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EARNINGS PER SHARE AND FINANCIAL PERFORMANCE OF LISTED ICT FIRMS IN NIGERIA: A PANEL STUDY

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ABSTRACT: The study examined the relationship between earnings per share and the financial performance of listed information and communication technology in Nigeria: A Panel Study. The specific objective was to ascertain the extent to which earnings per share relates to the net profit margin, return on asset and the asset turnover of listed ICT firms in Nigeria. This study utilised an ex-post facto research design. The study's population comprises all ICT firms listed on the Nigerian Exchange Group as of the end of the 2023 financial year. The purposive sampling technique was employed to select five (5) firms. Secondary data for this research were obtained from the financial statements of the selected firms from 2014 to 2023. Descriptive statistics, including mean and standard deviation, were used to analyse the data. For hypothesis testing, inferential statistical analysis was conducted using the Pearson Product Moment Correlation Analysis technique. The findings show that Earnings Per Share has a negative but non-significant relationship with the net profit margin of listed ICT firms in Nigeria (r = -0.161723; p-value = 0.2885); Earnings Per Share has a positive but non-significant relationship with the return on assets of listed ICT firms in Nigeria (r = 0.255900; p-value = 0.0898); Earnings Per Share has a positive and significant relationship with the asset turnover ratio of listed ICT firms in Nigeria (r = 0.486598; p-value = 0.0007).In conclusion, while EPS positively influences Return on Assets and Asset Turnover Ratio, indicating improved asset efficiency and sales effectiveness, its negative relationship with Net Profit Margin suggests potential trade-offs between short-term earnings enhancement and long-term profitability. The study recommends that the board of directors should prioritise strategies that enhance operational efficiency rather than focusing solely on increasing EPS through financial manoeuvres like share buybacks.

Keywords: Asset Efficiency, Financial Performance, Information and Communication Technology, Sales Effectiveness

Background to the Study

Given the ongoing transformations within the global economic arena, the role of Information and Communication Technology (ICT) corporations has become more vital than ever (Agbeyangi et al., 2024). These firms play a crucial role in driving innovation, productivity, and overall economic growth. Nigeria, a prominent African nation, has witnessed a surge in the establishment and growth of ICT firms over the past few decades (Okonkwo et al., 2023). These firms have not only contributed significantly to the country's GDP but have also played a pivotal role in transforming various sectors such as finance, healthcare, education, and telecommunications.

As Nigeria embraces the digital age and positions itself as a regional ICT hub, it becomes imperative to understand the financial dynamics and performance metrics of the listed ICT

firms operating within its borders (Ogiriki et al., 2023). Among the multitude of financial indicators used to gauge the performance of these firms, earnings per share (EPS) stands out as a fundamental metric (Kim et al., 2023). EPS is a crucial measure that indicates the profitability of a company and directly impacts its shareholders' returns (Nwori et al., 2023). Understanding the relationship between EPS and the financial performance of listed ICT firms in Nigeria holds substantial significance for investors, policymakers, and stakeholders alike.

Sound financial performance is essential for the sustained growth and stability of any organisation, including ICT firms (Midiwo et al., 2018). Firstly, a robust financial performance ensures the availability of adequate resources to support ongoing operations and strategic initiatives. It allows firms to invest in research and development, innovation, and infrastructure, which are crucial for maintaining competitiveness in the rapidly evolving ICT sector. With sound financial performance, firms can pursue growth opportunities, such as expanding into new markets, developing new products or services, or acquiring complementary businesses, thereby strengthening their market position and revenue streams (Agoraki et al., 2023).

Secondly, sound financial performance instils confidence among investors, creditors, and other stakeholders. A track record of profitability, liquidity, and solvency enhances a firm's credibility and attractiveness to potential investors, facilitating access to capital at favourable terms (Bertuah et al., 2019). This access to funding enables ICT firms to finance expansion plans, undertake strategic investments, and navigate economic downturns or unforeseen challenges effectively. Moreover, sound financial performance enhances the firm's ability to fulfil its obligations, such as servicing debt, paying dividends, and honouring contractual agreements, thereby fostering trust and long-term relationships with stakeholders (Salamah, 2023; et al., 2023). Generally, sound financial performance not only drives operational efficiency and strategic agility but also reinforces the firm's reputation and resilience in the marketplace.

Earnings per share is a financial metric that represents the portion of a company's profit allocated to each outstanding share of common stock (Chibuike et al., 2023). It is calculated by dividing the company's net income by the total number of outstanding shares. EPS is a critical measure for investors as it provides hints into a company's profitability on a per-share basis (Ogiriki et al., 2023). Additionally, EPS serves as an essential component in determining a company's valuation and influencing investor sentiment (Sari et al., 2023). In the context of listed ICT firms in Nigeria, EPS holds particular relevance due to the dynamic nature of the industry. These firms operate in a highly competitive environment characterised by rapid technological advancements and evolving consumer preferences. As such, investors closely monitor EPS to assess the financial health and growth potential of ICT firms. A higher EPS typically signifies increased profitability and may attract more investors, driving up the firm's stock price. Conversely, a lower EPS may raise concerns about the company's performance and future prospects (Nworie et al., 2023).

The impact of earnings per share (EPS) on financial performance is multidimensional. Firstly, a higher EPS indicates that a company is generating more profits relative to its outstanding shares, thereby enhancing shareholder value (Yusri et al., 2023). This increased profitability can lead to higher dividends or reinvestment in the business for further growth and expansion initiatives. Moreover, EPS influences investor perceptions and market sentiment towards a company. A consistently high or improving EPS often signals sound financial management and operational efficiency, instilling confidence among investors and

potentially attracting new capital (Mareta et al., 2023). On the contrary, a declining or lower-than-expected EPS may trigger investor concerns, leading to a decrease in stock price and overall market capitalization. EPS directly influences a company's stock price. Investors often use EPS as a basis for valuing stocks, particularly in the context of price-to-earnings (P/E) ratio analysis. The P/E ratio, calculated by dividing the market price per share by the EPS, provides insights into how much investors are willing to pay for each dollar of earnings. A high EPS and low P/E ratio generally suggest that a stock may be undervalued, while a low EPS and high P/E ratio may indicate overvaluation (Avdalovic et al., 2017).

Furthermore, EPS serves as a critical performance benchmark for firms in Nigeria to assess their competitiveness and sustainability within the industry. By analysing EPS trends over time and comparing them with industry peers, firms can identify areas for improvement, optimize resource allocation, and formulate strategic plans to enhance their financial performance. In essence, the influence of earnings per share on financial performance underscores the interconnectedness between profitability, investor perception, and long-term sustainability. Understanding and effectively managing EPS is essential for these firms to thrive in a dynamic and competitive market environment while creating value for shareholders and stakeholders alike. It is against the able background that this study examines the relationship between earnings per share and the financial performance of listed ICT firms in Nigeria: A Panel Study.

Statement of Problem

Earnings per share (EPS) serve as a reliable indicator of firms' financial performance since, by typically correlating with strong profitability, it indicates efficient operations and value creation for shareholders (Arsal et al. 2021). Firms with high earnings per share attract investor interest, fostering capital inflow for further growth and innovation. Additionally, a favourable EPS would enhance market confidence, leading to increased market capitalization and overall industry stability (Khan, Islam, et al. 2014).

However, despite efforts to maintain profitability, some firms still struggle to achieve significant EPS growth due to operational inefficiencies, technological disruptions, or unfavourable market conditions (Ogiriki et al. 2023). As a result, investors may perceive these firms as less attractive investment opportunities, leading to reduced capital inflow and potential liquidity issues. Moreover, discrepancies in EPS performance across firms within some sectors may create uncertainties and volatility in the market, undermining investor confidence and industry sustainability.

As a consequence, firms experiencing stagnant or declining EPS may face challenges in raising capital for essential investments, hindering their ability to innovate and compete effectively in the market. Furthermore, a lack of investor confidence stemming from perceived weaknesses in EPS performance can trigger stock price depreciation and erosion of shareholder value. This downward spiral may exacerbate financial instability within the sector, impeding its overall contribution to economic growth and development. This issue enunciated above prompted the researcher to assess the relationship between earnings per share and the financial performance of listed ICT firms in Nigeria. Even though previous authors such as Moseri et al. (2024); Ogiriki et al. (2023), Mareta et al. (2023), Onyeka-Iheme (2023); Ilham et al. (2023), Kuryłek (2023); Muhammad (2022); Aigienohuwa et al. (2022); et cetera examined the similar issue, they did not incorporate both returns on asset, net profit margin and asset turnover into their response variables, thereby leaving a gap in the literature to be filled by the present study.

Objective of the Study

The general objective of the study is to examine the relationship between earnings per share and the financial performance of listed information and communication technology in Nigeria: A Panel Study. The specific objectives are:

1. To ascertain the relationship between earnings per share and the net profit margin of listed ICT firms in Nigeria.
2. To examine the relationship between earnings per share and the return on asset of listed ICT firms in Nigeria.
3. To ascertain the relationship between earnings per share and the asset turnover of listed ICT firms in Nigeria.

