



Impairment Testing of Intangible Assets and Quality of Financial Reporting of Nigerian Manufacturing Companies

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Abstract

This study was carried out to investigate impairment testing of intangible assets as it affects the quality of financial reporting in Nigerian manufacturing companies, considering the conflicting interests of managers and owners of corporate firms, as established by the agency theory. Secondary data mainly audited annual reports for two years - 2012 and 2013 of 50 listed manufacturing companies which comprised the sample size for the study, were used and necessary data extracted for analysis. Descriptive and inferential statistics were employed, while the test of hypotheses and other analysis were carried out with the aid of SPSS version 17.0. The test revealed that listed corporate firms in Nigeria are complying with IFRS 3 and IAS 36, IAS 38 on impairment testing except disclosure requirement which has very low compliance rate. The study concludes that the carrying out of this test must be absolute and in full compliance with IFRS and relevant provisions of CAMA 2004, as amended, specifically disclosure requirement provision on impairment losses or gain, because this ensures that annual reports, published by these companies, truly reflect the companies' net worth and values; since users of such financial information place reliance on them for investment and other purposes which have financial implications. The study recommends that regulatory bodies should more vigorously increase enforcement of compliance with IFRS in the preparation and presentation of annual reports and accounts for improved quality of financial information.

Keywords: *impairment testing, intangible assets, financial reporting quality, impairment loss, manufacturing company*

1. Introduction

1.1 Background to the Study

The preparation of financial statements is typically controlled by the board of directors of the company who are separate from the company's stakeholders. This separation of ownership and control creates a contractual conflict between the parties, leading to agency cost (Adeyemi & Olowookere, 2012). However, in today's world, this obligation of management to report its activities to business owners has become more dynamic and complex in the face of the prevalence of the unresolved agency question and companies becoming global with international owners, different legal structures, varied regulating business forms across countries and relatively differing accounting standards modified to reflect local contents, except now that the world is moving towards a set of reporting standards -- the International Financial Reporting Standards (IFRS) that is still at infancy in Nigeria. The burden of corporate governance is to forestall corporate failure or scandals and the need for organizations to be socially responsible to their environment. The main instruments which companies use in meeting this requirement of stewardship are financial statements prepared and presented by the directors of these companies who are, in

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turn, seen as the agents of the owners of the companies. It is not a moral or ethical requirement for companies to report their activities to their owners periodically but a legal requirement imposed on companies as a core function of companies' directors in line with the Companies and Allied Matters Act, 2004, CAP 46 (as amended). This all-important output of management function could become a time bomb, if distorted by inappropriately accounting for intangible assets impairment. This may materially distort the financial information being issued which may lead to corporate failure and so be injurious to the society in terms of its economy.

Adeyemi and Dabor (2009) contend that the published financial statements prepared by directors of limited liability companies and audited by external auditors remain the primary means of informing shareholders and other users about the financial performance, progress and position of the business. They further stress that, *ceteris-paribus*; audited financial statements should be credible, believable and reliable. However, this condition, other things being equal, may not hold. This assertion becomes relevant, judging from the inability of quoted companies in Nigeria to appropriately report their business activities in line with relevant legal requirements and accounting standards periodically, as required, because of the tendency of impairment testing of intangible assets to distort financial information emanating from such reports if not appropriately accounted for, or ignored, as the case may be. Arising from the aforementioned overview and the adoption of International Financial Reporting Standards (IFRS) in 2012 in Nigeria, which is still very much in its infancy and the very little or no literature in the area of impairment testing of intangible assets to the best of the researcher's knowledge, this research work becomes relevant. The study is of critical importance because investigating the accounting activity of Nigerian manufacturing listed companies in relation to impairment testing of intangible assets and its impact on the quality of financial reporting, which, if not appropriately accounted for, can distort the quality of financial reporting materially. The proper classification, measurement, recognition and accounting for intangible assets are essential for the quality of financial reporting. The outcome of the research study will become an essential body of knowledge for further research work.

The management of limited liability companies needs to report how the companies have fared periodically to their owners. However, impairment testing of intangible assets by nature poses a very big challenge to corporate organizations especially, the Nigerian manufacturing sector in terms of how to account for them and their disclosure in compliance with International Financial Reporting Standards (IFRS), still relatively new in Nigeria in terms of implementation. In this regard, there exists a challenge of compliance with relevant standards by quoted companies in the Nigerian manufacturing sector with respect to appropriately accounting for impairment testing of intangible assets in their books and disclosing impairment losses. This research work sets out to investigate the recognition and measurement of impairment testing as a basis for correcting and ensuring improved financial reporting by listed manufacturing companies in Nigeria.

The following specific objectives are identified:

- i. Investigate whether relevant accounting standards and applicable laws are being followed in carrying out the impairment testing of intangible assets;
- ii. Ascertain how frequently the test for impairment of intangible assets is carried out in preparing the financial statements of manufacturing companies in Nigeria; and
- iii. Assess the extent of compliance with the required disclosure requirements for impairment losses or gains.

The need for corporate entities to carry out tests of impairment of intangible assets cannot be over-emphasized, as most investment decisions are based on the analysis of the companies' financial statements. The current study is expected to provide empirical evidence on corporate impairment testing of intangible assets in Nigeria. Non-compliance with the relevant standards on corporate impairment testing of intangible assets may send the wrong signal to the users of financial statements and perhaps distort the picture of the companies' reported activities for the reporting period.

The study expects to provide the board of directors, shareholders and other stakeholders with a better understanding of the relevant accounting standards that guide the recognition, measurement and reporting of intangible assets in Nigeria. The study also hopes to enhance better decision-making in business valuation for future strategic financial decisions, like mergers and acquisitions, as a considerable portion of most companies' net worth is made up of intangible assets, even when they are not reported or accounted for in most cases. Finally, the study seeks to sensitize stakeholders to the needed awareness and education as consumers of financial information derivable from financial reports in terms of exercising caution in placing reliance on financial reports of companies in Nigeria.

