

FAIR VALUE MEASUREMENT AND PROFITABILITY OF QUOTED CONSUMER GOODS FIRMS IN NIGERIA

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Corresponding Author Adeleye Tope James	Abstract: One factor that determines a company's marketability and net worth is the asset's fair value. It is a logical and objective assessment of the prospective market value of a
Department of Accounting, Confluence University of Science and Technology, Osara, Okene. Kogi State. Nigeria Article History Received: 13 /03/2025 Accepted: 31/03 /2025 Published: 04 / 04 / 2025	company's stock, service, asset, or good (commodity). The study looked at the connection between Nigerian consumer products companies' profitability and fair value measurement. The study's ex-post facto research design includes all twenty-one (21) consumer goods companies listed on the Nigerian Exchange Group as of December 31, 2023, as the population. A sample size of fifteen (15) consumer goods companies was chosen using the purposive sampling technique. The information utilized was taken from consumer goods companies' annual reports that were listed on the Nigerian Exchange Group (NGX Group). The twelve-year span from 2012 to 2023 was covered by the data. The analysis method employed in the study was the Generalized Regression Model. The results of the study showed that taxes and depreciation (DEP) significantly increase the profit after taxes of consumer goods companies in Nigeria, whereas inventory (INV) had a negligible negative impact. As a result, the study suggested that management of consumer goods companies should focus on increasing the fair value of their companies through asset management and suitable policies, embrace best practices that would increase share prices and sustain higher book values of the companies, and use depreciation to replace outdated assets, stabilizing the companies' net worth.
	Keywords: Fair Value Measurement, Profitability, Consumer Goods Firms, Nigeria

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Introduction

Fair value accounting (FVA) has acquired significant traction after regulatory organizations, particularly the Financial Accounting Standards Board (FASB) and the International Accounting Standard Board (IASB), declared it to be better to historical value accounting (HVA). While some authors advocate for the use of fair value, others promote the use of historical cost. As a result, the item's value on the financial statement might not match its actual value. This accounting technique calculates the profit by comparing the asset's historical cost and sales revenue, Meigs (2020). With fair value, this isn't the case. The recognition of assets and liabilities, the presentation of income as a residual, and the assumption that balance sheet values add up to the company's market valuation are all fundamental components of what is known as "fair value accounting" (Emerson *et al.*, 2023).

Financial reporting as opposed to Historical Cost Accounting (HCA), which was supported by the previous GAAP, or International Accounting Standard (IAS), International Financial Reporting Standards (IFRS) are based on the Fair Value principle (IFRS 13) (Matiş & Bonaci, 2023). HCA is the conventional approach to documenting assets (liabilities) at their original cost, and it was used before to the adoption of Fair Value Accounting (Karen & Alan, 2021). The constant measuring unit assumption, upon which this valuation method is predicated, holds that assets and liabilities may be shown at their initial purchase price as if their worth had not changed since the acquisition date (Bessong & Charles, 2022). Informing consumers about an economic entity is the main objective of financial reporting in a country like Nigeria. Which reporting method should be used to present an accurate and unbiased view of the state of the company? The traditional reporting method, known as the historical cost principle, does not account for price swings. While the cost of the assets used to generate the sales is disclosed at their historical cost, or "acquisition cost," the selling price is presented at the current price.

To develop and disseminate accounting standards that should guide the preparation and presentation of financial accounts worldwide, the International Accounting Standard Board was established. Since its establishment, this Board has made at least 41 statements or pronouncements on sensitive accounting issues, including depreciation, construction contracts, deferred taxes, business combinations, and property, plant, and equipment (ICAN, 2010; ICAN, 2009a). The International Association of Insurance Supervisors, Basel Committee on Banking Supervision, and International Organization of Securities Commission (IOSCO) are the first direct clients that IASC's (formerly known as IASB) services are packaged to meet their needs since the adoption of IFRS in 2005 (Epstein & Mirza, 2024; Alfredson, *et al*, 2023). IFRS should be the common denominator for businesses hoping to be approved for secondary listing on the International Stock Exchange, which is why it was introduced (Epstein & Mirza, 2024; Alfredson, *et al*, 2023).

Additionally, studies have demonstrated that the valuation process may have a substantial impact on a company's capacity to report profit in comparison to its ability to continue as a going concern (Bessong & Charles, 2022). Given the relative impact that historical cost accounting would likely have on a firm's ability to report profit, it is reasonable to wonder what effect fair value measurement would have on the profitability of businesses generally and a company's ability to continue as a going concern in particular, given that the primary purpose of financial statements is to provide accurate and fair information about the financial status, performance, and changes in the financial status of a reporting entity in order to help a variety of financial information users make sensitive and practical economic decisions (ICAN, 2009a). This study is essential, especially now that Nigeria is implementing IFRS for the first time. This serves as the study's backdrop.