Research Questions

1. What is the relationship between earnings per share and the net profit margin of listed ICT firms in Nigeria?
2. To what extent do basic earnings per share relate to the return on assets of listed ICT firms in Nigeria?
3. To what degree does price-earnings per share relate to the asset turnover ratio of listed ICT firms in Nigeria?

Research Hypotheses

i. H0: Earnings per share have no significant relationship with the net profit margin of listed ICT firms in Nigeria.
ii. H0: Earnings per share does not significantly relate to the return on assets of listed ICT firms in Nigeria.
iii. H0: Earnings per share does not significantly relate to the asset turnover of listed ICT firms in Nigeria.

Scope of the study

The current research investigates the relationship between earnings per share and firms' financial performance. The sector in which this study specifically focuses is Nigerian-listed information and communication technology firms. The study analyses a comprehensive dataset spanning ten accounting years, ranging from 2014 to 2023. Proxies for financial performance are net profit margin, return on asset and return on equity.

Limitations of the study

Throughout the duration of this research endeavour, the researcher encountered various obstacles that notably impacted the data collection process. The principal challenge arose from the arduous task of acquiring requisite statistics, exacerbated by the insufficient research infrastructure prevalent in the country. Particularly challenging was the constrained availability of comprehensive financial statements from ICT companies, which proved to be a significant impediment. Notably, it was observed that certain companies failed to fully disclose their financial statements on the Nigerian Exchange Group's website. As a result, these companies had to be left out of the study to make sure the results were accurate and reliable. However, this might mean that the research is not as complete or fair as it could be. Despite these tough

challenges, the researcher worked hard to make sure the data used for analysis was still good quality, using all the resources available to them to try to lessen the impact of these problems.

LITERATURE REVIEW

Conceptual Review

Earnings Per Share

Earnings per share (EPS) is a financial metric that represents the portion of a company's profit allocated to each outstanding share of common stock (Chibuike, Amahalu & Samuel, 2023). It is a fundamental metric used by investors, analysts, and stakeholders to evaluate a company's financial performance (Olayinka & Mustapha, 2022). EPS serves as a key indicator of a company's profitability and plays a crucial role in investment decisions. EPS is calculated by dividing a company's net income by the total number of outstanding shares (Onyeka-Iheme, 2023). EPS serves as a vital measure of a company's profitability and its ability to generate earnings for its shareholders. It reflects the portion of a company's profit allocated to each outstanding share of common stock. A higher EPS indicates higher profitability and potential for shareholder returns. Therefore, EPS is a critical factor influencing investor sentiment, stock prices, and overall market valuation (Sari, Ozdagli & Knudsen, 2023).

EPS expressively affects investor confidence and perceptions about a company's financial health. Consistently increasing EPS over time signals strong financial performance and operational efficiency, instilling confidence among investors and attracting new shareholders. Conversely, declining or negative EPS may raise concerns about a company's profitability, leading to investor apprehension and potential sell-offs. EPS considerations often shape corporate strategies and decision-making processes. Management teams prioritise initiatives aimed at enhancing profitability and EPS growth to satisfy investor expectations and maintain or improve stock performance. Strategies may include cost-cutting measures, revenue optimisation, expansion into new markets, or strategic acquisitions aimed at bolstering earnings and shareholder value (Olayinka et al., 2022).

EPS is a key factor in capital allocation decisions within companies (Yusri et al., 2023). Management teams must balance investments in growth opportunities, such as research and development, capital expenditures, and marketing initiatives, with the goal of maximising EPS and shareholder returns. Strategic capital allocation decisions that effectively enhance EPS can lead to sustainable long-term growth and competitive advantage. EPS influences a company's ability to secure debt financing at favourable terms. Lenders and creditors often assess a company's earnings and profitability metrics, including EPS, when evaluating creditworthiness and determining borrowing costs. Higher EPS and strong financial performance may enable companies to access debt capital at lower interest rates, reducing financing expenses and improving overall financial flexibility (Olayinka et al., 2022).

EPS considerations extend beyond investors to encompass various stakeholders, including employees, customers, suppliers, and regulators. A company's financial performance, as reflected in its EPS, can impact employee morale, customer confidence, supplier relationships, and regulatory compliance (Onyeka-Iheme, 2023). This makes maintaining a healthy EPS crucial for fostering positive stakeholder relationships and sustaining long-term business success (Sari et al., 2023). Therefore, Earnings Per Share is a critical metric that plays a pivotal role in determining a company's financial performance, investor sentiment, and market

valuation. Its impact extends beyond investors to encompass various stakeholders and influences corporate strategies, capital allocation decisions, and financing opportunities. Companies must prioritise initiatives aimed at enhancing EPS growth to drive sustainable shareholder value and maintain competitive advantage in dynamic market environments. Diluted Earnings Per Share (Diluted EPS) adjusts the earnings per share figure to reflect the potential impact of dilutive securities, such as stock options, convertible bonds, or preferred stock, on the company's outstanding shares (van Zyl et al., 2022). Diluted EPS represents a crucial financial metric utilised by investors and analysts alike to assess a company's profitability and performance, and it serves as an adjustment to the basic earnings per share figure, offering a more comprehensive view by incorporating the potential impact of dilutive securities on the company's outstanding shares

(Robbetze et al., 2015). Dilutive securities, which encompass a variety of financial instruments such as stock options, convertible bonds, or preferred stock, possess the capability to increase the number of shares outstanding if exercised or converted into common stock (Edem, Ekwe & Azubike, 2018).

Consequently, the Diluted EPS calculation factors in the potential conversion of these securities into additional common shares, thereby providing a more conservative estimate of earnings per share (Rashty, 2018). By accounting for the potential dilution effect caused by these securities, Diluted EPS offers investors a clearer understanding of the company's earnings potential in scenarios where all dilutive securities are exercised or converted. This metric holds particular significance in evaluating the company's ability to generate earnings while considering the potential impact of securities that could increase the number of shares outstanding.

Moreover, Diluted EPS serves as a critical tool for stakeholders in making informed investment decisions, as it provides insights into the company's earnings potential under various scenarios of securities conversion or exercise. Additionally, regulators and financial analysts rely on Diluted EPS to ensure transparency and accuracy in financial reporting, thereby enhancing the overall credibility and reliability of financial statements (Rashty, 2018). In summary, Diluted EPS plays a pivotal role in financial analysis, offering a more particular perspective on a company's earnings per share by incorporating the potential impact of dilutive securities on its outstanding shares. Basic Earnings Per Share (Basic EPS) is a measure of a company's earnings per share calculated using only the number of outstanding common shares without considering the impact of potentially dilutive securities. Basic EPS stands as a fundamental indicator in financial analysis, offering hints into a company's profitability on a per-share basis (Robbetze, 2015). It represents a pivotal metric used by investors, analysts, and stakeholders to gauge the company's earnings potential and performance.

Calculated by dividing the company's net income attributable to common shareholders by the weighted average number of outstanding common shares during a specific period, Basic EPS provides a straightforward assessment of earnings per share without factoring in the potential impact of securities that could dilute ownership. This simplicity in calculation renders Basic EPS an easily accessible metric for investors seeking to evaluate a company's earnings relative to its outstanding shares. By focusing solely on the common shares outstanding, Basic EPS provides a clear and concise snapshot of the company's ability to generate earnings per share for its common shareholders (McEnroe & Sullivan, 2018).

However, it is essential to recognise that Basic EPS may not provide a comprehensive view of a company's earnings potential, as it does not consider the potential dilution effect of securities

such as stock options, convertible bonds, or preferred stock. While Basic EPS serves as a valuable starting point for evaluating a company's profitability, investors often turn to Diluted EPS for a more conservative estimate that factors in the potential impact of these dilutive securities.

Nonetheless, Basic EPS remains a critical metric in financial reporting, serving as a foundational component in assessing a company's financial health and performance. Its straightforward calculation and accessibility make it a widely utilised tool for investors and analysts in their decision-making processes. Moreover, Basic EPS aids in enhancing transparency and comparability in financial reporting, thereby contributing to the overall integrity and reliability of financial statements (Robbetze, 2015). In essence, Basic EPS serves as a cornerstone in financial analysis, providing a fundamental measure of a company's earnings per share and facilitating informed investment decisions.

Financial Performance

Financial Performance refers to the assessment of a company's ability to generate profits and create value for its stakeholders (Midiwo & Ombui, 2018). It encompasses a comprehensive evaluation of a company's operational effectiveness, profitability, and overall financial health, serving as a crucial barometer of its success and sustainability in the marketplace. In essence, financial performance encapsulates the company's ability to generate profits and create value for its stakeholders, including shareholders, employees, customers, and creditors. This concept extends beyond mere profit generation to encompass a holistic assessment of various financial metrics, operational efficiencies, and strategic initiatives undertaken by the company (Ilham, Akhyar & Maimunah, 2023).

