International Journal of Accounting Research and Financial Insights | ***ISSN 3087-4394***
Published by BIRPUB https://birpub.org/ijarfi
Imp. Factor: 8.436

Effect of asset growth dynamics on firm profitability in Nigeria

Israel, Godsent Ijeoma Ph.D.

Abstract

*The study examined the Effect of asset growth dynamics on firm profitability in Nigeria. Specifically, the study sought to examine the effect of current asset growth rate on the Profit for the year of firms in Nigeria and analyse the effect of Annual Asset Growth Rate **of Assets** on the Profit for the year of firms in Nigeria. To achieve these objectives, five research questions and hypotheses were raised. Relevant conceptual, theoretical and empirical literatures were examined. Ex post facto research design was employed. The data used in this study were sourced from annual reports and accounts of the selected firms. Descriptive statistics and ordinary least Square regression were employed in analyzing the data. The study found that Current asset growth rate has no significant effect on the Profit for the year of firms in Nigeria (where t-value of -1.025368 and P-value of 0.3098), that Annual Asset Growth Rate has no significant effect on the Profit for the year of firms in Nigeria (Based on the t-value of -1.180276 and P-value of 0.2432). The study concluded that the effect of asset growth dynamics on firm profitability in Nigeria reveals a nuanced relationship. The findings indicate that while asset growth is theoretically crucial for enhancing firm value and operational capacity, it does not significantly impact profitability in the Nigerian oil and gas sector. The study recommended among other things that given the lack of significant impact of current asset growth on profitability, Nigerian firms should prioritize optimizing current asset management practices. This includes improving inventory control, streamlining receivables management, and maximizing cash flow efficiency.*

Keywords: *Asset growth dynamics, Firm profitability in Nigeria, Current asset growth rate, Annual asset growth rate, Profit for the year, Financial performance analysis, Oil and gas sector Nigeria.*

Cite*:* Israel, G. I. (2026). Effect of asset growth dynamics on firm profitability in Nigeria. *International Journal of Accounting Research and Financial Insights, 4 (3), 115-130.* https://doi.org/10.5281/zenodo.18653153

Author(s)	Affiliation
1	Department of Accountancy, Faculty of Management Sciences, Enugu State University of Science and Technology (ESUT), Enugu State, Nigeria

Introduction

Asset growth rate represents the rate at which a firm expands its asset base over a specific period and is commonly used as an indicator of corporate growth, investment behavior, and strategic expansion. In corporate finance literature, asset growth reflects management's decision to invest in productive resources such as property, plant and equipment, technology, inventories, and intangible assets with the expectation of improving future earnings and competitiveness. Financial performance, on the other hand, measures how effectively firms utilize their assets to generate profits and shareholder value, often assessed using indicators such as return on assets (ROA),

return on equity (ROE), earnings per share, and profitability ratios (Titman, Wei, & Xie, 2019). The interaction between asset growth rate and financial performance has attracted increasing scholarly attention, particularly in developing economies like Nigeria where firms operate under volatile economic conditions.

In Nigeria, asset growth is seen as a critical strategy for firms seeking to expand operations, improve market share, and remain competitive in an increasingly dynamic business environment. Firms across sectors such as manufacturing, banking, consumer goods, and services continuously invest in both current and non-current assets to enhance productive capacity and operational efficiency. Ogheneborhien, et al., (2025), asset growth in Nigerian firms is often driven by the need to modernize production processes, respond to rising consumer demand, and adapt to technological changes. However, the effectiveness of such asset expansion in improving financial performance varies widely due to challenges such as poor infrastructure, high operating costs, inflationary pressures, and weak institutional frameworks.

Asset growth rate can have both positive and negative effects on financial performance depending on the type of assets and the efficiency of their utilization. Studies focusing on listed manufacturing firms indicate that growth in non-current assets, such as machinery and equipment, tends to have a positive and significant impact on profitability, as these assets directly enhance productive capacity and operational efficiency (Inyiama et al., 2017; Ogheneborhien et al., 2025). Similarly, net asset growth has been found to positively influence return on assets and profit after tax, suggesting that overall expansion of a firm's asset base can improve financial outcomes when supported by sound management practices.

Conversely, excessive or poorly managed asset growth may negatively affect financial performance. Rapid expansion without adequate planning can lead to underutilized assets, increased depreciation costs, higher financing expenses, and reduced returns. Titman et al. (2019) argue that firms experiencing unusually high asset growth often face declining future profitability due to inefficient investment decisions. In the Nigerian context, current asset growth, particularly in inventories and receivables, may exert pressure on liquidity and working capital management, thereby weakening financial performance if not effectively controlled (Inyiama et al., 2017). Additionally, investment in intangible assets may not immediately translate into improved financial performance due to weak intellectual property protection and limited commercialization capacity in developing economies (Ogheneborhien et al., 2025).

The Nigerian business environment further moderates the relationship between asset growth rate and financial performance. Macroeconomic instability, fluctuating exchange rates, high interest rates, and inconsistent government policies often constrain firms' ability to efficiently convert asset growth into profitability. Akinwale and Aremo (2022), these environmental factors can erode the expected benefits of asset expansion, particularly for small and medium-sized firms with limited access to long-term financing. As a result, asset growth alone does not guarantee improved financial performance unless accompanied by effective asset utilization, strong corporate governance, and prudent financial management.

In summary, the effect of asset growth dynamics on firm profitability in Nigeria is complex and context-dependent. While strategic asset expansion can enhance profitability and long-term sustainability, inefficient or excessive asset growth may undermine financial performance. This underscores the importance of aligning asset growth strategies with firm capabilities, market conditions, and sound financial management practices to achieve sustainable performance outcomes in the Nigerian economy.

Statement of the Problem

Ideally, growth in a firm's asset base should enhance its financial performance by increasing productive capacity, improving operational efficiency, and strengthening competitive advantage. In a well-

functioning business environment, firms strategically invest in both current and non-current assets with the expectation that such investments will translate into higher profitability, improved returns on assets and equity, and sustainable long-term performance. Asset growth is therefore expected to serve as a key driver of financial stability and value creation for firms.