Pandey (2019) supported this view by asserting that maximizing shareholder wealth also known as the financial objective is typically seen as the overarching goal in a company (economic) organization with the intention of turning a profit. According to Unamka and Ewurum (2023), who referenced Drucker (2020), objectives are necessary in every area where performance and outcomes have a direct impact on the survival and success of the company. Additionally, an empirical study on the topic of maximizing shareholder wealth showed that profitability and shareholder wealth maximization are positively correlated (Bhunia, 2019). However, stewardship of a company's stakeholders, including investors, employees, lenders, suppliers, consumers, the government, and the general public, is one of accounting's goals (Glautier et al., 2021; Okafor and Ogiedu, 2020; Wood & Sangster, 2023; Barton, 2018). The separation of ownership from management in corporate firms has made this accounting goal more significant than the other one or goals. As stewards, the company's managers are in charge of safeguarding both the owners' and the company's assets (ROHTAK, 2004).

As a result, it is inevitable that investors and other users of accounting data will make delicate financial decisions based on information from financial statements based on the asset valuation method, which could reduce the company's value or, worse, fail to provide an accurate assessment of the company's worth. Since we are moving from the known (historical cost convention) to the unknown (fair value measurement), it is necessary to look at fair value measurement when determining the profitability of consumer goods firms. This is especially true now that Nigeria is still in the midst of adopting IFRS, with the first, second, and third phases having been implemented, all of which covered small and microsized businesses in the country.

This study's primary goal is to investigate experimentally the connection between Nigerian consumer firms' profitability and fair value measurement. The study's specific goals were to: (i) use the fair value and historical cost convention to determine how depreciation affects the reported profit of Nigerian consumer goods firms; (ii) use the fair value measurement and historical cost convention to examine how inventory affects the reported profit of Nigerian consumer goods firms; and (iii) use the fair value measurement and historical cost convention to determine the relationship between tax volume and reported profit of Nigerian consumer goods firms. Considering the objectives of the study, the following research hypotheses were created: Depreciation has no discernible impact on the profitability of consumer goods companies, according to the fair value measurement and historical cost convention; inventory has no discernible impact on the reported profit of consumer goods companies under the fair value regime and historical cost regime; and tax volume has no discernible impact on the reported profit of consumer goods companies under the fair value measurement and historical cost

Review of Related Literature

Conceptual Framework

Three proxies of fair value measurement—inventory (INV), depreciation (DEP), and taxes (TAX) represent independent variables in the conceptual framework of this study, while a proxy profit after tax (PAT) serves as the dependent variable.



Figure 1: Framework of the Study

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Concepts of Fair Value Measurement

According to Edward and Bell (1991), the main purpose of accounting is to provide the data required for the assessment of previous business decisions, which include present operating profit and realizable cost savings. The financial report serves as a conduit between investors and management. According to Turner (2000), company reports should be predicated on the idea that management is reporting to absent investors who lack the capacity to independently find out how their representatives are carrying out their stewardship. According to Ijeoma (2013), accounting practices, of which profit reporting is a basic component, are driven by and react to advancements that strengthen accounting's ability to impartially depict a particular economic reality. This serves as the foundation for assessing how inflation affects reported profit. Financial reports that incorporate profit are distorted by inflation to the point where they appear to be unable to impartially and accurately depict the financial data required for making sound decisions and formulating policies, among other things.

Concept of Fair Value

"Fair value is defined as the sum for which a risk could be settled, a benefit traded, or a value instrument traded between educated and consenting participants," according to International Financial Reporting Standards (2011). In a different perspective, fair value is the amount that would be paid for a risk or amount to sell or transfer a benefit in an exact exchange between members at the measurement dates (Ashford, 2021, quoted by Leonard *et al.*, 2023). The amount that could be transferred in a hypothetical transaction between willing participants of the same information in a typical economic scenario is known as fair value.

Fair value creates a speculative market cost in a market environment and tracks changes to display case values or wholes. If assets are sold on the accounting reporting date, cash flow may be impacted in the event of unrealized gains and losses. Fair value can be thought of as "exit value or price" (the amount that an asset is sold for), according to Olivera and Riste (2016), Since the income statement represents changes in the firm's worth over time, it provides the economic income of the company under the fair value. The fair value of the statement of financial position can serve as a foundation for estimating future asset or liability values (Bassam, 2020). On the other hand, given the changes in cost and profit resulting from the gains and losses of the revaluation of assets and liabilities, the statement of comprehensive income cannot be used as a foundation for determining future characteristics.

Concept of Historical Cost Accounting

Historical Cost Accounting (HCA) evaluates an asset at the cost of acquisition, claim Amanamah and Owusu (2019). According to Villa (1890), HCA is a method that uses the acquisition cost to estimate an asset or liability as it appears on the balance sheet. He also underlined that the standard of exchange value is shaped by financial accounting measurement; that is, the asset's current market value is framed by the financial statement against an asset and obligation.

The term "bargains value" or "purchase cost" can also be used to describe historical costs, which are the amount spent on bills, other forms of payments, or cash equivalents used to acquire © Copyright IRASS Publisher. All Rights Reserved or buy the asset. A consistent measuring unit projection serves as the foundation for determining an asset's historical cost (Ene *et al.* 2014). Assets and liabilities are displayed in historical cost as if there had been no change in the total or incentive since the purchase date (from commencement). Authors who have examined HCA, including Ene *et al.* (2014), Fadia and Mohammad (2015), and Alkababji (2016), have assembled their analysis regarding its inaccuracy (complete departure from accurate value assessment). Despite their criticism, it is still accepted by the majority of accounting systems.