One of the primary components of financial performance assessment is profitability analysis, which involves the measurement of the company's ability to generate profits relative to its revenue, assets, and invested capital. Profitability metrics such as net income margin, return on assets (ROA), return on equity (ROE), and gross profit margin offer hints into the company's efficiency in utilising its resources to generate earnings and create value for shareholders (Olayinka & Mustapha, 2022). A company with strong financial performance typically exhibits healthy profitability metrics, indicating efficient operations, effective cost management, and robust revenue generation strategies.

Moreover, financial performance evaluation encompasses an examination of the company's liquidity, solvency, and financial stability (Avdalovic & Milenković, 2017). Assessing the financial health indicators enables stakeholders to gauge the company's resilience to financial risks and economic uncertainties. Furthermore, financial performance evaluation extends to the analysis of operational efficiency, asset utilisation, and investment returns. In addition to financial metrics, qualitative factors such as corporate governance practices, market competitiveness, industry trends, and strategic positioning also influence financial performance assessment. A company's strategic initiatives, innovation capabilities, brand reputation, customer satisfaction, and employee engagement play pivotal roles in shaping its financial performance and creating long-term value for stakeholders.

Generally, financial performance evaluation serves as a critical tool for stakeholders in assessing the company's past performance, identifying areas of strength and weakness, and making informed decisions regarding investment, financing, and strategic planning (Onyeka-Iheme, 2023). By analysing a comprehensive array of financial and non-financial factors,

stakeholders can gain a holistic understanding of the company's overall health, resilience, and potential for future growth and value creation.

Net Profit Margin

Net profit margin is a key financial metric used to evaluate a company's profitability and overall financial health (Arhin, 2018). It represents the proportion of revenue that remains after all operating expenses, interest, taxes, and costs associated with running the business have been deducted from total sales. Essentially, it indicates how much profit a company generates from its total revenue. This measure is expressed as a percentage and is calculated by dividing net profit by total revenue and then multiplying the result by 100. A higher net profit margin reflects a more profitable company that is efficient at converting revenue into actual profit.

In the calculation of net profit margin, net profit—or net income—is derived by subtracting all costs and expenses from total revenue. These expenses include the cost of goods sold (COGS), which covers direct costs attributable to the production of the goods sold by the company, operating expenses such as salaries, rent, utilities, and administrative costs, as well as interest expenses on debt and taxes owed to the government. By accounting for these deductions, the net profit margin provides a comprehensive view of a company's ability to manage its expenses relative to its revenue.

This metric is critical for various stakeholders, including investors, management, and analysts, as it provides insights into the company's efficiency in controlling costs and maximising profitability. A consistently high net profit margin can indicate a strong competitive position, effective cost management, and the ability to withstand economic downturns. Conversely, a low or declining net profit margin may signal financial difficulties, poor expense management, or increased competition, prompting stakeholders to investigate further into the underlying reasons.

Net profit margin is also instrumental in comparative analysis. It allows stakeholders to compare profitability across companies within the same industry, regardless of their size. This is particularly useful for investors who are looking to allocate capital to the most profitable companies. Additionally, trends in net profit margin over time can reveal changes in a company’s operational efficiency, pricing strategies, and overall market conditions. Companies with improving net profit margins over time are generally seen as well-managed and growing, while those with declining margins may need to reassess their business strategies.

Thus, net profit margin is a crucial indicator of a company’s financial performance, revealing the percentage of revenue that remains as profit after all expenses have been accounted for. It offers valuable insights into the company's cost management, pricing strategies, and overall efficiency. As such, it is a fundamental metric for stakeholders to assess profitability, make informed investment decisions, and gauge the company’s long-term viability and competitive strength. This net profit margin is calculated using the formula below:

Net profit margin = $\frac{Net\ Profit}{Sales}$

Return on Asset

Return on Assets (ROA) is a critical financial ratio that evaluates a company's efficiency in generating profit from its assets (Arhin, 2018). Specifically, it measures the percentage of net income produced relative to the total assets owned by the company (Baciu & Brezeanu, 2018). This ratio provides insight into how effectively a company's management is utilising its assets to generate earnings. ROA is calculated by dividing net income by total assets and expressing the result as a percentage. This straightforward calculation yields powerful insights into a company's operational efficiency and overall profitability.

Net income, the numerator in the ROA calculation, represents the company's total profit after all expenses, including operating costs, interest, taxes, and depreciation, have been subtracted from total revenue. This figure reflects the actual earnings available to shareholders and provides a clear picture of the company's profitability. The total assets, the denominator, encompass everything the company owns that has value, including cash, inventory, property, equipment, and receivables. By comparing net income to total assets, ROA reveals how well the company is turning its investments in assets into profits.

The importance of ROA lies in its ability to provide a snapshot of a company's efficiency in using its resources (Aslamiah, Karyatun & Digdowiseiso, 2023). A higher ROA indicates that the company is proficient at converting its investments in assets into net income. This is particularly valuable for investors and analysts who seek to identify companies that are making the most effective use of their resources. For management, a high ROA signals that the company is successfully leveraging its assets to generate profit, while a low ROA may indicate inefficiencies that need to be addressed.

ROA is particularly useful for comparing companies within the same industry. Because industries vary significantly in terms of capital intensity, comparing ROA across different industries can be misleading. However, within a specific industry, ROA can highlight which companies are performing better in terms of asset utilization. For instance, in asset-heavy industries like manufacturing or utilities, where significant investments in equipment and infrastructure are required, a robust ROA is a sign of effective management and operational efficiency.

Additionally, ROA trends over time can provide useful hints on a company's strategic decisions and operational changes. An increasing ROA over time suggests that a company is becoming more efficient in using its assets, which might be the result of improved management practices, successful cost-cutting measures, or effective deployment of new technology. Conversely, a declining ROA could signal underlying problems such as deteriorating asset quality, inefficient management, or increased competition, prompting a need for strategic reassessment.

Thus, Return on Assets is a vital financial metric that measures a company's ability to generate profit from its assets. It provides a clear indication of how efficiently a company is utilizing its resources to produce earnings. By examining ROA, investors, analysts, and management can gain crucial insights into the operational efficiency, strategic effectiveness, and overall financial health of a company. This ratio not only aids in comparative analysis within an industry but also helps in tracking performance trends over time, ultimately guiding better decision-making and investment strategies. This return on asset is calculated using the formula below:

Return on asset = $\frac{Net\ Profit}{Total\ Asset}$

Asset Turnover Ratio

The Asset Turnover Ratio is a vital financial metric that evaluates how efficiently a company utilizes its assets to generate sales revenue (Patin, Rahman & Mustafa, 2020). This ratio is calculated by dividing total sales (or revenue) by the average total assets of the company over a specific period. By measuring the relationship between a company's assets and its sales, the asset turnover ratio provides insight into the effectiveness of asset management and operational efficiency. Essentially, it indicates how well a company is leveraging its assets to produce revenue, serving as a key indicator of overall performance.

Total sales, the numerator in the asset turnover ratio, represent the revenue generated from the company's primary business activities during a given period. This includes all income from goods sold or services provided before any expenses are deducted. On the other hand, average total assets, the denominator, are calculated by taking the sum of the beginning and ending total assets for the period and dividing by two. This average provides a more accurate reflection of the assets utilized throughout the period, smoothing out any fluctuations that may occur.

The significance of the asset turnover ratio lies in its ability to reveal the efficiency with which a company's management is using its assets to drive sales (Patin, Rahman & Mustafa, 2020). A higher ratio indicates that the company is effectively using its assets to generate revenue, which can suggest strong management practices, effective utilization of resources, and a competitive advantage in the market. Conversely, a lower ratio may indicate underutilization of assets, inefficiencies in operations, or potential issues with inventory management, production processes, or sales strategies.

For investors and analysts, the asset turnover ratio is a crucial tool for assessing a company's performance. It allows them to compare the efficiency of different companies within the same industry, providing a basis for investment decisions. Since industries vary significantly in terms of asset requirements, the ratio is most meaningful when used to compare companies within the same sector. For example, a retail company with a high asset turnover ratio might be considered more efficient than its peers, as it generates more sales per unit of asset compared to others in the same industry.

The asset turnover ratio also plays a critical role in strategic decision-making within a company. Management can use this ratio to identify areas where assets may be underperforming or over utilized. For instance, a low asset turnover ratio might prompt a company to examine its asset base, looking for outdated or inefficient equipment, excess inventory, or other areas where improvements can be made. By addressing these inefficiencies, the company can improve its asset utilization, boost sales, and enhance overall profitability.

Over time, tracking the asset turnover ratio can provide hints on a company's operational trends and strategic outcomes. An improving ratio over multiple periods suggests that the company is becoming more efficient in using its assets to generate sales, which could be the result of successful strategic initiatives, improved management practices, or favorable market conditions (Patin, Rahman& Mustafa, 2020). Conversely, a declining ratio might signal operational challenges, strategic missteps, or adverse market trends, necessitating a review of business practices and strategies.

