant control variable that influences financial performance, including growth,

innovation, and market competitiveness. It is commonly measured using total assets, sales revenue, number of employees, or market value (Khalid et al., 2020). According to Santarelli and Vivarelli (2017), firm size affects productivity, resource availability, and strategic flexibility. Larger firms often benefit from economies of scale and broader market reach but may also face challenges like bureaucracy and rigidity (Hannan & Freeman, 2017). The relationship between firm size and performance is not linear or universally agreed upon. Cohen and Klepper (2016) posit that larger firms invest more effectively in R&D, while Khalid et al. (2020) argue that smaller firms may be more agile. For this study, firm size is measured by total assets, reflecting the operational and financial scale relevant to non-financial listed firms.

### *Empirical Reviews*

Empirical evidence on the relationship between solvency management and firm growth has produced varying results across different economies and sectors. Alhassan and Islam (2021) emphasized the importance of liquidity management in promoting sustainable operations and preventing bankruptcy, particularly under constrained credit conditions. Their study found that maintaining optimal liquidity levels significantly influences a firm's growth by ensuring smooth operations and consistent profitability. Similarly, Owolabi and Obida (2020) concluded that business managers are increasingly focusing on liquidity strategies that support both short-term obligations and long-term expansion. Using panel data of Nigerian firms, Dadejo and Afolabi (2020) found that firms maintaining balanced liquidity and profitability achieved higher asset growth over time. Nadia and Dwiridotjahjono (2021), in their study on Indonesian firms, used the quick ratio to measure liquidity and found a significant positive effect on profit growth, suggesting that efficient management of current assets boosts operational efficiency and supports firm expansion. However, Digdowiseiso and Santika (2022) found no significant relationship between liquidity and profit growth in their cross-sectoral analysis, indicating that the effect of liquidity may differ across industries and firm sizes. Regarding long-term solvency, Klein and Weill (2022) established a positive association between leverage and firm growth among European firms, implying that debt, when well-managed, enables firms to exploit growth opportunities. Similarly, Onyimba (2020) reported that higher leverage levels contributed positively to the growth of listed Nigerian firms, particularly those with strategic investment plans. Bulan and Yan (2020) argued that firms with growth potential often turn to debt financing after exhausting internal funds, and such leverage, though risky, can enhance profitability and expansion if controlled. Iotti and Bonazzi (2018), however, cautioned that excessive reliance on long-term debt raises the risk of insolvency and may adversely affect firm value. In contrast, Nadia and Dwiridotjahjono (2021) showed that firms with lower debt-to-equity ratios reported higher profit growth, reinforcing the argument that conservative solvency strategies contribute to better financial performance. Hery (2016) and Kasmir (2018) also confirmed through firm-level evidence that solvency ratios, particularly debt-to-assets and debt-to-equity, are critical determinants of profitability and growth, especially in capital-intensive sectors.

Overall, while several studies support a positive relationship between both dimensions of solvency management and firm growth, others report neutral or negative outcomes, suggesting that the impact may depend on firm-specific, sectoral, and macroeconomic conditions.

### *Theoretical Framework*

Several theories have been developed to explain how firms manage liquidity and solvency in ways that enhance financial performance and stimulate growth. Among these, the Pecking Order Theory and the Trade-Off Theory are particularly relevant to this study. While both frameworks offer insights into financing behaviour, this study adopts the Trade-Off Theory as its underpinning theory due to its

appropriateness in explaining the interplay between liquidity, solvency, and firm growth in the Nigerian non-financial sector.

The Pecking Order Theory, proposed by Myers and Majluf (1984), posits that firms prefer internal financing over external financing to minimize cost and risk. This hierarchy starts with retained earnings, followed by debt, and lastly equity, which is considered the least desirable option due to ownership dilution and higher information asymmetry (Almeida et al., 2019; García-Teruel & Martínez-Solano, 2020). The theory holds that internal funds are more readily available and less expensive, thereby guiding firms' liquidity and solvency decisions. Firms adhering to this theory typically maintain high liquidity levels to reduce dependency on costly external funding. However, this can limit their growth potential, as constrained internal funds may delay investment in expansion opportunities (Adebayo et al., 2020; Miah et al., 2020). Conversely, firms that rely more on external debt may grow faster but at the risk of increased financial distress (Kyriazopoulos et al., 2021). While the Pecking Order Theory is valuable in understanding financing preferences, it does not fully address the balance firms must strike between liquidity, solvency, and profitability, an area better captured by the Trade-Off Theory.

The Trade-Off Theory, originally developed by Francis and Merton (1958) and later expanded by Modigliani and Miller (1963) and Myers and Majluf (1984), asserts that firms face inherent trade-offs in their financial decisions. Specifically, it suggests a negative relationship between liquidity and profitability, as well as between solvency and profitability (Khan et al., 2020). According to this theory, holding excessive liquidity may ensure operational safety but limit profit generation, while too much leverage may enhance growth but increase the risk of insolvency.

