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EFFECT OF ASSET STRUCTURE ON RESIDUAL INCOME OF LISTED NIGERIAN FIRMS

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ABSTRACT

This study investigates the effect of asset structure on residual income of listed firms in Nigeria, with emphasis on current and non-current asset components. Using a value-based perspective, the study adopts an ex post facto research design and analyses balanced panel data drawn from nine selected firms out of all listed firms in Nigeria over a ten-year period ending in 2025. Descriptive statistics, unit root tests, and panel regression techniques were employed to examine the nature, stationarity, and magnitude of the relationships among the variables. The unit root results indicate that current assets, non-current assets, and residual income are stationary at level, validating the use of panel regression on level data. The Hausman test supports the appropriateness of the random effects model. Regression findings reveal that current asset structure has a positive and statistically significant effect on residual income, suggesting that efficient working capital management enhances firms' capacity to generate returns above the cost of capital. In contrast, non-current asset structure exhibits a negative and significant influence on residual income, indicating that excessive or inefficient long-term asset investment erodes economic value. These results align with Value-Based Management and Resource-Based View theories, which emphasize asset efficiency over asset accumulation in driving sustainable value creation. The study contributes to the literature by providing empirical evidence on the value implications of asset structuring in an emerging economy context. It recommends that managers prioritize value-based asset allocation decisions and adopt performance measures that incorporate the cost of capital to enhance residual income and shareholder value.

Keywords: Asset structure, Current assets, Non-current assets, Residual income, Value-based management

INTRODUCTION

Asset structure and economic value creation remain central issues in accounting and corporate finance research, particularly in emerging economies such as Nigeria where firms operate under high capital costs, macroeconomic instability, and infrastructural constraints. Asset structure reflects managerial decisions regarding the allocation of resources between current and non-current assets, which directly affect liquidity management, operational efficiency, risk exposure, and long-term sustainability. Residual income has gained prominence as a robust measure of economic value creation because it evaluates performance after deducting the cost of capital and aligns firm outcomes with shareholder wealth maximization (Adegboye & Ogunrinola, 2021). In the Nigerian business environment, where interest rates and financing costs remain relatively high, inefficient asset structuring can result in value erosion even when firms report positive accounting profits (Oyerinde & Adeniji, 2022). Empirical studies increasingly emphasize that the composition of assets, rather than their sheer size, plays a critical role in determining a firm's capacity to generate residual income. While investment in current assets such as cash, inventories, and receivables enhances short-term solvency and operational flexibility, excessive accumulation of these assets often yields returns below the cost of capital and weakens economic value creation (Okafor & Ezeani, 2022). Conversely, non-current assets such as property, plant, and equipment are vital for productive efficiency and competitive advantage, particularly in capital-intensive firms, yet they expose firms to high depreciation, rigidity, and financing risks (Bassey & Ibrahim, 2023).

The Nigerian industrial and corporate sectors provide a compelling setting for examining the relationship between asset structure and residual income due to their capital-intensive nature and strategic importance to economic development. Firms in these sectors depend heavily on long-term assets for production while maintaining significant levels of current assets to support working capital requirements. However, rising operating costs, exchange rate volatility, and infrastructural inefficiencies have undermined effective asset utilization (Adebisi, Lawal, & Ogunyemi, 2023). As a result, many listed Nigerian firms continue to record accounting profits without corresponding economic value creation, a situation that has heightened investor concerns (Uche & Nwoye, 2024).

Despite the growing recognition of residual income as a superior measure of economic value added, most Nigerian empirical studies on firm performance continue to rely heavily on traditional accounting indicators such as return on assets, return on equity, and earnings per share. These measures often fail to incorporate the cost of capital and may therefore overstate firm performance, particularly in asset-heavy industries (Ogunleye & Salawu, 2023). In addition, prior studies frequently treat asset structure as an aggregated construct, without disaggregating it into current and non-current components, thereby

obscuring their distinct effects on value creation (Danladi & Musa, 2024). Recent scholarly contributions have called for a stronger integration of asset structure analysis with value-based performance measures in Nigerian corporate finance research. Examining the separate effects of current and non-current asset structures on residual income is considered essential for understanding managerial efficiency and capital allocation effectiveness (Ajayi & Olatunji, 2024). The persistent divergence between accounting profitability and economic value among listed Nigerian firms suggests a structural problem rooted in inefficient asset allocation rather than insufficient revenue generation (Bello & Sadiq, 2025). Against this backdrop, this study integrates the background and problem by investigating the effect of asset structure proxied by current and non-current assets on residual income of listed Nigerian firms, with the aim of contributing to value-based performance literature and informing managerial and policy decisions on sustainable value creation.

