



ISSN: 2617-6548

URL: www.ijirss.com



IAS 38 intangible assets and firm performance: Empirical evidence from selected consumer goods manufacturing companies listed in Nigeria

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Abstract

This study examined the effect of International Accounting Standards (IAS) 38 intangible assets on the firm performance of selected consumer manufacturing companies listed in Nigeria. The study employed secondary data extracted from the published financial statements of the sampled 15 companies out of a population consisting of 20 selected consumer goods manufacturing companies listed in Nigeria using a purposive sampling technique. A firm observation of 220 participants over 11 years from 2011 to 2021 was used in the study. Descriptive statistics and inferential analysis were adopted in the data analysis. The study revealed that intangible assets had a positive and significant effect on earnings per share (EPS) and the return on shareholders funds (SHF). The study concluded that the firm performance of selected consumer goods manufacturing companies in Nigeria was significantly affected by IAS 38 intangible assets. These findings suggest that compliance with IAS 38 standards is critical as it further deepens the relevance and faithful representation of financial statements prepared in Nigeria.

Keywords: Brand value, Development, Earning per share, Goodwill, IAS 38 intangible assets, Research, Shareholders fund.

DOI: 10.53894/ijirss.v6i3.1607

Funding: This study received no specific financial support.

History: Received: 30 November 2022/**Revised:** 15 March 2023/**Accepted:** 24 April 2023/**Published:** 3 May 2023

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Authors' Contributions: All authors contributed equally to the conception and design of the study.

Competing Interests: The authors declare that they have no competing interests.

Transparency: The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained.

Ethical Statement: This study followed all ethical practices during writing.

Publisher: Innovative Research Publishing

1. Introduction

Most developed countries have shown strong economic progress by increasing manufacturing activities and leveraging well-designed and standardized financial regulatory compliance by their companies. Effective regulatory compliance in advanced economies has transformed the landscape of firm performance in corporate organizations that have witnessed corporate governance best practices over the years. Compliance with regulatory requirements is desirable and has a close relationship with corporate legitimacy and robust financial performance. Incidentally, the same cannot be said with full

assurance in emerging and developing economies as the level of compliance with regulatory requirements seems uncertain. Manufacturing companies in Nigeria are struggling under a tough business operating environment and hence many of the companies hardly consider compliance with regulatory standards [1, 2]. The performance of the manufacturing companies in Nigeria is characterized by uncertainties as a result of infrastructural deficits and a lack of consistent electricity supply to power their plants and equipment to ease manufacturing operations [2]. According to Awa, et al. [3], Nigerian manufacturing companies are facing the challenges of persistent double-digit inflation, high-interest loan rates, dilapidated infrastructure, epileptic and unstable power supply, insecurity and kidnapping rackets resulting in inadequate production and problems with firm performance. Unfortunately, there seem to be wider gaps, deepening insensitivity and inadequate policies to address problems of firm performance among the consumer goods manufacturing companies listed in Nigeria [2]. As a result of weak firm performance, managers sought ways to cover the inefficiencies of non-compliance with IAS 38 intangible asset compliance requirements. The exclusion of intangible assets in the statement of financial position, non-compliance with IAS 38 intangible assets and non-disclosure of the accounting policies in regards to measurement, recognition, amortizations and rates, capitalization and expensing information of corporate intangible assets create compounding problems and broaden uncertainties in trusting the reliability and credibility of firm performance reported in the financial statements. Consumer goods manufacturing companies have been declining for several years which has led to the closure of some manufacturing companies such as Michelin (Nigeria), Dunlop (Nigeria) and textile companies such as Nibeltax Industries Nigeria Ltd. Aswani Industries Nigeria Ltd. Afprint Nigeria Plc Aba textile Nigeria Ltd. and many others. Incidentally, the other existing manufacturing industries have not made a significant impact by providing employment opportunities exercising expected social responsibilities or competing positively with their peers in the developed economies [4]. The firm performance of the manufacturing companies has been on a declining trend indicating that their presence has not impacted the reduction of widely spreading poverty or the standard of living of the average Nigerian. The significant role of intangible assets in influencing the firm performance of a corporate organization can never be downplayed [4]. Studies have shown that IAS 38 intangible assets are significant in increasing firm performance Abeysekera [5]; Centobelli, et al. [6]. Boučková [7] posited that intangible assets are directly correlated with firm performance. Nnado and Ozouli [8] documented that intangible assets are significant in the formation of a firm's performance in manufacturing companies in Nigeria in that the relevance of intangible assets has been evidenced as human capital is the essence of the survival of many companies. Managers ought to be positively disposed towards recognizing intangible assets and making disclosures that reflect the true value of intangible assets. Some studies have attempted to consider the problem of firm performance among manufacturing companies in Nigeria but the problems still persist. In contributing to knowledge and extending the frontiers of literature, this study considers the effect of intangible assets and therefore investigates the effect of intangible assets on firm performance in consumer goods manufacturing companies listed in Nigeria. The consumer goods manufacturing companies operating in Nigeria are faced with unprecedented and harsh economic conditions that have crippled business expansion opportunities [2]. There has been an unabated increase in the cost of running a successful business in Nigeria compared to some other countries that have reliable and sustainable power supplies [1, 8]. The manufacturing companies operate with over-exhausted generating sets due to constant usage. Naturally, these generators were built to be used for a short period of time when there are power failures. Unfortunately, the issue of power failure has become so entrenched in the system that it is permanent on its own [4, 9]. The companies now struggle for optimal performance resulting in inadequate earnings and an inadequate return on shareholders' funds which threaten the continued existence and sustainability of the manufacturing companies in Nigeria.