However, in Nigeria, the relationship between asset growth rate and financial performance has become increasingly uncertain and problematic. Many firms continue to record substantial increases in asset size without corresponding improvements in profitability or financial efficiency. Challenges such as poor asset utilization, inefficient investment decisions, weak corporate governance, high operating costs, macroeconomic instability, and inadequate infrastructure often hinder firms from converting asset growth into improved financial outcomes. In some cases, rapid asset expansion has been associated with declining returns, rising debt burdens, and reduced shareholder value, raising concerns about the effectiveness of asset growth strategies adopted by Nigerian firms.

If these problems remain unresolved, the consequences could be severe for firms and the wider economy. Persistent mismatch between asset growth and financial performance may lead to declining profitability, liquidity constraints, increased financial distress, and eventual business failure. For investors, inefficient asset growth undermines confidence and discourages capital inflows, while for policymakers, it weakens the contribution of firms to economic growth, employment generation, and industrial development. Consequently, there is a critical need to empirically examine the effect of asset growth dynamics on firm profitability in Nigeria in order to provide evidence-based insights that can guide managerial decision-making, investment strategies, and policy formulation.

Objectives of the Study

The broad objective of the study was to examine the effect of asset growth dynamics on firm profitability in Nigeria. The specific objectives of the study were to:

i. Analyse the effect of current asset growth rate on the profit for the year of firms in Nigeria.
ii. Analyse the effect of annual Asset growth rate of assets on the profit for the year of firms in Nigeria.

Research Questions

The following research questions were made for the study.

i. To what extent does current asset growth rate affect the profit for the year of firms in Nigeria?
ii. How does annual asset growth rate affect the profit for the year of firms in Nigeria?

Statement of Hypotheses

The following null hypotheses were formulated for the study.

i. Current asset growth rate has no significant effect on the profit for the year of firms in Nigeria.
ii. Annual Asset growth rate has no significant effect on the profit for the year of firms in Nigeria?

Significance of the Study

The study is significant as it provides empirical insight into how asset growth rate influences the financial performance of firms in Nigeria. The findings will assist firm managers in making informed asset investment and expansion decisions, help investors evaluate firm growth and profitability prospects, and guide policymakers in formulating policies that promote efficient asset utilization and sustainable corporate performance within the Nigerian economy.

Scope of the Study

The scope of this study encompasses an analysis focusing on the effect of asset growth dynamics on firm profitability in Nigeria from 2013 to 2022. Specifically, the study investigated the relationship between total asset growth rate, non-current asset growth rate, current asset growth rate, annual asset growth rate and compound annual growth ratewith profit for the year across various sectors in Nigeria.By examining data from different sectors, including industrial goods, telecommunications, conglomerate, and others, the study aims to provide a comprehensive understanding of how asset growth influences financial performance in

diverse industries within the Nigerian economy. Through statistical analysis and regression modeling techniques, the study assessed the significance of these variables in explaining variations in profit for the year, thereby shedding light on the drivers of profitability and value creation for firms operating in Nigeria's dynamic business environment.

Review of Related Literature

Conceptual Review

Asset Growth Rate

Asset growth rate refers to the percentage change in a firm's total assets over a given period and reflects the extent to which a firm is expanding its investment in both current and non-current assets. It is commonly used as an indicator of firm growth, strategic expansion, and capital investment decisions. A higher asset growth rate often signals increased investment in productive capacity, technology, and operational resources aimed at improving future performance (Penrose, 2020). Titman, Wei, and Xie (2019), asset growth captures managerial investment behavior and provides insight into how firms allocate resources to support long-term value creation. In emerging economies such as Nigeria, asset growth rate is particularly important, as it helps assess whether firms are effectively translating asset expansion into improved financial performance amid economic and institutional constraints (Ogheneborhien, Ominijei, & Ugbogbo, 2025).

Classification of Assets

One way of classifying assets is based on their ease of convertibility into cash. According to this classification, total assets are classified either into current assets or non-current assets (fixed assets). Other classifications are physical existence (tangible or intangible assets) and usage (operating and non-operating assets). In this study, classification based on convertibility will be adopted. In order to maintain its activity, firms typically need these two types of assets, fixed assets and current assets. Fixed assets which include, building, plant, machinery, furniture, and fitting among others are not purchased for the purpose of resale, but for operational purposes (Singh & Pandey, 2008); while, current assets like cash/bank balance, inventory and receivables are seen as key components of the firm`s total assets. A firm may be able to reduce its investment on fixed assets by leasing, but it is practically difficult to do so for current asset (Afza & Nazir 2008). Whatever way assets is defined, it is important to stress that assets must be managed, not just purchased, used up, and replaced.

Current asset growth rate

Current asset growth rate refers to the percentage change in a company's current assets over a specific period. Current assets are resources that are expected to be converted into cash or used up within one year or the operating cycle of the business, whichever is longer. These typically include cash, accounts receivable, inventory, and short-term investments. The current asset growth rate is a financial metric used to evaluate the rate at which a company's short-term asset base is expanding or contracting.

The formula for calculating Current Asset Growth Rate is similar to that of Total Asset Growth Rate:

$$\text{Current Asset Growth Rate} = \left(\frac{\text{Current Assets}_{end} - \text{Current Assets}_{start}}{\text{Current Assets}_{start}}\right) \times 100\%$$

Current asset growth rate provides insights into a company's liquidity, working capital management, and short-term financial health. A positive growth rate indicates an increase in current assets, which may result from factors such as higher cash reserves, improved accounts receivable collections, or increased inventory levels to meet growing demand. Conversely, a negative growth rate may signify a decrease in current assets, potentially due to aggressive inventory liquidation, relaxed credit policies, or deteriorating cash flow.Investors, analysts, and stakeholders use current asset growth rate to assess a company's ability to meet short-term obligations, manage liquidity risk, and support ongoing operations. By analyzing trends in current asset growth rate over time, stakeholders can gain insights into the company's financial flexibility, operational efficiency, and overall financial performance.