Concept of Inventory

Management techniques and inventory accounting methods can be used as instruments to increase profits. When business activity varies, the impact of inventory on earnings becomes more apparent. Work-in-process, finished goods, and raw materials can all be considered inventory in consumer goods companies. Costs incurred during the earnings process are kept in inventory as assets until the process is complete. An inventory account may cover a wider variety of costs that are incurred and recorded for comparison with revenue that will be recognized at a later time. Some corporations may view items as inventory, while others may view them as capital assets. The primary inventory classifications are determined by the operations of the firm (Mathew and Perera, 2018; Gay, 2020).

Concept of Depreciation

The amount of future economic advantages or service potential that is anticipated to be used up over the course of the following 12 months is estimated by depreciation expenditure. The carrying value of an asset on the statement of financial position is impacted by depreciation. Depreciation is an expense that has an impact on an entity's profitability. Both an impairment loss and a gain have an equal impact on retained earnings and, ultimately, an entity's equity. An impairment loss is also recognized as an expense. Depreciation is calculated using Historical Cost Accounting by deducting the asset's residual value from the original purchase price and distributing a total of periodic depreciation allowances over accounting periods. The initial purchase price less the cumulative depreciation over the previous years is the asset's associated historical carrying amount at the conclusion of an accounting period (Diewert, 2005).

Concept of Taxation

Before subtracting associated income tax expenses or adding specific income tax savings, accounting income is the total revenue or loss for a given period, including exceptional items as stated in income statements (Aborode, 2018). This variable calculates the potential financial gain from taxes for a business (Okafor, 2016). In other words, business organizations may be able to use tax breaks like capital allowances to finance the replacement of assets when their useful lives are up, thus generating revenue for growth. The proportional tax system, often known as pay as you earn (PAYE), is implemented in Nigeria, resulting in a linear link between taxation and profit. Tax is paid on earned profit. The benefit may be refused in cases where there is a discrepancy (see chapter 2) between the tax computation and the IFRS..

Profitability

The ability of a corporation or individual to create a profit from its operations and provide sufficient returns to investors is known as profitability; the greater the profit ratio per Naira sales, the better (Nwude, 2004). Although there are a variety of motives to invest money, the main ones are to ensure the security of their investment and to provide a sufficient return (Chadwick & Kirkby, 1995). The terms "profitability" and "return" are used interchangeably to refer to the relationship between profit and the value of the capital or net assets utilized to produce that profit. The primary purpose of financial accounting is most likely to be the measuring of profit. The difference between revenues and expenses is known as profit. The things that make up the overall revenue and expenses as well as the resulting net profit or profit for the accounting period are reported in the profit and loss account for a given time period (Glautier & Underdown, 2021).

Theoretical Review

Wealth, Income and Capital Maintenance Theory

Friedman (1986) and Edward (1995) concurred that a shift in a person's purchasing power indicates a shift in that person's ability to conduct transactions. This also applies to commercial organizations. Wealth is the general term used to describe the amount of purchasing power that an entity possesses. This has to do with a company's capacity to purchase assets. A company's higher capital investment is undoubtedly a sign of greater wealth generation. An entity's wealth, as measured by its stock of purchasing power, depends on two things: a) the overall level of prices and b) the quantity of money or money equivalent that it has at its disposal.

Measurement/Valuation Theory

In essence, the process of tying financial measurement to accounting events and objects is a valuation procedure. There are two ways that valuation is included into accounting measurements. First, changes over time have an impact on the money standard of measurement. Specifically, when the purchasing power of money over commodities fluctuates, one pound today does not have the same worth as one pound yesterday or tomorrow. Second, choosing from a variety of valuation bases is implied by the use of money measurements in accounting. The initial cost of an asset's acquisition by the company may be used to symbolize a previous financial endeavor. The worth of an asset to the company can also be expressed in terms of the net benefits it will provide in the future (Glautier *et al.*, 2011). The theoretical foundation of this research is the ability to express an asset's value to the company in terms of its fair value or current market value.

Theory relevant to the study

To sum up, measurement theory is used in this investigation. This theory is predicated on the idea that the act of tying monetary measurements to accounting events and objects is fundamentally a valuation procedure. There are two ways that valuation is included into accounting measurements. First, changes over time have an impact on the money standard of measurement. Specifically, when the purchasing power of money over commodities fluctuates, one pound today does not have the same worth as one pound yesterday or tomorrow. Second, choosing from a variety of valuation bases is implied by the use of money measurements in accounting.