According to Shafiu, et al. [2], many manufacturing companies have closed shops, some have left the country and those remaining are under intense pressure to meet their set targets and firm performance objectives. In the case of Michelin and Dunlop's tyre manufacturing companies' the closure was attributed to the epileptic power supply in Nigeria. Other companies include Woolworths, Tiger brands and many textile companies. Unfortunately, the consumer goods manufacturing companies had not impacted the Nigerian economy as much as many stakeholders expected due to low-capacity participation and not being in a position to compete for favor with their peers within the developing nations. The study considers intangible assets from the perspectives of brand value, goodwill and investment in research and development as proxies of intangible assets to investigate the effect of intangibles on the performance of selected consumer goods manufacturing companies listed in Nigeria. The rest of the paper is arranged as follows: Section 2 shows a literature review. Section 3 focuses on materials and findings while sections 4 and 5 center on the results and discussion of the research findings respectively. The conclusion and suggestions of the study are presented in Section 6.

2. Literature Review

2.1. Conceptual Review

Firm Performance: The firm's performance is a clear reflection of corporate efficiencies and managerial competence in the optimal utilization of corporate productive resources [10]. Firm performance is a financial measure of the efficiency of the corporate entity as well as the competitive advantage, market share and position of the company in the market where the entity operates. The stability, sustainability and growth of the companies equally constitute the firm performance of the consumer goods manufacturing companies listed in Nigeria. **Earnings per Share:** The profits made by an organization's operations are reflected in its earnings. Earnings per share is one of the performance indicator ratios that is primarily of interest to current and potential shareholders as well as analysts, investors and other stakeholders [11]. IAS 33 states that earnings per share is an appropriate method of evaluating the management's contribution to ensuring corporate growth, firm performance and the level of earnings generated by the organization and made available to shareholders of the company

over time based on the number of ordinary shares in circulation, measuring the number of equity earnings after tax and preference dividends attributable to a unit of outstanding ordinary shares [12-14].

Return on Shareholders Fund: Every investor expects rewards for their investment. A clear measure of how well a company has performed is the dividend payments that make up the dividend payments. When there is a consistent and regular dividend payment, shareholders tend to have a strong trust in the competence of the management [15, 16].