1.2 Specific Research Questions

The following specific questions are formulated in an attempt to meet the aim and objectives of the research:

- i. What applicable laws if any do Nigerian corporate organizations follow in carrying out impairment testing for intangible assets?
- ii. How frequently do corporate organizations carry out impairment testing of intangible assets?



- iii. To what extent do manufacturing companies in Nigeria comply with the appropriate disclosure requirements to account for impairment losses?
- iv. What significant factors influence the quality of financial reporting in the IFRS regime in Nigeria?

1.3 Research Hypotheses

The following research hypotheses formulated from the foregoing research questions were tested towards the determination of the findings of the study:

HO₁: Corporate entities in Nigeria do not disclose impairment losses in their annual reports.

HO₂: The observed corporate impairment testing of intangible assets in the Nigerian manufacturing companies do not lower the quality of financial information of the reporting entities.

The scope of this study is limited to manufacturing companies that are quoted on the Nigerian Stock Exchange because companies in the manufacturing sector have more intangible assets. The study focuses on the corporate impairment testing of intangible assets in the manufacturing sector of the economy in Nigeria. Therefore, the study reviews annual reports and accounts of the selected manufacturing companies in Nigeria for financial year 2012 and 2013. The study suffers from inadequate study materials, as very few scholars have worked on impairment testing of intangible assets within and outside of Nigeria. In Nigeria, there is little or no material on intangible assets impairment testing, largely due to the fact that the adoption of International Financial Reporting Standards (IFRSs) by Nigeria is still nascent. This accounts for the sparse literature review on the subject.

2. Literature Review

2.1 General Review of Related literature

The introduction and adoption of the International Financial Reporting Standards by the Nigerian government in 2011 makes the impairment testing of intangible assets by listed corporate firms mandatory. In Nigeria, the corporate bodies statutorily commenced the implementation and preparation of their financial statements in accordance with the provisions of IFRSs effective January 1, 2012. It is obvious that the mandatory compliance of public limited companies in the country with IFRSs provisions is nascent. Omoye, (2013) notes that the Nigerian economy is fast growing, with firms and organizations struggling to survive and keep up with global competition in their industries. Experts on the Nigerian economy consider that the main feature of the new economic environment of Nigeria is the essential role played by intangibles assets as a fundamental determinant of value creation of businesses or companies (Meritum, 2001). In this regard, intangible assets have become the focus of companies, financial analysts, investors, accountants, and regulators alike in recent times and this has motivated attempts to understand and narrow the gap between a company's book values and market values (Barton, 2005).

The concept of intangible assets

The adoption of the International Financial Reporting Standards in Nigeria has created increased awareness on the nature of intangible assets. According to Schedule 2, Part II, Section C, of the Companies and Allied Matters Act 2004, as amended, examples of intangible assets include development cost, concessions, patents, franchise, trademarks and goodwill. These items are also referred to as deferred charges. On the other hand, International Accounting Standard 38 defined intangible assets as identifiable non-monetary assets without physical substance such as patents, research and development, copyrights, franchise, computer software, manuscripts, plays and motion pictures. However, Statement of Accounting Standard 31, (adopted by the Financial Reporting Council of Nigeria), also states in relation to intangible assets that, "entities frequently expand resources, or incur liabilities on the acquisition, development, maintenance or enhancement of intangible resources such as scientific or technical knowledge, design and implementation of new processes or systems, licenses, intellectual property, market knowledge and trademarks including brand names and publishing titles. Items encompassed by the above broad headings subject to meeting some defined criteria are referred to as intangible assets." (SAS 31, Part I, Introduction, paragraph I). The broad classification makes for easy comprehension and interpretation of the concept of "intangibles". Impairing assets according to the International Accounting Standard 38 means a reduction in the recoverable amount of fixed assets of a cash generating unit below its carrying amount or when its carrying amount exceeds its recoverable amount. Thus, testing intangible assets for impairment at least once a year is so important because these assets' values may have either positive or negative effects on the valuation of any corporate entity especially when confronted with decisions involving mergers and acquisitions.

Characteristics of Intangible Assets

Intangible assets are defined as identifiable non-monetary assets that cannot be seen, touched or physically measured, which are created through time and/or effort and that are identifiable as a separate asset (IAS 38). The special characteristics of intangible assets, on the one hand, the value driving capabilities and the increased vulnerability raise the question on how the risk-return relationship of intangibles looks like. The importance of intangible assets lies in their distinctive characteristics to



create a sustainable competitive advantage. Firm resources can be divided into three categories: physical capital, human capital and organizational capital resources (Fernandez, Montes & Vasquez, 2000). Physical capital resources include tangible assets in a firm, such as its plant and equipment, technology, location and raw materials. Human capital resources consist of everything associated with the firm's employees, their training, experience, judgment, intelligence and relationships. Organizational capital resources include the internal framework of a firm, its controlling and coordinating systems, reporting structure and informal relations within the firm. Evidently, two out of three resource categories consist of intangible assets. The features of intangibles are that they provide benefits in future periods; have no physical substance; convey a right or privilege; and are relatively long-lived assets. The business professionals consider legally unprotected intangibles such as product and company reputation, human capital and company culture as the most important value drivers (Danique, 2011).

The Emergence of Intangible Assets in the Firm

Historically, there has been a growing disparity between market and book values in market indices across the globe in terms of company's value. The S & P 500 for example experienced a growth in market to book ratio from 1.3 in the 1980s to 4.6 in 2004. (Salinas, 2009). Also, Bond and Cummins (2000) reported empirically significant evidence that equity values systematically deviate from firms' fundamental valuations in the United States stock markets in the period 1980-2000. Economists within the period formulated several reasons to explain the increase in the ratio, an important one being the increasing proportion of intangible assets to market capitalization. Johnsons and Kaplan (1987) asserted that "a company's economic value is not merely the sum of the values of its tangible assets, whether measurable at historical cost, replacement cost or current market value prices. It also includes the value of intangible assets: the stock of innovative products, the knowledge of flexible and high quality production processes, employee talent and morale, customer loyalty and product awareness, reliable supplies, efficient distribution networks and the likes". (p. 202).