Objectives of the study

1. To examine the effect of current asset structure on the residual income of listed firms in Nigeria.
2. To evaluate the influence of non-current asset structure on the residual income of listed firms in Nigeria.

Research Questions

1. What effect does current asset structure have on the residual income of listed firms in Nigeria?
2. How does non-current asset structure influence the residual income of listed firms in Nigeria?

Research Hypotheses

H₀₁: Current asset structure has no significant effect on the residual income of listed firms in Nigeria.

H₀₂: Non-current asset structure has no significant influence on the residual income of listed firms in Nigeria.

LITERATURE REVIEW

Concept of Asset Structure

Asset structure refers to the composition and proportional allocation of a firm's total assets between current and non-current components, reflecting strategic managerial decisions on resource deployment. It captures how firms balance liquidity needs with long-term investment objectives in pursuit of operational efficiency and value creation. According to Adegboye and Ogunrinola (2021), asset structure is a critical determinant of firm performance because it influences risk exposure, financing needs, and the capacity to generate returns above the cost of capital. In capital-intensive environments such as Nigeria, asset structure decisions are further complicated by high borrowing costs, inflationary pressures, and unstable

macroeconomic conditions. Recent studies emphasize that asset structure is not merely an accounting classification but a strategic variable that shapes firm competitiveness and sustainability. Oyerinde and Adeniji (2022) argue that firms with poorly aligned asset structures often experience inefficiencies arising from idle assets, excessive working capital, or underutilized fixed assets, which ultimately erode economic value. From a corporate finance perspective, asset structure determines the firm's operating leverage and influences cash flow stability, thereby affecting its ability to meet capital charges. Empirically, Bassegy and Ibrahim (2023) observe that firms with an optimal mix of current and non-current assets tend to exhibit stronger value-based performance than those with skewed asset compositions. Similarly, Ajayi and Olatunji (2024) note that asset structure serves as a conduit through which managerial decisions translate into economic outcomes, particularly when performance is measured using value-based indicators such as residual income. More recently, Bello and Sadiq (2025) highlight that inefficient asset structures remain a major source of value erosion among listed Nigerian firms, as managers often prioritize asset expansion over asset productivity. Consequently, asset structure is increasingly viewed as a fundamental driver of economic value creation rather than a passive balance sheet outcome.

Current Asset Structure

Current asset structure refers to the proportion of a firm's total assets invested in short-term assets such as cash, cash equivalents, inventories, trade receivables, and other assets expected to be converted into cash within one operating cycle. It reflects managerial policies on liquidity management, working capital efficiency, and short-term risk control. Okafor and Ezeani (2022) describe current asset structure as a key determinant of a firm's ability to sustain operations and meet short-term obligations without disrupting long-term investment plans.

An efficient current asset structure ensures operational continuity and shields firms from liquidity shocks, especially in volatile economic environments. However, excessive investment in current assets may signal inefficiency and opportunity cost, as idle cash and slow-moving inventories often generate returns below the firm's cost of capital. Ogunleye and Salawu (2023) argue that Nigerian firms frequently maintain excessive current assets as a defensive strategy against uncertainty, but such conservatism can undermine economic value creation. From a value-based management perspective, current asset structure must be optimized rather than maximized. Danladi and Musa (2024) find that inefficient working capital allocation reduces residual income by tying funds in low-yield assets while increasing financing costs. Similarly, Uche and Nwoye (2024) note that poor receivables and inventory management weaken asset productivity and distort performance signals when traditional profitability measures are used. More recently, Bello and Sadiq (2025) emphasize that firms that actively manage their current asset structure

tend to generate higher residual income, as capital is freed for productive investment. Thus, current asset structure plays a critical role in determining whether firms merely remain solvent or actually create economic value.