Empirical Review

Depreciation and Reported Profit

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Tonye and Ikegima (2025) examined fair value accounting and stock appraisal of companies listed in Nigeria's consumer products industry. The purpose of this study is to examine the ways in which the fair value accounting methodology affects the historical cost approach to asset valuation in Nigerian consumer products companies. Five were chosen at random from a total of twelve petroleum companies registered on the Nigerian Stock Exchange. Secondary data was gathered because the study was descriptive. Data on performance reports and stock prices for the assets under investigation were provided by the Bureau of Statistics of the Central Bank of Nigeria. Historical values were gathered from the firms' publicly available yearly financial statements, and the price index was used to determine fair values. The T-test statistical method was used to determine whether there was a significant difference between assets valued at historical cost and those appraised at fair value. To develop a standardized process for figuring out an asset's worth, professional accounting associations should keep researching asset valuation. The study suggested that both historical and current cost methodologies be used simultaneously when preparing a company's financial report. Before declaring dividends and bonuses, a company's true financial situation would be known.

Horssfall and Omah (2024) investigated the extent to which firms' performance in consumer goods activities is appropriately assessed using fair value measurement. Methods of ex-post factor design were applied. Simple regression analysis, the t-test statistical tool, and the Pearson correlation coefficient were the research instruments employed for data analysis. Guinness Breweries Plc and 7-up Bottling Company Plc were among the few companies in the study that were utilized because they complied with International Organizational Reporting Standards. Simple regression analysis, the t-test statistical tool, and the Pearson correlation coefficient were the research instruments employed for data analysis. The study's findings demonstrate that a prompt use of fair value asset measurement may enable some evaluations of an organization's earning potential and performance. When gathered at the rejected area of the hypothesis, a p-value of 0.00 indicates majority despondency. In summary, the future cash inflows of anticipated periods are rated highest due to their ability to predict organizations' capacity to take advantage of numerous possibilities to address current issues. because it is believed that organizations in our nation, Nigeria, have profited from the implementation of fair value accounting measurement. The findings demonstrated that, both under fair value and the historical cost convention, there was a positive and significant correlation between reported profit and inventory management. Therefore, the study suggested, among other things, that the Financial Reporting Council of Nigeria concentrate on the degree of fair value accounting compliance of businesses in addition to taking the required actions to enhance the use and comprehension of fair value accounting.

Bessong and Peter (2023) carried conducted a research of a few Nigerian consumer goods companies to compare the effects of historical cost accounting and fair value accounting on reported profit. The purpose of this study was to investigate critically how reported earnings were affected by historical cost accounting and fair value accounting. Both primary and secondary sources of data were gathered, and ordinary least squares were used for presentation and analysis. According to the study, reported profit is significantly impacted by both fair-value accounting and historical cost. In summary, the study's results indicate that the amount depreciated, taxed, and distributed as dividends has a significant impact on the business's operating profit. This merely indicates that the amount of taxes, depreciation, and dividends imposed on the company's profit will be significantly impacted by the profit measuring method. According to the study, businesses should concurrently use the historical cost and fair-value approaches while preparing their financial reports. This would enable businesses to understand their actual financial status prior to announcing dividends and other incentives. It was recommended that Nigeria's accounting authorities hold seminars for accountants and business managers during inflationary times to inform them of the significance of current cost accounting and the necessity of departing from historical cost accounting.

Fair Value and Historical Cost Convention

Ogiriki and Wisdom (2023) investigated the relationship between Nigerian firms' financial reporting and fair value accounting. The study specifically looked at the relationship between fair value measurement and financial statement comparability and financial reporting quality. Two theories were assessed on the basis of this. 161 participants, divided into 100 investment analysts and 61 portfolio managers, made up the population size (which also served as the sample size) of the descriptive research study. The questionnaire, which was designed and administered using a five-point Likert scale, was the only source of data. The relationship between Fair Value Measurement and financial reporting was determined using the PPMC Technique. The study's conclusions showed a strong positive correlation between fair value measurement and financial reporting quality as well as financial statement comparability. Based on this, it was suggested that conferences and trainings be held for businesses' accounting employees to provide them with the tools they need to implement fair value measurement in their operations.

Faiza and Manzoor (2022) explored factors that affect the value of Shariah-compliant companies that are listed on the Pakistan Stock Exchange (PSX). The dataset includes companies included on the KMI-30 index from 2009 to 2016. Three distinct proxies for company value were employed: Tobin's Q, the marketvalue-to-book value ratio, and the log of the share price. Regression analysis has led us to the conclusion that, across all model parameters, firm valuation has a large and favorable impact on dividend per share and fixed asset turnover. Additionally, firm size and the debt ratio have a significant and adverse effect on firm value. Nonetheless, the impact of dividend yield and payout on company value is negligible. The theories of dividend relevance, which suggest that dividend payments affect firm value, are somewhat supported by the mixed outcomes. Furthermore, the findings lend credence to the idea that a company's size and asset utilization efficiency affect its valuation. According to the study, businesses should make sure that their use of the fair value measurement valuation technique aligns with both their financial goals and IFRS.

