

FAIR VALUE ACCOUNTING AND FINANCIAL PERFORMANCE OF LISTED OIL AND GAS COMPANIES IN NIGERIA

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ABSTRACT

This study investigated fair value accounting and financial performance of listed oil and gas companies in Nigeria. This study was anchored on the agency theory. An ex-post-facto research design was used. The population of this study is made up of Eight (8) listed oil and gas companies in Nigeria on the Nigeria Exchange Group (NGX) spanning from 2014-to-2023. The study used judgmental (purposive) sampling technique in selecting seven (7) oil and gas companies listed on the Nigeria exchange group (NGX) due to availability and completeness of the secondary data. The cross-sections included in the study was seven (7) listed oil and gas companies; sample period Ten (10) years, and total observation was Seventy (70) sampled from 2014 to 2023. The secondary data was gathered by downloading published annual accounts of the seven (7) selected oil and gas companies on the Nigerian Exchange Group website. The study used descriptive statistics; Augmented Dickey-Fuller (ADF) unit root test; Hausman Test, and Fixed-Effect Regression Model (FEM) were used for the data analyses. The results revealed that; the effect of fair value of non-current assets on earnings per share of listed oil and gas companies in Nigeria is negative and statistically significant; the effect of fair value of current assets on earnings per share of listed oil and gas companies in Nigeria is positive and statistical significant and the effect of fair value of total liabilities on earnings per share of listed oil and gas companies in Nigeria is positive and statistically significant. The study generally concluded that the effect of fair value accounting on financial performance of listed oil and gas companies in Nigeria is positive and statistically significant for the time frame (2014 – 2023) investigated. Thus, the study recommended amongst others that the oil and gas companies in Nigeria should regularly re-evaluate tangible and intangible assets to reflect their fair value accurately. This can enhance the asset base on the balance sheet and potentially lead to higher depreciation deductions, impacting net income positively.

Keywords: fair value accounting, fair value of non-current assets, fair value of current assets, fair value of total liabilities, financial performance and earnings per share.

INTRODUCTION

The oil and gas sector play a critical role in the economic performance of a nation. This is because it produces the goods that are needed to enhance human welfare, provide employment opportunities for both skilled and unskilled manpower as well as being strategic in the quest for self-reliance. It is in recognition of these that the sector has benefited from a catalogue of efforts, particularly the mandatory credit and concessionary interest rate policies from the government and monetary authorities (Alkali & Aliyu, 2023; Alkali et al., 2023).

The term 'profitability' is an index of efficiency and is regarded as a measure of efficiency and management guide to greater efficiency. Abiahu et al (2020) reported that profitability with regards to in fair value accounting is determined by the ability of an entity to generate income and financial gains based on the fair value measurements of its assets, liabilities, and other financial instruments. Ahmed (2019) stated that financial performance is a crucial measure of a business's success and sustainability. It indicates whether a company's operations are efficient and effective in generating more revenue than the costs incurred. Chukwu and Akpeekon (2019) stated that fair value accounting also considers gains or losses from changes in fair value of financial instruments, such as derivatives or equity investments. These gains or losses are recognized in the income statement and contribute to overall profitability. It is important to note that fair value accounting can also lead

to increased volatility in reported profits, as the fair value of assets and liabilities can fluctuate with market conditions (Anisere-Hameed & Bodunde, 2021).

In oil and gas business context, Goroke and Maccarthy (2023) stated that financial performance entails measurement of the results of a firm's policies and operations in monetary terms. Hassan et al. (2023) documented that financial performance is the health of a firm and the outcome of business programme and activities measured against stated objectives or compared to the health of competing firms. Jonah et al (2023) opined that the objective of profitability in a business is to generate more revenue than the costs incurred, resulting in a net positive income. This allows the business to cover expenses, invest in growth, reward stakeholders, and ensure long-term sustainability (Osanyinbi et al., 2023; Alkali et al., 2023).

Over the years, the objectivity of profits declared in the financial statements of business firms has resulted in the adoption of various accounting standards. In recent time, the historical cost accounting standards has given way to fair value accounting. Jonah et al (2023) asserted that fair value accounting is a methodology used to measure and report the value of assets and liabilities based on their estimated current market prices. It reflects the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. Fair value is not a single-point estimate; rather, it encompasses a range of possible values depending on the valuation techniques used and the assumptions applied (Kangogo & Irungu, 2020; Jonah et al., 2023; Joseph et al., 2023; Dawad et al., 2022).

On an ongoing basis, assets and liabilities are rated by fair value at estimates of the prices achievable for assets or payable in offsetting liabilities. It is very clear that the accounting treatments of the various assets and liabilities of a firm have significant impact on its financial statements; and above all management decisions regarding future corporate concerns. Osama et al (2020) asserted that creditors and investors tend to rely on assets valuation in determining the credit worth of an entity while lenders consider same as the indication of the entity's operational status, presently and probably in future. Thus, fair value accounting affects the financial statement; although Sunusi et al (2020) opined that there is no direct impact on the statement of cash flows, unless there is a tax benefit granted when using fair value accounting. Aigienohuwa and Ohonba (2023) asserted that financial statements contain more information on methodology used in collecting data based on fair value compared to historical cost method. Abotsi et al (2024) opined that fair value accounting relies on data which is taken on the basis of current market conditions. The information collected is updated on the basis of changing market conditions.

Presently, various regulatory bodies, such as the International Accounting Standards Board (IASB) and the Financial Accounting Standards Board (FASB) have adopted the fair value accounting system over historical cost accounting. Although, historical cost accounting reports assets and liabilities at their initial price while fair value accounting reflects the prevailing market price of such asset or liability Akwu et al., 2017; Al-Homaida et al., 2018; Edori & Ohaka, 2018; Elshamy et al., 2018; Enock et al., 2017; Fontes et al., 2018). As a going concern, manufacturing companies are set up basically with the aim of making profit; which is measured by certain parameters such as return on assets, return on equity and earnings per share. The oil and gas companies using fair value have to provide information on assumptions made, risk associated, related information regarding observable market price etc. This increase the transparency in providing enough information to users like potential investors, contractors and lenders for their decision making process. Since there is availability of observable market price that cannot be influenced or manipulated easily, qualitatively better information can be made available to stakeholders.

Although, empirical literatures exists on fair value accounting versus historical cost accounting, depreciation and financial performance, especially with a focus on listed deposit money banks (DMBs), food and beverage, construction and real estate, conglomerate and manufacturing companies in Nigeria (Alkali & Aliyu, 2023; Alkali et al., 2023; Bratten et al., 2020; Chidi et al., 2022; Kangogo & Irungu, 2020; Jonah et al., 2023; Joseph et al., 2023; Dawad et al., 2022; Ibidunnia & Okere, 2019), the methodology obtained have differed. In most cases, such studies are skewed

towards depreciation, and scarcely changes in fair values included in the model estimation. It is in the light of the above, that this study sought to determine the effect of fair value accounting on financial performance; with specific reference to Oil and Gas companies in Nigeria.

Statement of the Problem

The underlying idea of fair value accounting and financial performance has generated a lot of challenges and attention throughout the years. By valuing assets and liabilities based on their current market pricing, it differs from conventional historical cost accounting. The need for more transparent and relevant financial data, particularly in dynamic and constantly shifting economic situations, has promoted the development of fair value accounting (Adeyemi & Kargi, 2022; Adegboyegun et al., 2024; Agadoni, 2018; Chimele & Imo, 2019).

There are several problems associated with financial performance under fair value accounting and International Financial Reporting Standards (IFRS). This can involve subjectivity, lack of observable market prices, timing issues, cost of valuation, inconsistent application. Akinlabi and Sonko (2021) documented that fair value accounting required the valuation of inventory based on market prices. Additionally, Leonard et al (2018) opined that determining the fair value of inventory can be subjective and may vary depending on multiple factors such as supply and demand, market conditions, and the specific characteristics of the inventory. This subjectivity can lead to different valuations for the same inventory, thereby affecting the reliability and comparability of financial statements (Abiahu et al., 2020; Abotsi et al., 2024; Ahmadi et al., 2018; Ahmed, 2018; Ahmed & Schaefer, 2022; Chukwu & Akpeekon, 2019; Lyndon & Paymaster (2019). Other challenge is the lack of liquidity in certain markets. In some cases, there may be limited or no active market for certain assets or liabilities, making it difficult to determine their fair value. This can result in the use of less reliable methods, such as model-based valuations, which may introduce additional uncertainty and potentially impact profitability measurements.