The effects of intangible assets on financial statements, earnings per share (EPS) and business valuation cannot be over-emphasized. In the knowledge-driven economy where intangible assets such as intellectual resources (that is, employee, process and customer relationship) are held more important and crucial for firm valuation than assets, non-disclosure of such assets will create information asymmetry (Guthrie & Petty, 2000; Holland, 2009). However, Sooriyakumaran and Velnanpy, (2013), contend that the research carried out on impairment losses and disclosure revealed that disclosures on the estimation of impairment losses of non-current assets and principles of their making are relatively of poor quality. Most of the companies investigated have presented in their financial statements only the general principles of accounting for the subject matter. They concluded that only six percent of the companies surveyed disclosed detailed data that are sufficient to properly interpret and evaluate the reliability of the information presented in the financial statements.

In another study by Omoye (2013), it was revealed that the probability for most Nigerian companies to disclose intangible assets are weakly associated with companies in service oriented industry, companies with foreign activities, profitable companies and companies that use big audit firms. It follows therefore that there is the need for assets to be tested for impairment at least once a year in order not to either overstate or understate their values in the statement of financial position. This gave rise to the introduction of various accounting standards and laws guiding the treatment of these intangible assets in corporate entities' financial statements. The increased attention to intangible assets led to regulatory changes. The International Accounting Standard Board (IASB) develops standards to provide a reliable and consistent measurement of intangible assets. Therefore, the IASB has chosen a conservative approach towards the reporting of intangible assets.

In mid-2005, the first adjustment towards the reporting of intangible assets was implemented in IFRS 3 and mid-2009, the latest adjustment has been made. The new regulation does not allow for the inclusion of internally generated intangible assets or goodwill on a company's balance sheet because those assets are sensitive to fraud. Purchased intangibles, however, are reported using the "fair value" method. Purchased goodwill and intangibles are no longer amortized in the new regulation especially those with indefinite useful life because the value of intangible assets can be very volatile. As a result, the IASB decided to implement a mandatory annual impairment test to capture the unstable value in depreciating intangible assets. An impairment test entails a revaluation of intangible assets and only an adjustment is made in the statement of financial position when the carrying amount of any asset exceeds its recoverable amount (IFRS 3, A, IAS 16.6).

The IASB further distinguishes between intangible assets and goodwill because some assets are easier to identify and separate than others. The exact definitions from IFRS 3 concerning intangible assets and goodwill in business combinations are as follows:

- i. *Intangible asset* – are identifiable non-monetary assets without physical substance. (IAS 38.8; IFRS 3. A, FRCN SAS 31)
- ii. *Goodwill* – future economic benefits of being individually identified and separable recognized (IFRS 3. A).

Relevant Financial Reporting Standards on Intangibles

The International Accounting Standards Board (IASB) offers some guidance (IAS 38) as to how intangible assets should be accounted for in financial statements. In general, legal intangibles that are developed internally are not recognized and legal intangibles that are purchased from third parties are recognized as in IAS 9. Expenditure on an intangible item shall be recognized as an expense when it is incurred unless:

- (i) It forms part of the cost of an intangible asset that meets the recognition criteria; or
- (ii) The item is acquired in a business combination and cannot be recognized as an intangible asset. If this is the case, this expenditure (included in the cost of the business combination) shall form part of the amount attributed to goodwill at the acquisition date (see IFRS 3 Business Combinations).

Danique (2011) confirms that reported intangible assets have a larger impact on firm value than tangible assets. Danique also stresses that goodwill in general has a positive impact on market value while other intangible assets have a negative impact on firm value. This report is similar to the findings of Oliveira, Rodrigues & Craig (2006). In this regard, total intangible assets have a positive influence on company's value, but when separated other intangible assets have a negative impact on company value. The study further explains that this variation in terms of impact and firm value is due to the fact that investors do not perceive other intangible assets as an asset but as an expense in the short-run. It can be inferred that in business combinations, investors have to be convinced that the price paid for the target's intangibles is worth at least the future expected cash flows. Danique concluded by saying that as a result of diverse industry characteristics, in some industrial sectors, the impact of intangible assets on company value is larger than in others. In general therefore, other intangible assets do not have a positive impact on firm value in contrast to the very significant positive impact goodwill has on firm value even when comparing different industries. In addition, this finding provides evidence that in the context of business combinations, financial statements do contain value relevant information concerning intangible assets. Shalev (2007) asserts that in the USA, the Financial Accounting Standards Board (FASB) requires all acquirers of assets to allocate the purchase price to the assets acquired and liabilities assumed as a result of the economic significance of business combinations to firms and their shareholders.

The purchase price allocation should reflect the economic value of the business combination that is the resources acquired by the firms for its operations. However, the special characteristics of goodwill and indefinite-life intangible assets may result in acquirers deviating from non-strategic allocation of the purchase price. The study shows that there are factors that could steer firms towards a strategic allocation of the purchase price between non-amortizable intangible assets and other assets. Specifically, acquirers consider the effect that recognized assets would have on their EPS. In a bid to impress investors' functional fixation on earnings, acquirers that view reported EPS as more central to the evaluation of their performance by outsiders tend to allocate a larger portion of purchase price to assets which allow them to report higher post-acquisition EPS. Acquirers appear to be less concerned with the increase in expected EPS volatility that is also associated with non-amortizable intangible assets. The finding of this study is consistent with the following three alternative explanations:

- i. Given equal cash flows, firms are willing to trade lower long-term EPS volatility for higher level of post-acquisition EPS.
- ii. Managers believe that impairment is seen by investors as a non-recurring item which is not considered in long-term EPS volatility calculation.
- iii. Managers can avoid impairment and thus avoid the increase in EPS volatility or at least time impairment strategically.