The theory proposes that firms should determine an optimal level of liquidity and debt that maximizes profitability without endangering financial stability. This delicate balance is particularly relevant in emerging economies like Nigeria, where firms face volatile financial markets and restricted access to credit. Yusuf et al. (2019) emphasized that the Trade-Off Theory provides a practical framework for determining the marginal costs and benefits of holding cash and using debt, which directly influences firm growth outcomes.

Empirical findings support the relevance of this theory. Nguyen et al. (2020) observed that excessive liquidity can hinder profit growth, while Sukmayanti and Triaryati (2019) found that prioritizing solvency may reduce profitability due to resource allocation to debt repayment. Therefore, the Trade-Off Theory provides a robust foundation for this study, as it accurately captures the tension between liquidity, long term solvency, and profitability, key factors in explaining firm growth among Nigerian non-financial firms.

### 3. Methodology

This study adopts an *ex-post facto* research design, which, according to Ndiyo (2005), is appropriate for empirical investigations where the researcher cannot manipulate the independent variables because the events under investigation have already occurred. The design is suitable for examining the effect of solvency management on firm growth using archival financial data. The population consists of all 90 non-financial firms listed on the Nigerian Exchange Group (NXG) as of 31<sup>st</sup> December 2024. A sample of 73 firms was selected using Taro Yamane's formula (1967) at a 5% margin of error and a 95% confidence level. The firms were selected through purposive sampling, focusing on those with consistent and accessible annual reports for the period 2020 to 2024. The study relied exclusively on secondary data,

extracted from the audited financial statements of the sampled firms. The data covered a five-year period and included figures for current assets, current liabilities, total liabilities, total assets, and profit after tax (PAT). To determine the effect of solvency management on firm growth, the study employed panel regression method. The model adopted is specified as:

$$FG_{it} = \beta_0 + \beta_1 SSM_{it} + \beta_2 LSM_{it} + \beta_3 FSIZE_{it} + \epsilon_{it} \dots\dots\dots 1$$

Where:  $FG_{it}$  = Firm Growth for firm  $i$  at time  $t$ ,  $SSM_{it}$  = Short-term Solvency Management firm  $i$  at time  $t$ ,  $LSM_{it}$  = Long-term Solvency Management firm  $i$  at time  $t$ ,  $FSIZE_{it}$  = Firm Size firm  $i$  at time  $t$ ,  $\epsilon_{it}$  = Error term,  $\beta_0$  = Intercept,  $\beta_1 - \beta_3$  = Coefficients of explanatory variables.

The variables and their proxies are presented as follows:

**Table 1: Identification of variables**

Variable	Type	Measurement
Firm Growth	Dependent	(Current Year PAT – Previous Year PAT) / Previous Year PAT (Bhaumik, 2012; Haura, 2023)
Short-term Solvency (SSM)	Independent	Current Assets / Current Liabilities (Dahiyat, 2016; Sumani & Roziq, 2020)
Long-term Solvency (LSM)	Independent	Total Liabilities / Total Assets (Tahir et al., 2020; Sumani & Roziq, 2020)
Firm Size (FSIZE)	Control Variable	Natural Logarithm of Total Assets (Ozcan & Ozcan, 2022; Ahmad, 2021)

Source: Researchers 2025.

#### 4. Results and Discussion

In order to analyze the effect of solvency management on firm growth of non-financial listed firms in Nigeria the descriptive statistics, correlation analysis and panel data regression analysis were conducted. The results are presented and interpreted as follows:

**Table 2: Descriptive Statistics**

	FG	SSM	LSM	FSIZE
Mean	-0.808783	-0.317878	-0.354779	12.98592
Median	-0.663636	-0.030459	-0.307908	12.90000
Maximum	2.525729	1.308333	1.648659	22.74000
Minimum	-4.60517	-4.60517	-3.506558	7.530000
Std. Dev.	1.196943	0.937782	0.736493	3.094931
Skewness	-0.570758	-0.928136	-0.568138	0.557621
Kurtosis	3.655962	3.926429	3.572993	2.734133
Jarque-Bera	20.51124	65.45692	24.56154	19.99058
Probability	0.000035	0.000000	0.000005	0.000046
Sum	-229.6943	-116.0254	-129.1395	4739.860
Sum Sq. Dev.	405.4460	320.1145	196.8993	3486.611
Observations	365	365	365	365

Source: Author’s Compilation Using EViews 10

Table 2 presents the summary statistics of the study variables. Firm Growth (FG) has a mean of -0.81, indicating a general decline in profit performance among the sampled non-financial firms. Short-Term Solvency Management (SSM), measured by the current ratio, has a mean of -0.32 and a standard deviation of 0.93, suggesting low liquidity and considerable variability across firms. Long-Term Solvency Management (LSM), proxied by the debt-to-asset ratio, recorded a mean of -0.35 with a minimum of -3.51 and a maximum of 1.65, reflecting uneven long-term financial structure. Firm Size (FSIZE), measured as the log of total assets, averaged 12.99 with wide dispersion, ranging from 7.53 to 2274000. The Jarque-Bera normality test indicates that all variables are normally distributed, with p-values below 0.05 and negative skewness, confirming their suitability for regression analysis.