In the Oil and Gas industries, there may be limited or no observable market prices. This can make it difficult to determine fair value accurately, as there may be a lack of reliable market data to reference. In such cases, manufacturing companies may need to rely on estimated or alternative valuation methods, which can introduce additional uncertainty and risk. Obigabemi et al (2020) asserted that fair value accounting require valuing inventory at the end of each reporting period. However, in manufacturing companies where inventory turnover is high or market conditions fluctuate rapidly, determining fair value at a specific point in time can be challenging. This can result in outdated or irrelevant fair value estimates and may not reflect the current economic reality of the inventory (Oyebisi & Wisdom, 2019; Paul, 2019; Ramli et al., 2021; Richard, 2019; Rodrigo et al., 2020; Sodan 2022).

Osanyinbi et al (2023) reported that valuing inventory at fair value can be costly, especially for companies with large and diverse inventories. This required hiring external experts or using complex valuation models, both of which can be expensive. The additional expenses associated with fair value accounting can create a burden for companies; especially smaller companies ones, and may outweigh the benefits of using fair value. International Financial Reporting Standards (IFRS) allowed manufacturing companies to use either the cost or the fair value model for inventory valuation. This flexibility can lead to inconsistency in the application of inventory valuation methods across different companies and industries. Goroke and Maccarthy (2023) affirmed that such inconsistencies can make it difficult for investors and stakeholders to compare financial statements and make informed decisions. While fair value accounting and IFRS provide a framework for valuing inventory based on market prices, there are several challenges and problems associated with its implementation. These include subjectivity, lack of observable market prices, timing issues, cost of valuation, and inconsistent application. It is important for manufacturing companies to consider these factors when valuing inventory and reporting financial information. Although, empirical literatures exist on fair value accounting versus historical cost accounting, depreciation and financial performance, especially with a focus on listed deposit money banks (DMBs), food and beverage, construction and real estate, conglomerate and manufacturing companies in Nigeria (Alkali et al., 2023; Alkali & Aliyu, 2023; Amaefule et al., 2018; Bratten et al., 2020; Chen et al., 2020; Goroke & Maccarthy (2023)

Chidi et al., 2022; Kangogo & Irungu, 2020; Jonah et al., 2023; Joseph et al., 2023; Dawad et al., 2022; Ghosh et al., 2020), the methodology obtained have differed. In most cases, such studies are skewed towards depreciation, and scarcely changes in fair values included in the model estimation. It is in the light of the above, that this study sought to determine the effect of fair value accounting on financial performance; with specific reference to the oil and gas companies in Nigeria.

Conceptual Framework

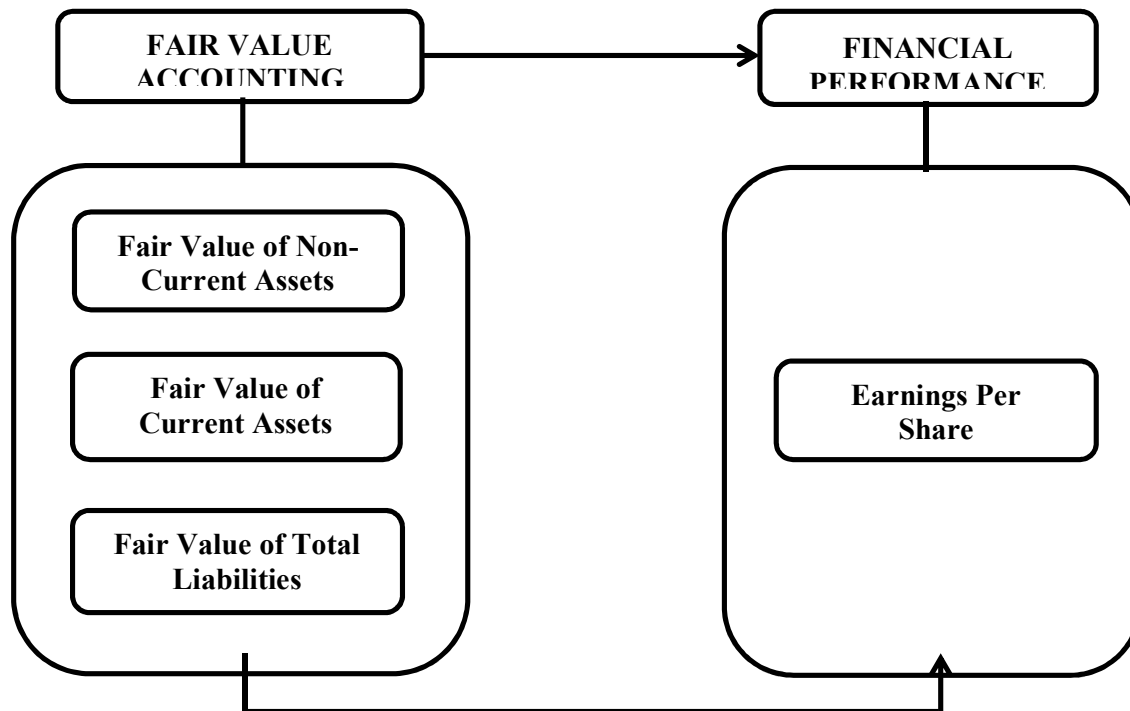


Figure 1.1 Conceptual framework of fair value accounting and financial performance of listed oil and gas companies in Nigeria.

Sources: Adapted from Osanyinbi et al (2023); Abotsi et al (2024); Adegboyegun et al (2024)

Aim and Objectives of the Study

The ultimate aim of this study is to investigate the effect of fair value accounting on financial performance of listed Oil and Gas companies in Nigeria. Specifically, the objectives of the study are to:

1. Ascertain the effect of fair value of non-current assets on earnings per share of Listed Oil and Gas companies in Nigeria
2. Determine the effect of fair value of current assets on earnings per share of Listed Oil and Gas companies in Nigeria
3. Ascertain the effect of fair value of total liabilities on earnings per share of Listed Oil and Gas companies in Nigeria

Research Questions

The following research questions were formulated to guide the study.

1. What is the effect of fair value of non-current assets on earnings per share of Listed Oil and Gas companies in Nigeria?
2. What is the effect of fair value of current assets on earnings per share of Listed Oil and Gas companies in Nigeria?
3. What is the effect of fair value of total liabilities on earnings per share of Listed Oil and Gas companies in Nigeria?

Hypotheses

The study was guided by the following null hypotheses:

- H₀₁: The effect of fair value of non-current assets on earnings per share of Listed Oil and Gas companies in Nigeria is not significant.
- H₀₂: The effect of fair value of current assets on earnings per share of Listed Oil and Gas companies in Nigeria is not significant.
- H₀₃: The effect of fair value of total liabilities on earnings per share of Listed Oil and Gas companies in Nigeria is not significant.

Significance of the Study

The study stands to benefits and contributes to the following groups:

Accounting Professionals: This study will help accounting professionals in contributing to the body of research in both emerging and developed nations by bringing in new ideas on the effect of fair value accounting and financial performance of Oil and Gas companies in Nigeria.

Board Members: The study will help board members to capture the changing nature of markets and economic conditions that aimed at providing the users of financial statements with more relevant and timely information about the studied oil and gas companies assets and liabilities.

Government: The study will help government agencies in updating the financial regulations and legislations that aid the creation of enabling business environment for consumer goods manufacturing companies and other related business organizations in Nigeria.

Management: The study will provide information to shareholders/managers in the manufacturing companies how to compare the historical cost and fair value its assets and liabilities which will enable the management to evaluate the companies' inventories and improved the financial performance of oil and gas companies in Nigeria.

Research Students: The study will also help scholars in the field of accounting to contribute in the increasing body of research with regards to fair value accounting and financial performance under IFRS and students seeking source of secondary data for future research in this area.

Scope of the Study

The scope of the study was discussed under the following sub-headings:

Content Scope: The content scope of this study was restricted to fair value accounting and its dimensions of fair value of non-current assets, fair value of current assets, and fair value of total liabilities and earnings per share

Geographical Scope: The study is limited to oil and gas companies listed on the Nigerian Exchange Group (NGX).

Unit of Analysis: The study was at the macro organizational level of the studied oil and gas companies in Nigeria. It involved the use of secondary data collected from the Nigerian Exchange Group (NGX). This study utilized descriptive statistics, unit root test, and regression analyses for the data analyses covering from 2014-to-2023.