IAS 38 Intangible Assets: Several authors have provided different definitions of intangible assets. According to [Ferdaous and Rahman \[17\]](#), intangible assets are identifiable non-financial assets without a physical presence. An intangible asset must contribute to the corporation control as a result of previous events related to the asset from which the organization anticipates future financial profit. Computer software, patents, copyrights, film studios, significant client lists, corporate franchises and fishing rights are typical examples. It is a crucial component of IAS 38 standards. The main goals of IAS 38's intangible asset standards are to establish the fundamental circumstances under which an item of an intangible asset should be recognized in accounting to establish how and when an item of an intangible asset should be measured and to clarify the item's disclosure requirements [18]. [Gamayuni \[19\]](#) posited that assets are intangible assets when they fulfill the following criteria as stipulated by IAS 38: (i) Identifiable: The ability to separate the value of the intangible asset from among the other assets at any point in time particularly when situations arise for contractual or legal rights. (ii) Controllability: A condition in which economic benefits are derivable from intangible assets and controllable by an entity (iii) Future economic benefits: The ability of intangible assets to generate future financial profits or benefits if their use leads to rising revenues or falling costs. In this regard, economic advantages may result from the sale of goods or services or from a decrease in expenses brought on by the cost savings from intangible assets. The cost of an intangible asset must also be calculated in accordance with fair value under IAS 38 intangible asset standards provided the exchange transaction lacks commercial substance or the fair value of the intangibles obtained or given up cannot be measured precisely and reliably [20]. Disclosure Requirements: According to IAS 38 intangible asset standards, the financial statement must include information about the specific intangible asset accounting policies that have been used, the method of amortization and the rate. It must include the intangible assets, the gross carrying amount, the accumulated amortization or accumulated impairment losses as well as a reconciliation of the potential carrying amount at the start of the accounting period to the actual carrying amount. Brand Value: The brand value of a corporate organization is its financial worth. According to [Satt and Chetioui \[21\]](#), brand value depicts the equity value and the significance of the customers' perception of the efficiency and firm performance of the company. The brand value also reflects the financial worth attributable to the corporate brand built over the years consequent to consistent efficient performance which demonstrates the value of the companies' intangible assets [22-24].

Goodwill: Goodwill indicates an intangible asset that interprets the excess of purchase consideration above the asking or selling value [25]. IAS 38 states that a company can cultivate goodwill by having positive interactions with its clients and by continually establishing a reputation for providing high-quality goods and services. However, goodwill is not evaluated in a company's accounts and can be acquired through consolidation and retained in the statement of financial position as an intangible asset under IAS 38 which must be assessed annually for impairment.

Investment in Research and Development: Many studies have argued the intricacies and controversies of expenses used in research and development as components of intangible assets [26-28]. [Montesor and Vezzani \[29\]](#) consider research and development to be secret and a tool for earnings management, since their transparency is uncertain and there is no clear information for third parties. There is no approved or organized market value for research and development expenses that allows a reliable value precisely while the research and development expenses are treated in various ways under different accounting frameworks. For instance, IAS 38 stipulates the capitalization of intangible assets after meeting some stipulated criteria [Mnif and Znazen \[30\]](#). In addition, there are different effects of different accounting choices with different implications. On the contrary, [Mukherjee and Sen \[31\]](#) submitted that obligatory expenses may signal financial distress to the organization even if this is not the case. Evidence from studies has reported that over and under-reported revisions are characteristics of companies with higher research and development.

2.2. Theoretical Framework

The framework of the study is based on the knowledge-based view theory of intangible assets. The framework is being considered from two perspectives, the first is one of intangible asset recognition and measurement from a framework perspective and the second is firm performance from intangible asset perspective. The knowledge-based theory was propounded by Pensoes in 1959 and is an extension of the resource-based theory of the firm [32]. The knowledge-based theory suggests that knowledge is a component of intangible assets. The proponents of knowledge-based resources as a philosophy are complex, full of imitation and have heterogeneous capabilities and they argue that intangible assets are the major determinants of sustainable corporate performance and the coordinators of all resource-based assets [33].

The intangible assets are embedded in knowledge-based theory that considers corporate organizational culture identification, policy implementation, routine reviews, documentation, systems and employee management in achieving the desired firm performance. Resource-based theory recognizes the strategic role of knowledge-based theory in connection with intangible assets. It posits the role of knowledge-based theory in accomplishing competitive advantage that knowledge-based is a generic resource and propeller of effective usage of all corporate resources to attain corporate firm performance [25]. Knowledge from a research perspective and development, goodwill, brand names, software and all other intangibles are very distinctive corporate resources in firm performance and most importantly, these assets do not depreciate like traditional economic productive resources do and intangibles can generate an increasing return affecting comprehensive firm performance.