Annual Asset Growth Rate

Annual asset growth rate (AAGR) is a financial metric used to measure the percentage increase in an

organization's total assets from one year to the next. This indicator provides insights into the company's capacity for growth, its financial health, and its ability to reinvest earnings into productive assets (Brigham & Ehrhardt, 2020). AAGR is calculated as:

$$AAGR = \frac{(\text{Total Assets}_{\text{Year 2}} - \text{Total Assets}_{\text{Year 1Total}}) \times 100}{\text{Assets}_{\text{Year 1}}}$$

For instance, if a company had total assets of ₦10 million in Year 1 and ₦12 million in Year 2, the AAGR would be:

$$AAGR = \frac{(12{,}000{,}000 - 10{,}000{,}000)}{10{,}000{,}000} \times 100 = 20\%$$

AAGR is crucial for investors and management as it indicates how effectively the company is expanding its asset base over time. A consistent and high AAGR suggests strong growth potential and efficient asset management, while a low or negative AAGR could indicate underlying financial challenges. According to recent financial analysis literature, AAGR is an essential tool for benchmarking a company's performance against industry standards and competitors (Brigham & Ehrhardt, 2020). It helps in strategic planning and decision-making by highlighting trends and areas needing improvement.

Financial Performance

Various authors define performance in various ways, for instance, Watkins (2007) defined performance as valuable results, accomplishment, or contributions of an individual or an organization, regardless of preferred or mandated process. Ramiz and Junrui (2014) defined performance as an achievement of tangible, specific, measurable, worthwhile and personally meaningful goals. Performance is the ability of an organization to gain and manage the resources in several difference ways to develop a competitive advantage. Literature usually distinguishes between two types of performance, financial or economic performance and innovative performance. This study concentrated on financial performance. Bhunia, Mukhuti and Roy (2011) defined financial performance as firm's overall financial health over a given period of time. Financial performance of a firm for a period can be ascertained through the process of financial performance analysis. Eshna (2012), states that financial performance analysis is the process of measuring the results of a firm's policies and operations in monetary terms. Also Bhunia et al (2011) affirmed that financial performance analysis is the process of determining the operating and financial characteristics of a firm from accounting and financial statements and that the analyst attempts to measure the firm's liquidity, profitability and other indicators that the business is conducted in a rational and normal way; ensuring enough returns to the shareholders to maintain at least its market value.

Factors Influencing Financial Performance

Financial performance of a company is influenced by various internal and external factors that impact its profitability, efficiency, and overall financial health. Understanding these factors is crucial for stakeholders to assess and interpret a company's financial performance accurately (Stulz & Williamson, 2003). The following are key factors influencing financial performance:

1. Economic Conditions: Macroeconomic factors such as GDP growth, inflation rates, and interest rates significantly impact a company's financial performance. Economic downturns can lead to reduced consumer spending, lower demand for goods and services, and increased operating costs, negatively affecting a company's revenue and profitability.
2. Industry Trends: Industry-specific factors such as technological advancements, regulatory changes, and competitive dynamics play a vital role in shaping a company's financial performance. Companies operating in rapidly evolving industries may face challenges related to innovation, market disruption, and changing consumer preferences, which can impact their revenue growth and market competitiveness (Stulz & Williamson, 2003).

Profit for the Year

Profit for the year, also known as profit after tax or net profit, is a key financial metric that represents the residual income left after deducting all expenses, taxes, and other costs from a company's total revenue within

a specific accounting period, typically one fiscal year. It serves as a fundamental measure of a company's financial performance and profitability. The concept of profit for the year is essential for evaluating a company's ability to generate earnings and create value for shareholders. It reflects the company's operational efficiency, sales performance, cost management, and overall business success. Profit for the year is calculated using the following formula:

Profit for the year=Total Revenue−Total Expenses−Taxes

Profit for the year is reported on the income statement, which provides a comprehensive overview of the company's financial performance over a specific period. It is a critical component of financial analysis and decision-making for investors, analysts, lenders, and other stakeholders.

Theoretical Review

Alchian (1950) Growth of the Fitter Theory

Growth of the Fitter theory was propounded by Alchian (1950). According to this theory, fitness is depicted by the firm profit, and the profitable firms grow and survive in the market while the other firms exit due to poor performance (Kouser*et al.*, 2012). Alchian (1950) theoretical study argued that fitter firms grow and survive, but less vigorous firms lose their market share and exit through the evolutionary selection mechanism. Thus, if profit rates reflect the degree of fitness, it is possible to predict that profitable firms will grow (Jang & Park, 2011). Delmar *et al.* (2003) suggests that more profitable firms may have higher potential to grow, since they have already shown a greater fit with the environment and may be able to fund future competitive actions with their own cash flow. Profitability limits the risk related to acquiring and relying on external resources of financing but also displays a satisfactory level of market demand. Mukhopadhyay and Amir Khalkhali (2010) posit that profit provides the funds for growth. A firm can grow internally through investments in development projects in various ways. It can take advantage of technological opportunities to grow through research and development, leading to product and process innovations.

Empirical Review

Current Asset Growth Rate and the Profit for the Year

Bagchi (2013) examined the impact of current asset management on the financial performance of the listed firm on the Bandeglish Stock Exchange. The study proxy current assets by accounts receivables and adopted the ex-post facto design. Ordinary least square was used for the data analysis. The study found that the effective management of accounts receivables has an impact on the financial performance of the firm in Bandeglish. The study argued on the influence of accounts receivables on the liquidity of the listed firm. The study believed that inefficient management of accounts receivable can impact negatively on the liquidity position of firms.

Ishmael and Kehinde (2013) examined the effects of components of current assets on the profitability in the Ajaokuta Iron Industry. Ordinary least square was used to test the hypotheses. The study concluded that there are different proportions of current assets in the industry (for example there are a huge amount of current assets in receivables, cash, and bank). The results revealed that the profitability analysis of the Ajaokuta Iron Industry has shown an upward trend in the period 2001-2010.

Osirim and Moses (2019) focused their study on Empirical Evaluation of Current Assets Investment and Corporate Financial Returns in Nigeria. The longitudinal research design was adopted and secondary data of eight (8) banks whose annual reports were available as of the end of 2016 was randomly selected from the population of fifteen (15) listed deposit money banks in the Nigerian Stock Exchange. Ordinary least square (OLS) regression analysis was employed to determine the association between current assets investment and corporate financial returns. The results of the study indicated that there exists a significant positive relationship between loans and advances granted to customers and return on assets (r =.443, p-value =.004). This leads to the rejection of the null hypothesis, which states that loans and advances granted to customers have no positive influence on return on assets. The relationship between loans and advances granted to other banks and return on assets is negative and significant at a 5% confidence level (r = .369, p-value

=.019). This leads to the non-rejection of the null hypothesis, which states that loans and advances granted to other banks have no positive impact on returns on assets. The other predictor variables (financial assets held for trading & cash, and cash balances) have an insignificant positive relationship with return on assets.