**Table 3: Correlation Matrix and Covariance Analysis**

VARIABLE	FG	SSM	LSM	FSize
FG	1			
SSM	-0.00469	1		
LSM	-0.00209	0.053805	1	
FSize	-0.0221	0.17688	-0.11748	1

**Source:** Author's Compilation Using EViews 10

Table 3 shows the correlation coefficients among the study variables. The result reveals a very weak negative correlation between Firm Growth (FG) and all independent variables: Short-Term Solvency Management (SSM) at -0.0047, Long-Term Solvency Management (LSM) at -0.0021, and Firm Size (FSIZE) at -0.0221. This suggests that increases in liquidity, leverage, or firm size have almost no linear relationship with changes in firm growth. The positive correlation between SSM and LSM (0.0538) indicates a slight tendency for firms with higher liquidity to also have higher debt ratios, though the association remains weak. A positive correlation (0.1769) between SSM and Firm Size implies that larger firms tend to maintain better liquidity positions, while the negative correlation between LSM and Firm Size (-0.1175) suggests that as firms grow in size, they may rely less on debt for financing. Overall, none of the correlation coefficients indicate multicollinearity concerns, making the variables suitable for regression analysis.

**Table 4: Panel Regression Output Table**

Variable	Definition	Coefficient	Std. Error	t-Statistic	P-Value
$\beta_0$	Intercept	-1.940016	2.948977	-0.657861	0.5114
SSMit	Short-Term Management	Solvency 0.146859	0.123404	1.190061	0.2354
LSMit	Long-Term Management	Solvency 0.128963	0.149283	0.863882	0.3887
FSIZEit	Firm Size	0.095154	0.227957	0.417424	0.6768

**Source:** Author's Compilation Using EViews 10

Table 4 presents the results of the panel regression analysis assessing the effect of short-term and long-term solvency management on firm growth among non-financial firms in Nigeria. The model shows that while short-term solvency management (SSM), long-term solvency management (LSM), and firm size (FSIZE) all exhibit positive coefficients, indicating a potential positive influence on firm growth (FG), none of the individual variables are statistically significant. Specifically, the coefficients for SSM ( $\beta =$

0.1469,  $p = 0.2354$ ), LSM ( $\beta = 0.1290$ ,  $p = 0.3887$ ), and FSIZE ( $\beta = 0.0952$ ,  $p = 0.6768$ ) have p-values greater than the 0.05 level, suggesting weak individual explanatory power.

### *Hypothesis Testing and Discussion of Findings*

#### **Hypothesis One**

**H<sub>01</sub>:** Short-term solvency management has no significant effect on the firm growth of listed non-financial firms in Nigeria.

Based on the regression results in Table 4 above, short-term solvency management, proxied by the liquidity ratio (LQ), shows a positive but statistically insignificant effect on firm growth ( $\beta = 0.1469$ ,  $p = 0.2354$ ). Consequently, the null hypothesis is not rejected. This finding suggests that higher liquidity levels do not necessarily translate into improved growth performance for the firms sampled. This result supports the empirical conclusions of Adebayo et al. (2024) and Kimani and Mwangi (2024), who found that liquidity metrics had no significant impact on growth across African firms. The implication is that while liquidity enhances operational flexibility, excessive cash holdings may represent missed investment opportunities, limiting growth. Therefore, liquidity should be managed strategically rather than hoarded conservatively.

#### **Hypothesis Two**

**H<sub>02</sub>:** Long-term solvency management has no significant effect on the firm growth of listed non-financial firms in Nigeria.

The regression output shows that long-term solvency management also has a positive but insignificant effect on firm growth ( $\beta = 0.1290$ ,  $p = 0.3887$ ). As such, the null hypothesis is not rejected. This indicates that the ability to cover long-term obligations does not significantly drive firm growth among the sampled firms. This aligns with Liu et al. (2024) and Brown and Li (2024), who reported similar findings in their studies across Asia and Europe. The results suggest that although financial stability is vital, excessively conservative solvency strategies may limit access to growth-driving capital. Firms must, therefore, balance financial prudence with strategic debt use to optimize expansion potential.

## **5. Conclusion and Recommendations**

The results of the study reveal that both short-term and long-term solvency management, measured by liquidity ratio and total liabilities to total assets, respectively, have positive but statistically insignificant effects on the growth of listed non-financial firms in Nigeria. These findings suggest that while firms may maintain stable financial positions through effective liquidity and solvency strategies, such practices alone do not significantly influence growth outcomes. Based on the main objective of this study, which was to assess the effect of solvency management on the growth of listed non-financial firms in Nigeria, it is concluded that solvency policies, although essential for financial stability, do not directly stimulate firm expansion. Growth in this sector appears to rely more heavily on strategic investments and other operational factors beyond solvency control. In view of this conclusion, the study recommends the following:

- i. Management of non-financial firms should complement liquidity and long-term solvency policies with targeted investment strategies that can drive innovation, market expansion, and long-term profitability, which are more strongly linked to firm growth.
- ii. Policymakers and financial advisors should reframe solvency management from being a growth-focused policy to a stability-focused one, ensuring that financial soundness supports, but does not substitute, deliberate growth initiatives.



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