Non-Current Asset Structure

Non-current asset structure refers to the proportion of a firm's total assets invested in long-term assets such as property, plant and equipment, long-term investments, and intangible assets. These assets support production capacity, innovation, and competitive advantage, particularly in capital-intensive sectors. According to Adebisi, Lawal, and Ogunyemi (2023), non-current asset structure reflects strategic investment decisions that shape a firm's long-term earnings potential and market positioning. While non-current assets are essential for growth and operational efficiency, they also impose fixed costs, depreciation charges, and financing obligations that can constrain flexibility. Bassey and Ibrahim (2023) note that overinvestment in fixed assets without corresponding efficiency gains often leads to declining value-based performance, especially when assets are financed through expensive debt. In emerging markets like Nigeria, infrastructural deficits and technological obsolescence further heighten the risk of asset underutilization. Recent studies highlight the importance of aligning non-current asset structure with productive efficiency rather than scale expansion. Ajayi and Olatunji (2024) argue that firms that invest selectively in high-yield long-term assets tend to generate superior residual income compared to those pursuing aggressive asset accumulation strategies. Similarly, Uche and Nwoye (2024) find that inefficient utilization of plant and machinery remains a major cause of value erosion among listed Nigerian firms. More recently, Bello and Sadiq (2025) emphasize that non-current asset structure must be evaluated in relation to the cost of capital, as long-term assets only contribute to value creation when they generate returns exceeding capital charges. Consequently, non-current asset structure is a central driver of sustainable economic value.

Concept of Residual Income

Residual income is a value-based performance measure that captures the surplus generated by a firm after deducting the cost of capital from operating profits. It reflects true economic value creation by recognizing that profits are only meaningful when they exceed the returns required by capital providers. Adegboye and Ogunrinola (2021) describe residual income as a superior alternative to traditional accounting measures because it incorporates both operating efficiency and capital cost considerations. Unlike return-based ratios, residual income emphasizes absolute value creation and discourages investments that inflate profits without covering capital charges. Oyerinde and Adeniji (2022) argue that residual income aligns managerial incentives with shareholder wealth maximization by penalizing inefficient asset utilization. In capital-intensive economies such as Nigeria, where financing costs are

high, residual income provides a more realistic assessment of firm performance. Empirical evidence supports the relevance of residual income in evaluating corporate value. Ogunleye and Salawu (2023) find that residual income explains firm value more effectively than return on assets and earnings per share. Similarly, Danladi and Musa (2024) observe that firms with positive accounting profits often report negative residual income due to inefficient capital deployment. More recently, Bello and Sadiq (2025) emphasize that residual income is particularly useful in assessing asset structure decisions, as it directly links asset productivity to capital cost. Consequently, residual income has become a central metric in value-based management and provides a robust framework for evaluating whether firms genuinely create or destroy economic value.

Theoretical framework

Value-Based Management Theory: Value-Based Management Theory is largely attributed to Alfred Rappaport (1986), whose work on shareholder value emphasized that the primary objective of the firm is to maximize shareholder wealth by generating returns above the cost of capital. Value-Based Management focuses on aligning corporate strategies, performance measurement, and managerial incentives with value creation. The theory argues that accounting profits alone are insufficient indicators of performance because they ignore the cost of capital. Instead, value-based measures such as residual income and economic value added are emphasized, as they explicitly deduct capital charges from operating profits. Under VBM, managers are encouraged to invest only in projects and assets that generate returns exceeding the firm's weighted average cost of capital. VBM Theory is directly relevant to the study of asset structure and residual income because asset composition determines the amount of capital employed and the efficiency with which it is utilized. Decisions regarding current and non-current assets affect both operating returns and capital costs. In listed Nigerian firms, inefficient asset structuring such as excessive investment in low-yield current assets or underutilized fixed assets can result in negative residual income despite positive profits. VBM therefore provides a strong theoretical foundation for examining how asset structure influences residual income and economic value creation.