REVIEW OF RELATED LITERATURE

Conceptual Review

Fair Value Accounting

Osanyinbi et al (2023) disclosed that fair value is not a single-point estimate; rather, it encompasses a range of possible values depending on the valuation techniques used and the assumptions applied. The international financial reporting standard (IFRS) 13 defined fair value as the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (that is, an exit price). It provides a systematic framework for measuring and disclosing the fair value of assets and liabilities in financial statements. Ahmed and Schaefer (2022) emphasized on the principle that financial reporting reflects the most current market prices and provides useful information for decision-making. Unyimadu and Kirfodu (2023) opined that fair value accounting is also applied to other non-financial assets and liabilities, such as

real estate, plant and equipment, and intangible assets. Kangogo and Irungu (2020) asserted that fair value accounting is an accounting method that measures the value of assets and liabilities based on their current market prices or the price that would be received if sold in an orderly transaction in the open market. It reflects the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. Rodrigo et al (2020) documented that fair value accounting ensure a more accurate and transparent representation of an entity's financial statements. Tonye and Ikegima (2022) acknowledged that fair value is determined based on the current market value of the assets or through other valuation techniques like discounted cash flow analysis or the present value of expected future cash flows. Joseph et al (2023) affirmed that fair value accounting is an accounting method that values assets and liabilities at their current market prices. Dawad et al (2022) stated that fair value accounting provide a more accurate and transparent representation of an entity's financial position, ensuring that financial statements reflect the true value of an entity's assets and liabilities. Adeyemi and Kargi (2022) documented that fair value accounting is a measurement principle used in financial reporting to determine the value of an asset or liability. It is based on the concept that the value of an asset or liability should reflect the price that would be received to sell it in an orderly transaction in the current market (Richard 2019; Rodrigo et al., 2020; Sodan, 2022; Sunusi et al., 2020). Bessong and Charles (2022) stipulated that determining the fair value of these assets and liabilities may require more judgment and estimation compared to financial instruments. Goroke and Maccarthy (2023) averred that fair value is used for a variety of purposes in accounting, including financial reporting, valuing assets during mergers and acquisitions, and determining the value of collateral for loans. It allows investors, creditors, and other stakeholders to make informed decisions based on the true value of an organization's assets.

Dimensions of Fair Value Accounting

Fair Value of Non-Current Assets

Chen et al (2020) stated that fair value of non-assets is the estimated worth or price that can be obtained if a non-physical asset, such as a liability or financial instrument, is sold or transferred in the open market. Jonah et al (2023) explained that fair value of non-current asset is a market-based measurement that takes into consideration factors such as supply and demand, prevailing market conditions, and the perceived risk associated with the asset. Edori and Ohaka (2018) affirmed that fair value of non-current assets allowed investors, creditors, and other stakeholders to make informed decisions by providing an estimate of what the non-assets are worth in the current market. Ghosh et al (2020) stressed that fair value of non-current asset is important for financial reporting purposes, as it provides a more accurate representation of an entity's financial position. This information can impact financial statements, such as the statement of financial position, and can also influence the assessment of performance indicators like profitability and solvency (Osama et al., 2020).

Non-current assets can include items such as financial derivatives, contractual rights and obligations, intellectual property rights, or even intangible assets like brand value. Unlike physical assets, which have a tangible presence and can be easily valued based on their physical attributes, non-assets are more difficult to measure objectively. To determine the fair value of non-assets, companies often rely on various valuation techniques. These techniques may include using market prices for similar assets, applying mathematical models such as discounted cash flow analysis, or considering the value of comparable transactions in the market. The International Financial Reporting Standards (IFRS) defines non-current assets as long-term assets that are expected to be held for more than one year. These assets can include property, plant and equipment, intangible assets, investment properties, and financial assets held for long-term investment purposes. Ibidunnia and Okere (2019) disclosed that determination of fair value of non-current assets involves subjective judgments and assumptions, and the actual value obtained in a transaction may differ from the estimated fair value. Therefore, companies need to exercise caution and rely on reliable data sources and valuation methodologies to ensure a reasonable estimate of the fair value of their non-assets. Ahmadi et al (2018) documented that under International Financial Reporting Standards (IFRS), the fair value of non-current assets is the estimated value at which an asset can be exchanged between

knowledgeable parties in an arm's length transaction. Under IFRS, fair value is used for various purposes, including the initial recognition of an asset, subsequent measurement, impairment testing, and disclosure in the financial statements. The fair value of non-current assets is typically disclosed in the notes to the financial statements, providing users with additional information to assess the value and risks associated with these assets. Overall, fair value provides users of financial statements with more relevant and reliable information about the value of non-current assets under IFRS. It reflects the current market conditions and helps users make informed decisions about the entity's financial position and performance (Leonard et al., 2018; Osama et al., 2020; Ibidunnia & Okere, 2019; Unyimadu & Kirfodu, 2023).

Fair Value of Current Assets

Abiahu et al (2020) stated that fair value of current assets, as per International Financial Reporting Standards (IFRS), is the estimated amount at which the assets could be exchanged between knowledgeable and willing parties in an arm's length transaction. It represents the market value or the price that seller would receive and a buyer would pay for the assets in an active market. Chimele and Imo (2019) documented that the International Financial Reporting Standards (IFRS) required companies to disclose the fair value of current assets in their financial statements, either in the statement of financial position (balance sheet) or in the notes to the financial statements. Chidi et al (2022) documented that current assets are typically valued at fair value on the balance sheet as they are expected to be converted into cash or used up within a short period of time, usually within one year. Chimele and Imo (2019) stated that fair value reflects the current market conditions and expectations, which may be different from the historical cost. Therefore, fair value provides users of financial statements with more relevant and reliable information about the value of the assets. It is important to note that fair value is not always equal to the historical cost at which the assets were acquired. Daniel and Assefa (2018) shown that fair value information helps investors, lenders, and other stakeholders to assess the financial position and performance of the company. Akpaka (2021) reported that fair value of current assets is determined based on various factors, including market conditions, supply and demand, and the specific characteristics of each asset. The fair value of current assets is important because it provides a more accurate representation of a company's financial position. Anssari (2023) explained that fair value of current assets is the estimated worth of a company's short-term assets, such as cash, accounts receivable, inventory, and marketable securities. Al-Homaida et al (2018) stated that fair value of current assets reflects the current market value of the assets and can be used to assess the company's liquidity and ability to meet its short-term obligations. Amaefule et al (2018) shown that fair value accounting standards require companies to report their current assets at fair value in financial statements, providing more transparency and comparability in financial reporting. This helps investors and stakeholders in evaluating a company's financial health and making informed decisions (Anshur et al., 2018; Elshamy et al., 2018; Anssari, 2023). Overall, fair value of current assets under IFRS is an important concept in financial reporting as it provides a more accurate representation of the value of the assets and enhances the transparency and comparability of financial statements. In conclusion, the fair value of current assets provides a more accurate reflection of a company's financial position and can be used to assess its liquidity and ability to meet its short-term obligations.

Fair Value of Total Liabilities

In accounting context, Ahn (2022) reported that total liabilities are the combined amount of debts and obligations a company owes to external parties. Akwu et al (2017) stated that total liabilities represented the financial obligations that a company must fulfill in the future. Ahmed (2018) disclosed that fair value of total liabilities, in an accounting context, is the state current market conditions. Agadoni (2018) stated that fair value is an important concept in financial reporting as it provides a more accurate representation of a company's financial position. Ibidunnia and Okere (2019) explained fair value of total liabilities is based on the principle of market value, where assets and liabilities are valued at their current market prices. With regard to total liabilities, Obigabemi et al (2020) stated that fair value takes into account factors such as interest rates, creditworthiness,

and market conditions. Bessong and Charles (2022) asserted that fair value of total liabilities is the price that would be received to sell the liabilities in an orderly transaction between a willing buyer and a willing seller. The fair value of total liabilities is disclosed in the financial statements, typically in the footnotes or accompanying schedules. This information is important for investors and stakeholders to assess the company's financial health, risk exposure, and ability to meet its obligations (Ramli et al., 2021; Richard, 2019; Rodrigo et al., 2020; Sodan, 2022; Soyemi & Olawale, 2019; Sunusi et al., 2020; Thi, 2020).

The fair value measurement of liabilities takes into account various factors such as market conditions, credit risk, future cash flows, and discount rates. It requires companies to consider both observable market data and their own assumptions when determining the fair value of their liabilities. Lyndon and Paymaster (2019) affirmed that fair value of total liabilities provides a more accurate and market-oriented view of a company's financial position, allowing stakeholders to make informed decisions. Osanyinbi et al (2023) disclosed that fair value of total liabilities in accounting represents the estimated market value of a company's outstanding debts or financial obligations. Under International Financial Reporting Standards IFRS, fair value is a key measurement principle used for financial reporting. Dawad et al (2022) affirmed fair value of total liabilities provides stakeholders with information about the current value of a company's financial obligations, which allows for better decision-making and more transparency in financial statements. It is worth noting that fair value is different from historical cost, which records liabilities at their original cost. In certain cases, such as for short-term trade payables or other liabilities with fixed terms and rates, using the nominal or contractual value may be an appropriate alternative.