2.3. Empirical Review

Zhang [34] studied empirically the effect of intangible assets on profitability and the causal relationship between intangible assets and profitability. The study employed secondary data using data extracted from selected samples of 17 telecommunications firms listed in China for a period of 4 years spanning from 2014 to 2016. The data were extracted from the financial statements of the companies while profitability used return on assets as a proxy to measure financial performance; intangible assets used all the value of the same from the financial statements. The study found that intangible assets were positively related to the return on assets. In addition, the study found that intangible assets ratios had a positive and significant effect on the return on assets of the selected telecommunication companies listed in China. Consistent with the prior studies of Zhang [34] and Montresor and Vezzani [29] examined the connection between intangible assets investments and innovations using cross-sectional forms in European companies. The study measured intangible assets with research and development, software, designs, training, reputation and branding and organizational and business processes as proxies of intangible assets. The study revealed that intangible assets and investment had a positive and significant effect on the performance of European firms. Ferdaous and Rahman [14] examined the effect of research and development (R & D) on firm performance in the pharmaceutical industries in Bangladesh. The study adopted a resource-based approach alongside a knowledge-based theoretical framework. The study used secondary data collected from the financial statements of 49 selected manufacturing companies listed on the Dhaka Stock Exchange (DSE) in Bangladesh for 11 years (2007 to 2017). A balanced panel data of fixed effects was explored in describing and analyzing the data. The study then found mixed results in the behavior of the elements of the models. First, the study found that intangible assets had a positive and significant effect on earnings per share (EPS). In addition, the study also revealed that the rise in high performance had an inverse relationship with shareholders' wealth (SHW). The study posits that the results have practical implications for managers to integrate intangible assets into future decision processes and for investors to select portfolios that will increase and add value to their investment decisions. Novák [35] examined the effect of intangible asset disclosure under International Accounting Standards (IAS 38). The study explored content analysis using data extracted from the financial records of the selected companies for one year. The study found that there were poor information disclosures with respect to IAS 38 intangible assets and revealed that intangible asset disclosure had a positive but insignificant effect on the performance of companies listed on the PSE. The study further revealed that the manufacturing companies had better intangible asset disclosure compliance than the service companies in the industry sector.

Owolabi and Anaekenwa [36] studied the concepts and accounting for intangible assets and goodwill under IAS 38. The study adopted content analysis highlighting International Accounting Standards IAS 38 treatment, identification, measurement and reporting processes among financial preparation and reporting for the benefit of the users. The study revealed that the issue of IAS 38 intangible asset compliance in terms of recognition, measurement, valuation and reporting of intangible assets has been controversial as IAS 38 excludes internally generated intangible assets and instead applies intangible asset recognition and reliability tests. Consequent to the reported weaknesses and lapses, gaps were observed in financial statements and measurements of intangible assets. The study recommended that improvements are required in reporting realistic and fair value measurements of intangible assets in line with IAS 38 requirements.

Moreover, Nnado and Ozouli [8] conducted research on the impact of intangible assets on the economic value added (EVA) of a sample of Nigerian manufacturing enterprises. For an unspecified period, the study analyzed secondary data from the published audited financial statements of 46 manufacturing companies registered in Nigeria. In order to examine the data, the study used Prais- Winsten regression correlation analysis and corrected standard errors. The study's findings were inconsistent. Intangible assets had a significant and negative impact on economic value-added as well as on manufacturing enterprises' return on assets (ROA). The study discovered a significant and positive effect when the controlling variable of company size was included in the model indicating that intangible assets and firm size together had a significant and positive effect on economic value added and return on assets for the manufacturing enterprises in Nigeria.