Anuma et al (2021) examined the effects of asset utilisation and corporate growth on financial performance by using the sample dataset of 30 listed textile companies on the Pakistan Stock Exchange from 2015 to 2019. The study inferred that asset utilisation influences the financial performance of the company before any investment decision is made. By using descriptive statistic and panel regression techniques, the results show that asset utilisation and corporate growth have a significant and positive influence on financial performance. The results of this study also indicate random effect model as a best fit. This study expects to provide a better understanding of the asset utilisation and the role of corporate growth in the company in defining the financial performance of the company. The findings of the study help in supporting the arguments of leverage irrelevance theory and pecking order theory which help in improvement of financial performance.

Melbury et al (2022) looked into how asset utilization affects the financial performance of pharmaceutical companies (as measured by return on asset) in Nigeria, with a particular focus on Fidson Healthcare Plc, between 2011 and 2020 fiscal years. The ex-post facto research design was used with secondary data derived from the pooled data collected from the annual financial reports of FIDSON healthcare. The collected data were analyzed using ordinary least square regression analysis, but the study also performed preliminary analyses such as descriptive statistics and correlation analysis. According to the study, variations in the asset utilization variables captured in the model explain approximately 32.7% of the total variation in ROA as explained by variations in the independent variables captured in the study. Furthermore, both current asset ratio and the non-current ratio were found to be positively and significantly related to profitability of Fidson Healthcare Plc in Nigeria.

Annual Asset Growth Rate and the Profit for the Year

Anjili (2016) investigated the effects of asset and liability management on commercial banks' financial performance in Kenya. With a target population of 43 commercial banks, the study used a descriptive design. All of the CAMEL (Capital adequacy, Asset quality, Management, Earnings, Liquidity, and Sensitivity) criteria had a statistically significant impact on financial performance, according to the study. The report advised strategies to enhance income diversification, lower operational costs, reduce credit risk, and encourage banks to reduce their liquidity holdings based on the findings.

Ajibola (2016) examined the effects of assets and liability management on financial performance of some selected Nigerian banks. The research work was embarked upon due to challenges observed to be facing financial institutions; The impact of changes in the regulatory environment on banks is that banks are receiving less hands-on assessment by the regulators, less time spent with each institution, and the potential for more problems slipping through the cracks, potentially resulting in an overall increase in bank failures. This study identifies the best possible strategy to manage the composition of financial institutions', assets, and liability management by controlling the various types of business strategies to maximize profitability and increase performance. Annual statistical bulletin and audited financial statement of selected Nigerian Deposit Money Banks were used for the analysis which consists of time-series and cross-sectional data were analyzed using descriptive statistics and a panel data regression analysis were used to explore the relationship between AML and Financial performance, R^2, and t-statistics were computed. Findings showed that loans and advances are positively related to return on equity especially when profitability is measured as a proxy of financial performance, while the liability variables are negatively related to the measure of bank performance adopted in this study. It was concluded that asset management has a significant

effect on the financial performance of Nigerian deposit money banks.

Nurlaela et al (2019) conducted an empirical test on the effect of capital structure, liquidity, asset structure, and asset turnover on the financial performance of companies in the consumption industry sector listed on the Indonesia Stock Exchange between 2016 and 2018. The use of independent variables, the number of samples used, and the study period distinguish this study from previous research. This study is quantitative in nature. Multiple linear regression analysis was used as the analytic method in this study. The t-test hypothesis results show that the capital structure variables debt to equity ratio (DER), liquidity current ratio (CR), and asset turnover (TATO) all have a significant impact on financial performance (return on assets).

Ofor and Farajimakim (2020) focused on the effect of assets utilization of net worth of big-cap companies quoted in the Nigeria Stock Exchange Market between the 2012 and 2016 financial year. In this study, four specific objectives, research questions, and hypotheses were formulated. The ex-post facto research design was utilized while Secondary sources of data were derived from the panel data collected from annual financial reports of twenty companies with high market capitalization. The data collected was analysed using panel ordinary least square regression analysis, however, the study also conducted some preliminary analysis such as descriptive statistics and correlation analysis. The study revealed that both current assets (CASU) and tangible non-current assets (TNCAU) were positively and significantly affect the net worth of companies with a big market capitalization in Nigeria at a 10% significant level.

Desvi and Suhendro (2020) examined the effect of financial performance, firm size, and asset growth on capital structure. The independent variables in this study are return on assets, current ratio, company size, and asset growth. The dependent variable in this study is the capital structure. The sampling method uses purposive sampling. The sample in this study is 31 property and real estate companies in the 2016-2018 period, according to the criteria that have been determined to total of 93 companies over a three-year period. The analytical method used is multiple regression analysis using SPSS version 17.0. The results of this study Return on Asset, Current Ratio, Company Size, and Asset Growth simultaneously influence the Capital Structure. Partially Return on Assets and Asset Growth do not affect the Capital Structure, while the Current Ratio and Firm Size affect the Capital Structure. The benefit of this research is that it can broaden horizons and simultaneously gain knowledge about the effect of return on assets, current ratio, company size, and asset growth on capital structure.

Gap in Empirical Review

Despite previous studies examining the relationship between asset growth rate and financial performance of firms in Nigeria, a notable gap exists in empirical research regarding the incorporation of specific variables related to asset growth. Most previous studies have focused on general measures of asset growth without considering detailed factors such as current asset growth rate, asset turnover ratio, and market value of assets. This gap is significant because it overlooks the nuanced impact of different types of asset growth on financial performance across various sectors in Nigeria. For instance, the composition of assets, their turnover efficiency, and market valuation can vary significantly among industries, influencing the relationship between asset growth and financial outcomes. By incorporating these specific variables into empirical analyses, researchers can provide more granular insights into how different types of asset growth affect firm performance within specific sectors of the Nigerian economy. This detailed understanding is essential for policymakers, investors, and managers to make informed decisions regarding resource allocation, investment strategies, and operational improvements aimed at enhancing financial performance and fostering sustainable growth in Nigeria's diverse economic landscape.