Financial Performance

In oil and gas business environment, Rajkumar and Hanitha (2021) viewed financial performance as a firm's ability to generate new resources from day-to-day operations over a given period of time. Olayinka et al. (2018) affirmed that financial performance is a post business operation activity used to determine how economically well or profitable the business has done within a particular period; it is the extent to which financial goals or obligation of a firm is being accomplished. Olaiya and Adeleke (2019) maintained that financial performance demonstrates the economic state of the firm, the degree of the competition in the industry, and a comprehensive knowledge about the profitability of the sectors within the firm. Sulieman and Ahlam-Jebreen (2017) disclosed that financial performance is the firm's overall financial health over a given period of time. Amu and Nathaniel (2016) acknowledged that financial performance is the ability of an organization to gain and manage the resources in several difference ways to develop a competitive advantage. Ngungi (2018) established that financial performance is the process of determining the operating and financial characteristics of a firm from accounting and financial statements whereby the analyst attempts to measure the firm's liquidity, profitability and other financial indicators that the business is conducted in a rational and normal way to ensure enough returns to the shareholders and maintain at least its market value.

Rokhimah (2024) documented that financial performance is to the evaluation of the financial results of an entity or organization, such as a company, financial institution, or individual, over a certain period of time. Additionally, Ngungi (2018) stated that financial performance is a post business operation activity to determine how economically well or profitable the business has done within a particular period. The financial performance is commonly measured by the ratios such as return on equity, return on assets, return on capital, return on sale and operating margin. Okonkwo and Ekwueme (2022) stated that financial performance entails measurement of the results of a firm's policies and operations in monetary terms. Abaenewe et al. (2019) reported that financial performance is a measure of a business ability to make profit or revenue based on the information provided in the financial statements. Olaiya and Adeleke (2019) maintained that financial performance demonstrates the economic state of the firm, the degree of the competition in the industry, and a comprehensive knowledge about the profitability of the sectors within the firm.

Measures of Financial Performance

Earnings Per Share

The term earnings per share (EPS) are essential and important financial measure that indicates a company's profitability. The term is calculated by dividing the company's net income with the total number of outstanding shares. It is a tool that market participants often use to measure the profitability of a company before buying their shares. Ahmed and Schaefer (2022) stated that earnings per share are the portion of a company's profit allocated to each share of common stock. Al-Homaida et al (2018) stated that earning per share is a financial metric that measures the profitability of a company on a per-share basis. It is widely used by investors, analysts, and financial institutions to evaluate a company's performance and compare it with other companies in the same industry. Earnings per share (ESP) are the net profit realized by the company after accounting for all expense such as interest, depreciation, and taxes (Abotsi et al., 2024; Chidi et al., 2022).

Alkali et al (2023) stated that earning per share gives pertinent note to shareholder or stockholders. An entity that discloses earnings per share (EPS) amounts for profit or loss attributable to the ordinary shareholders of the parent company and, if presented, profit or loss from continuing operations attributable to those equity holders in accordance with the standard and if it chooses to disclose earning per share based on a separate financial statements such information will be shown in its statement of comprehensive income and not in the consolidated financial statements. The company can withhold all the EPS to be used in its operation; however, dividends can be declared and paid to the shareholders. Earnings per share is defined the profit in pence attributable to each equity share, based on the consolidated profit of the period after tax and after deducting minority interests and preference dividends, but before taking into account extraordinary items, divided by the number of equity shares in issue and ranking for dividend in respect of the period. Earnings per share (EPS) is a ratio that shows how much profit (return) obtained by investors or shareholders per share by dividing net income after tax with the number of ordinary shares outstanding (Anssari, 2023; Bui, 2020; Chen et al., 2020; Chidi et al., 2022).

Theoretical Review

Agency Theory

The agency theory was developed by Michael C. Jensen and William H. Meckling in 1976. Agency theory is a financial and economic concept that examines the relationships and conflicts of interest between principals (owners or shareholders) and agents (managers or employees) within an organization. Joseph et al (2023) analyzed how agents perform their duties and make decisions on behalf of principal's and how these decisions affect the interests of both parties. In the context of fair value accounting, agency theory suggested that conflicts of interest may arise between principals and agents. Principals typically want to maximize the value of their investment and may prefer fair value accounting, which measures assets and liabilities at their current market value. This can provide more accurate and relevant information to investors (Kangogo & Irungu, 2020; Bessong & Charles, 2022).

On the other hand, managers or agents may have incentives to manipulate fair value measurements to meet certain performance targets or personal goals (Chidi et al., 2022; Tonye & Ikegima, 2022). They may have a bias towards overstating the value of assets, leading to potential distortions in financial statements. This can result in misleading information for stakeholders and affect their decision-making. Dawad et al (2022) opined that financial performance can also be influenced by agency conflicts. The principals may prefer using fair value methods, such as the lower of cost or market value, to reflect the current market conditions accurately (Unyimadu & Kirfodu, 2023; Jonah et al., 2023; Khaled & Hayam, 2021).

Anisere-Hameed and Bodunde (2021) affirmed that agency theory emphasizes the importance of understanding and managing the conflicts of interest that arise between principals and agents in relation to fair value accounting and inventory valuation. By addressing these conflicts, companies can enhance transparency, accountability, and trust in their financial reporting practices. Adeyemi and Kargi (2022) opined that agency theory is a principle in economics and finance that analyzes

the relationships between individuals, known as principals, who delegate decision-making authority to other individuals, known as agents.

In the context of fair value accounting and inventory valuation, the implications of agency theory can be significant. Agency theory suggested that agents may have different goals and interests compared to the principals they represent. Goroke and Maccarthy (2023) stated that agents may have incentives to manipulate the reported fair values or valuations of inventory in order to benefit themselves or their own interests. For example, agents may have an incentive to overstate the fair values of assets or to undervalue inventory in order to increase their own compensation or to meet certain performance targets. Agency theory highlighted the importance of monitoring and control mechanisms. However, the principals need to have effective monitoring and control systems in place to ensure that agents act in their best interests and do not engage in opportunistic behavior (Abotsi et al., 2024).

In the context of fair value accounting and financial performance, this may involve implementing robust internal controls, conducting regular audits, and ensuring transparency and disclosure in reporting practices. By having these mechanisms in place, principals can reduce the potential for agents to manipulate fair values or inventory valuations. Thirdly, agency theory emphasizes the need for aligning the interests of principals and agents. In the context of fair value accounting and inventory valuation, this means that principals should design compensation and incentive systems that encourage agents to act in the best interests of the principals. For example, principals could tie agent compensation to long-term performance measures or require agents to disclose any conflicts of interest that may arise in the valuation process. By aligning the interests of principals and agents, the likelihood of opportunistic behavior that could distort fair value accounting or inventory valuation can be reduced (Obigabemi et al., 2020; Onoja & Yahya 2015).

In summary, agency theory has implications for fair value accounting and profitability by emphasizing the potential for agents to act in their own interests, the importance of monitoring and control mechanisms, and the need for aligning the interests of principals and agents. By understanding and addressing these implications, principals can enhance the accuracy and reliability of fair value accounting and inventory valuation practices (Osama et al., 2020; Osanyinbi et al., 2023; Osho & Ajetunmobi, 2018; Oyeibisi et al., 2018).

Replacement Cost Theory

The replacement cost theory was developed by Norman B. Macintosh and Eric W. Noreen in their book "Accounting Choices in Controlling the Work Process" in 1998. In relation to replacement cost theory, Daniel and Assefa (2018) argued that inventory should be valued at the cost of replacing it with identical or similar items at the current market price. It takes into account changes in market prices and considers the current cost of replacing inventory. Under the replacement cost theory, Ahmed and Schaefer (2022) suggested that assets should be valued and reported on the financial statements at their current replacement cost, which represents the amount of money needed to acquire a similar asset in the current market. Chukwu and Akpeekon (2019) opined that when considering this theory in relation to fair value accounting and inventory valuation, there are several implications: Al-Homaida et al (2018) documented that fair value accounting aimed to provide accurate and reliable information about the value of assets and liabilities on the financial statements. The replacement cost theory aligns with this objective by valuing assets at their current replacement cost, which reflects their fair value in the market. This allowed investors and stakeholders to make informed decisions based on the most up-to-date information. Under the replacement cost theory, Anisere-Hameed and Bodunde (2021) asserted that inventory is valued at the cost of replacing it with identical or equivalent goods in the current market. This method ensures that the inventory is reported at its current market value, which is the most reliable measure of its worth. It helps avoid the overstatement or understatement of inventory values, which can distort the financial statements and mislead users. The replacement cost theory promotes consistency in valuing assets. By valuing assets at their current replacement cost, companies can ensure that their financial statements reflect the true economic value. Akpaka (2021) stated that, this is especially important in industries where the market value of assets fluctuates significantly, such as in commodities or real estate. Akinlabi

and Sonko (2021) disclosed that implementing the replacement cost theory may pose some practical challenges. It may be difficult to determine the accurate replacement cost of certain assets, especially if there are no identical or equivalent goods available in the market. This can result in subjective estimates and potential inconsistencies in valuing assets across different entities (Agadoni, 2018). The replacement cost theory enhances transparency in financial reporting. By valuing assets at their replacement cost, companies provide a clearer picture of their financial position and performance. This transparency allows users to assess the true value of assets, which can be particularly important during periods of economic uncertainty or volatility (Dawad et al., 2022; Elshamy et al., 2018; Osanyinbi et al., 2023). In conclusion, Ahmed and Schaefer (2022) opined that the replacement cost theory has implications for fair value accounting and inventory valuation by promoting accurate and reliable financial reporting, ensuring consistency in valuing assets, and enhancing transparency in financial statements. It may also present practical challenges in determining accurate replacement costs for certain assets (Goroke & Maccarthy, 2023; Jonah et al., 2023; Unyimadu & Kirfodu, 2023).