The effect of intangibles on the corporate performance of money deposit banks in Nigeria was examined by Awa, et al. [3]. The study used goodwill and software to quantify intangible assets and return on assets to measure company performance. Using panel data gathered from nine commercial banks that were specifically chosen from the financial statements of the units for a period of seven years from 2012 to 2018, the study used an *expo facto* research design. The study discovered that the return on assets was significantly enhanced by goodwill and computer software. This suggests that the stated corporate performance of the commercial banks sample for the study was significantly influenced by intangible assets. The impact of intangible assets on the performance of listed companies in Nigeria was investigated by Okoye, et al. [1]. For the study's analysis, descriptive statistics and inferential analysis were used. The signaling and agency theories served as the study's foundation. Intangible assets were measured using goodwill and research and development (R&D). The performance of the proxy was assessed using the return on capital employed. The study discovered that the return on capital employed by the listed companies in Nigeria was positively and significantly impacted by the costs associated with research and development. The research also showed that goodwill significantly improved the return on capital used by Nigerian listed companies. The study came to the conclusion that intangible assets significantly and positively impacted the performance of companies listed in Nigeria.

3. Methodology

The study employed an *ex-post facto* research design. Secondary data were obtained from the published financial statements of the sampled companies for 11 years (2011 to 2021). The population consisted of 20 consumer goods manufacturing companies listed in Nigeria. 15 companies were selected using purposive sampling techniques. The 15 sampled firms are Cadbury Nig. Plc; Dangote Sugar refinery; DN Tyre & Ruber Plc; Flour Mill Nig. Plc; Guinness Nig.

Plc; Honeywell Flour Mill Plc; PZ Cusson Nig Plc; Int'l Breweries Plc; Unilever Nig Plc; Union Dicon Salt Plc; Vitalfoam Nig. Plc; Multi-Trax Integrated Food Plc; Nasco Allied Industries Plc; Nestle Nig. Plc and McNichols Plc. These firms were selected because of the availability of data. 15 consumer goods manufacturing companies listed in Nigeria for 11 years yielded 165 observations.

Model Specification

$$Y_{it} = \alpha_0 + \beta X_{it} + \mu_{it} \tag{1}$$

Functional Relationship

$$EPS = f(BRV, XGW, IRD) \tag{2}$$

$$SHF = f(BRV, XGW, IRD) \tag{3}$$

$$EPS_{it} = \alpha_0 + \beta_1 BRV_{it} + \beta_2 XGW_{it} + \beta_3 IRD_{it} + \mu_{it} \tag{4}$$

$$SHF_{it} = \alpha_0 + \beta_1 BRV_{it} + \beta_2 XGW_{it} + \beta_3 IRD_{it} + \mu_{it} \tag{5}$$

Where EPS = Earnings per share, SHF = Shareholders' fund, BRV = Brand value, XGW = Goodwill, IRD = Investment in research and development, α = Constant; i = Cross-sectional; t = Time series; β_1 - β_3 = Coefficients, μ = Error terms

A Priori Expectation: β_1 to $\beta_3 > 0$.

Table 1 represents the measurement of the variables used in the study.

Table 1.
The measurement of variables used in the study

Variables	Abbr.	Measures	Source
Dependent variables			
Earnings per share	EPS	Profit after tax and pref. dividends No. of the ordinary share	Murat and Derya [37]
Shareholders' fund	SHF	Net profit after tax Capital employed	Novák [35]
Independent variables			
Brand Value	BRV	Absolute figure	Ozkan, et al. [38]
Goodwill	XGW	Absolute figure	André, et al. [39]
Investment in research & development	IRD	Absolute figure	Peters and Taylor [40]

3.1. Checking the validity of Model Assumptions

Table 2 shows various diagnostic checks performed on the two models under study. These checks are necessary for us to determine which effect is appropriate for the datasets. It also determines whether or not the error variances are homogeneous, the level of autoregression in the model and finally, the existence of serial correlation in the datasets. These operations are done with R statistical software package version 3.6.3.

3.2. Estimation of Parameters and ANOVA Techniques

Table 3 shows the estimation technique of the two models with their respective analysis of variance (ANOVA) results as well as other relevant statistics.

Table 2.
Diagnostic checks for models 1 and 2.