Conclusively, the study provides evidence that acquirers are also concerned with the effect the reported values on the statement of financial position would have on their ability to secure debt in the future. This is in line with the notion that the special attributes of intangible assets may limit its usefulness as collateral, the portion of purchase price allocation to intangibles decreases with acquirers' leverage. The three studies above relate the impairment testing outcome to EPS, firm value and compliance with relevant standards. It has become very obvious that base on the usefulness of financial statement to its users and other implications, necessary compliance to relevant standards in impairment testing of intangible assets be followed. From the review of the related literature, compliance with the International Financial Reporting Standard in respect of impairment testing of intangible assets and quality of financial information is relatively low in Europe and across other western countries that adopted IFRS since 2005. This trend is due to the silent nature of intangible assets being fictitious and the inability to notice these assets if they are not included in the financial statements and in an environment of relatively weak enforcement by regulatory agencies of accounting standards relating to impairment testing of intangible assets and disclosure requirements (Fadur, Ciotinia & Mironiuc, 2011). This situation also applies to Nigeria. As a result, there exists a knowledge gap in terms of compliance of Nigerian listed manufacturing firms in the Nigerian Stock Exchange regarding impairment testing of intangible assets. This has implications for the quality of financial information prepared and published by these companies due largely to the fact that the adoption and implementation of the International Financial Reporting Standard number 3, IAS 36 and 38 are still nascent in Nigeria. This study is out therefore to fill this knowledge gap.

2.2 Theoretical Framework

Impairment testing of intangible assets can affect positively or negatively the quality of financial information that are issued by corporate entities. This can be manipulated in such a way to favor managers of corporate entities in terms of their performance and continuous relevance to the owners of the business. The major theory used in the current study is the agency cost theory.

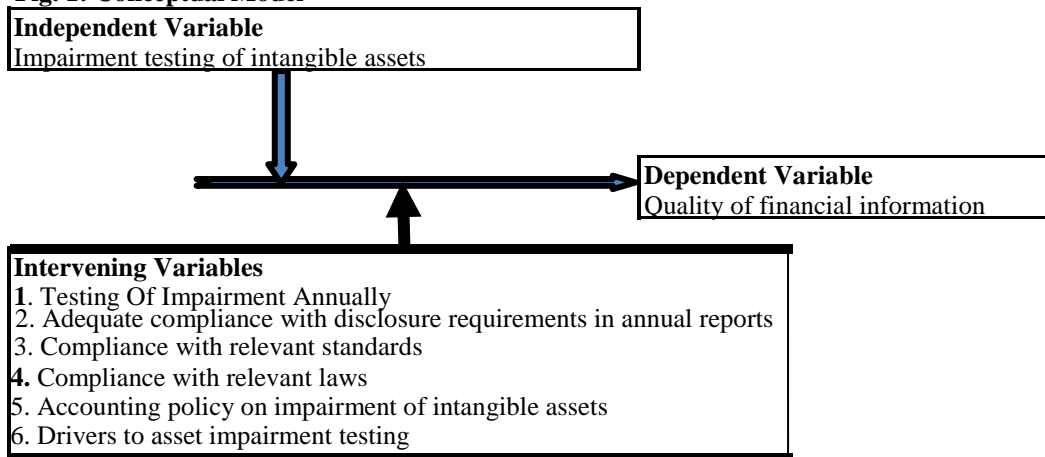
The Agency Cost Theory: It has become obvious that one of the major factors which puts publicly quoted companies' managers under pressure to window-dress accounts or misrepresent financial information to please the owners of companies of their stewardship thereby retaining their roles as managers can be explained by the agency cost theory. Generally speaking, agency cost theory is an aspect of financial economics that examines conflicts of interests between parties with different interests in the same asset. That is, conflicts between shareholders and managers of companies, then shareholders and bondholders. The theory was first established by Jensen and Meckling (1976). It explains the relationship between principals such as shareholders and their agents, such as companies' managers. The principal delegates or hires an agent to perform certain duties on his behalf. Bundala (2012) asserts that agency costs is the sum of three variables, namely: the monitoring expenditure of the principal, the bonding expenditure by the agent, and the residual loss. The first type of agency cost is expenditure by the principal in monitoring the agent. Monitoring cost is the economic value of not only observing the behaviour of the agent, but also the efforts on the part of the principal to control the behaviour of the agent through budget restrictions, compensation policies and operating rules. Bundala further explains that the second-class agency costs are usually known as bonding expenditures. This refers to situations where the principal will pay the agent to expend resources to guarantee that the agent will not take actions that harm the principal. A bonding cost is increased where the principal pays a premium to the agent to create some pool of resources or a legal obligation from which the principal can be compensated for detrimental actions of the agent.

The final class of agency cost is the principal's lost welfare caused by the divergence in his interests from that of the agent. If because of circumstances such as technology, geography or even personalities involved, an agent cannot be perfectly monitored or bonded, it becomes obvious that the interests of the principal and the agent will not be in harmony. It is obvious that the agency question continues unanswered as long as there is separation between shareholders and managers of companies owned by shareholders. Consequently, impairment testing and disclosure may be used to reduce information asymmetry and hence enhance the protection of the principal's interest.

2.3 Conceptual Model

This is shown in Figure 1. It presents the relationship among the variables that are investigated.

Fig. 1: Conceptual Model



(Source: Designed for the study by the Researchers)

Figure 1 shows the relationship between the quality of financial information and impairment testing of intangible assets, as moderated by annual impairment testing, adequate regulatory disclosures in annual reports, and general compliance with the relevant laws. Other moderating factors are the accounting policy on impairment of intangible assets, and the triggers to assets impairment tests. The model was used to provide logical answers to the research questions guiding the study.

3. Research Methods

3.1 Research Design

This study was designed to capture the impairment testing of intangible assets and the quality of financial information in Nigerian manufacturing companies. A combination of descriptive and explanatory approaches was used in this study. Polit and Hungler (1999) observe that description can be a major purpose of both qualitative and quantitative research studies. With the descriptive design, the paper was structured to gain more information about impairment testing among listed manufacturing firms in Nigeria. On the other hand, Saunders, et al. (2007) contend that studies that establish causal relationship between variables may be termed explanatory studies. They further emphasized that this has to do with studying a situation of a problem in order to explain the relationship between variables. It permits control over the research process. The research designs were considered appropriate because they facilitate a comprehensive and detailed view of the major research questions in the study.