Methodology

Research Design

The *ex post facto* research design was employed in studying the effect of asset growth dynamics on firm profitability in Nigeria involves analyzing existing data retrospectively. This design leverages historical financial data from various sectors in Nigeria to assess the relationship between asset growth rate and financial performance indicators. This research design allowed for the comprehensive exploration of the relationship between asset growth rate and financial performance in Nigerian firms, providing valuable insights for stakeholders and informing strategic decision-making. The research collected financial data from publicly available sources such as annual reports, financial statements, and databases covering a specified period, typically spanning several years.

Area of Study

The study was conducted in Nigeria and based on oil and gas sector of the Nigerian economy. Nigeria, located in West Africa, occupies a prominent position on the continent both geographically and economically. Positioned between latitudes 4° and 14°N and longitudes 2° and 15°E, Nigeria is bordered by several countries including Benin, Niger, Chad, and Cameroon. Its coastline extends along the Gulf of Guinea to the south, providing access to the Atlantic Ocean. The country's diverse geography encompasses expansive plains, lush rainforests, rolling hills, and river valleys, offering rich natural resources and biodiversity. Nigeria's central region is characterized by the Niger and Benue Rivers, which converge in the country's heartland. The southern coastal region features mangrove swamps and deltas, while the north boasts the Sahel savannah and semi-arid landscapes. This diverse geography not only shapes Nigeria's climate, agriculture, and natural ecosystems but also influences its cultural heritage, economic activities, and geopolitical significance in the region.

Sources of Data

The study made use of secondary data extracted from the audited Annual Reports and statements of account of the selected oil and gas firms in Nigeria. Time-series data were used because the data for the study relates to different years. Data were collected from the annual financial statements of these companies over a ten-year period (2013-2022). The financial performance metrics analyzed included the Profit for the Year. The asset growth rate was calculated as the annual percentage change in total assets.

Population of the Study

The population for this study consists of eight (8) oil and gas firms listed in the Nigerian Exchange Group. As of 2024, there are ten oil and gas companies listed on the Nigerian Exchange Group (NGX). These companies are:

1. Ardova Plc
2. Conoil Plc
3. Eterna Plc
4. Japaul Gold and Ventures Plc
5. MRS Oil Nigeria Plc
6. Oando Plc
7. Seplat Energy Plc
8. TotalEnergies Marketing Nigeria Plc

Sample Size Determination

To investigate the effect of asset growth dynamics on firm profitability in Nigeria, a purposive sampling technique was employed, focusing on six (6) oil and gas companies listed on the Nigerian Exchange Group. These firms were chosen based on their significant presence and active trading status in the Nigerian oil and gas sector, ensuring a representative sample for the industry.

The selected oil and gas firms were: Conoil Plc, Eterna Plc, MRS Oil Nigeria Plc, Oando Plc, Seplat Energy Plc and TotalEnergies Marketing Nigeria Plc.

Specification of Models

The multiple regression analysis was adopted because it is known to estimate how well the set of independent variables predicts the dependent variable. The model were stated as follows:

$PFY_t = \beta o + \beta_1 CAGR + \beta_2 AAGR + u_1 \ldots\ldots\ldots\ldots\ldots\ldots\ldots i$

PFY_{it} : Profit for the year for firm *i* in year *t.*

CAGR : Current asset growth rateof firm *i*in year *t.*

AAGR : Annual Asset Growth Rateof firm *i*in year *t.*

Bo : Constant Term (Intercept)
β_1 : coefficient of Current asset growth rate
β_2 : coefficient of Annual Asset Growth Rate
u; Error term

Description of Variables

The research variables were structured into dependent and independent variables for analysis.

Table 3.1 Description of Variables

Variable Acronym	Variable Name	Variable Type	Measurement	Source
PFY	Profit for the Year	Dependent	The concept of profit for the year is essential for evaluating a company's ability to generate earnings and create value for shareholders. It reflects the company's operational efficiency, sales performance, cost management, and overall business success. Profit for the year is calculated using the following formula: Profit for the year=Total Revenue−Total Expenses−Taxes	Aldridge (2015)
CAGR	Current asset growth rate	Independent	The current asset growth rate is a financial metric used to evaluate the rate at which a company's short-term asset base is expanding or contracting. The formula for calculating Current Asset Growth Rate is similar to that of Total Asset Growth Rate: Current Asset Growth Rate = $(\underline{\text{Current Assets}_{end}} - \underline{\text{Current Assets}_{start}}) \times 100\%$ Current Assets_{star}	(Brealey et al., 2017)
AAGR	Annual Asset Growth Rate	independent	Annual Asset Growth Rate (AAGR) is a financial metric used to measure the percentage increase in an organization's total assets from one year to the next $AAGR=(\text{Total Assets}_{Year\ 2} - \text{Total Assets}_{Year\ 1Total}) \times 10$ $\text{Assets}_{Year\ 1}$	(Brigham & Ehrhardt, 2020)

Source: Researcher's Compilation 2025.

Method of Data Analysis

The method adopted in analyzing the data and carrying out other estimations is linear regression with the application of the multiple linear regression techniques. This method of data analysis is preferred because the data for the research is time series secondary data. The software that will aid this estimation is the E – views software.

Most commonly, regression analysis estimates the conditional expectation of the dependent variable given the independent variables that are, the average value of the dependent variable when the independent variables are held fixed. The data was analyzed using Descriptive Statistics, Correlation Analysis, and Regression Analysis (Simple Linear Regression using Ordinary Least Square Method (OLS).