Empirical Review

Kato and Nsubuga (2024) examined the effect of fair value accounting on the financial performance of listed agricultural companies in Uganda. Using a fixed-effects regression model with a sample of nine (9) agricultural firms, the research investigates how the fair value of biological assets, property, plant, and equipment (PPE), and liabilities affects financial performance metrics such as return on assets (ROA), net profit margin (NPM), and return on equity (ROE). The findings suggest that the fair value of biological assets has a significant and positive effect on ROA and ROE, while the fair value of liabilities has an insignificant impact on performance. Additionally, the study finds that the fair value of PPE has a minimal effect on profitability measures. The research underscores the importance of fair value accounting in improving the accuracy of financial statements, which in turn enhances financial transparency and supports long-term financial sustainability. The study recommends that Ugandan agricultural firms adopt more comprehensive fair value accounting standards to reflect true market values and improve decision-making.

Mokhtar and Wang (2024) explored the role of fair value accounting in improving the financial performance of agricultural companies listed in Sub-Saharan Africa, with a focus on Kenya and South Africa. Using a sample of twelve (12) listed agricultural firms, the study employs a fixed-effects regression model to assess the relationship between the fair value of biological assets and liabilities and key financial performance indicators, including return on equity (ROE), return on investment (ROI), and net profit margin (NPM). The study's results reveal a strong positive correlation between the fair value of biological assets and profitability indicators in both countries. Notably, fair value measurements of current assets are found to have a more significant impact on profitability compared to non-current assets. The research suggests that fair value accounting can lead to more reliable financial reporting, thus improving investor confidence and market efficiency. The study recommends that agricultural firms in these markets adopt international fair value standards to enhance financial transparency and reduce information asymmetry.

Molefe and Thwala (2024) explored the impact of fair value accounting on the financial performance of listed agricultural companies in South Africa. Using data from ten (10) agricultural companies listed on the Johannesburg Stock Exchange (JSE), the study applies a panel regression analysis to assess the relationship between fair value measurements of biological assets and liabilities and key financial performance metrics such as return on assets (ROA) and earnings per share (EPS) among the listed agricultural companies in South Africa. The results show that fair value accounting for biological assets significantly enhances profitability and liquidity, highlighting the importance of fair value disclosures in improving financial transparency and performance in the agricultural sector.

Ngugi and Cheruiyot (2024) analyzed the relationship between fair value accounting and the financial performance of listed agricultural companies in Kenya. The research used panel data from seven (7) agricultural firms and employed a fixed-effects regression model. Results indicated that the fair value of current assets had a significant positive effect on the financial performance

indicators, including net income and earnings per share (EPS). However, non-current assets had a minimal impact on performance of listed agricultural companies in Kenya. The study suggests that Kenyan agricultural companies should increase the frequency of asset revaluations to better align with market conditions and improve financial outcomes.

Ogunleye and Alabi (2024) examined the impact of fair value accounting on the financial performance of listed agricultural companies in Nigeria. A sample of eight (8) companies listed on the Nigerian Exchange Group (NGX) was analyzed using a fixed-effect regression model. The study found that the fair value of both biological assets and current assets had a significant and positive impact on key performance metrics, including return on equity (ROE) and earnings per share (EPS) of listed agricultural companies in Nigeria. However, the effect of non-current assets was less pronounced among the agricultural companies in Nigeria. The study recommends that Nigerian agricultural firms should integrate fair value accounting to enhance the accuracy of their financial statements, which would improve the transparency of their performance.

Wangui and Njoroge (2024) examined the influence of fair value accounting on the financial performance of listed agricultural companies in Kenya. The research analyzed the relationship between fair value accounting for biological assets, fixed assets, and profitability ratios, including return on investment (ROI) and earnings per share (EPS), using a fixed-effects regression model. The study revealed that the fair value of biological assets has a significant and positive effect on both ROI and EPS, while non-current assets and liabilities showed a weaker correlation among the listed agricultural companies in Kenya. The findings suggested that Kenyan agricultural companies benefit from adopting fair value accounting for their biological assets, as it provides more accurate financial information for investors.

Boateng and Yeboah (2023) explored the effect of fair value accounting on the financial performance of agricultural companies listed on the Ghana Stock Exchange. The study uses a fixed-effects regression model to analyze the financial data of ten (10) agricultural firms. The findings suggested that fair value accounting, particularly the valuation of biological assets, significantly improves the financial performance, including return on equity (ROE) and earnings per share (EPS) of agricultural companies listed on the Ghana Stock Exchange. The study recommended that Ghanaian agricultural firms adopt more comprehensive fair value practices to enhance financial transparency and attract more investment.

Kwaku and Amoah (2023) investigated the relationship between fair value accounting and financial performance in agricultural companies listed on the Ghana Stock Exchange (GSE). Using a sample of six (6) listed agricultural companies, the study applies a fixed-effects regression model to explore how the fair value measurement of both current and non-current assets affects financial performance indicators such as return on equity (ROE) and return on assets (ROA). The results indicate a positive and statistically significant relationship between the fair value of biological assets and both ROA and ROE, while non-current asset revaluation showed no significant impact on performance among the agricultural companies listed on the Ghana Stock Exchange (GSE). The study advocated for the regular revaluation of biological assets as a tool for enhancing financial reporting and decision-making in Ghana's agricultural sector.

Santos and Lima (2023) investigated the effect of fair value accounting on the financial performance of agricultural companies in Brazil. The study used a longitudinal analysis of publicly listed agricultural companies from 2014 to 2022. The study employed a combination of fixed-effects and random-effects regression models. The regression analysis revealed that the fair value of biological assets had a positive and significant impact on the financial performance metrics, including return on equity and earnings per share of agricultural companies in Brazil. However, the fair value of liabilities showed no significant effect on performance of agricultural companies in Brazil. The finding supports the argument that fair value accounting enhances the transparency and quality of financial reporting, thereby potentially improving decision-making for investors of agricultural companies in Brazil.

Smith and O'Connor (2023) examined the impact of fair value accounting on the financial performance of listed agricultural companies in South Africa. Utilizing an ex-post-facto research

design, the study covered a sample of ten (10) listed agricultural firms on the Johannesburg Stock Exchange (JSE) between 2015 and 2021. The study employed a fixed-effect regression model to analyze the relationship between fair value measurements of assets and liabilities and key performance indicators such as return on assets (ROA) and earnings per share (EPS). The results indicate that the fair value of biological assets significantly impacts the return on assets (ROA) and earnings per share (EPS) of these companies, with a positive correlation between the fair value of current assets and financial performance. The study recommends that agricultural firms regularly revalue their assets to reflect fair market value, which could improve their financial transparency and performance.

Adamu and Bello (2022) research focused on the role of fair value accounting in the financial performance of listed companies within the Nigerian agricultural sector. Using a panel data methodology from 2013 to 2020, the study analyzed a sample of five (5) listed agricultural companies on the Nigerian Exchange Group (NGX). The study employed both descriptive statistics and a fixed-effects regression model to assess the relationship between fair value accounting and financial performance metrics such as return on equity (ROE) and earnings before interest and taxes (EBIT). The results suggest that the fair value of biological assets has a significant and positive impact on both return on equity and EBIT, highlighting the importance of fair value accounting in providing more accurate financial insights for investors.