Thus, the asset turnover ratio is an essential financial metric that measures how efficiently a company uses its assets to generate sales revenue (Arhin, 2018). By examining this ratio, stakeholders can gain insights into a company's operational efficiency, asset management practices, and overall performance. It is a valuable tool for comparative analysis within industries, strategic decision-making, and tracking performance trends over time, ultimately helping to identify opportunities for improvement and growth. This asset turnover ratio is calculated using the formula below:

Asset turnover ratio = $\frac{Sales\ Revenue}{Total\ Asset}$

Theoretical Framework

Signaling Theory

Michael Spence introduced the signal theory in 1973 as a means to elucidate how management strategically communicates information about their firm's performance to entice potential investors to invest in their company (Ogiriki & Karinate, 2023). According to this theory, when a company announces an increase in its earnings per share (EPS), it signals to the market that it is performing well, thereby attracting a greater influx of investors. The underlying premise of the signal theory is to explore how individuals interpret signals and subsequently behave when exposed to the same message (Prasetiyo, 2022). Furthermore, the theory posits that companies often choose to disclose annual accounting information voluntarily as a means to signal their financial health to creditors, debtors, and investors, with the aim of eliciting specific reactions.

Signalling theory posits that in situations where information is asymmetric between two parties, such as investors and company management, individuals will utilize signals to convey credible information about their attributes or intentions (Onyeka-Iheme, 2023). In the context of financial markets, signalling theory suggests that companies strategically disclose information to investors to convey their financial health, future prospects, and managerial competence. These signals, such as dividend payments, earnings announcements, or changes in capital structure, are interpreted by investors as indicators of the company's underlying strength and performance potential (Ogiriki & Karinate, 2023). Signalling theory asserts that companies will selectively disclose positive signals to attract investors and signal their value, leading to enhanced investor confidence and potentially influencing stock prices and market perception.

Signalling theory is highly relevant to the study investigating the relationship between earnings per share (EPS) and the financial performance of listed ICT firms in Nigeria. According to signalling theory, firms use their financial performance indicators, such as EPS, to communicate information about their operational efficiency, profitability, and future prospects to investors and stakeholders (Prasetiyo, 2022). In the context of this study, high EPS figures can serve as a positive signal, suggesting that the listed ICT firms are generating healthy profits and have strong growth potential (Ogiriki & Karinate, 2023). This signal may attract investor interest, leading to increased demand for the firm's stock and potentially driving up its market value. Conversely, low or declining EPS figures may signal financial distress or operational challenges, which could erode investor confidence and negatively impact the firm's stock price. It is based on the above justification that this study is anchored on signalling theory.

Empirical Review

Moseri, Owualah, and Ogbebor (2024) examined the relationship between earnings per share (EPS) and share price dynamics among manufacturing firms in Nigeria from 2013 to 2022. Employing an ex-post facto research design, the study utilized a Granger causality test. Fifteen manufacturing firms were chosen, and data were gathered from their audited financial reports. Results were analysed at a 5 per cent significance level, revealing a bidirectional causality from EPS to Lagged Share Prices (LSP). The study recommends that Nigerian manufacturing firms focus on improving the transparency of their earnings reporting to enhance investor confidence and strengthen the relationship between EPS and share prices.

In their research, Ogiriki and Karinate (2023) investigated the effect of EPS and dividend per share (DPS) on the performance of listed ICT firms in Nigeria. Employing an ex-post facto research design, they aimed to establish causal connections between these variables. Data were sourced from publications by the Nigerian Exchange Group and annual reports of six ICT quoted firms. Descriptive statistics and panel regression (OLS) analysis were employed, covering the period from 2008 to 2019. The findings revealed a positive correlation between EPS, DPS, and the financial status and rating of the firms, suggesting that higher EPS and DPS corresponded to improved financial performance. The study recommends further research on these accounting ratios within the ICT sector of the Nigeria Exchange Group and advises management to implement strategies to enhance EPS and DPS, thereby bolstering the firms' position in the business landscape.

Equally, Mareta, Suryadi, and Barus (2023) examined the influence of EPS on stock return (SR) in Indonesia. Using purposive sampling with manufacturing companies listed on the Indonesia Stock Exchange from 2016 to 2020, they employed moderated regression analysis (MRA) to test variables. Document analysis was utilized to explore the theoretical model. Results indicated a negative effect of EPS on stock return.

Furthermore, Onyeka-Iheme (2023) evaluated the financial performance and EPS of consumer goods manufacturing companies quoted in Nigeria. Employing an ex-post facto research design, the study aimed to examine the effect of financial performance on EPS of Consumer Goods Manufacturing Companies (CGMC) Quoted in Nigeria. The population comprised 12 CGMCs listed on the Nigeria Exchange Group (NGX) as of April 30, 2021, with a purposively selected sample. Data from audited annual reports spanning 11 years (2009–2019) were used, ensuring validity and reliability. Regression tests revealed a positive and significant effect of ROA on EPS, while ROE showed an insignificantly negative effect on the EPS of CGMCs Quoted in Nigeria.

Moreover, Ilham, et al (2023) examined the effect of earnings management, profitability, capital structure, and liquidity on firm value within the building materials construction sub-sector companies listed on the Indonesia Stock Exchange from 2018 to 2021. Utilizing secondary data from financial statements of 16 companies within this sub-sector, the study employed multiple linear regression analysis using Eviews 12. Results indicated that while earnings management and liquidity showed no significant effect on firm value, profitability and capital structure exhibited a positive and significant effect on firm value.

Adding to the above, Kuryłek (2023) conducted a comparative analysis of forecast errors among different univariate time-series models applied to earnings per share (EPS) data for Polish companies spanning from the 2008–2009 financial crisis to the 2020 pandemic shock.

The study found that the seasonal random walk (SRW) model performed the best across all quarters, effectively describing the behaviour of the Polish market. This contrasted with findings from the US market, where more sophisticated ARIMA models were deemed more suitable. The research suggests that conclusions drawn from the US market may not necessarily apply to emerging economies due to the simpler behaviour of these markets, resulting in the absence of autoregressive and moving average components.

Also, Muhammad (2022) studied the influence of earnings per share on the value of banking companies listed on the Indonesia Stock Exchange from 2018 to 2020. Employing purposive sampling, the study gathered data from 10 samples over three years, resulting in 30 data points. Multiple linear regression analysis with a significance level of 5% was conducted. Findings revealed a significant positive effect of earnings per share on company value (price to book value).

Aigienohuwa et al. (2022) ascertained whether there is a significant difference between the pre and post-COVID-19 pandemics on earnings per share of industrial goods manufacturing companies in Nigeria. Using a sample of sixteen industrial goods companies, the study employed an ex-post facto research design, extracting data from annual accounts from 2018 to 2021. Regression analysis via E-View 9.0 was conducted, showing that earnings per share had a positive effect on market price during both periods, with post-COVID-19 results being significant. The study concluded that there was a significant difference in earnings per share and market price before and after the pandemic in Nigeria, emphasizing the importance of earnings in influencing share prices and advising investors to prioritize earnings per share in their decision-making processes.

Humaerah et al. (2022) examined the effect of Dividend Per Share (DPS) and Earning Per Share (EPS) on stock prices within the pharmaceutical sub-sector companies listed on the Indonesia Stock Exchange. The study utilized both qualitative and quantitative data sources, with a sample size comprising 4 companies. Analysis methods included multiple linear regression, correlation coefficient testing, determination testing, F-test, and t-test. The multiple linear regression equation derived was Y = 787,831 - 2,928 + 8,737. Results showed a correlation coefficient (R) of 0.776 and a coefficient of determination () of 0.602. The F-test indicated that DPS and EPS together had a significant effect on stock prices (F-count = 12.878 > F-table 3.59, p-value = 0.000 < 0.05). However, while DPS showed an effect on stock prices, it was not statistically significant (t-count = -0.614 < t-table 2.109, p-value = 0.547 > 0.05), whereas EPS had a significant effect (t-count = 3.328 > t-table = 2.109, p-value = 0.004 < 0.05) on stock prices in pharmaceutical sub-sector companies listed on the Indonesia Stock Exchange.

Gharaibeh et al and Ali (2022) examined the influence of earnings per share (EPS) and net income on stock prices among six manufacturing businesses listed on the Jordanian Stock Exchange (JSE) from 2011 to 2021. Employing panel data analysis, the study utilized a regression model to examine stock price determinants. Model utility testing, employing p-value hypothesis testing and R2 coefficient of determination, was conducted to assess the significance of the regression model. Findings revealed a negative association between net income and share price, while EPS exhibited a positive relationship with stock price. The study suggests that investors consider financial parameters like EPS and net income when making investment decisions and emphasizes the importance of understanding factors influencing stock prices to ensure reasonable returns.

Olayinka et al. (2022) analysed the financial performance of listed cement industries in Nigeria using a financial ratio approach. Employing descriptive research with a quantitative approach, the study focused on calculations and utilized Financial Ratio Analysis (FRA) via mean point analysis. Comparative FRA revealed that, on average, Dangote Cement plc maintained the lead, followed by CCNN/BUA Cement, while Lafarge Africa plc exhibited the lowest performance across all financial performance indicators, including earnings per share.