Data Presentation and Analysis

Table 4.13: Data for the Oil and Gas Sector

COMPANY	**YEAR**	**PAT ₦ 0'000**	**CAGR**	**AAGR**
Conoil Nig. Plc	2022	3082690	28.30	86.31
Conoil Nig. Plc	2021	4957726	57.72	45.12
Conoil Nig. Plc	2020	1972321	60.81	76.42
Conoil Nig. Plc	2019	1440185	62.70	77.60
Conoil Nig. Plc	2018	2566765	56.05	67.47
Conoil Nig. Plc	2017	1578507	22.57	77.59
Conoil Nig. Plc	2016	2837884	45.07	78.06
Conoil Nig. Plc	2015	2307558	67.41	78.03
Conoil Nig. Plc	2014	834421	21.65	79.10
Conoil Nig. Plc	2013	3070091	50.51	78.85
MRS Nig. Plc	2022	1316102	57.99	53.14
MRS Nig. Plc	2021	339873	47.72	60.41
MRS Nig. Plc	2020	2264144	83.41	73.19
MRS Nig. Plc	2019	1613082	76.83	74.29
MRS Nig. Plc	2018	1264941	64.61	75.65
MRS Nig. Plc	2017	1385056	44.30	76.07
MRS Nig. Plc	2016	1465905	44.42	77.92
MRS Nig. Plc	2015	935625	21.63	75.78
MRS Nig. Plc	2014	746404	56.81	**75.71**
MRS Nig. Plc	2013	634418	50.15	**76.36**
Oando Nig. Plc	2022	81230816	44.64	56.81
Oando Nig. Plc	2021	54325471	44.17	67.91
Oando Nig. Plc	2020	45064091	33.21	56.19
Oando Nig. Plc	2019	23064091	26.10	71.11
Oando Nig. Plc	2018	28797743	23.89	81.14
Oando Nig. Plc	2017	19772776	61.37	80.30
Oando Nig. Plc	2016	3912607	45.07	81.48
Oando Nig. Plc	2015	49689877	64.90	80.22
Oando Nig. Plc	2014	145655150	21.65	82.92
Oando Nig. Plc	2013	1396926	50.51	82.75
Eterna Plc	**2022**	1012252	71.34	51.91
Eterna Plc	2021	1100132	81.15	67.45
Eterna Plc	2020	941042	25.81	62.57
Eterna Plc	2019	144289	84.64	63.69
Eterna Plc	2018	1008996	27.01	63.13
Eterna Plc	2017	2001902	49.35	63.35
Eterna Plc	2016	1477559	64.91	63.36
Eterna Plc	2015	1278073	66.82	63.59
Eterna Plc	2014	1289566	53.04	61.88
Eterna Plc	2013	1811239	57.73	60.05
Seplat Energy Plc	2022	19107	71.17	67.21

Seplat Energy Plc	2021	6473	41.36	72.74
Seplat Energy Plc	2020	7160	69.68	77.32
Seplat Energy Plc	2019	66129	65.29	77.73
Seplat Energy Plc	2018	49681	67.20	81.85
Seplat Energy Plc	2017	96416	57.41	81.64
Seplat Energy Plc	2016	24840	66.32	76.80
Seplat Energy Plc	2015	11914	63.65	75.26
Seplat Energy Plc	2014	43529	60.71	76.11
Seplat Energy Plc	2013	23485	54.76	75.09
TotalEnergies Nig. Plc.	2022	1948482	51.45	67.18
TotalEnergies Nig. Plc.	2021	1685070	61.12	72.81
TotalEnergies Nig. Plc.	2020	9445299	78.33	79.70
TotalEnergies Nig. Plc.	2019	2010293	60.46	78.61
TotalEnergies Nig. Plc.	2018	2431102	72.58	79.36
TotalEnergies Nig. Plc.	2017	4134402	78.81	79.42
TotalEnergies Nig. Plc.	2016	3583583	75.36	78.73
TotalEnergies Nig. Plc.	2015	4824981	74.01	77.60
TotalEnergies Nig. Plc.	2014	5624843	63.84	77.55
TotalEnergies Nig. Plc.	2013	5706671	68.03	76.56

Source: Annual Reports and Accounts of Sampled firms in Oil and Gas Sector

Table 4.2. Descriptive Statistics for Oil and Gas Firms

	LPAT	CAGR	AAGR
Mean	14.03792	55.70000	72.84678
Median	14.27199	57.99000	76.11000
Maximum	18.79675	84.64000	86.31000
Minimum	8.775395	21.63000	45.12000
Std. Dev.	2.214192	17.04626	8.695147
Skewness	-0.507805	-0.559327	-1.128423
Kurtosis	3.346142	2.555008	3.741176
Jarque-Bera	2.830223	3.563122	13.87163
Probability	0.242899	0.168375	0.000972
Sum	828.2375	3286.300	4297.960
Sum Sq. Dev.	284.3535	16853.34	4385.123
Observations	60	60	60

Source: Author's Computation from Eviews 10.0 Statistical Software

The variable description of the 60 panel data observations for the selected companies in Nigeria's oil and gas firms is shown in Table 4.2 above. Profit for the Year (8.775395), Current Asset Growth Rate (21.63000), and Annual Asset Growth Rate (45.12000),are the minimums for the oil and gas firms, according to the data.

The Maximum for the oil and gas firms, however, is 18.79675 for Profit for the Year; 94.40000 for Current Asset Growth Rate; 86.31000 and for Annual Asset Growth Rate; and 87.41000 . Profit for the Year (14.03792), Current Asset Growth Rate (55.70000), Annual Asset Growth Rate (72.84678), are the industry means for the variables examined.

The coefficients of skewness, kurtosis, and Jarque-Bera probability demonstrate the normalcy of the data series' distribution. The likelihood of the Jarque-Bera Statistics for, Total Asset Growth Rate, Current Asset Growth Rate and Compound Annual Growth Rate is shown in Table 4.2 and has insignificant p-values of 0.496943, 0.651380, and 0.136912. The normal distribution of the variables is indicated by the negligible p-values.

The kurtosis coefficient further confirmed that Total Asset Growth Rate, Current Asset Growth Rate and Compound Annual Growth Rate are normally distributed with coefficients that are around two, Current Asset Growth Rate (5.742684) and Compound Annual Growth Rate (2.777461), and the skewness coefficients, which are not greater than one, with the

following outcomes: Current Asset Growth Rate (0.251152)

Table 4.3: Pearson Correlation Matrix Results

	LPAT	CAGR	AAGR
LPAT	1	-0.22453	-0.0029
CAGR	-0.22453	1	-0.0598
AAGR	-0.00297	-0.05984	1

Source: Author's Computation from Eviews 10.0 Statistical Software

Most regression models use a correlation matrix to examine the relationship between each explanatory variable (CAGR, and AAGR) and the dependent variable (PAT) as well as to test for multicollinearity. The relationship between Profit for the Year and the independent variables — CAGR, and AAGR — was the main topic of Table 4.3. one of our independent variables (CAGR = 0.02370) were found to be positively associated with Profit for the Year, according to the correlation matrix table findings, while the remaining independent variables (CAGR = -0.22453, AAGR = -0.00297) were found to be negatively associated with Profit for the Year.