S/N	Various tests conducted	Model 1	Model 2
1.	Hausman test	χ^2_{cal} statistic= 9.428 $P_{-value} = 0.190$	χ^2_{cal} statistic = 0.791 $P_{-value} = 0.225$
Decision			
The P_{-value} of 0.191 and 0.226 show that the random effect estimation techniques are appropriate for the two models when subjected to a 0.05 level of significance.			
2.	Breusch-Pagan test	χ^2_{cal} statistic = 3.891 degree of free = 3 $P_{-value} =$ 0.000	χ^2_{cal} statistic =68.452 degree of free = 3 $P_{-value} = 0.002$
Based on the P_{-value} obtained here, rejecting the null hypothesis of serially correlated error, paves the way to believe that idiosyncratic errors are statistically dependent. This means that the results are good for random effect estimation.			
3.	Wald Chi-squared test	χ^2_{cal} statistic= 146.780 degree of free = 3 $P_{-value} = 0.532$	χ^2_{cal} statistic = 217.084 degree of free = 3 $P_{-value} = 0.311$

The P_{-value} (= 0.5316 and 0.3114) suggest that the null hypothesis of the existence of homoscedasticity should not be rejected indicating that the error variances are the same for the two models under study for which our decision is based on a 0.05 level of significance.

4.	Pesaran's CD test	Pesaran's statistic: CD value = 85.512 degree of free = 3 P_{-value} = 0.000	Pesaran's statistic: CD value = 101.411 degree of free = 3 P_{-value} = 0.000
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At a 5% level of significance and with the null hypothesis of cross-dependence, we therefore reject the null hypothesis and agree that no cross-sectional dependence exists within the two models. This decision is based on the P_{-value} (= 0.000 and 0.000) which suggest rejection of the null hypothesis.

Table 3.
Intangible assets firm performance (Model 1 & 2).

Intangible assets and earnings per share (Model 1) $EPS_{it} = \alpha_0 + \beta_1 BRV_{it} + \beta_2 XGW_{it} + \beta_3 IRD_{it} + \mu_{it}$				Intangible assets and return on shareholders fund (Model 2) $SHF_{it} = \alpha_0 + \beta_1 BRV_{it} + \beta_2 XGW_{it} + \beta_3 IRD_{it} + \mu_{it}$		
Variables	Estimates	Std error	P-value	Estimates	Std error	P-value
BRV	34.908	11.095	0.006	34.909	11.095	0.004
XGW	22.008	2.866	0.002	33.008	2.896	0.002
IRD	30.111	8.666	0.000	30.111	8.666	0.001
Constant	10.092	6.897	0.009	10.0916	6.897	0.002
ANOVA						
Source	Sum of squares	Degree of freedom	Mean of squares	Sum of square	Degree of freedom	Mean of squares
Regression	111.0978	3	34.032	5612.094	3	1870.698
Residual	56.0089	161	-	1102.045	161	5.594
Total	164.1067	0.284	-	6714.139	-	-
Observations	165	165	165	165	165	165
R-squared				0.858	0.862	
Adjusted R-squared				0.841	0.858	
F-statistics				119.703	334.406	
P-value of F-statistics				0.029	0.002	

Note: EPS = Earnings per share; SHF = Shareholders' fund; BRV = Brand value; XGW = Goodwill; IRD = Investment in research and development.

4. Discussions

The structure and layout of our datasets, static panel data modeling method with random effects be adopted to analyze the data. Several diagnostic tests are conducted to ensure that the datasets are appropriate for modeling under panel data structures. None of these tests reportedly failed to conform to the condition of the application of the methods of the first difference estimator under the random effect modeling technique. The random effect technique used to estimate the parameters of the models shows a 0.05 level of significance. All the variables of interest (brand value -BRV; goodwill XGW and investment in research and development - IRD) were statistically significant with regard to earnings per share (EPS) and shareholders fund (SHF). This is established from the p-values of 0.006, 0.002, 0.000 for model 1 and 0.004, 0.002 and 0.001 for model 2 in respect of XBV, XGW and IRD respectively.