3.2 Population, Sample and Sampling Technique

A population is the total group of subjects that meet a designated set of criteria. Polit and Hungler (1999) distinguishes between the target population and an accessible population. The target population includes all the cases about which the researcher would like to make generalization. While the accessible population, comprises all the cases that conform to the designated criteria and are accessible to the researcher as a pool of subjects for a study. Therefore, the target population of this study includes all Nigerian manufacturing companies quoted in the Nigerian Stock Exchange that were still active as at close of trading on 31st December 2013. The Nigerian Stock Exchange daily listing had a total of 132 active listed companies, consisting of 66 active manufacturing companies as at the said date. (*The Guardian Newspaper, Tuesday December 31, 2013*). These active manufacturing companies constituted the population of this study.

The purposive sampling technique was used. It refers to a procedure that involves the selection of persons or objects that represent the desired population. This is a non-probability sampling method which involves the conscious selection of certain subjects to be included in the study. The purposive sampling technique was used to ensure that participants were accessible and were representatives of the population. A sample size of 50 active firms listed on the Nigerian Stock Exchange as at December 31, 2013, was considered a good representation of the manufacturing companies forming the population of this study, since the ultimate test of a sample design is how well it represents the characteristics of the population it purports to represent (Emory and Cooper, 2003). The fifty firms which were the sample elements and formed the sample size were selected, using the stratified convenience sampling technique. This was achieved by dividing the population into four industrial strata. The agriculture sector contributed 3 companies, while 32 companies were from Fast Moving Consumer Goods (FMCG) and others. Pharmaceutical firms had 7 companies, while 8 companies were drawn from the building materials subsector. The choice of this sample size of fifty elements was informed by the literature on the maximum and minimum practical sample sizes for statistical testing. Aside from adequate representation, the sample size is greater than 30 subjects which satisfies the statistical condition for a large sample (Descombe, 2003). The 2012 and 2013 annual reports and accounts of the 50 sample companies were analyzed and these yielded hundred (100) firm years.

3.3 Data Type and Model Development

In this study, only secondary data were used. The secondary data were extracted from the 2012 and 2013 annual reports of public limited companies sampled. These companies were listed on the Nigerian Stock Exchange and were active as at December 31, 2013. The criterion for the two years selected was the implementation and adoption of the International Financial Reporting Standard commenced in 2012 in Nigeria after the directive by the Federal Government of Nigeria and the regulatory guidelines of the Financial Reporting Council of Nigeria (FRCN) to regulate and enforce the directive. The research questions were answered by estimating a binary logistic regression model which describes the relationship between a dichotomous response variable and a set of explanatory variables (Adeyemi, Okpala & Dabor, 2012). The binary logistic regression is based on the use of maximum likelihood estimator (MLE) and, when compared to the Ordinary Least Square (OLS), does not assume linearity, normality distribution, heteroscedasticity and hence in general has less stringent assumptions (Salvatore & Reagle, 2001).

The choice of binary logistic regression model is to relate the explanatory variables to the probability of firm's willingness to engage in voluntary disclosure of intangible assets and do the impairment testing. This is further based on the inability of the ordinary least square multiple regression model to yield reliable coefficients and inference statistics in situation where the dependent variable is binary (0 and 1). The binary logistic regression model, unlike others, is based on the use of dichotomous dependent variable, in which an observation scores one, if it is present and zero, if otherwise (Omoye, 2013). This study used neither the ordered logit nor multinomial logistic regression because the ordered logit is ranked, and multinomial is used for nominal dependent variables (Greene, 2003).

3.4 Model Specification

In the light of the research hypotheses and literature reviewed in the previous section of this study, a multiple regression model is specified in equation 1. The multiple regression econometric model seeks to explain change or variation in the values of the dependent variable (quality of financial information) on the basis of change in other explanatory variables (impairment testing, compliance with relevant standards, compliance with relevant laws, impairment test done annually, accounting policy and disclosure requirement of intangible assets). The assumption is that the dependent variable is a linear function of the independent variables. The multiple regression with an error (ϵ) is expressed in equation 1.

$$\text{QualFinRep} = \alpha + \beta_1 \text{ImpTes} + \beta_2 \text{ConStd} + \beta_3 \text{ConLaw} + \beta_4 \text{ImpAnn} + \beta_5 \text{AccPol} + \beta_6 \text{DisReq} + \epsilon \dots (1)$$

Where: **QualFinRep** = quality of financial reporting

ImpTes = impairment testing of intangible assets

ConStd = compliance with relevant standard on impairment testing of intangible assets

ConLaw = compliance with relevant law on impairment testing of intangible assets

ImpAnn = impairment testing of intangible asset once a year

AccPol = accounting policy on impairment testing of intangible asset

DisReq = disclosure requirement of intangible assets

α = constant of the regression model

β = parameters of each variable

ϵ = Residual (error) term

3.5 Measurement and Operationalization of Variables

Dependent Variable – The quality of financial reporting is the dependent variable of this study. A dummy variable was adopted whereby the study used the statement of the significant accounting standards containing the policy of the company on impairment testing of intangible assets. The presence of this policy on the significant accounting policy of the concerned company proxies or signifies high quality of financial information, as presented in the annual reports and accounts and otherwise signifies low quality of financial information presented in the annual reports and accounts.

Independent Variables – these are shown in Tables 5 and 6.

3.6 Statistical Tool and Analytical Procedure

For the purpose of analysis, this study adopted both descriptive and inferential statistics. The secondary data were analyzed, using the simple percentage, frequency distribution, and regression with the help of the statistical package for social sciences (SPSS) Version 17.0.

3.7 Data Robustness Tests

The results generated by the regression model were subjected to some diagnostic tests of autocorrelation and heteroscedasticity. In order to carry out this test, Durbin Watson test statistic was used. The result was a value of 1.987, which falls within the acceptable range. This indicates that there is no correlation among the independent variables in the regression model formulated for the study (Field, 2009).

3.8 Reliability and Validity

To test the reliability of the instrument used, Cronbach's alpha coefficient was tested using the Statistical Package for Social Sciences, Version 17. The Cronbach's alpha coefficient result was 0.98. This value is above 0.70, so the scale can be considered reliable with our sample.