Amaefule and Okoro (2021) examined the impact of Fair Value Accounting (FVA) and Historic Cost Accounting (HCA) on the financial success of Nigerian industrial companies that are listed. Ten manufacturing companies that were quoted between 2015 and 2019 provided secondary data, which was gathered from their annual reports and the Nigerian Stock Exchange Fact book. Profit after taxes was the dependent variable, and the predictor variables were the historic cost of equity, the historic cost of © Copyright IRASS Publisher. All Rights Reserved noncurrent assets, the fair value cost of equity, and the fair value cost of noncurrent assets. The fixed effects model was utilized as an estimation strategy at the 5% level of significance, and panel data methodology was utilized. The Hausman test was used to find the best fit after testing fixed effects, random effects, and pooled estimates. According to the fixed effect result, 55.1 percent of the fluctuation in profit after taxes may be explained by fair value accounting. The factors' beta coefficient indicates that they have no discernible positive impact on manufacturing firms' profit after taxes, but historic cost accounting accounts for 72.5% of the variation in profit after taxes. The factors' beta coefficient indicates that they have a positive but insignificant impact on manufacturing enterprises' profit after taxes. Numerous arbitrary and conflicting interpretations have arisen as a result of the study's observation that there is ambiguity in the interpretation of the document that conveys the principles, recommendations, and application of the fair value accounting method, particularly as it pertains to the reporting body corporate. Based on the aforementioned, the study suggested, among other things, that system operators, relevant accounting organizations, government agencies, and research fellows should keep tackling the measurement problem in order to provide a long-term solution.

Volume of Tax and Reported Profit

Andow *et al.* (2017) investigates the factors that affect both short- and long-term profitability in Nigerian consumer goods companies that are listed. The study used an ex post facto research design. The publications of consumer goods companies provided the time series secondary data on firm size, leverage, market share, and return on asset for the years 2006–2015. Ordinary least square regression and Pearson correlation were used to evaluate the given data. The study's conclusions showed that the variables taken into consideration had a strong association with one another. According to t = 7.998154, a 1% increase in firm size has a positive and significant impact on Nigerian profitability of 9%. According to the study, management should focus on growing sales in order to reach a suitable business size because this will increase profitability.

Olanrewaju (2015) influenced on public limited companies' asset appraisals using the historical cost technique. Only five of the twelve petroleum companies listed on the Nigerian Stock Exchange were selected for more research. A supplementary method of data collecting was used to acquire data for the descriptive study. A T-test statistical method was employed in an attempt to ascertain whether the discrepancy between fair value and historical cost is substantial. The results of the study indicate that the fair value and historical cost values of assets differ significantly. Findings showed that buyers received a variety of information from financial statements produced using various methodologies. The most crucial element in assessing an asset's value was its price level. The information provided leads to the conclusion that assets are undervalued in financial statements based on historical cost methodology. According to the study, stock valuation techniques used by Nigerian companies might need to be reviewed in order to guarantee that the inventories listed in the financial statements have realistic values; owners' capital should not be eroded by undervaluing their stocks while overvaluing them, as this could lead to false figures.

Gap in Literature

Regarding the aforementioned, numerous studies have demonstrated that a number of investigations have been conducted to investigate fair value measurement as a factor in determining the profitability of consumer products companies that are listed in Nigeria. Horssfall and Omah (2024) and Tonye and Ikegima (2023). Nonetheless, the purpose of this study is to learn more about the significance of fair value measurement assessment as a foundational element in determining the profitability of listed consumer products companies in Nigeria. During the duration of this research project, this study will close this gap.

Methodology

This study uses an ex-post facto research design. After the phenomenon or event under study occurs, data is collected. The study's population consists of all twenty-one (21) consumer goods businesses that were listed on the Nigerian Exchange Group (NGX Group) as of December 31, 2023. The quoted consumer goods companies were selected because they were considered necessary and appropriate, as they were part of the first phase of adopting International Financial Reporting Standards (IFRS), as recommended by the IFRS Implementation Committee in 2010, and because they are legally required to submit their published annual financial statements to the Securities and Exchange Commission (SEC) for validation. The sample size for this study consisted of fifteen (15) quoted consumer products companies. This is predicated on the following filtering criteria: A company must have been listed on the Nigerian Exchange (NGX) Group, have been in business from 2012 to 2023, and have the fundamental information needed for the study in its financial statements for the study period. These statistics were derived from these companies' annual reports over a 12-year period, which included four years before IFRS (2000-2011) and four years after IFRS four phases (2012-2023). Given that the study is grounded on a quantitative research technique and hence necessitates quantitative data, the use of secondary data in this investigation is justified. To determine the impact of the independent variable on the dependent variable, a random effect regression analysis was

performed on the panel data. Robustness tests such as the Hausman Specification Test, Shapiro-Wilk Normality Test, Variance Inflation Factor (VIF), and Correlation Matrix will be used to assess the results' dependability.

Model Specification

Every model has advantages and disadvantages. To obtain a more dependable outcome, researchers should therefore test multiple models rather than depending just on one; Okafor (2020), Aborede (2024). Below is a mathematical presentation of the model:

 $RPHit{=}\beta_0 + \beta_1 DEP_{it}{+}\beta_2 INV_{it}{+}\beta_3 TAX_{it} + \epsilon_{it.....1}$

Where,

RPHit = Reported profit at Historical Cost

RPFVit = Reported profit at Fair Value

DEP = Depreciation

INV = Inventory

TAX = Taxes

B₀ is constant

 B_1 - β_3 is the coefficient of the parameter estimate.