Odukwu et al. (2022) determined the relationship between financial information and manufacturing business performance in Nigeria. Employing an ex-post facto design, the study utilized secondary data from financial filings of selected industrial businesses from the Nigerian Stock Exchange (NSE) spanning 2014 to 2019. Data analysis involved descriptive statistics and Pearson Product Moment correlation analysis in SPSS. While the study found no significant correlation between the operating expenditure ratio and return on equity, a considerable correlation was observed between the asset turnover ratio and return on equity. The findings suggest that financial information significantly influences manufacturing firm performance in Nigeria.

Arsal (2021) investigated the influence of earnings per share (EPS) and dividends per share (DPS) on company value in the Indonesian stock exchange from 2014 to 2017. Utilizing data from 6 food industry companies listed on the Indonesian Stock Exchange, the study employed multiple regression models to analyse the effect of these variables. The findings revealed that EPS had a significant and positive effect on company value individually, while DPS did not substantially affect company value. Moreover, the study indicated that company value was influenced simultaneously by EPS and DPS. Consequently, the research suggests that investors can rely on EPS as a basis for making investment decisions, particularly within the Indonesian Stock Exchange for companies in the food industry.

Ichsani et al. (2021) examined the relationship between the Earnings per Share (EPS) and Price Book Value (PBV) of firms in Indonesia. The study encompassed a population of 44 companies listed on the Indonesia Stock Exchange-30 (IDX30) from 2015 to 2019, with a purposive sampling technique selecting 11 companies as the sample. Utilizing descriptive quantitative methods and multiple regression tests, the research found no significant effect of EPS on PBV.

Soeindoen et al, (2021) assessed the effect of earnings per share (EPS) on the profitability of firms, drawing data from 48 infrastructure companies operating in various sectors registered on the IDX. Financial and annual reports spanning from 2015 to 2018 were analysed using linear regression models. The study revealed a positive and significant effect of earnings per share on profitability.

Maulidina et al (2021) studied the effect of leverage, earnings per share, and dividend policy on firm value in manufacturing companies listed on the Indonesia Stock Exchange from 2017 to 2019. Employing a quantitative approach, the study utilized a purposive sampling technique to select 38 companies meeting the criteria. The findings concluded that earnings per share did not affect company value, as fluctuations in EPS did not affect the overall value of the company.

Hasiholan et al. (2020) analysed the effect of Earnings per Share (EPS) and Sales Growth on stock prices within the household appliances sub-sector companies listed on the Indonesia Stock Exchange from 2015 to 2019. Employing a purposive sampling technique, the study included 15 corporate annual financial statements for analysis. Multiple linear regression was

utilized to explore the relationship between variables. The findings indicated that while EPS showed a positive but statistically insignificant effect on share prices (regression coefficient X1 = 1.554, significance value = 0.105), sales growth did not significantly affect stock prices (regression coefficient X1 = -186,678, significance value = 0.447). The Adjusted R2 test demonstrated that EPS and sales growth collectively influenced 21.2% of the share price variability within the household appliances sub-sector companies listed on the Indonesia Stock Exchange during the period of 2015 to 2019.

Herawati et al., (2018) ascertained the influence of fundamental factors on stock prices of food and beverage industries listed on the Indonesia Stock Exchange from 2012 to 2015. Utilizing secondary data from the Indonesia Stock Exchange website, the study employed causal research methods and purposive sampling, including 11 out of 17 companies meeting the criteria. Panel data regression analysis using three approaches - Common Effect, Fixed Effect, and Random Effect - was conducted. Model selection was performed using F-tests, t-statistical tests, Chow test model, Hausman test, and Lagrange Multiplier test. Results from the F-tests indicated that the price-earnings ratio did not significantly influence changes in stock prices.

Velankar et al. (2017) analysed the influence of earnings per share on the stock price of selected public sector banks in India from the financial years 2006-07 to 2014-15. Employing regression models via EViews7, the study assessed the cause-and-effect relationship while ensuring data stationarity using the Augmented Dickey-Fuller test for unit root testing. Results revealed a significant effect of EPS and DPS on stock price.

Khan et al. (2014) examined the effect of earnings per share on the share prices of firms listed on the Dhaka Stock Exchange. The study utilised percentage analysis to analyse 22 scheduled banks and 110 firm-year data. Findings suggested that share prices did not adjust as quickly as EPS and depended on various micro and macroeconomic factors in the economy. The study recommended that investors consider multiple factors beyond EPS when investing in the security market.

METHODOLOGY

Research Design

The study is based on a correlational research design. The use of this research design is justified in studying the relationship between earnings per share (EPS) and the financial performance of listed information and communication technology (ICT) firms in Nigeria because it allows for the examination of the strength and direction of the association between these two variables without manipulating any factors. Correlational design is particularly suitable when the goal is to determine whether a statistical relationship exists between EPS, a key measure of a company’s profitability, and various indicators of financial performance, such as return on assets (ROA) or return on equity (ROE). This design is efficient for analysing existing data from financial statements and market reports, enabling researchers to draw conclusions about the potential predictive value of EPS on financial performance within the natural context of the firms' operations, thus providing insights that can inform investment decisions and corporate strategies in the ICT sector.

Population of the Study

The study's population comprises all ICT firms listed on the Nigerian Exchange Group as of the end of the 2023 financial year. This target population consists of 9 firms listed under the information and communication technology sector of the Nigerian Exchange Group. The following are the firms:

Table 3.1 List of Population

1. Airtel Africa Plc
2. Briclinks Africa Plc
3. Chams Holding Company Plc
4. Cwg Plc
5. E-Tranzact International Plc
6. Mtn Nigeria Communications
7. Ncr
8. Omatek Ventures Plc
9. Data Flex

Source: NGX Factbook (2023)

Sample Size and Sampling Technique

The purposive sampling technique was employed to select five (5) firms. These firms were required to have been quoted from 2014-2023. The selected firms that met the above criterion and were included in the sample size are presented in Table 3.2 below.

Table 3.2 Sample Size of the Study

1. MTN Nigeria
2. Airtel Africa Plc
3. E-Tranzact International Plc
4. Data Flex
5. Omatek Ventures Plc

Source: Author's Compilation, 2024

Instrument for Data Collection

Data for this research were obtained from the financial statements of the selected firms, classifying it as secondary data research. To ensure thoroughness and reliability, the study focused on ICT firms that were active from 2014 to 2023. This ten-year period was considered adequate to provide a robust dataset for analysis. The key variables collected included earnings per share, net profit margin, return on assets, and asset turnover ratio.

Validity and Reliability of Research Instrument

Validity in research refers to the degree to which a research instrument accurately measures the intended variables or constructs. On the other hand, reliability pertains to the consistency and stability of the research instrument's results over multiple uses. For a research instrument to be considered reliable, it should yield consistent outcomes when used repeatedly. In this

study, the financial statements utilised for data collection are both valid and reliable, as relevant authorities have authenticated them.

There are four common ways to assess the reliability of any empirical method or metric:

1. Inter-rater reliability: This measures the extent to which different raters or observers provide consistent responses when presented with the same phenomenon.
2. Test-retest reliability: Test-retest reliability ensures that the measurements obtained from a test remain stable and consistent over time, reflecting the internal validity of the assessment tool.
3. Parallel form reliability: Parallel form reliability evaluates the reliability obtained by administering different versions of an assessment tool to the same group of individuals, aiming to maintain consistent results.
4. Internal consistency reliability: This type of reliability assesses whether multiple items that aim to measure the same general construct produce similar scores, indicating their internal consistency.

Method of Data Collection

The study used secondary data collection methods to obtain relevant information. Key financial metrics, including earnings per share, net profit margin, return on assets, and asset turnover ratio, were calculated from the data gathered through research instruments. The sample included five firms, each providing ten years of data, resulting in a panel data set with 50 firm-year observations. The data collection covered a ten-year period from 2014 to 2023.

Method of Data Analysis

The data collected for the study was entered into E-views 10, a specialized data analysis software. The data was edited, filtered, and processed for analysis. Descriptive statistics, including mean and standard deviation, were used to analyse the data. For hypothesis testing, inferential statistical analysis was conducted using the ordinary least squares method. Correlational analysis is commonly employed because it efficiently establishes the relationship between a dependent variable and one or more independent variables.

Model Specification

As an additional statistical technique used to examine the relationship between earnings per share and the financial performance of listed ICT firms in Nigeria, the study developed the following models:

The modified models used in the study are:

$PFM_{it} = \beta_o + \beta_1 EPS_{it} + e_{it}$ ----------eqi

$ROA_{it} = \beta_o + \beta_1 EPS_{it} + e_{it}$ ----------eqii

$ATR_{it} = \beta_o + \beta_1 EPS_{it} + e_{it}$ ----------eqiii

Where,

PFM_{it} = Profit margin of firm *i* at time *t*

ROA_{it} = Return on assets of firm *i* at time *t*

ATR_{it} = Asset Turnover Ratio of firm *i* at time *t*

EPS_{it} = Earnings Per Share of firm *i* at time *t*

β_0 = Intercept (constant)

β_1= Coefficients of the Independent Variables

e = error term

Measurement of Variables

The measurement of the variables are given in Table 3.1 below.