Ajayi and Oladipo (2022) explored the effects of fair value accounting on the financial performance of listed agricultural companies in Nigeria. The study applied a descriptive research design with secondary data collected from the Nigerian Exchange Group (NGX) for the period 2016-2021. Using a fixed-effects regression analysis, the study examined the influence of fair value measurements of non-current assets, current assets, and liabilities on profitability indicators such as net income and return on equity (ROE). The results indicated a strong positive relationship between fair value of current assets and profitability, while non-current assets showed a weaker effect of listed agricultural companies in Nigeria. The study suggested that Nigerian agricultural companies should adopt regular asset revaluation practices to improve the accuracy of their financial reports and enhance investor confidence.

Gap in Literature

There is extensive research on fair value accounting in various sectors; few studies focus specifically on the oil and gas industry in emerging economies like Nigeria. Research that explores fair value accounting in the Nigerian oil and gas sector is sparse, especially studies that assess its direct impact on financial performance within this context. Most existing studies focus on developed economies, and there is a need to examine the unique challenges and opportunities faced by Nigerian oil and gas companies. Much of the existing literature on fair value accounting tends to focus on short-term financial performance, typically looking at quarterly or annual results. However, your study covers a ten-year period (2014–2023), which provides a broader perspective on the long-term effects of fair value accounting on the financial performance of listed oil and gas companies.

This long-term perspective is not sufficiently explored in previous studies, especially in the Nigerian context. The literature often treats fair value accounting as a broad concept without distinguishing the effects it has on different asset classes, such as non-current versus current assets. The study uniquely investigates the separate effects of the fair value of non-current assets, current assets, and total liabilities on earnings per share and return on equity. Thus, previous studies have not adequately explored how different categories of assets under fair value accounting influence financial performance in a sector-specific context like oil and gas. Additionally, agency theory has been widely used in financial accounting research, but few studies have applied it specifically to the impact of fair value accounting on the financial performance of oil and gas companies in Nigeria. This gap suggested that there is limited research exploring the principal-agent problem and how it influences the interpretation and application of fair value accounting within Nigerian listed oil and gas companies. These gaps highlight opportunities for further research, especially in the context of fair value accounting and its impact on financial performance in the Nigerian oil and gas industry.

METHODOLOGY

This section presented the research philosophy, research design, and research population, sample size and sampling technique, sources and method of data collection, measurement of variables, model specification and method of data analysis to be employed while analyzing the work.

Research Philosophy: The underlying philosophy of this study is positivism, wherein the cardinal principle is founded in the belief that reality is stable and can be observed and described from an objective viewpoint. Adeyemi and Kargi (2022) suggested that positivism is a philosophy of research that explains that only real knowledge is knowledge that relates with real sense of experience. The reason for choosing this school of thought is that positivism is particularly deductive with the testing and assessing the validity of known theories or hypotheses through their application to the real world that related to fair value accounting and financial performance and how oil and gas companies activities impact on the environment in their pursuit for financial performance. A vital concern in research is the philosophical norms which strengthen the study. These are usually recognized as ontology, epistemology, methodology and axiology. Generally, researchers are considered in terms of their epistemological alignments. Epistemology has given rise to two far-reaching research patterns in management called positivism and interpretivism or positivism and social constructionism.

Research Design: The study used an ex-post-facto research design in a bid to achieve a holistic evaluation of the effect of fair value accounting on financial performance of listed oil and gas companies in Nigeria. The purpose for using an ex-post-facto research design is due to the fact that the study relied on existing secondary data obtained, which the researcher cannot manipulate.

Population of the Study: The study was made up of Eight (8) listed oil and gas companies in Nigeria on the Nigeria Exchange Group (NGX). The data for the study were extracted from published financial statements from the Nigeria Exchange Group (NGX) as from 2014-to-2023. The oil and gas companies listed on the Nigeria Exchange Group (NGX) are presented below in Table 1.

Table 1: Listed Oil and Gas Companies in NGX

S/N	COMPANY	DATE INCORPORATED
1	CAPITAL OIL PLC	AUGUST, 29 TH 1985
2	CONOIL PLC	JUNE 30 TH 1970
3	ETERNA PLC	JANUARY 13 TH 1989
4	JAPPAUL GOLD & VEN. PLC	JUNE 29 TH 1994
5	MRS OIL NIGERIA PLC	AUGUST 12 TH 1969
6	OANDO PLC	AUGUST 25 TH 1969
7	TOTAL ENERGIES MARKETING NIG PLC.	JANUARY 6 TH 1956
8	SEPLAT ENERGY PLC	JUNE 17 TH 2009

SOURCE: www.ngx.com.ng

Sample Size and Sampling Technique: The study constitutes seven (7) listed oil and gas companies on the Nigeria exchange group (NGX) spanning from (2014 -to- 2023) using a purposive (judgmental) sampling technique. The main purpose of choosing this sampling technique is to allow the researcher gather required data which is most important to the research aim and objectives. The list of the sampled oil and gas companies in this study is shown in Table 2

Table 2: Sample Oil and Gas Companies

S/N	COMPANY	DATE INCORPORATED	OBSERVATIONS
1	CAPITAL OIL PLC	August, 29 th 1985	10
2	CONOIL PLC	June 30 th 1970	10
3	ETERNA PLC	January 13 th 1989	10
4	JAPPAUL GOLD & VEN. PLC	June 29 th 1994	10

5	MRS OIL NIGERIA PLC	August 12 th 1969	10
6	OANDO PLC	August 25 th 1969	10
7	TOTAL ENERGIES MARKETING NIG PLC.	January 6 th 1956	10
TOTAL OBSERVATIONS			70

SOURCE: www.ngx.com.ng

Sources and Methods of Data Collection: The study employed the use of secondary data. Secondary data refers to existing data that have been collected by other researchers, organization or government agencies. They include published articles, reports, statistical database, among others. The time series data were extracted downloading audited annual financial statements of the seven (7) sampled oil and gas companies on the Nigerian Exchange Group (NGX) website spanning from (2014 -to- 2023). These data provide reliable information because it is obtain from reliable source. We ensure that the validity and reliability critical considering its consistency and accuracy.

Validity of Research Instrument: The researcher opted for use of published data sourced from the Nigerian Exchange Group (NGX) website spanning from (2014 -to- 2023) because they contain values for the items which have been selected as variables in the study that disclosed the extent to which the instrument was considered accurate and precise in the measurement of the variables under investigation. The validity is represented as the agreement between two attempts to measure the same trait through maximally different methods; it is the extent to which a research instrument measures what it is supposed to measure.

Reliability of Research Instrument: The instrument was deemed to be satisfactory because the published data sourced from the Nigerian Exchange Group (NGX) website used for data analysis where consistent. The reliability test was conducted on the preliminary data that was collated for the purpose of the study. It was confirmed that the data set was reliable and valid because the data are in public domain.

Measurement of Variables: The variables of interest used or adapted to measure the effect of fair value accounting on financial performance of listed oil and gas companies in Nigeria are presented in this section:

Fair Value of Non-Current Assets (FVANONA): This is the estimated value at which an asset can be exchanged between knowledgeable parties in an arm's length transaction. These are long-term assets that are expected to be held for more than one year. However, for purpose of this study, a fair value of non-current asset is extracted direct from the annual report of the studied oil and gas companies in Nigeria.

Fair Value of Current Assets (FVACA): This is the estimated amount at which the assets could be exchanged between knowledgeable and willing parties in an arm's length transaction. It represents the market value or the price that a seller would receive and a buyer would pay for the assets in an active market. However, for purpose of this study, a fair value of current asset is extracted direct from the annual report of the studied oil and gas companies in Nigeria.

Fair Value of Total Liabilities (FVATOL): This represents the estimated market value of the company's outstanding debts or financial obligations. However, for purpose of this study, a fair value of total liabilities is extracted direct from the annual report of the studied oil and gas companies in Nigeria.

Earnings Per Share (EPS): This is a financial metric that measures the profitability of a company on a per-share basis. It is widely used by investors, analysts, and financial institutions to evaluate a company's performance and compare it with other companies in the same industry. The formula for earnings per share (EPS) is as follows: $EPS = \text{Net profit divided by total number of shares outstanding}$.

Model Specification: In order to investigate the effect of fair value accounting on financial performance of listed oil and gas companies in Nigeria. In line with the study objective and operational framework developed at the introductory chapter required functional relationship to test the developed hypotheses is presented as follows:

Model I: Earnings Per Share (EPS) Model

$$\text{EPS} = f(\text{FVANONA}, \text{FVACA}, \text{FVATOL}) \dots\dots\dots \text{I}$$

This can be written in Panel Least Square (PLS) form as:

$$\text{EPS}_{it} = a_0 + a_1\text{FVANONA}_{it} + a_2\text{FVACA}_{it} + a_3\text{FVATOL}_{it} + U_{it} \dots\dots \text{II}$$

$a_1 > 0; a_2 > 0; a_3 > 0$

Where:

- EPS = Earnings per share as proxy for financial performance
- FVANONA = Fair value of non-current assets as proxy for fair value accounting
- FVACA = Fair value of current assets as proxy for fair value accounting
- FVATOL = Fair value of total liabilities as proxy for fair value accounting
- f = function
- t = time period under study
- a_0 = constant
- a_1 - a_3 = Parameter or coefficient of explanatory variable
- u = error term

Method of Data Analysis: The study used Descriptive Statistics, Augmented Dickey-Fuller (ADF) test, diagnostic test, Hausman test and fixed effect regression technique for the data analysis.