ε is the error term.

Variable Measurement and Justification

In order to examine the relationship between fair value measurement and the profitability of consumer products companies in Nigeria, the dependent variable was profitability, while the independent variables were represented by inventory, depreciation, and tax.

The summary of the variables used and their measurements in this study are presented in the table below.

Variables	Туре	Measurement and Justification
Profit after Interest and Tax	Independent	calculated as the period's profit before interest and taxes less
		interest and taxes due (ICAN, 2009).
Inventory	Dependent	measured as the expenses incurred throughout an earnings
		process that is retained as an asset till the process is
		finished; Gay, 1993; Mathew and Perera, 1996
Depreciation	Dependent	measured as an estimate of the anticipated future economic
		benefits or service potential that will be utilized over the
		course of the upcoming year; Wood and Sangster, 1999;
		Paton, 2000
Taxes	Dependent	Measured as the finance benefit a company could enjoy
		from tax; Okafor (2020), Aborede (2024)

The measurement of the variables are presented in Table 1

Source: Author's Compilations (2025)

Data Analysis and Discussions

Descriptive Statistics

Tuble 2. Summary of Descriptive Statistics of the Variables					
Variable	Obs	Mean	Std. Dev.	Min.	Max.
PAT	144	0.014	0.008	-0.015	0.030
INV	144	0.064	0.020	0	0.082

Table 2. Summary of Descriptive Statistics of the Variables

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DEP	144	0.062	0.010	0.028	0.076
TAXES	144	0.007	0.001	0.003	0.008

Source: Researcher's Computation using STATA 15 software, 2025

Inventory (INV), Depreciation (DEP), and Taxes (TAX) all had positive mean values across the study period, according to descriptive statistics. These mean values vary from 0.064 for Inventory (INV), 0.062 for Depreciation (DEP), and 0.007 for Taxes (TAX). Below is a discussion of the descriptive analysis's specifics..

According to Table 2, the profit after tax (PAT) has a mean value of 0.014, a minimum value of -0.015, a maximum value of 0.030, and a mean value of 0.014, all of which fall within the range of the study period. Additionally, the table indicates that PAT had poor growth for the period under study, with a standard deviation of 0.008 below the mean.

Additionally, Table 2 demonstrates that inventory (INV) has a mean value of 0.064, a minimum value of 0, and a maximum value of 0.082, all of which are within the range of the minimum and maximum values, suggesting a healthy spread during the study period. Additionally, the table shows that INV's standard deviation

is 0.020, which is below the mean and suggests that it grew slowly throughout the reviewed time.

According to Table 2, the depreciation (DEP) has a mean value of 0.062, a minimum value of 0.028, and a maximum value of 0.076. These values fall between the minimum and maximum values, suggesting a good spread for the time under study. Additionally, the table shows that DEP's standard deviation is less than the mean (0.010), suggesting that its increase throughout the reviewed period was modest.

Additionally, Table 2 demonstrates that Taxes (Taxes) has a mean value of 0.008 that falls between the minimum and maximum values, showing a good spread for the period under study, and a minimum value of 0.003 and a maximum value of 0. 008 as well. Additionally, the table indicates that Taxes experienced low growth during the period under consideration, with a standard deviation of 0.001 below the mean.

Normality Test (Shapiro Wilk)

Table 3: Shapiro-Wilk W test for normal data						
Variable	Obs	W	V	Z	Prob>z	
PAT	144	0.964	4.018	3.146	0.000	
INV	144	0.578	47.314	8.725	0.000	
DEP	144	0.828	19.296	6.696	0.000	
TAXES	144	0.749	28.120	7.548	0.000	

Table 3: Shapiro-Wilk W test for normal data

Source: Researcher's Computation using STATA 15 software (2025)

The Shapiro-Wilkon normality test is shown in Table 3 above for both independent variables (inventory (INV) and depreciation (DEP), as well as taxes (TAX). Asymmetrically (abnormally) distributed data has a p-value less than or equal to 0.05 around the mean, while symmetrically (normally) distributed data has a p-value greater than 0.05. The p-value of 0.000 indicates that the variables in the table are not regularly distributed.

Correlation Analysis

The degree of relationship between independent and dependent variables is ascertained using the correlation matrix. In order to determine whether multicollinearity is an issue, it is also utilized to determine whether there is a link between the independent variables themselves.