Table 3.2 Measurement of Variables

Variable	Acronym	Formula
1. Return on assets	ROA	Earnings After Tax/ Total Assets
2. Asset Turnover ratio	ATR	Revenue/ Total Asset
3. Profit Margin	PFM	Net profit/ Revenue
4. Earnings Per Share	EPS	Earnings After Tax/ Total Ordinary Shares

Source: Researcher's Compilation (2024)

Decision Rule

The acceptance or rejection of a hypothesis is based on the significance of the associated probability as shown by the correlation coefficient. If the p-value is below the significance threshold, the alternative hypothesis is accepted, the null hypothesis is rejected, and the result is considered significant.

DATA PRESENTATION AND ANALYSIS

Presentation and Descriptive Analysis of Data

The study's data include profit margin, return on asset, earnings per share, and asset turnover ratio.

Table 4.1 Presentation of Data for Profit Margin

Year	MTN Nigeria	Airtel Africa Plc	Omatek Plc	Data Flex	E-Transact Int'l Plc Ltd
2014	25.66	13.22	77.97	6.35	5.75
2015	9.94	23.79	388.58	8.99	8.13
2016	11.19	71.34	382.79	9.75	4.32
2017	9.10	4.44	2066	905.01	1.78
2018	14.02	2.64	23200	95.48	16.84

2019	17.28	2.09	-	399.20	0.58
2020	15.24	11.92	9396.85	433.38	8.31
2021	18.05	10.62	46680	522.63	1.93
2022	17.33	16.02	357490	-	5.21
2023	5.55	14.27	308290	-	6.49

Source: Researcher's Computation (2024)

The data in Table 4.1 reveals diverse trends in profit margins across the listed companies from 2014 to 2023. MTN Nigeria's profit margin exhibits relative stability with slight fluctuations, peaking at 25.66% in 2014 and experiencing a decline to 5.55% by 2023, indicating a general downward trend over the decade. Airtel Africa Plc shows significant variability: its margin rises sharply to 71.34% in 2016 but then declines markedly to 2.09% in 2019 before slightly recovering to 14.27% in 2023. Omatek Plc's profit margin displays extreme volatility, soaring to an extraordinary 2,066% in 2017, but then shows a dramatic decline to 308,290% by 2023, reflecting severe instability. Data Flex's profit margin shows a substantial increase, especially notable in 2017 with 905.01%, but faces gaps in data reporting and a decrease in subsequent years. E-Transact Int'l Plc Ltd's profit margin is inconsistent, with a significant drop to 1.78% in 2017 and fluctuating margins thereafter, peaking at 16.84% in 2018 but ending at 6.49% in 2023. The varying degrees of stability and volatility among these companies highlight significant differences in their financial performance over the period.

Table 4.2 Presentation of Data for Return on Asset

Year	MTN Nigeria	Airtel Africa Plc	Omatek Plc	Data Flex	E-Transact Int'l Plc Ltd
2014	14.86	6.72	11.22	5.79	8.75
2015	8.09	10.44	24.59	8.05	12.08
2016	8.65	3.05	20.85	8.52	6.50
2017	8.12	1.82	28.36	91.06	3.34
2018	15.47	0.87	23.80	133.78	53.01
2019	13.25	0.61	-	213.43	2.14
2020	10.45	4.38	43.83	134.85	27.88
2021	13.22	4.15	37.16	120.07	4.18
2022	13.73	7.28	41.31	-	6.64
2023	4.30	6.72	6.61	-	7.81

Source: Researcher's Computation (2024)

The data in Table 4.2 illustrates the trends in Return on Assets (ROA) for the listed companies over the period from 2014 to 2023. MTN Nigeria shows a generally stable but declining trend, with a peak ROA of 15.47% in 2018, followed by a notable decrease to 4.30% by 2023. Airtel Africa Plc experiences significant volatility, starting at 6.72% in 2014, peaking at 10.44% in 2015, but then declining sharply to a low of 0.61% in 2019, with a slight recovery to 6.72% by 2023. Omatek Plc's ROA fluctuates considerably, with a high of 28.36% in 2017 and dropping to 6.61% in 2023, indicating high variability in asset returns. Data Flex shows impressive growth in ROA, reaching 213.43% in 2019 and maintaining strong performance in subsequent years, though with gaps in data reporting. E-Transact Int'l Plc Ltd.'s ROA displays a fluctuating pattern, starting at 8.75% in 2014, experiencing peaks like 53.01% in 2018, and ending at 7.81% in 2023. Overall, the data highlights varying levels of performance stability and profitability efficiency among the companies over the decade.

Table 4.3 Presentation of Data for Asset Turnover Ratio

Year	MTN Nigeria	Airtel Africa Plc	Omatek Plc	Data Flex	E-Transact Int'l Plc Ltd
2014	211.40	185.54	52.50	323.50	555.46
2015	296.83	160.22	23.10	326.98	542.56
2016	282.13	156.24	19.88	318.84	549.49
2017	325.84	149.90	5.01	36.73	682.98
2018	402.74	120.37	0.37	511.44	1139.01
2019	279.87	107.14	-	195.14	1335.98
2020	250.28	133.94	1.72	492.20	1224.12
2021	267.23	142.76	0.29	83.86	788.93
2022	289.24	166.02	0.04	-	127.45
2023	282.59	171.78	7.83	-	438.78

Source: Researcher's Computation (2024)

Table 4.3 presents the Asset Turnover Ratios (ATR) for the companies from 2014 to 2023, showcasing their efficiency in utilizing assets to generate revenue. MTN Nigeria's ATR exhibits a steady increase, rising from 211.40 in 2014 to 282.59 in 2023, indicating consistent efficiency in asset utilization. Airtel Africa Plc demonstrates a declining trend with some fluctuation, starting at 185.54 in 2014 and dropping to 171.78 by 2023, reflecting decreasing efficiency over time. Omatek Plc shows extreme variability, with a high of 52.50 in 2014 but a sharp decline to 7.83 in 2023, indicating significant challenges in asset utilization. Data Flex experiences high and volatile asset turnover, peaking at 511.44 in 2018 but facing data gaps in subsequent years, suggesting fluctuations in operational efficiency. E-Transact Int'l Plc Ltd exhibits a notable increase in ATR, from 555.46 in 2014 to 438.78 in 2023, with exceptional highs like 1335.98 in 2019, highlighting strong and variable asset utilization performance. Overall, the data illustrates varied trends in asset turnover across the companies, with some demonstrating stable efficiency while others show significant fluctuations.

Table 4.4 Presentation of Data for Earnings Per Share

Year	MTN Nigeria	Airtel Africa Plc	Omatek Plc	Data Flex	E-Transact Int'l Plc Ltd
2014	1.61	16.69	0.30	3.71	10
2015	0.87	33.02	1.50	5.67	17
2016	0.10	18.88	0.36	7.22	11
2017	0.18	-	0.47	9.32	5
2018	0.36	-	0.39	61.47	75
2019	0.34	19.5	0.30	15.1	4
2020	0.57	10.3	0.27	8.09	45
2021	0.50	9.0	0.11	4.68	7
2022	0.64	16.8	0.13	-	16
2023	0.12	17.7	0.11	-	24

Source: Researcher's Computation (2024)

Table 4.4 displays the Earnings Per Share (EPS) for the companies from 2014 to 2023, reflecting their profitability on a per-share basis. MTN Nigeria shows a generally low and declining EPS, starting at 1.61 in 2014 and dropping to 0.12 by 2023, suggesting a decrease in

profitability over the period. Airtel Africa Plc exhibits variability with a notable peak at 33.02 in 2015, but EPS fluctuates and trends downward to 17.7 by 2023, reflecting inconsistent profitability. Omatek Plc's EPS is relatively low with minor fluctuations, peaking at 1.50 in 2015 and ending at 0.11 in 2023, indicating persistent but low profitability. Data Flex demonstrates significant growth in EPS, soaring to 61.47 in 2018, but with gaps in data reporting in subsequent years, suggesting a period of high profitability followed by data inconsistencies. E-Transact Int'l Plc Ltd shows an increasing EPS trend, from 10 in 2014 to 24 in 2023, with substantial highs like 75 in 2018, reflecting strong growth in earnings over the decade. Overall, the data illustrates varying trends in EPS across the companies, with some experiencing declining profitability, others showing inconsistent performance, and a few demonstrating significant growth.

Descriptive Statistical Analysis of the Data

Table 4.5 shows the descriptive statistics of the data.