Table 4.4: Regression Result for the selected firms

Dependent Variable: LPAT
Method: Panel Least Squares
Date: 06/01/24 Time: 15:19
Sample: 2013 2022
Periods included: 10
Cross-sections included: 6
Total panel (unbalanced) observations: 59

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CAGR	-0.017164	0.016739	-1.025368	0.3098
AAGR	-0.037663	0.031910	-1.180276	0.2432
C	21.53769	3.324501	6.478473	0.0000

R-squared	0.283642	Mean dependent var	14.03792
Adjusted R-squared	0.216061	S.D. dependent var	2.214192
S.E. of regression	1.960453	Akaike info criterion	4.280372
Sum squared resid	203.6989	Schwarz criterion	4.491647
Log likelihood	-120.2710	Hannan-Quinn criter.	4.362845
F-statistic	4.197074	Durbin-Watson stat	0.488118
Prob(F-statistic)	0.002752		

Source: Author's Computation from Eviews 10.0 Statistical Software

Regression coefficient : $PAT_{it} = 21.53769 - 0.017164 - 0.037663 + 0.007397$

Interpretation of Regression Coefficient

The Oil and Gas firm coefficient of regression results are displayed in Table 4.4. For Compound Annual Growth Rate, the coefficient of Profit for the Year is positive; however, for Total Asset Growth Rate; Non-Current Asset Growth Rate; Current Asset Growth Rate; and Annual Asset Growth Rate; it is negative. This means that, for every unit of change in the explanatory variables of asset growth rate that are explained by Compound Annual Growth Rate, the firms PAT will increase by 0.002397. Conversely, for every unit of change in the explanatory variables of asset growth rate that are explained by Current Asset Growth Rate and Annual Asset Growth Rate, the firms PAT will decrease by , -0. 017164, -0.017164 and further decrease by -0.037663.

The regression model is well specified, as evidenced by the F-statistics of 4.197074 and its P-value of (0.002752), and the R-squared and its adjusted R-squared values in table 4.4 were (0.283642) and (0.216061), respectively, indicating that all the independent variables together explain about 79% of the systematic variations in Profit for the Year (EPS) of firms in oil and gas firms over the ten years (2013-2022), with the error term Accounting for 21% of the systematic variations.

Test of Hypotheses

In other to examine the effect of the dependent variable EPS and the independent variables (CAT and ART) and to also test the formulated hypotheses given, the study used multiple regression analysis, because the data had both time series (2013-2022) and cross-sectional properties (6 quoted oil and gas firms in Nigeria). The result of the regression analysis is presented in table 4.4 and is interpreted below.

Decision Rule:

Reject Ho if the P-Value cal< 0.05 at 5% level of significance. Otherwise, accept the null hypothesis (Ho).

Hypothesis One: Current asset growth rate has no significant effect on the Profit for the year of firms in Nigeria.

Decision: Current asset turnover has a negative impact on the oil and gas firms'Profit for the Year (PFY), according to the panel regression analysis in Table 4.4. This impact is statistically insignificant at the 5% level of significance because the P-value is outside of this range. The analysis was based on the t-value of -1.025368 and P-value of 0.3098. This result, therefore suggests that we should accept our null hypothesis three (H_3) which states thatCurrent asset growth rate has no significant effect on the Profit for the year of firms in Nigeria.

Hypothesis two: Annual Asset Growth Rate has no significant effect on the Profit for the year of firms in Nigeria.

Decision: Based on the t-value of -1.180276 and P-value of 0.2432 from the panel regression analysis in Table 4.4, it was discovered that Annual Asset Growth Rate negatively affects the Profit for the Year (PFY) of the health care sector. However, this influence is statistically insignificant at the 5% level of significance because the P-value is outside of the 5% significance level. This result, therefore suggests that we should accept our null hypothesis four (H_{04}) which states that Annual Asset Growth Rate has no significant effect on the Profit for the year of firms in Nigeria.

Discussion of Findings

The findings were discussed as follows:

Current Asset Growth Rate and Profit for the year

The result equally indicated that Current asset growth rate has no significant effect on the Profit for the year of firms in Nigeria (where t-value of -1.025368 and P-value of 0.3098). The finding that the current asset growth rate has no significant effect on the profit for the year of firms in Nigeria (t-value of -1.025368 and p-value of 0.3098) suggests that changes in current assets, such as cash, inventories, and receivables, do not directly influence profitability. This result is consistent with some previous empirical studies, yet contrasts with others, highlighting the nuanced nature of asset management's impact on firm performance. For instance, the study by Wang (2002) found that efficient management of current assets, particularly working capital, is crucial for maintaining liquidity and operational efficiency. However, Wang also noted that merely increasing current assets without improving efficiency does not necessarily translate to higher profitability. This aligns with the current finding, indicating that growth in current assets alone is insufficient for boosting profits.

Contrarily, studies such as those by Shin and Soenen (1998) highlighted a positive relationship between working capital management and profitability, suggesting that firms that optimize their current assets tend to perform better financially. The discrepancy between these findings and the current study could be attributed to differences in market dynamics, economic conditions, and firm-specific factors in Nigeria compared to other regions. In the Nigerian context, the non-significant p-value (0.3098) suggests that firms may not effectively leverage current asset growth to enhance profitability. Factors such as inefficiencies in inventory management, receivables collection, and cash utilization could explain this lack of impact. Moreover, Nigerian firms might face external challenges, such as economic instability and market volatility, which affect

the effectiveness of current asset management. In conclusion, while efficient management of current assets is theoretically important, the current findings indicate that growth in current assets alone does not significantly impact profitability for Nigerian firms. This underscores the need for a holistic approach to asset management that integrates both current and long-term assets strategically to drive profitability.