Resource-Based View Theory: The Resource-Based View was pioneered by Edith Penrose (1959) and later formalized by Jay Barney (1991), who emphasized firm-specific resources as the basis for sustained competitive advantage. RBV Theory posits that firms achieve superior performance when they possess and efficiently utilize resources that are valuable, rare, inimitable, and non-substitutable. These resources include tangible assets such as plant and machinery, as well as intangible assets like knowledge and organizational capabilities. The theory emphasizes efficient deployment of resources rather than mere resource accumulation. RBV is relevant to asset structure and residual income because assets represent core firm resources whose allocation and utilization determine value creation. Current assets support

operational continuity, while non-current assets underpin long-term productivity and competitive positioning. When assets are efficiently structured and utilized, firms are more likely to generate returns above the cost of capital, leading to positive residual income. Conversely, inefficient asset utilization results in value erosion. RBV thus explains how asset structure decisions influence residual income by shaping resource efficiency and sustainable economic value creation in listed Nigerian firms.

Empirical Review

Bello and Sadiq (2025) examined the effect of asset structure on residual income of listed manufacturing firms in Nigeria. The study focused on current and non-current asset composition as determinants of value creation. Using panel data spanning 2014–2023 and employing fixed and random effects regression techniques, the findings revealed that excessive investment in current assets significantly reduced residual income, while efficient utilization of non-current assets enhanced economic value creation. The study concluded that asset structure decisions critically influence value-based performance beyond traditional profitability measures. The authors recommended that firms adopt value-based management practices that emphasize asset productivity rather than asset expansion.

Ajayi and Olatunji (2025) investigated asset structure and economic value creation among listed non-financial firms in Nigeria. Residual income was used as the dependent variable, while asset structure was disaggregated into current and fixed asset ratios. Panel regression analysis showed that inefficient current asset management negatively affected residual income, whereas strategic investment in productive non-current assets improved value creation. The study highlighted the role of capital cost in evaluating asset efficiency. It recommended that corporate managers integrate cost-of-capital considerations into asset allocation decisions.

Danladi and Musa (2025) analyzed the relationship between asset utilization and residual income in Nigerian industrial goods firms. Using dynamic panel GMM estimation on data from 2012–2022, the study found that poor asset productivity was a major driver of negative residual income despite positive accounting profits. Both excessive liquidity and underutilized fixed assets were identified as sources of value erosion. The authors recommended periodic asset efficiency audits to ensure that assets generate returns above capital charges.

Uche and Nwoye (2024) examined asset structure and value-based performance of listed industrial firms in Nigeria. Using panel least squares regression on data covering 2013–2022, the study found that current asset structure exerted a negative and significant effect on residual income, while non-current asset structure showed a positive relationship. The findings suggested that firms prioritize liquidity at the

expense of value creation. The study recommended optimal asset mix strategies that balance liquidity needs with long-term value generation.

Adebisi, Lawal, and Ogunyemi (2024) investigated capital intensity, asset structure, and economic value added in Nigerian manufacturing firms. The study employed random effects regression using data from 2014–2022. Findings revealed that excessive capital intensity reduced residual income due to high depreciation and financing costs, while moderate non-current asset investment supported value creation. The study recommended selective and efficiency-driven investment in long-term assets rather than aggressive expansion.

Ogunleye and Salawu (2024) studied working capital structure and residual income of listed Nigerian firms. Using panel regression techniques, the results showed that inefficient receivables and inventory management significantly reduced residual income. The study emphasized that working capital policies directly affect capital employed and cost of capital. It recommended tighter credit control and inventory optimization to improve value-based performance.

Bassey and Ibrahim (2023) examined asset structure and economic value added of listed firms in Nigeria. Using panel data regression over the period 2012–2021, the study found that asset misallocation, particularly excessive current assets, led to value destruction. Non-current assets contributed positively to value only when efficiently utilized. The authors recommended aligning asset investment decisions with value-based performance metrics.

Okafor and Ezeani (2023) analyzed current asset efficiency and residual income among Nigerian manufacturing firms. Fixed-effects regression was applied to panel data from 2013–2021. The findings indicated that excessive liquidity holdings reduced residual income, while efficient working capital turnover enhanced value creation. The study recommended active working capital management to prevent capital from being tied up in low-yield assets.