Descriptive Statistics: This shows the mean (average) for each of the variables, their maximum values, minimum values, median, standard deviation, skewness, kurtosis, and the Jarque-Bera (JB) statistics (normality test) computed for each of the variables to quantify the manifested construct central tendency, dispersion and shape of their distributions.

Unit Root Test: This was used to determine whether the time series data are stationary at level, 1st difference and 2nd difference. The variables in the regression model are required to be stationary to ascertain the reliability of the result. The presence of unit root implies that the time series data under investigation is non-stationary, the absence of a unit roots showed that stochastic process is stationary. The study used Augmented Dickey-Fuller (ADF) test.

DATA PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS

Data Statistics

Descriptive Statistics

This section presents the descriptive analysis for each variable that includes the mean, maximum and minimum value, standard deviation, and Jarque-Bera value, which demonstrate whether the data are normally distributed. Describing the distribution features of the data and identifying any unexpected observations or patterns of the descriptive statistics used. Thus, the data obtained for the study was first described and summarized using simple descriptive methods.

Table 3: Descriptive Statistics of the Variables

Category	FVANONA	FVACA	FVATOL	EPS
Mean	0.876583	4.351884	7.508890	6.719920
Median	0.612005	4.020683	7.759268	6.951642
Maximum	3.033227	8.189720	8.585182	8.665380
Minimum	0.040586	0.108470	5.689152	4.618027
Std. Dev.	0.745903	2.164136	0.758408	0.949537
Skewness	1.285478	-0.148733	-0.368295	-0.225924
Kurtosis	3.780015	2.070433	1.934565	2.135729
Jarque-Bera	21.05318	2.778363	4.893340	2.774134

Probability	0.000027	0.249279	0.086581	0.249807
Sum	61.36081	304.6319	525.6223	470.3944
Sum Sq. Dev.	38.38962	323.1603	39.68758	62.21184

Observations 70 70 70 70

Source: E-View Output, Version 10

This section revealed the descriptive analysis in Table 4.1. This analysis enables the researcher to take visual inspections on the cross sectional data and their behaviour. The Jarque-Bera test was executed to check whether the research variables are normally distributed or not. The Jarque-Bera test statistics revealed that fair value of non-current assets (FVANONA) was not normally distributed because their Prob** value are less than 5% decision criteria. This simply indicated that the null hypothesis of Jarque-Bera test statistics was rejected and the data does not follow a normal distribution. However, fair value of current assets (FVACA), and fair value of total liabilities (FVATOL) and earnings per share (EPS) variables were normally distributed because their Prob** value are greater than 5% decision criteria. This indicated that the null hypothesis cannot be rejected; there is no evidence to suggest that the data does not follow a normal distribution.

Unit Root Test: The panel data unit root of each variable was tested with Augmented Dickey-Fuller (ADF) Unit Root approach. Table 4 shows the results of the Fisher-ADF Test Unit Root Test.

Table 4: Unit Root Test Results

VARIABLE	Fisher-ADF Test	Order of Integration	Probability **	REMARK
FVANONA	-4.66215	I(0)	0.0000	Stationary
FVACA	-4.95872	I(0)	0.0000	Stationary
FVATOL	-5.34031	I(0)	0.0000	Stationary
EPS	-2.77980	I(0)	0.0027	Stationary

Source: E-View Output, Version 10

This section presents the Fisher-ADF unit root test in Table 4. The results in table indicated that all the variables of interest are 1(0) or stationary at level because their probability value is less than 5% decision criteria. The null hypothesis of panel unit root is therefore rejected with 95% certainty. This indicates that the data series have been cleansed of unit root.

Table 5 Multi-collinearity Test

Variance Inflation Factors
Date: 10/13/24 Time: 12:10
Sample: 2014 2023
Included observations: 70

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
FVANONA	0.000910	5.473852	3.463306
FVACA	0.278110	1.570760	1.289801
FVATOL	0.000229	5.288706	2.979500
C	135.1323	1.864705	NA

Source: E-View Output, Version 10

Table 5 revealed the Multi-collinearity test that was tested through the use of the variance inflation factor (VIF). The results show that the study is free from the multi-collinearity problem because the Tolerance Value (TV) is < 1 and Variable Inflation Factors (VIF) is > than 10. The result is in agreement with the assumption of the classical regression model which states that there should not be multi-collinearity among the explanatory variables included in the model.

Table 6: Hausman Test on Model I

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	4.387562	3	0.0225

Source: E-View Output, Version 10

Based on the results of the Hausman test by comparing the fixed effect regression model and random effect model estimation methods, the value of Probability chi2 = 0.0225 is obtained. The prob. value < 5% decision criteria. This implied that the fixed effect regression model estimation method is more appropriate than the random effect regression model estimation.

Table 7: Regression Analysis of Model I

Cross-section random effects test equation:

Dependent Variable: EPS

Method: Panel Least Squares

Date: 10/13/24 Time: 11:16

Sample: 2014 2023

Periods included: 10

Cross-sections included: 7

Total panel (balanced) observations: 70

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.875108	1.062737	1.764414	0.0828
FVANONA	-0.362888	0.124338	-2.918553	0.0049
FVACA	0.122528	0.043749	2.800717	0.0069
FVATOL	0.616561	0.141625	4.353460	0.0001
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.676672	Mean dependent var	6.719920	
Adjusted R-squared	0.628173	S.D. dependent var	0.949537	
S.E. of regression	0.579005	Akaike info criterion	1.876552	
Sum squared resid	20.11481	Schwarz criterion	2.197766	
Log likelihood	-55.67934	Hannan-Quinn criter.	2.004142	
F-statistic	13.95225	Durbin-Watson stat	1.140972	
Prob(F-statistic)	0.000000			

Source: E-View Output, Version 10

The results in Table 7 disclosed the regression coefficient of ($R^2=0.676672$, Adjusted $R^2= 0.628173$, DW=1.140972). The results of the regression model disclosed the effect of fair value of non-current

assets (FVANONA); fair value of current assets (FVACA); and fair of total liabilities (FVATOL) on earnings per share (EPS) has a strong effect. The coefficient of determination R^2 represented the proportion of variance of earnings per share (EPS) that has been explained by the fair value of non-current assets (FVANONA); fair value of current assets (FVACA); and fair of total liabilities (FVATOL) in the fixed effect regression model. The Adjusted R^2 provides an insight of goodness of fit of the model. This implied that 62.8% increase in earnings per share (EPS) is contributed to increase in fair value of non-current assets (FVANONA); fair value of current assets (FVACA); and fair of total liabilities (FVATOL). The remaining value for earnings per share (EPS) was explained by unknown variables in fixed effect regression model. The Durbin-Watson test value (1.140972) is within the acceptable range of 1 to 3 specified by Field (2009) and this affirmed that the problem of autocorrelation is unlikely to exist in the data series. Additionally, the Table 4.7 also revealed a regression significant Prob** value 0.000000 is less than 5% decision criteria with F(13.95225) indicating that, the overall model is statistically significant at 5% decision criteria of the studied Oil and Gas companies in Nigeria.

Discussion of Findings

The Effect of Fair Value of Non-Current Assets on Earnings Per Share: The results in Table 7 disclosed the effect of fair value of non-current assets on earnings per share of listed Oil and Gas companies in Nigeria. The coefficient (-0.362888) and T-statistics (-2.918553) revealed a negative effect. The Prob. ** value 0.0049 < 5% decision criteria. Given the above result, the null hypothesis was rejected while the alternate hypothesis was accepted. This implied that the effect of fair value of non-current assets on earnings per share of listed Oil and Gas companies in Nigeria is negative and statistically significant. The finding associated with this variable is tandem with Abotsi et al. (2024); Aigienohuwa and Ohonba (2023); Alkali and Aliyu (2023); Anssari (2023); Goroke and Maccarthy (2023); Jonah et al (2023); Joseph et al (2023); whereas, Chimele and Imo (2019); Chukwu and Akpeekon (2019); Kayed and Hewaidy (2018) shared a contradicting result with the current study.