Table 4.5 Descriptive Statistical Analysis

	EPS	ROA	ATR	PFM
Mean	10.66844	27.53556	308.7996	16682.64
Median	5.000000	10.44000	250.2800	15.24000
Maximum	75.00000	213.4300	1335.980	357490.0
Minimum	0.100000	0.610000	0.040000	0.580000
Std. Dev.	15.90805	43.59006	316.4939	69597.78
Skewness	2.468407	2.683987	1.693569	4.378840
Kurtosis	9.324861	9.978698	5.702768	20.53196
Jarque-Bera	120.7050	145.3451	35.20811	720.1245
Probability	0.000000	0.000000	0.000000	0.000000
Sum	480.0800	1239.100	13895.98	750719.0
Sum Sq. Dev.	11134.91	83604.12	4407408.	2.13E+11
Observations	45	45	45	45

Source: Eviews 10 Statistical Software (2024)

Earnings Per Share (EPS): The mean EPS of 10.66844 indicates relatively high average earnings per share among the listed ICT firms. The maximum EPS of 75.00000 suggests that at least one firm achieved exceptionally high earnings per share, while the minimum EPS of 0.100000 reveals some firms had very low earnings. The standard deviation of 15.90805 highlights substantial variability in EPS across firms, with some experiencing considerable deviations from the average. The skewness of 2.468407 indicates a rightward skew, meaning a majority of firms have lower EPS with a few firms achieving very high values. The kurtosis of 9.324861 reflects a leptokurtic distribution with heavy tails, suggesting that extreme EPS values are more frequent than in a normal distribution.

Return on Assets (ROA): The average ROA of 27.53556 signifies a high level of asset efficiency across the firms. The maximum ROA of 213.4300 indicates that some firms are exceptionally efficient at utilizing their assets to generate returns, whereas the minimum ROA of 0.610000 shows that some firms have very low asset efficiency. The standard deviation of 43.59006 points to considerable variability in ROA, with some firms deviating significantly from the mean. The skewness of 2.683987 shows a rightward skew, suggesting that most firms

have lower ROA, with a few firms having exceptionally high values. The kurtosis of 9.978698 indicates a leptokurtic distribution, with frequent extreme values compared to a normal distribution.

Asset Turnover Ratio (ATR): The mean ATR of 308.7996 demonstrates strong average asset utilization among the firms. The maximum ATR of 1335.980 suggests that some firms have exceptionally high efficiency in generating revenue from their assets, while the minimum ATR of 0.040000 indicates extremely low asset utilization by some firms. The standard deviation of 316.4939 reflects significant variation in asset turnover, showing that some firms experience substantial deviations from the average. The skewness of 1.693569 indicates a rightward skew, meaning that most firms have lower ATR values with a few firms achieving very high ratios. The kurtosis of 5.702768 shows a moderately leptokurtic distribution, suggesting that extreme ATR values are more common than in a normal distribution.

Profit Margin (PFM): The average profit margin of 16682.64 reflects a high level of profitability among the firms. The maximum profit margin of 357490.0 indicates that some firms have achieved exceptionally high profitability, while the minimum profit margin of 0.580000 suggests very low profitability for some firms. The standard deviation of 69597.78 reveals substantial variability in profit margins, with significant deviations from the mean. The skewness of 4.378840 shows a pronounced rightward skew, indicating that most firms have lower profit margins, with a few firms reaching very high levels. The kurtosis of 20.53196 points to a highly leptokurtic distribution, suggesting that extreme profit margins are much more frequent than in a normal distribution.

Hypotheses Testing

The hypotheses were tested using Pearson Correlational technique.

Hypothesis One

1) H0: Earnings per share has no significant relationship with the net profit margin of listed ICT firms in Nigeria.

Table 4.6 Correlational Analysis for Hypothesis I
Date: 08/08/24 Time: 05:06
Sample: 2014 2023
Included observations: unbalanced
Balanced sample (listwise missing value deletion)

Correlation Probability	EPS	PFM
EPS	1.000000 -----	
PFM	-0.161723 0.2885	1.000000 -----

Eviews 10 Statistical Software (2024)

According to Table 4.6, the coefficient for EPS is -0.161723, with a p-value of 0.2885. This p-value is above the standard significance level of 0.05, meaning that the relationship between EPS and PFM is not statistically significant. An increase in EPS by 1 unit results in a decrease in PFM by -0.161723 units. However, since the p-value exceeds 0.05, there is insufficient evidence to conclude that changes in EPS significantly influence the net profit margin. Therefore, the null hypothesis (H0) was accepted that Earnings Per Share has a negative but non-significant relationship with the net profit margin of listed ICT firms in Nigeria (r = -0.161723; p-value = 0.2885).

Hypothesis Two

2) H0: Earnings per share does not significantly relate with the return on asset of listed ICT firms in Nigeria.

Table 4.7 Correlational Analysis for Hypothesis II
Date: 08/08/24 Time: 05:09
Sample: 2014 2023
Included observations: unbalanced
Balanced sample (listwise missing value deletion)

Correlation Probability	EPS	ROA
EPS	1.000000 -----	
ROA	0.255900 0.0898	1.000000 -----

Eviews 10 Statistical Software (2024)

As shown in Table 4.7, the coefficient for EPS is 0.255900 with a p-value of 0.0898. This p-value is above the 0.05 threshold, implying that the relationship between EPS and ROA is not strongly significant. An increase in EPS by 1 unit leads to an increase in ROA by 0.255900 units. Although there is some evidence of a relationship, the relationship is not sufficiently significant at the 0.05 level. Therefore, the null hypothesis (H0) was accepted that Earnings Per Share has a positive but non-significant relationship with the return on assets of listed ICT firms in Nigeria (r = 0.255900; p-value = 0.0898).

Hypothesis Three

3) H0: Earnings per share does not significantly relate with the asset turnover of listed ICT firms in Nigeria.

Table 4.8 Correlational Analysis for Hypothesis III
Date: 08/08/24 Time: 05:10
Sample: 2014 2023
Included observations: unbalanced
Balanced sample (listwise missing value deletion)

Correlation Probability	EPS	ATR
EPS	1.000000 -----	
ATR	0.486598 0.0007	1.000000 -----

Eviews 10 Statistical Software (2024)

Table 4.11 indicates that the coefficient for EPS is 0.486598, with a p-value of 0.0007. This p-value is significantly less than 0.05, confirming a strong statistical significance of the relationship. An increase in EPS by 1 unit results in an increase in ATR by 0.486598 units. Therefore, the alternate hypothesis (Ha) was accepted that Earnings Per Share has a positive and significant relationship with the asset turnover ratio of listed ICT firms in Nigeria (r = 0.486598; p-value = 0.0007).

DISCUSSION OF FINDINGS

The finding that Earnings Per Share has a negative relationship with the Net Profit Margin (NPM) of listed ICT firms in Nigeria. This suggests that as EPS increases, the Net Profit Margin decreases. This counterintuitive result may be attributed to several factors specific to the ICT industry in Nigeria. One possible explanation is that higher EPS may result from aggressive earnings management practices, where firms prioritize boosting per-share earnings through short-term financial manoeuvres rather than focusing on sustainable profitability. This approach might involve significant cost-cutting measures or increased debt levels, which could adversely affect the firm's net profitability, thus leading to a lower Net Profit Margin. Additionally, the competitive nature of the ICT sector may force companies to invest heavily in innovation, marketing, and technology, driving up expenses and thereby reducing profit margins, even when EPS shows improvement. This result aligns with the findings of Mareta, Suryadi and Barus (2023), who reported a negative effect of EPS on stock returns in Indonesia. However, it contrasts with Ogiriki and Karinate (2023), who observed a positive correlation between EPS and financial performance in Nigerian ICT firms, suggesting that higher EPS is generally associated with improved financial metrics.

In contrast, the study found that EPS has a positive relationship with the Return on Assets (ROA) of listed ICT firms in Nigeria. This indicates that as EPS increases, so does the efficiency with which a firm utilizes its assets to generate earnings. The positive relationship can be explained by the fact that higher EPS often reflects improved profitability, which in turn suggests that the firm's assets are being employed more effectively. In the ICT industry, where capital investment in technology and infrastructure is substantial, firms that manage to increase their EPS are likely optimizing their asset base, leading to better returns on those assets. This could involve the strategic deployment of capital in high-return projects, the efficient management of working capital, or the prudent allocation of resources towards innovation and

product development, all of which contribute to a stronger ROA. This finding is in line with Onyeka-Iheme (2023), who observed a positive effect of ROA on EPS in Nigerian consumer goods companies, though their analysis highlighted an insignificant negative effect on ROE. This suggests that while EPS may be positively related to ROA, the relationship is not statistically robust. On the other hand, the study by Muhammad (2022) found a significant positive effect of EPS on the value of banking companies in Indonesia, highlighting that the significance of EPS on financial performance metrics can vary across different sectors and markets.

Lastly, the positive relationship between EPS and the Asset Turnover Ratio (ATR) of listed ICT firms in Nigeria. This suggests that an increase in EPS is associated with higher sales efficiency. The Asset Turnover Ratio measures the efficiency with which a firm converts its assets into revenue. A positive relationship between EPS and ATR implies that firms with higher EPS are also more efficient in generating sales from their asset base. This could be due to effective management practices that enhance operational efficiency, such as leveraging technology to streamline processes, reducing operational bottlenecks, and optimizing the use of assets in revenue-generating activities. In the ICT sector, where rapid technological advancements and the ability to scale operations quickly are critical, firms that can translate higher EPS into improved asset turnover are likely those that have mastered the art of aligning their assets with market opportunities, thus maximizing sales potential. This finding is consistent with the results of Aigienohuwa and Ezejiofor (2022), who found a positive effect of EPS on market price, suggesting a significant relationship between EPS and financial performance indicators. Furthermore, Soeindoen and Siagian (2021) reported a positive and significant effect of EPS on profitability within infrastructure companies, supporting the notion that EPS can significantly influence various aspects of firm performance.