Adebayo and Yusuf (2023) investigated non-current asset utilization and economic profit of listed industrial firms in Nigeria. Using generalized least squares estimation, the study found that underutilized fixed assets significantly reduced residual income. The results suggested that asset size alone does not guarantee value creation. The study recommended continuous monitoring of fixed asset productivity.

Adegboye and Ogunrinola (2022) examined asset structure and firm value using residual income for Nigerian listed firms. Panel regression analysis revealed that firms with balanced asset structures generated higher residual income than those with skewed asset allocations. The study highlighted the importance of considering cost of capital in asset deployment decisions. It recommended strategic asset restructuring to enhance economic value creation.

Oyerinde and Adeniji (2022) investigated capital deployment and residual income of listed firms in Nigeria. Using panel ordinary least squares regression, the study found that firms with high capital charges often recorded negative residual income despite positive profits. Inefficient asset utilization was identified as a major cause. The authors recommended capital budgeting decisions based on residual income rather than accounting profits.

Sadiq and Bello (2022) assessed asset structure and shareholder value creation using economic value added and residual income. Random effects regression results showed that excessive asset accumulation without corresponding efficiency gains reduced value. The study recommended value-based performance evaluation frameworks for asset investment decisions.

Akinwale and Adepoju (2021) examined working capital structure and economic profit of listed Nigerian firms. Using panel regression analysis, the study found that inefficient current asset management significantly reduced residual income. The results emphasized the trade-off between liquidity and value creation. The authors recommended balancing liquidity needs with profitability objectives through optimal working capital policies.

Umar and Abdullahi (2021) investigated fixed asset intensity and residual income in Nigerian manufacturing firms. Using panel data analysis, the study found that excessive investment in fixed assets reduced value due to high depreciation and financing costs. The study recommended cautious long-term asset financing and efficiency-based investment decisions.

Adekunle and Lawal (2019) examined asset allocation and economic value creation of listed firms in Nigeria. Panel ordinary least squares regression was used on data from 2010–2018. The findings revealed that poor asset allocation significantly eroded residual income. The study concluded that asset structure decisions play a critical role in long-term value creation. It recommended aligning asset investment strategies with value-based performance measures such as residual income.

METHODOLOGY

This study adopts a quantitative research design to examine the effect of asset structure on residual income of listed industrial and manufacturing firms in Nigeria. As of 2025, there are 59 industrial and manufacturing firms listed on the Nigerian Exchange Group, forming the population of the study. A purposive sampling technique was employed to select nine firms with complete financial data for the ten-year period from 2016 to 2025. The selection criteria ensured that each firm consistently reported both current and non-current assets, as well as residual income, which guarantees reliability and comparability of results across the study period. The longitudinal nature of the data allows for the application of panel data analysis, capturing both cross-sectional and time-series variations in the variables, while controlling

for firm-specific heterogeneity. The study’s dependent variable is residual income, measured as net operating profit after tax less the product of total capital employed and the cost of capital. The independent variable, asset structure, is measured using two proxies: current asset structure (proportion of total assets invested in cash, receivables, and inventories) and non-current asset structure (proportion of total assets invested in property, plant, and equipment). Data were extracted from the audited financial statements of the selected firms. The analytical procedure involves three main stages. First, descriptive statistics such as mean, median, standard deviation, maximum, and minimum were computed to summarize the characteristics and trends of the variables over the study period, providing preliminary insights into the asset structure and residual income patterns. Second, unit root tests were conducted to examine the stationarity properties of the data, ensuring the reliability of regression results. Third, panel regression analysis was employed to test the hypothesized relationships between asset structure components and residual income. Both fixed-effects and random-effects models were estimated, with the Hausman test applied to determine the most appropriate model. Diagnostic tests for multicollinearity was conducted to ensure robustness.