4. Results

This section of the study is devoted to presenting the result of the analysis performed on the data collected from secondary data source (annual reports) to test the postulations made in the study and answer the research questions. Adeyemi and Okpala, (2011) assert that analysis means the ordering, categorizing and summarizing of data to obtain answers to research questions. They stress that the purpose of analysis is to put data collected into manageable and intelligible form so that the relation of research problem can be studied and tested. However, this study set out to investigate the impairment testing of intangible assets and the quality of financial information of Nigerian manufacturing companies. This stems from the adoption of the International Financial Reporting Standards by Nigeria, which was slated to take effect in terms of compliance by all listed companies in Nigeria from 2012. This study seeks among other objectives, to ascertain the level of compliance with the relevant International Financial Reporting Standard as it affects impairment testing of intangible assets and the quality of

financial reporting, disclosure requirement, frequency of testing and modalities. The population of this study comprises only quoted Nigerian Manufacturing companies that were listed and were still active on the Nigerian Stock Exchange as at December 31, 2013. As at the aforementioned date, only 66 Nigerian manufacturing companies, excluding petroleum and gas related companies, were listed and active. A sample selection of 50 Nigerian quoted manufacturing firms over a two-year period of 2012 and 2013 were considered, resulting in a representation of 75.76% of the population.

4.1 Data and Robustness Test

In ascertaining the compliance level of listed manufacturing companies to international financial reporting standard on impairment testing of intangible assets, descriptive and inferential statistics were used, especially binary logistic regression with the aid of Statistical Package for Social Sciences (SPSS Version 17.0). The variables for this study include a dummy dependent variable (in this case, a proxy, that is, significant accounting policy, specifically on impairment testing stated in annual reports), which takes the value of "1" for firms that have as part of their accounting policies in their financial reports, impairment testing of intangible assets (QualFinInf) and "0", if otherwise. The independent variables include impairment testing (ImpTes), compliance with relevant standard on impairment testing of intangible assets (ConStd), compliance with relevant law on impairment testing of intangible assets (ConLaw), impairment testing done once a year (ImpAnn), stated accounting policy on impairment testing of intangible assets (AccPol), and disclosure requirement (DisReq).

4.2 Descriptive Statistics

Table 1 showed the descriptive statistics from 50 sampled listed manufacturing companies in Nigeria. It shows the mean (average) for each of the variables, their standard deviation (degree of dispersion), median, mode, maximum and minimum of the data collected.

Table 1: Descriptive Statistics

	Mean	Std. Deviation	N
Quality of financial information	4.62	2.86357	100
Impairment testing	1.38	1.07037	100
Compliance with accounting standard	1.88	1.18896	100
Compliance with CAMA 2004	5.58	2.80732	100
Impairment done annually	3.2	2.44634	100
Stated accounting policy on impairment testing	4.84	2.31035	100
Appropriate disclosure requirement	3.42	1.83096	100

The results provided some insight into the nature of the selected firms that were used for the study in that these descriptive statistics in general reveal that there is no sample selection bias or outliers in the data collected that would impair or impede the validity of the generalization from the study.

Table 2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin Watson
1	0.628	0.583	0.512	5.104	1.987

4.3 Multicollinearity Test

The decision rule according to Menard (1995), suggests that a tolerance value of less than 0.1, almost certainly indicates a serious multicollinearity problem, while a value higher than 0.1, indicates no Collinearity among the independent variables of the model. Also, Myers (1990) suggests that a variable inflation factor (VIF) value greater than 10 is a cause for concern. From the results in Table 3, an output of the analyzed data shows that there is no tolerance value below 0.1 and VIF above 10. Therefore, there is no Collinearity among the predictor variables.

Table 3: Collinearity Statistics

Model		Collinearity Statistics
1	(Constant)	0.35
	Impairment testing	0.950
	Compliance with accounting standard	0.870
	Compliance with CAMA 2004	0.970
	Impairment done annually	0.980
	Stated accounting policy on impairment testing	0.881
	Appropriate disclosure requirement	0.987

4.4 Model Summary I

Table 4 gives information about the usefulness of the model. The Cox & Snell R square and the Nagelkerke R square values provide an indication of the amount of variation in the dependent variable explained by the minimum of “0” to a maximum of approximately “1”. These are described as pseudo R square statistics, rather than the true R square values, that are provided in multiple regression output (Pallant, 2005). Table 4 shows the output of the analyzed data; the two values are 0.576 and 0.518 for Cox & Snell R square and Naagelkerke R square, respectively, suggesting that between 57.6 per cent and 51.8 percent of the variability in the dependent variable is explained by the predictor variables.

Table 4: Model Summary I

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	252.976	0.576	0.518

Research Questions and Hypotheses Testing

In order to answer the research questions and test the hypotheses, the following data, obtained from the annual reports and accounts of all the sampled listed companies were reviewed and used as a basis for analysis:

- (i) Significant accounting policies of the listed companies, as reflected in their annual reports.
- (ii) Notes to the accounts, as related to impairment testing of intangible assets.
- (iii) Appropriate disclosure of either impairment losses, or otherwise, which were obtained by reviewing the companies’ statements of financial position as at specific dates, that is, for 2012 and 2013; and statements of comprehensive income for the years ended 2012 and 2013.
- (iv) All sampled listed companies prepared and presented their annual reports and accounts for the years 2012 and 2013 on the basis of International Financial Reporting Standards.

Tables 5 and 6 were used to answer all the research questions and test the research hypotheses. However, a correlation matrix (Table 5) is used to assess the degree of relationship between variables under study. The objective of the test is to see whether there are many multicollinearity problems among variables (Adeyemi, Okpala & Dabor, 2012). The problem exists, if independent variables are highly correlated among each other, with correlation values exceeding 0.90 (Tabachnick & Fidell, as quoted in Adeyemi, Okpala & Dabor, 2012). High correlation among independent variables reduces the explanatory power of the variables on the dependent variable (Sharma, as quoted in Adeyemi, Okpala & Dabor, 2012). Results of the test are as shown in Table 8, which reveals that the correlation values among independent variables range between 0.006 and 0.0091. Hence, multicollinearity problems do not exist in this study.