The Effect of Fair Value of Current Assets on Earnings Per Share: The results in Table 7 disclosed the effect of fair value of current assets on earnings per share of Listed Oil and Gas companies in Nigeria. The coefficient (0.122528) and T-statistics (2.800717) revealed a positive effect. The Prob. ** value 0.0069 < 5% decision criteria. Given the above result, the null hypothesis was rejected while the alternate hypothesis was accepted. This implied that the effect of fair value of current assets on earnings per share of listed Oil and Gas companies in Nigeria is positive and statistical significant. The finding associated with this variable is tandem with Osanyinbi et al (2023); Unyimadu and Kirfodu (2023); Adeyemi and Kargi (2022); Chidi et al (2022); Khaled and Hayam (2022); Tonye and Ikegima (2022); Akinlabi and Sonko (2021); Anisere-Hameed and Bodunde (2021); whereas, Rodrigo et al (2020); Sunusi et al (2020); Kangogo and Irungu (2020); Osama et al (2020); Abiahu et al (2020) shared a contradicting result with the current study.

The Effect of Fair Value of Total Liabilities on Earnings Per Share: The results in Table 7 disclosed the effect of fair value of total liabilities on earnings per share of listed Oil and Gas companies in Nigeria. The coefficient (0.616561) and T-statistics (4.353460) revealed a positive effect. The Prob. ** value 0.0001 < 5% decision criteria. Given the above result, the null hypothesis was rejected while the alternate hypothesis was accepted. This implied that the effect of fair value of total liabilities on earnings per share of listed Oil and Gas companies in Nigeria is positive and statistical significant. The finding associated with this variable is tandem with Abotsi et al. (2024); Aigienohuwa and Ohonba (2023); Alkali and Aliyu (2023); Anssari (2023); Goroke and Maccarthy (2023); Jonah et al (2023); Joseph et al (2023); whereas, Chukwu and Akpeekon (2019) Ogwo and Ugwunta (2019); Kayed and Hewaidy (2018) shared a contradicting result with the current study.

SUMMARY OF FINDINGS, CONCLUSIONS, RECOMMENDATIONS AND CONTRIBUTION TO SCHOLARSHIP

Summary of Findings

The study investigated the effect of fair value accounting on financial performance among listed Oil and Gas companies in Nigeria. The descriptive statistics, unit root test, diagnostic test, multi-collinearity test, correlation analysis, Hausman test, and fixed effect regression estimate were used. Based on the data presentation, analysis, and discussion of findings, the study summarized that:

1. The effect of fair value of non-current assets on earnings per share of listed Oil and Gas companies in Nigeria is negative and statistically significant for the time frame investigated.
2. The effect of fair value of current assets on earnings per share of listed Oil and Gas companies in Nigeria is positive and statistical significant for the time frame investigated.
3. The effect of fair value of total liabilities on earnings per share of listed Oil and Gas companies in Nigeria is positive and statistical significant for the time frame investigated.

Conclusions

Based on the data analysis, discussion of findings, and summary of findings above, the study generally concluded that this study investigated the effect of fair value accounting on financial performance among listed oil and gas companies in Nigeria is positive and statistically significant for the time frame (2014 – 2023) investigated. Additionally, the study had drawn the following conclusions:

1. Fair value of non-current assets adversely affected earnings per share of listed Oil and Gas companies in Nigeria
2. Fair value of current assets positively influenced earnings per share of listed Oil and Gas companies in Nigeria.
3. Fair value of total liabilities positively enhanced earnings per share of listed Oil and Gas companies in Nigeria.

Recommendations

Based on the summary of findings and conclusions above, the following recommendations were made:

1. The studied oil and gas companies should implement rigorous impairment testing as per accounting standards (e.g., IAS 36). Early identification of impairments can help in making strategic decisions about asset utilization or divestment.
2. The studied oil and gas companies in Nigeria should regularly review the fair value of non-current assets that include exploration rights, extraction equipment, and facilities. Utilize market assessments, production rates, and cash flow projections to ensure the assets are not overvalued on the statement of financial position (balance sheet).
3. The studied oil and gas companies should regularly re-evaluate tangible and intangible assets to reflect their fair value accurately. This can enhance the asset base on the balance sheet and potentially lead to higher depreciation deductions, impacting net income positively.
4. The studied oil and gas companies should report liabilities accurately to build investor trust. A clear understanding of debt conditions and obligations assures investors of the company's financial health, potentially increasing stock prices and earnings per share.

Contributions to Scholarship

The study has made the following contributions to scholarship:

Contribution to Policy: This study will benefit the management of oil and gas companies in Nigeria by designing alternative measures of determining the effect of fair value accounting in relation to fair value of non-current assets; current assets; and total liabilities on financial performance measures of earning per share and return on equity among oil and gas companies in Nigeria.

Contribution to Scope: This study empirically shown that fair value accounting and financial performance was majorly carried out in deposit money banks (DMBs) and construction companies. However, this will enlighten other researchers to go beyond these studies. Therefore, the present study was carried out on listed oil and gas companies in Nigeria.

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UNIT ROOT TEST

Null Hypothesis: Unit root (individual unit root process)

Series: FVANONA

Date: 10/13/24 Time: 11:57

Sample: 2014 2023

Exogenous variables: None

User-specified lags: 1

Total (balanced) observations: 49

Cross-sections included: 7

Method	Statistic	Prob.**
ADF - Fisher Chi-square	50.0450	0.0000
ADF - Choi Z-stat	-4.66215	0.0000

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Intermediate ADF test results FVANONA

Cross section	Prob.	Lag	Max Lag	Obs
1	0.4111	1	1	7
2	0.0054	1	1	7
3	0.1351	1	1	7
4	0.0369	1	1	7
5	0.0582	1	1	7
6	0.0248	1	1	7

7	0.0008	1	1	7
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Null Hypothesis: Unit root (individual unit root process)

Series: FVACA

Date: 10/13/24 Time: 11:59

Sample: 2014 2023

Exogenous variables: None

User-specified lags: 1

Total (balanced) observations: 49

Cross-sections included: 7

Method	Statistic	Prob.**
ADF - Fisher Chi-square	51.6852	0.0000
ADF - Choi Z-stat	-4.95872	0.0000

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Intermediate ADF test results FVACA

Cross section	Prob.	Lag	Max Lag	Obs
1	0.1126	1	1	7
2	0.0364	1	1	7
3	0.0113	1	1	7
4	0.2161	1	1	7
5	0.0012	1	1	7
6	0.0151	1	1	7
7	0.0317	1	1	7

Null Hypothesis: Unit root (individual unit root process)

Series: FVATOL

Date: 10/13/24 Time: 12:00

Sample: 2014 2023

Exogenous variables: None

User-specified lags: 1

Total (balanced) observations: 49

Cross-sections included: 7

Method	Statistic	Prob.**
ADF - Fisher Chi-square	58.8343	0.0000
ADF - Choi Z-stat	-5.34031	0.0000

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Intermediate ADF test results FVATOL

Cross section	Prob.	Lag	Max Lag	Obs
1	0.0009	1	1	7
2	0.0221	1	1	7
3	0.0209	1	1	7
4	0.0004	1	1	7
5	0.0406	1	1	7
6	0.0795	1	1	7
7	0.3301	1	1	7

Null Hypothesis: Unit root (individual unit root process)

Series: EPS

Date: 10/13/24 Time: 12:01

Sample: 2014 2023

Exogenous variables: None

User-specified lags: 1

Total (balanced) observations: 49

Cross-sections included: 7

Method	Statistic	Prob.**
ADF - Fisher Chi-square	29.5281	0.0089
ADF - Choi Z-stat	-2.77980	0.0027

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Intermediate ADF test results EPS

Cross section	Prob.	Lag	Max Lag	Obs
1	0.2114	1	1	7
2	0.0909	1	1	7
3	0.0656	1	1	7
4	0.6231	1	1	7
5	0.2360	1	1	7
6	0.0192	1	1	7
7	0.1091	1	1	7

Null Hypothesis: Unit root (individual unit root process)

Series: ROE

Date: 10/13/24 Time: 12:01

Sample: 2014 2023

Exogenous variables: None

User-specified lags: 1
Total (balanced) observations: 49
Cross-sections included: 7

Method	Statistic	Prob.**
ADF - Fisher Chi-square	49.3514	0.0000
ADF - Choi Z-stat	-4.53473	0.0000

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Intermediate ADF test results ROE

Cross section	Prob.	Lag	Max Lag	Obs
1	0.0427	1	1	7
2	0.2692	1	1	7
3	0.0001	1	1	7
4	0.0623	1	1	7
5	0.0178	1	1	7
6	0.1184	1	1	7
7	0.1331	1	1	7