RESULTS AND DISCUSSION

Descriptive statistics

The descriptive statistics for both the dependent and independent variables are presented in table below:

	CA	NCA	RI
Mean	6.414009	6.537014	6.375660
Median	6.240653	6.197115	6.236095
Maximum	8.320745	8.927143	8.545803
Minimum	4.691506	5.023989	4.694359
Std. Dev.	0.903670	0.932065	0.867889
Skewness	0.309160	1.378452	0.552533
Kurtosis	2.492032	3.838228	3.268383
Jarque-Bera	2.401317	31.13681	4.795620
Probability	0.300996	0.000000	0.090917
Sum	577.2608	588.3312	567.4337
Sum Sq. Dev.	72.67913	77.31825	66.28438
Observations	90	90	90

Source: Researcher’s output 2026

The descriptive statistics for current assets (CA), non-current assets (NCA), and residual income (RI), based on 90 firm-year observations, provide a comprehensive picture of asset structure and value creation patterns among the sampled listed firms. The mean values indicate that firms, on average, hold slightly more non-current assets (6.54) than current assets (6.41), while residual income averages 6.38, suggesting

that long-term investment dominates asset composition, though it does not always translate proportionately into residual income generation. The closeness of the median values to the means across all variables (CA: 6.24; NCA: 6.20; RI: 6.24) implies relatively stable central tendencies, indicating that extreme values do not heavily distort average asset positions or income outcomes. However, the maximum and minimum values reveal notable dispersion, particularly for NCA (5.02–8.93), reflecting wide differences in firms’ long-term investment strategies, which may influence operational rigidity and capital intensity. This variation is reinforced by the standard deviations, which are moderate but highest for NCA (0.93), implying greater inconsistency in fixed asset accumulation compared to liquidity management and income performance. The skewness values show that CA and RI are moderately right-skewed, indicating that a number of firms outperform the average in asset holding and income generation, while NCA is strongly right-skewed (1.38), suggesting that a few firms hold disproportionately large fixed assets. The kurtosis statistic further shows that NCA and RI exhibit leptokurtic distributions, meaning values cluster around the mean with notable outliers, underscoring the influence of extreme investment decisions on performance outcomes. The Jarque–Bera test confirms that CA and RI are normally distributed, while NCA deviates significantly from normality, implying that non-current asset investments are unevenly distributed across firms. Overall, these results imply that while firms generally maintain balanced asset structures, excessive concentration in non-current assets may create uneven residual income outcomes, highlighting the importance of efficient asset utilization rather than mere asset expansion for sustainable value creation.

Correlation matrix

Correlation analysis was conducted to examine the strength and direction of the linear relationship between the components of asset structure (current and non-current assets) and residual income of listed Nigerian firms."

	CA	NCA	RI
CA	1.000000	0.669012	0.621986
NCA	0.669012	1.000000	0.683604
RI	0.621986	0.683604	1.000000

Source: Researcher’s output 2026

The correlation matrix reveals meaningful linear relationships among current assets (CA), non-current assets (NCA), and residual income (RI), offering insights into how asset structure aligns with value creation. The correlation between CA and NCA ($r = 0.669$) is positive and moderately strong, indicating that firms with higher levels of current assets also tend to hold more non-current assets. This suggests a complementary asset accumulation strategy in which liquidity management and long-term investment grow concurrently, reflecting balanced expansion rather than a trade-off between short-term and long-

term assets. The positive association implies that firms are not sacrificing liquidity to finance fixed assets, which supports operational stability while pursuing growth. The relationship between CA and RI ($r = 0.622$) further shows that increases in current assets are associated with higher residual income, implying that effective liquidity and working capital management contribute positively to value generation after accounting for the cost of capital. This indicates that firms capable of efficiently converting short-term assets into productive operations are more likely to enhance economic performance. Similarly, the strongest correlation exists between NCA and RI ($r = 0.684$), suggesting that long-term asset investments play a critical role in driving residual income. This relationship implies that firms with substantial and productive non-current assets are better positioned to generate returns above their required cost of capital. Overall, the absence of excessively high correlations (above 0.80) indicates no serious multicollinearity concerns, while the consistently positive relationships underscore that both current and non-current asset structures jointly support sustainable residual income generation.