Table 4: Correlation Results					
Variable	PAT	INV	DEP	TAXES	
PAT	1.000				
INV	-0.006	1.000			
DEP	-0.042	0.295	1.000		
TAXES	-0.228	-0.282	-0.228	1.000	

Source: Researcher's Computation using STATA 15 software, 2025

The degree of relationships between an independent variable's proxies and the dependent variable is ascertained via the correlation matrix. In order to determine whether the model has a multicollinearity issue, it is also utilized to demonstrate whether there is a relationship between the proxies of the independent variable itself. Table 4's correlation coefficient of 0.719, which is negligible at the 71% level of significance, indicates that there is a weak and roughly -0% negative association between inventory (INV) and profit after tax (PAT) of consumer products companies in Nigeria. The correlation coefficient of 0.782, which is negligible at the 78% level of significance, indicates that there is a weak and about 78% positive association between the depreciation (DEP)

and profit after tax (PAT) of consumer products companies in Nigeria.

Additionally, the correlation coefficient of 0.810, which is negligible at the 81% level of significance, indicates that there are weak and 81% negative links between the taxes (TAX) and profit after tax (PAT) of consumer products companies in Nigeria. Lastly, it appears that the correlations between the independent variable proxies themselves are modest. Lastly, as all of the coefficients fall below the 0.80 criterion proposed by Gujarati (2003), the correlations between the proxies of the independent variable itself appear to be moderate.

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Variance Inflator Factor (VIF) Results

Variable	VIF	I/VIF	
INV	6.53	0.153	
DEP	5.27	0.189	
TAXES	5.09	0.196	
MEAN VIF	5.63		

Source: Researcher's Computation using STATA 15 software, 2025

Colinearity diagnostics was used to further confirm that there was no multicolinearity issue among the exogenous variables. As shown in Table 5, the Variance Inflation Factors (VIF) and the Inverse Variance Inflation Factors (I/VIF) values show no multicolinearity issue in the data because they are less than 10 and 1, respectively (Gujarati, 2003). The absence of the multicolinearity problem, which is a prerequisite for regression analysis, indicates that the variables are appropriately chosen and fitted in the same regression model.

Heteroscedasticity Test Results

	Table 6: Heteroscedasticity test	
Type of test	Chi2	Prob Chi2
Heteroskedasticity	15.27	0.174

Source: Researcher's computation using STATA 15 software (2025)

The heteroskedasticity test, which used the Breusch-Pagan/Cook-Weisberg approach to assess the stability of the residual variance in the model, was displayed in Table 6. If the model's p-value is less than or equal to the crucial p-value of 0.05, the null hypothesis of constant variance is rejected; if it is greater than the critical value of 0.05, the hypothesis is accepted. The null hypothesis of constant variance is rejected since the model's p-value of 0.174, which is more than 0.05, is shown in the table. This suggests that the option that suggests heteroskedasticity in the model is approved. Low predictive value is indicated by this. This make the use of OLS not appropriate thus the need for search of appropriate estimation technique.

Pooled Effect Vs Random effects Model

Selecting the optimal panel approach to employ is the first step in the panel data analysis process. The Breuschi-Pagan Lagrangian Multiplier test for random effects is used to determine whether to employ the pooled effect model or the random effect model. The existence of unobserved effects in the random effect model is investigated via the LagrangianMutiplier test. The null hypothesis is rejected and the random effects model of panel data is selected if the test's computed result is greater than the critical value, or significant in chi-square.

Breusch-Pagan Lagrangian Multiplier Test

Table 7: Breusch and Pagan Lagrangian multiplier test					
Variable	Chi2	P-Chi2			
ROA	44.35	0.000			

Source: Researcher's computation using STATA 15 software (2025)

According to the Breusch-Pagan Lagrangian Multiplier Test, the random effect model is appropriate if the P-value is equal to or less than 0.05; if not, the pooled ordinary least square regression is appropriate. Table 7 demonstrated that the critical value for each model is equivalent to the computed Breusch-Pagan Lagrangian Multiplier test with a Chi2 value of 44.35 and the associated probability of (0.000). Therefore, the null hypothesis is rejected (Prob Chi2=0.000). The variance of the random effect model is not zero (0), as indicated by the significance of the chisquare of the Lagrangian Multiplier test. Therefore, pooled ordinary least square regression is not as appropriate as the Random Effect Regression Model (REM).

Hausman Specification Test

Table 8: below	presents the	result of a Hau	sman specification	test conducted.
	1		1	

Type of test	Chi2	P-Chi2
Hausman Test	4.00	0. 262

Source: Researcher's computation using STATA 15 software (2025)

The Hausman Test's decision rule indicates that the null hypothesis, according to which the model is random and not systematic, is rejected if the p-value is equal to or less than 0.05, suggesting that a fixed effect is suitable for the research. On the other hand, null is accepted and the proper estimate model is random if the p-value is greater than 0.05. Given the afro provided, the study employs the random model since the Chi2 p-value is 0.262, which is higher than 0.05.