Table 5: Correlations Matrix

	QualFinRep	ImpTes	ConStd	ConLaw	ImpAnn	AccPol	DisReq
QualFinRep	1						
ImpTes	0.0690	1					
ComStd	0.0360	0.0012	1				
ComLaw	0.0400	0.0031	0.0051	1			
ImpAnn	0.0470	0.0023	0.0042	0.0033	1		
AccPol	0.0680	0.0006	0.0091	0.0039	0.0044	1	
DisReq	-0.046	-0.0014	0.0017	0.0083	0.0025	0.0032	1

* Correlation is significant at 0.05 level (2-tailed)

Research Question One

What applicable laws, if any, do Nigerian corporate organizations follow in carrying out impairment testing of intangible assets? Table 5 reveals that there is a positive relationship between compliance with applicable laws and the quality of financial information. And Table 6 shows that this relationship is significant, that is, $P < 0.05$ where $P = 0.001$. Therefore, listed companies do comply with relevant laws in carrying out impairment testing of intangible assets.

Research Question Two

How frequently do corporate organizations carry out impairment testing of intangible assets?

Significant accounting policy on impairment testing and notes to the accounts were data extracted from the annual reports of the listed companies sampled in order to provide an answer to this research question. Table 5 shows that there is a positive relationship between impairment testing of intangible assets once a year and the quality of financial information and that this

relationship is significant, as shown in Table 6, that is $P < 0.05$. Therefore, corporate organizations carry out impairment testing, at least, once in a year.

Research Question Three

To what extent do manufacturing companies in Nigeria comply with the appropriate disclosure requirements to account for impairment losses? In answering this question, items, such as comprehensive income statements, statements of financial position, notes to the accounts and significant accounting policies were extracted and analyzed. Table 5 reveals that there is a negative relationship between disclosure requirement of impairment losses and the quality of financial information. And this relationship is not significant, that is $P > 0.05$ where $P = 0.09$ as in Table 6. It follows therefore that corporate organizations do not follow appropriate disclosure requirements to account for impairment losses.

Hypothesis One

H_0 : Corporate entities in Nigeria do not disclose impairment losses in their annual reports

Table 6: Variables in the Equation Model Summary II

Logistic Regression

Variables in the Equation

Step 0	B	S.E.	Wald	df	Sig.	Exp(B)
Constant	1.386	.250	30.749	1	0.000	4.000
Step 1 Variables						
ImpTes	1.521	.167	29.123	1	0.022	5.001
ConStd	1.826	.201	29.763	1	0.011	5.201
ConLaw	1.983	.110	29.340	1	0.001	5.003
ImpAnn	1.798	.203	29.132	1	0.018	5.002
AccPol	1.673	.102	29.345	1	0.001	5.012
DisReq	1.902	.135	29.342	1	0.090	

In testing this postulation, item relating to comprehensive statement, statement of financial position, and notes to the account had their data extracted and analyzed. Table 5 showed a negative relationship between disclosure of impairment losses by corporate entities in their annual reports and accounts and the quality of financial information. And this relationship is not significant, that is, $P > 0.05$, where $P = 0.09$, as in Table 6. As a result, the null hypothesis is retained, which states that corporate entities in Nigeria do not disclose impairment losses in their annual reports.

Research Question Four

What significant factors influence the quality of financial reporting in the IFRS regime in Nigeria? From the results in Table 5, there is a positive relationship between the variables: impairment testing of intangible assets, compliance with relevant laws and standards, accounting policy on impairment testing of intangible assets and annual impairment testing of intangible assets and the quality of financial reporting. Table 6 reveals that, at 5% level of significance, compliance with relevant laws, compliance with relevant standards, accounting policy on impairment testing of intangible assets and annual impairment testing of intangible assets, are significant factors that influence the quality of financial reporting in the IFRS regime in Nigeria, but disclosure requirement for impairment losses or gain is not a significant factor in influencing the quality of financial reporting in the IFRS regime in Nigeria.

Hypothesis Two

H_0 : Corporate impairment testing of intangible assets in the Nigerian manufacturing companies does not lower the quality of financial information of the reporting entities.



The hypothesis was validated, using the data gathered from annual reports especially as related to significant accounting policies, notes to the accounts and so on, and then binary logistic regression was applied on the data. Table 5 reveals a positive relationship between impairment testing of intangible assets and the quality of financial information. Table 6 shows that when $P < 0.05$, $P = 0.022$. This shows a significant relationship between impairment testing of intangible assets and the quality of financial information. Therefore, the null hypothesis is not retained and the alternative hypothesis, which states that corporate impairment testing of intangible assets affect the quality of financial information of the reporting entities, is accepted.

5. Discussion, Conclusion And Recommendations

5.1 Discussion of Findings

The aim of this study has been to provide information that may help improve the quality of financial information and reporting through appropriate impairment testing of intangible assets in listed manufacturing companies in Nigeria. High quality and reliable financial information, as prepared and presented by business managers, is necessary, if managers, financial institutions, analysts, brokers, regulators, shareholders and academics are to make informed decisions about resource allocation, which will invariably have financial implications, either positively or negatively. It is apparent that as managers make decisions capable of influencing directly or indirectly the operations of the business, these decisions can affect the business owners. To reduce the incidence of wrong decisions being taken and ensure correct reporting of the performance and state of affairs of a business, full compliance with International Financial Reporting Standards and Companies and Allied Matters Act, 2004, as amended, in relation to impairment testing of intangible assets, becomes a necessity, especially for publicly quoted companies. If the financial information presented by corporate entities is low in quality, users may be misled and this may have an adverse financial effect on the consumers of such financial information and the public.