Additional Tests Using Regression

Table 4.9 Ordinary Least Square Regression Analysis for EPS and PFM

Dependent Variable: PFM
Method: Least Squares
Date: 08/05/24 Time: 05:04
Sample: 1 50
Included observations: unbalanced

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EPS	-707.5389	658.3990	-1.074635	0.2885
C	24230.98	12514.05	1.936302	0.0594

R-squared	0.026154	Mean dependent var	16682.64
Adjusted R-squared	0.003507	S.D. dependent var	69597.78
S.E. of regression	69475.64	Akaike info criterion	25.17877
Sum squared resid	2.08E+11	Schwarz criterion	25.25906
Log likelihood	-564.5222	Hannan-Quinn criter.	25.20870
F-statistic	1.154841	Durbin-Watson stat	1.053130
Prob(F-statistic)	0.288531		

Source: Eviews 10 Statistical Software (2024)

The R-squared value of 0.026154 indicates that EPS explains only 2.6% of the variability in PFM, suggesting a very weak relationship. The probability of the F-statistic (0.2885) is greater than 0.05, indicating that the overall model is not statistically significant. According to Table 4.9, the coefficient for EPS is -707.5389, with a p-value of 0.2885. This p-value is above the standard significance level of 0.05, meaning that the relationship between EPS and PFM is not statistically significant. An increase in EPS by 1 unit results in a decrease in PFM by 707.5389 units. However, since the p-value exceeds 0.05, there is insufficient evidence to conclude that changes in EPS significantly relates with the net profit margin. Therefore, the null hypothesis (H0) was accepted that Earnings Per Share has a negative but non-significant effect on the net profit margin of listed ICT firms in Nigeria (β = -707.5389; p-value = 0.2885).

Table 4.10 Ordinary Least Square Regression Analysis for EPS and ROA

Dependent Variable: ROA
Method: Least Squares
Date: 08/05/24 Time: 05:03
Sample: 1 50
Included observations: unbalanced

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EPS	0.701197	0.403952	1.735844	0.0898
C	20.05487	7.677827	2.612051	0.0123

R-squared	0.065485	Mean dependent var	27.53556
Adjusted R-squared	0.043752	S.D. dependent var	43.59006
S.E. of regression	42.62583	Akaike info criterion	10.38622
Sum squared resid	78129.34	Schwarz criterion	10.46652
Log likelihood	-231.6900	Hannan-Quinn criter.	10.41616
F-statistic	3.013155	Durbin-Watson stat	0.371429
Prob(F-statistic)	0.089753		

Source: Eviews 10 Statistical Software (2024)

The R-squared value of 0.065485 reveals that EPS explains approximately 6.5% of the variability in ROA, suggesting a modest explanatory power. The probability of the F-statistic (0.0898) is close to, but slightly above, the 0.05 significance threshold, indicating marginal significance of the model. As shown in Table 4.10, the coefficient for EPS is 0.701197 with a p-value of 0.0898. This p-value is above the 0.05 threshold, implying that the effect of EPS on ROA is not strongly significant. An increase in EPS by 1 unit leads to an increase in ROA by 0.701197 units. Although there is some evidence of a relationship, the effect is not sufficiently significant at the 0.05 level. Therefore, the null hypothesis (H0) was accepted that Earnings Per Share has a positive but non-significant effect on the return on assets of listed ICT firms in Nigeria (β = 0.701197; p-value = 0.0898).

Table 4.11 Ordinary Least Square Regression Analysis for EPS and ATR

Dependent Variable: ATR
Method: Least Squares
Date: 08/05/24 Time: 05:05
Sample: 1 50
Included observations: unbalanced

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EPS	9.680964	2.650572	3.652406	0.0007
C	205.5187	50.37887	4.079463	0.0002

R-squared	0.236778	Mean dependent var	308.7996
Adjusted R-squared	0.219028	S.D. dependent var	316.4939
S.E. of regression	279.6939	Akaike info criterion	14.14869
Sum squared resid	3363832.	Schwarz criterion	14.22899
Log likelihood	-316.3456	Hannan-Quinn criter.	14.17863
F-statistic	13.34007	Durbin-Watson stat	0.761997
Prob(F-statistic)	0.000701		

Source: Eviews 10 Statistical Software (2024)

The R-squared value of 0.236778 shows that EPS accounts for approximately 24% of the variability in ATR, indicating a moderate explanatory power of the model. The probability of the F-statistic (0.000701) is well below 0.05, suggesting that the model is statistically significant. Table 4.11 indicates that the coefficient for EPS is 9.680964, with a p-value of 0.0007. This p-value is significantly less than 0.05, confirming a strong statistical significance of the effect. An increase in EPS by 1 unit results in an increase in ATR by 9.680964 units. Therefore, the alternate hypothesis (Ha) was accepted that Earnings Per Share has a positive and significant effect on the asset turnover ratio of listed ICT firms in Nigeria ($\beta = 9.680964$; p-value = 0.000701).

Summary of Findings, Conclusion and Recommendations

Findings

i. Earnings Per Share has a negative but non-significant relationship with the net profit margin of listed ICT firms in Nigeria ($r = -0.161723$; p-value = 0.2885).
ii. Earnings Per Share has a positive but non-significant relationship with the return on assets of listed ICT firms in Nigeria ($r = 0.255900$; p-value = 0.0898).
iii. Earnings Per Share has a positive and significant relationship with the asset turnover ratio of listed ICT firms in Nigeria ($r = 0.486598$; p-value = 0.0007).

Discussion

Earnings Per Share (EPS) is a critical financial metric used to gauge a company's profitability on a per-share basis, representing the portion of a company's profit allocated to each outstanding share of common stock. This metric is particularly significant for investors and analysts as it provides hint into a company's financial health and its ability to generate profit.

The analysis reveals that EPS has a significant negative effect on the net profit margin of listed ICT firms in Nigeria, with a beta coefficient of -0.161723. This coefficient indicates that for every one-unit increase in EPS, the net profit margin decreases by 0.161723 units. This negative relationship suggests that increases in EPS may be associated with strategies that diminish the profitability of the firm's operations relative to revenue.

EPS has a positive effect on the return on assets (ROA) of listed ICT firms in Nigeria, with a beta coefficient of 0.255900. This coefficient implies that for every one-unit increase in EPS, the ROA increases by approximately 0.26 units. The positive relationship suggests that firms with higher EPS are more efficient in utilizing their assets to generate returns.

The study also finds that EPS positively influences the asset turnover ratio of listed ICT firms in Nigeria, with a beta coefficient of 0.486598. This substantial coefficient indicates that for every one-unit increase in EPS, the asset turnover ratio increases by nearly 0.486598 units. The large positive relationship suggests that higher EPS is strongly associated with improved efficiency in generating sales from assets.

Conclusion

The relationship between EPS and various financial performance indicators—such as net profit margin, return on assets, and asset turnover ratio—varies, reflects the complex dynamics within the sector. Based on the study, higher EPS might be achieved through strategies that do not necessarily improve the efficiency or profitability of core operations. Additionally, ICT firms in Nigeria may face high operational costs, such as technology investments, which could lead to a lower net profit margin even when EPS is growing. However, profitable firms are generally more efficient in generating returns from their assets. ICT firms, which typically have significant investments in technology and infrastructure, might benefit from these assets as they increase their profitability. Also, as firms increase their earnings per share, they are also improving their efficiency in utilizing assets to generate revenue. In other words, firms that successfully innovate and adapt to market demands are likely to achieve higher sales volumes, thereby increasing their asset turnover ratio. Moreover, this positive relationship highlights the ability of profitable ICT firms to maximize the utilization of their assets, reflecting their operational effectiveness in a competitive market.

In conclusion, the findings indicate that while EPS positively relates with return on assets and asset turnover ratio, it negatively relates with the net profit margin of listed ICT firms in Nigeria. While EPS positively influences Return on Assets and Asset Turnover Ratio, indicating improved asset efficiency and sales effectiveness, its negative relationship with Net Profit Margin suggests potential trade-offs between short-term earnings enhancement and long-term profitability. These insights underscore the importance for ICT firms in Nigeria to balance the pursuit of higher EPS with sustainable financial management practices to ensure overall financial health. This was based on the findings below:

Recommendations

1) Board of directors should prioritize strategies that enhance operational efficiency rather than focusing solely on increasing EPS through financial manoeuvres like share buybacks. This could involve optimizing cost management and investing in core business activities that directly contribute to profitability.

2) Managers should continue to focus on asset optimization strategies by regularly evaluating the firm's asset portfolio to ensure that it is being utilized effectively to maximize returns, thereby sustaining the positive relationship between EPS and ROA.

3) Operations managers should work on further improving the efficiency of asset utilization by implementing technologies and processes that streamline operations and enhance the firm's ability to generate higher sales from its existing asset base.

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