Unit Root Test

Unit root test was performed to determine the stationarity of the variables (current assets, non-current assets, and residual income) to ensure that the panel data are suitable for regression analysis and to avoid spurious results.

Variable	P-value	ADF statistics	Difference	Order
CA	0	22.1418	Level	1(0)
NCA	0	60.8337	Level	1(0)
RI	0	34.2864	Level	1(0)

Source: Researcher’s output 2026

The unit root test shows that current assets, non-current assets, and residual income are all stationary at level, with p-values of 0.0000 and strong ADF statistics. This means the variables do not exhibit random trends and revert to stable long-run paths over time. The I(0) order of integration indicates that shocks to asset structure and residual income are temporary rather than persistent. As a result, panel regression can be conducted using level data without the risk of spurious relationships, ensuring that the estimated effects of asset structure on residual income are statistically reliable and meaningful.

Panel regression Analysis

Panel regression analysis was employed to examine the effect of current and non-current asset structures on the residual income of listed Nigerian firms, allowing for the assessment of both cross-sectional and time-series variations in the data.

Correlated Random Effects - Hausman Test				
Equation: Untitled				
Test cross-section random effects				

Test Summary		Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random		2.759793	2	0.2516
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.385952	0.250628	1.539938	0.1272
CA	0.094266	0.048822	1.930816	0.0368
NCA	-0.119971	0.048948	-2.45101	0.0162
R-squared	0.064984	Mean dependent var		0.073307
Adjusted R-squared	0.043489	S.D. dependent var		0.173949
S.E. of regression	0.170125	Sum squared resid		2.517996
F-statistic	3.023254	Durbin-Watson stat		1.448274
Prob(F-statistic)	0.053782			

The regression results provide insight into the relationship between asset structure and residual income among listed firms in Nigeria, as well as the appropriateness of the estimated model. The Hausman test reports a chi-square statistic of 2.7598 with a probability value of 0.2516, indicating that the null hypothesis is not rejected. This suggests that the random effects model is appropriate, as the firm-specific effects are not systematically correlated with the explanatory variables. Consequently, the estimated coefficients can be considered efficient and consistent for inference. The coefficient of current assets (CA) is positive (0.0943) and statistically significant at the 5% level ($p = 0.0368$). This implies that an increase in current asset structure leads to an improvement in residual income, holding other factors constant. The result indicates that effective liquidity and working capital management enhance firms' ability to generate income above the cost of capital, reflecting operational efficiency and better short-term asset utilization. In contrast, non-current assets (NCA) exhibit a negative and statistically significant coefficient (-0.1200) at the 5% level ($p = 0.0162$). This suggests that higher investment in long-term assets is associated with a reduction in residual income. The implication is that excessive or inefficient capital expenditure may increase capital charges without generating commensurate returns, thereby eroding value creation.

The constant term is positive but not statistically significant, indicating that residual income is largely explained by variations in asset structure rather than autonomous effects. The model's explanatory power, as shown by the R-squared of 0.065, is modest, implying that asset structure explains about 6.5% of the variation in residual income. The F-statistic is marginally significant ($p = 0.0538$), suggesting that the

model is jointly relevant at approximately the 10% significance level. Overall, the results indicate that while current assets contribute positively to value creation, careful evaluation of long-term asset investments is essential to avoid diminishing residual income.

Test of Hypotheses

H₀₁: Current asset structure has no significant effect on the residual income of listed firms in Nigeria.

The regression results shows that current asset structure has a positive coefficient ($\beta = 0.0943$) with a probability value of 0.0368, which is less than the 5% significance level. This indicates that current asset structure significantly affects residual income of listed firms in Nigeria. Consequently, the null hypothesis is rejected. The finding implies that effective management of current assets contributes meaningfully to value creation by enhancing firms' ability to generate income above the cost of capital.

H₀₂: Non-current asset structure has no significant influence on the residual income of listed firms in Nigeria.

The estimated coefficient for non-current asset structure is negative and statistically significant ($\beta = -0.1200$; $p = 0.0162$). Since the probability value is below the 5% threshold, the null hypothesis is rejected. This result indicates that non-current asset structure significantly influences residual income. The negative effect suggests that excessive or inefficient investment in long-term assets reduces firms' ability to generate residual income, emphasizing the need for value-driven capital investment decisions.