Annual Asset Growth Rate and Profit for the year

The result of hypothesis four showed that Annual Asset Growth Rate has no significant effect on the Profit for the year of firms in Nigeria (Based on the t-value of -1.180276 and P-value of 0.2432).The finding that the annual asset growth rate has no significant effect on the profit for the year of firms in Nigeria (t-value of -1.180276 and p-value of 0.2432) suggests that changes in the overall asset base, both current and non-current, do not directly influence profitability. This result provides an interesting perspective compared to previous empirical studies on asset growth and firm performance.

For instance, McConnell and Muscarella (1985) found a positive relationship between capital investment (a form of asset growth) and firm value in their study of American firms. They argued that well-planned asset growth could enhance a firm's productive capacity and competitive advantage, leading to increasedi. profitability. However, the lack of significance in the Nigerian context may highlight different economic dynamics and challenges that affect how asset growth translates into profit. Similarly, a study by Titman, Wei, and Xie (2004) noted that while asset growth could be beneficial, excessive or poorly managed asset expansion might lead to inefficiencies and decreased returns. This aligns with the current finding, suggesting that without effective asset management strategies, growth in theii. asset base alone is insufficient for enhancing profitability.

Summary of Findings, Conclusion and Recommendations

Summary of Findings

The findings of the study were as follows:

i. Equally, the finding indicated that Current asset growth rate has no significant effect on the Profit for the year of firms in Nigeria (where t-value of -1.025368 and P-value of 0.3098). This suggests that changes in current assets, such as cash, inventories, and receivables, do not directly influence profitability.
ii. It was found that Annual Asset Growth Rate has no significant effect on the Profit for the year of firms in Nigeria (Based on the t-value of -1.180276 and P-value of 0.2432). This suggests that changes in the overall asset base, both current and non-current, do not directly influence profitability

Conclusion

The study concludes that asset growth rate plays a significant role in influencing the financial performance of firms in Nigeria. When firms expand their asset base through well-planned and efficiently utilized investments, asset growth contributes positively to profitability and overall financial performance. However, unproductive or poorly managed asset expansion can weaken returns and strain financial resources. Therefore, the impact of asset growth on firm performance in Nigeria largely depends on effective asset utilization, sound investment decisions, and the prevailing economic environment.

Recommendations

Because of the finding and conclusion, the following recommendations were made:

Given the lack of significant impact of current asset growth on profitability, Nigerian firms should prioritize optimizing current asset management practices. This includes improving inventory control, streamlining receivables management, and maximizing cash flow efficiency. By enhancing operational effectiveness and liquidity management, firms can mitigate the potential drawbacks of current asset growth and improve overall financial performance.

In light of the non-significant effect of annual asset growth rate on profitability, Nigerian firms should focus on ensuring efficient allocation of resources and strategic planning. This involves carefully evaluating investment opportunities, prioritizing projects with the potential for high returns, and monitoring asset utilization closely. By adopting a prudent approach to asset growth and investment, firms can enhance their financial performance and long-term sustainability.

References

Afza, T., and Nasir, M.S. (2007). Is it better to be aggressive or conservative in managing working capital? *Journal of Quality and Technology Management*, 3(2), 11-21.

Agbogun, S. A. and Taiwo, J. A. (2020).Asset Efficiency and Financial Performance of Manufacturing Firms Quoted on Nigerian Stock Exchange. *Caleb International Journal of Development Studies.* 3(1), 117-138.

Ajibola, M. O., and Adebayo, A. (2014). Asset Growth and Firm Performance in Nigeria, Evidence from Manufacturing Sector. *Journal of Business Management and Economic Research*, 3(5), 074-086.

Anjili, F. (2016). Liquidity management, operating performance, and corporate value: evidence from Japan and Taiwan. *Journal of Multinational Financial Management*, 12, 159–169

Brealey, R. A., Myers, S. C., Allen, F., & Mohanty, P. (2017). Principles of Corporate Finance. McGraw-Hill Education.

Brealey, R. A., Myers, S. C., and Allen, F. (2017). Principles of corporate finance. McGraw-Hill Education.

Brigham, E. F., and Ehrhardt, M. C. (2013). Financial management: Theory & Practice. Cengage Learning.

Brigham, E. F., and Houston, J. F. (2012*). Fundamentals of financial management*. Cengage Learning.

Fu, R., Kraft, A., and Zhang, H. (2012). Financial reporting frequency, information asymmetry, and the cost of equity. *Journal of Accounting and Economics, 54*(3), 132- 149.

Inyiama, O. I, Ugbor, R, O. and Chukwuani, V. N. (2017)**.** Evaluation of the relationship between assets growth rate and financial performance of manufacturing firms in Nigeria. *International Journal of Managerial Studies and Research (IJMSR),**5 (10) 63-73***

Ishmael, O., and Kehinde, J. S. (2013). Profitability analysis trend of components of current assets and their prospects in Ajaokuta iron industry. *eCanadian Journal of Accounting and Finance, 1*(2), 28-37.

Li, D. (2004). *The implications of capital investments for future profitability and stock returns-an overinvestment perspective*. Retrieved from http://bschool.nus.edu/departments/Financ e and Accounting/ DonglinLi

Melbury S. K., Abdulmalik Y., and Halima S. (2022). Assets utilization and financial performance of pharmaceutical companies in Nigeria (A case study of Fidson Healthcare Plc). *International Journal of Intellectual Discourse, 5(1), 318-329.*

Nurlaela, S., Mursito, B., Kustiyah, E., Istiqomah, I., and Hartono, S. (2019). Asset turnover, capital structure and financial performance consumption industry company in Indonesia stock exchange. *International Journal of Economics and Financial Issues*, *9*(3), 297-301

Ofor T. N. and Farajimakim, A. S. (2020). Effect of assets utilization of net worth of big cap companies quoted in Nigeria, *Journal of Accounting, Business and Social Sciences,* **3(**1), 1-17.

Singh, J., and Pandey, S. (2008). Impact of working capital management in the profitability of Hindalco Industries Limited. *ICFAI journal of financial Economics,* 6(4).

Stulz, R. M., & Williamson, R. (2003). Culture, Openness, and Finance. Journal of Financial Economics, 70(3), 313-349.

Watson, D., and Head, A. (2013). *Corporate finance principles and practice* (4th ed.). England: Pearson Education Limited