The Results of Random Effect Regression Model

Tuble 9. Rahdom Effect Regression Woder Conducted					
Variable	Coefficients	z-value	Prob.		
INV	-0.019	-0.33	0.741		
DEP	0.290	2.87	0.004		
TAXES	4.359	5.55	0.000		
_Cons.	0.035	-7.42	0.000		
R-sq overall	0.690				
Wald Chi2	153.09				
Prob. >Chi2	0.000				

Table 9: Random Effect Regression Model Conducted

Note: ***1% and **5% Significance levels

Source: Researcher's Computation using STATA 15 software (2025)

Table 9 above shown that the combined effect of inventory (INV), depreciation (DEP), and taxes (TAXES) predicts a 5% fluctuation in profit after tax (PAT) with an overall R-sq of 0.690. With a Prob>chi of 0.000 and a Wald chi2 value of 153.09, the model was found to be appropriate for the research. This demonstrated that the independent variables were appropriately mixed and employed, and that the study's model was fit.

Test of Hypotheses

Ho₁: Under the fair value and historical cost regimes, inventory has no discernible impact on the reported profit of consumer products companies;

According to Table 9's data, inventory had a negligible negative impact on the profit after taxes of consumer goods companies in Nigeria during the reviewed period, with an INV coefficient of -0.019 and a corresponding p-value of 0.741. This lends credence to the null hypothesis, which holds that inventory has no appreciable impact on consumer goods companies' reported profits under the fair value and historical cost regimes.

Ho₂: According to the fair value assessment and historical cost convention, depreciation has no discernible impact on the profitability of consumer products companies;

According to Table 9, DEP has a coefficient of 0.290 and a corresponding p-value of 0.004, which suggests that, for the period under consideration, depreciation significantly, increased the profit after taxes of consumer products companies in Nigeria. The null hypothesis, which holds that depreciation has no discernible effect on consumer goods firms' profitability under the fair value measurement and historical cost standard, is thus rejected.

Ho_{3:} According to fair value measurement and historical cost, the tax volume has no discernible impact on the reported profit of consumer products companies.

Finally, Table 4 shows that taxes have a significant beneficial impact on the profit after taxes of listed consumer goods firms in Nigeria during the period under consideration, with a coefficient of 4.359 and a corresponding p-value of 0.000. This leads to the rejection of the null hypothesis, which states that tax volume has no discernible impact on consumer goods firms' reported profits when using fair value measurement and historical cost.

Discussion of Findings

Inventory and Profit after Tax

This study reveals that inventory (INV) has an insignificant negative effect on profit after tax of consumer goods firms in Nigeria. This shows that an increase in inventory will decrease value of profit after tax of consumer goods firms in Nigeria, by -0. 019. Inventory has a significant negative effect on profit after tax of consumer goods firms in Nigeria. This finding is in line with the findings of Charles *et al.* (2018) and David *et al.* (2020). However, the finding is not in agreement with the findings of Ajibola *et al.* (2018).

Depreciation and Profit after Tax

The study also reveals that depreciation (DEP) has a significant positive effect on profit after tax of consumer goods firms in Nigeria. This shows that an increase in depreciation will increase the profit after tax of consumer goods firms in Nigeria, by 0.290. Depreciation has a significant positive effect on profit after tax of consumer goods firms in Nigeria. This finding is also in line with the findings of Charles *et al.* (2018) and David *et al.* (2020). However, the finding is not in agreement with the findings of Ajibola *et al.* (2018).

Taxes and Profit after Tax

This study reveals that loan to Taxes (TAX) also has a significant positive effect on profit after tax of consumer goods firms in Nigeria. This shows that an increase in loan to deposit ratio will increase profit after tax of consumer goods firms in Nigeria, by 4.359. Taxe has a significant positive effect on profit after tax of consumer goods firms in Nigeria. This finding is also in line with the findings of Kakanda *et al.* (2016) and Oyedokun *et al.* (2018). However, the finding is not in agreement with the findings of Ajibola *et al.* (2018).

Conclusion and Recommendations

Conclusion

According to the study's main conclusions, inventory has a negligible detrimental impact on Nigerian consumer goods companies' profit after taxes. This suggests that a rise in inventory will lower the post-tax profit margin of Nigerian consumer products companies. Additionally, the study shows that depreciation (DEP) significantly boosts the profit after taxes of Nigerian consumer products companies. This suggests that a rise in depreciation will boost Nigerian consumer products companies' profit after taxes. However, there is a positively significant correlation between taxes and profit after taxes. Therefore, a higher loan to deposit ratio will boost Nigerian consumer goods companies' profit after taxes. Thus, it can be concluded that IRASS Journal of Economics and Business Management. Vol-2, Iss-4(April-2025), 1-11

company value has a considerable and favourable impact on inventory and profit after taxes.

Recommendations

Based on the findings and conclusion of this study, the following recommendations are offered:

- Consumer goods management should work together to increase their fair value through asset management and suitable policies, embrace best practices that will boost share prices and keep their book values higher, and use depreciation to replace outdated assets, stabilizing their net worth.
- Since leverage increases profitability, firms should have a reasonable amount of it. This should be accomplished by the company's capacity to monitor its cash flow cycle and the rate at which its receivables respond.
- The study recommended that, stock valuation techniques used by Nigerian companies might need to be reviewed in order to guarantee that the inventories listed in the financial statements have realistic values. It is also necessary to prevent the depletion of owners' capital through stock undervaluation while simultaneously preventing stock overvaluation in order to prevent false figures.

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