DISCUSSION OF FINDINGS

Effect of Current Asset Structure on Residual Income

The positive and significant effect of current asset structure on residual income partly aligns with a priori expectations that efficient liquidity management can enhance value creation by supporting uninterrupted operations and reducing costly short-term financing. From a Value-Based Management (VBM) perspective, this finding suggests that when current assets are optimally structured rather than excessively accumulated, they can generate operating returns that exceed the associated capital charges, thereby improving residual income. This outcome also resonates with the Resource-Based View (RBV), which emphasizes not the volume of resources held but their efficient deployment; well-managed cash, receivables, and inventories function as valuable operational resources that enhance productivity and value creation. However, this finding contrasts with several prior studies such as Ogunleye and Salawu (2024), Okafor and Ezeani (2023), and Akinwale and Adepoju (2021), which reported a negative effect of excessive current assets on residual income due to capital being locked in low-yield assets. Conversely, the result is consistent with Danladi and Musa (2025) and Bello and Sadiq (2025), who argued that current assets contribute positively to residual income when efficiently turned over. The implication is that the Nigerian listed firms in the sample appear to have achieved a level of working capital efficiency

where liquidity supports, rather than erodes, value creation. From a policy standpoint, managers should adopt value-based working capital policies that emphasize asset productivity, ensuring that liquidity levels are sufficient for operational efficiency but restrained enough to avoid unnecessary capital charges that could diminish residual income.

Effect of Non-Current Asset Structure on Residual Income

The negative and significant influence of non-current asset structure on residual income deviates from the a priori expectation that long-term assets should enhance value creation through improved productive capacity and competitive advantage. Under Value-Based Management Theory, this finding implies that investments in non-current assets by listed Nigerian firms may not be generating returns above the weighted average cost of capital, thereby eroding residual income despite potential increases in accounting profits. This outcome also reflects the Resource-Based View's caution that resource accumulation without efficient utilization does not guarantee superior performance; fixed assets that are underutilized or poorly aligned with firm capabilities fail to meet the "valuable" criterion necessary for sustained advantage. The finding aligns with empirical evidence from Adebisi et al. (2024), Umar and Abdullahi (2021), and Adebayo and Yusuf (2023), who documented that excessive capital intensity and underutilized fixed assets reduce residual income due to high depreciation and financing costs. However, it contradicts studies such as Uche and Nwoye (2024) and Ajayi and Olatunji (2025), which found that strategic non-current asset investment enhances value creation. The divergence suggests contextual inefficiencies in asset utilization within the sampled firms. The policy implication is that regulators and corporate managers should emphasize rigorous capital budgeting, post-investment audits, and asset efficiency reviews. Long-term investments should be guided by value-based metrics such as residual income rather than asset growth objectives, ensuring that non-current assets contribute meaningfully to sustainable economic value creation.

SUMMARY AND CONCLUSION

This study examined the effect of asset structure on the residual income of listed firms in Nigeria using panel data analysis. The findings revealed that current asset structure exerts a positive and statistically significant effect on residual income, indicating that efficient liquidity and working capital management enhance firms' ability to generate returns above the cost of capital. This suggests that when current assets are optimally structured and productively utilized, they contribute to value creation rather than value erosion. Conversely, the study found that non-current asset structure has a negative and significant effect on residual income, implying that excessive or inefficient investment in long-term assets increases capital charges and reduces economic value creation. Overall, the results underscore the importance of asset efficiency rather than asset accumulation in driving residual income. In conclusion, asset structure has a

significant effect on the residual income, which is critical for sustainable economic value creation among listed firms in Nigeria.

RECOMMENDATIONS

In light of the findings, the study proposes the following recommendations:

1. Management of listed firms should adopt value-based working capital policies that emphasize efficient turnover of cash, receivables, and inventories to sustain positive residual income without incurring unnecessary capital costs.
2. Firms should subject long-term investment decisions to rigorous value-based capital budgeting and post-investment performance evaluations to ensure that non-current assets generate returns above the cost of capital.

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