This study finds that majority of listed companies in Nigeria currently manifest very high compliance with relevant standards and laws with respect to impairment testing of intangible assets, it reveals that listed manufacturing firms in Nigeria demonstrate a low level of compliance with disclosure requirements, as dictated by IFRS. In line with the agency cost theory, if this act of non-disclosure on the part of management (agent) is not checked, it may create misleading information about a listed firms total assets and net worth of the company resulting in information asymmetry and reduced protection of the interest of the shareholders (principal). The study also indicates that the intangible assets in the financial reports of listed manufacturing companies comprised majorly of software and trademark (brand name) costs. Other intangible assets, such as licenses, franchise, customer relationship and intellectual property did not feature at all, even though these assets play vital roles in the business activities of the companies concerned. Based on the researchers' review of previous studies which shows that firm value is affected by impairment losses or gains and their disclosure, accounting for impairment testing of intangible assets becomes critically important. Hence the absolute need for quoted manufacturing companies in Nigeria to prepare their financial statements in compliance with the relevant standards and laws on impairment testing of intangible assets in order to improve the quality of information in the financial statements which both local and international users can rely on to make sound financial decisions.

5.2 Summary and Conclusion

In order to achieve the aim of this study, the researchers obtained data on variables which were believed to have a relationship with the quality of financial information, such as: impairment testing of intangible assets, compliance with relevant standards, compliance with relevant laws, disclosure requirement and impairment testing of intangible assets to be done once a year. A total of fifty listed manufacturing companies on the Nigerian Stock Exchange which cut across four industrial sectors of FMCG, pharmaceuticals, building materials and Agriculture, and covered a two year period of 2012 and 2013 were selected. The choice of these two years was on the basis that the IFRS adopted in Nigeria with effect from the year 2012, mandated the impairment testing of intangible assets by all listed companies. On the basis of the following variables: impairment testing of intangible assets, compliance with relevant law and standard and impairment testing of intangible asset annually, two hypotheses was formulated and tested. The results show that there is a high level of compliance by listed manufacturing companies with International Financial Reporting Standard and Companies and Allied Matters Act, 2004, as amended in relation to intangible assets impairment testing and reporting. The variables: impairment testing of intangible assets, compliance with relevant law and standard and impairment testing of intangible assets annually, were significant in influencing the quality of financial reporting. The only factor that was not significant was the low compliance by listed companies with the disclosure requirement on impairment losses or gain in respect of intangible assets. In other words, the result shows a positive relationship between all the enumerated factors with the quality of financial information provided, except disclosure requirement by the listed companies for impairment losses or gain which shows a negative relationship.

5.3 Recommendations

In order to prevent financial losses by users of financial statements in Nigeria and potential foreign investors, government agencies, such as the Securities and Exchange Commission (SEC), Nigerian Stock Exchange (NSE) and the Financial Reporting Council of Nigeria (FRCN) and other relevant professional bodies, should ensure that quoted manufacturing companies comply with the provision of IFRS 3, IAS 36 and 38, that especially relate to appropriate disclosure requirement on impairment losses or gain on intangible assets. Parent companies which have subsidiaries with intangible assets, such as brand names, trademarks and intellectual property, should account for them, by estimating the effect on the local companies in Nigeria in terms of their net worth and disclose in the financial reports whether the intangible assets result in impairment losses or not. Companies, especially listed manufacturing companies, must include this disclosure as part of their accounting policies, so that users of financial statements are appropriately guided, thereby improving the quality of the information in the financial statements reported by the local companies/subsidiaries in Nigeria. Where impairment losses are very material, they should be accounted for by the local companies irrespective of this loss being accounted for by the parent companies. This exception should be granted to ensure that the financial statements show a true picture of the companies' activities for the period.

5.4 Contribution to Knowledge and suggestion for further studies

This study has attempted to provide information that may help improve the quality of financial information and reporting, especially as it relates to listed manufacturing companies in Nigeria through appropriate accounting for impairment testing of intangible assets. The study has confirmed the relevance of the agency theory in terms of the susceptibility of managers to manipulate the provision of the IFRS on impairment testing of intangible assets in order to enhance their performance to remain as managers and please the owners of the business and other stakeholders.

Secondly, the study has highlighted the very high level of compliance of listed manufacturing companies in Nigeria to the provision of the IFRS 3 on impairment testing of intangible assets, which may be attributed largely to the need for the companies to be able to compete with their counterparts in other developed countries and meet international best practice.

Also, the study has added to the existing literature on impairment testing of intangible assets and quality of financial reporting in Nigerian manufacturing companies by documenting current practices by corporate firms. It complements previous studies by demonstrating that, despite compliance with the IFRS by listed companies in Nigeria, more work needs to be done in the area of disclosure of impairment losses or gain on intangible assets as presented by the IFRS.

This study has, however, concentrated only on the compliance of listed manufacturing companies with the regulatory demand for impairment testing of intangible assets and the impact of this on the quality of financial information of corporate firms in Nigeria. The focus was only on companies in the Agricultural, Building Materials, FMCG and Pharmaceutical sectors of the Nigerian economy. Similar studies should be conducted in other sectors, such as the petroleum industry, the banking, insurance and other service industries. This will help in monitoring and ascertaining the compliance level with IFRS in Nigeria. The outcomes of this study may help to put in place remedial actions for any deviation before it adversely affects the quality of the financial information reported to stakeholders of corporate entities in Nigeria and the world at large. Attention should also be given to other provisions of the IFRS and the compliance of listed companies across all industrial sectors in Nigeria. This will strengthen public confidence, both locally and internationally in the annual reports and accounts prepared and presented by the companies in reporting their stewardship to their stakeholders.

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Appendix A

5. Case processing summary, dependent variable encoding and iteration history
Logistic Regression

Case Processing Summary

Unweighted Cases ^a		N	Percent
Selected Cases	Included in Analysis	100	100.0
	Missing Cases	0	.0
	Total	100	100.0
Unselected Cases		0	.0
Total		100	100.0

Dependent Variable Encoding

Original Value	Internal Value
NO	0
YES	1

Block 0: Beginning Block**Iteration History^{a,b,c}**

Iteration		-2 Log likelihood	Coefficients
			Constant
Step 0	1	100.656	1.200
	2	100.082	1.377
	3	100.080	1.386
	4	100.080	1.386
	5	100.080	1.386
	6	100.080	1.386