The F-statistics (119.703) with (P-value = 0.029) establishes that the model is statistically significant at the 5% level. The adjusted R-squared of the regression model is 0.841 (i.e. 84 per cent by approximation) showing that 84% of variations in earnings per share can be explained by brand value (BRV), goodwill (XGW) and investment in research and development (IRD) while the remaining 16% were not taken into account by the model. This means that the three variables (BRV, XGW and IRD) could only contribute 84% to earnings per share. The coefficients of BRV, XGW and IRD ($\beta_1 = 34.909$, $\beta_2 = 22.008$, and $\beta_3 = 30.111$) together with their corresponding p-values (0.009, 0.006, and 0.000) suggest the model is individually statistically significant at the 0.05 level. These results are in tandem with prior studies by Awa, et al. [3]. On the contrary, the results were inconsistent with the results reported by Nnado and Ozouli [8] who reported negative effects. Similarly, in model 2, the modelling of the return on shareholders' funds (SHF) on brand value (BRV), goodwill (XGW) and investment in research and development (IRD) is obtained in Table 3 to test the second hypothesis which stated that there is no significant impact of IAS 38 intangible assets on the return on share holders' equity of selected manufacturing companies in Nigeria. The results in Table 3 show that all the independent variables, brand value (BRV), goodwill (XGW) and investment in research and development (IRD) are statistically significant. This is confirmed by the probability values of 0.004, 0.002 and 0.001 which are far less than 0.05 as a chosen level of significance. The results revealed that each of these variables ($\beta_1 = 34.909$, $\beta_2 = 33.008$, and $\beta_3 = 10.092$) contributes positively to the return on shareholders' funds. R-squared and adjusted R-squared as reported in Table 3 for the second model (0.862 and 0.868) simultaneously show that 86% of variations in return on shareholders' funds could be accounted for by brand value (BRV), goodwill (XGW) and investment in research and development (IRD) while the remaining 14% of variations are unaccounted for. These figures indicate that brand value (BRV), goodwill (XGW) and investment in research and development (IRD) could only explain 86% of return on shareholders' funds while about 14% of variations are not taken

into account in the model indicating that we have about 14% of other sources of return on shareholders' funds that are not taken into account in our model. Based on the estimations in both models 1 and 2, the results revealed that intangible assets had a positive and significant effect on EPS ($AdjR^2 = 0.841$; $F\text{-Stat.} = 119.703$; $P\text{-value} = 0.029$). These results are consistent with the results documented by the study of Asika, et al. [4]. In the same manner, the results were not in tandem with the results documented by Nnado and Ozouli's [8] studies on the effect of intangible assets on the economic value added (EVA) of some selected and sampled manufacturing companies listed in Nigeria.

5. Conclusion and Recommendations

The study examined IAS 38 intangible assets and firm performance. Two research objectives led to two tested hypotheses. Earnings per share and return on shareholders' funds were employed as firm performance indicators and the explanatory variables used to proxy intangible assets were brand value, goodwill and investment in research and development. The study revealed that intangible assets had a positive effect on earnings per share and also on the shareholders' funds of the companies tested in each case. Consequently, the study concluded that IAS 38 intangible asset standards and the level of compliance by the companies had a positive effect on the manufacturing companies tested. The implication suggests that the companies having followed the IAS 38 standards in measuring their intangible assets to such an extent had a positive effect on their performance. In addition, the assets had not been underestimated or overestimated to such an extent as to suggest discretionary earnings.

The study recommended that organizations comply with IAS 38 intangible asset standards for accounting information disclosures that will enhance public trust and confidence relying on the reliability of reported earnings and financial statements capable of influencing useful investment decisions.

6. Limitations and Suggestions for Future Studies

This study considered IAS 38 intangible assets from the perspective of the extent of compliance and its effect on the performance of manufacturing companies listed in Nigeria. The study provided an integral understanding of the significance of IAS 38 intangible asset compliance and a novel insight into the existing literature. It is one of the emerging studies in Nigeria. The only intangible assets considered under IAS 38 affect the manufacturing companies listed in Nigeria with only 20 companies as many of the manufacturing companies had incomplete data because some of them were constantly trading on the capital market. Further studies could be expanded by including other sectors besides the manufacturing companies used.

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