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## **MODERATING EFFECT OF AUDIT QUALITY ON VALUE RELEVANCE OF FAIR VALUE MEASUREMENTS HIERARCHY OF LISTED FINANCIAL SERVICES COMPANIES**

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### **Abstract**

The International Financial Reporting Standards (IFRS) was developed to enhance transparency and high-quality information as a principle-based standard that allows some degree of flexibility in financial reporting process. An important feature of IFRS is that of paradigm shift from historical cost to fair value-based measurement of certain assets and liabilities. Consequently, the reliability of fair value measurement became a subject of concern, particularly in most developing economies with inactive market for financial instruments. The study examines the value relevance of fair value measurement hierarchy for financial instruments taking into consideration the moderating role of audit quality. The sample comprised of thirty-six (36) out of fifty-nine (59) financial services companies listed on the Nigerian Exchange Group as at 31<sup>st</sup> December, 2018. The study employed OLS multiple regression and heteroskedasticity corrected standard errors were used to test the relationship. The study revealed fair value measurements hierarchy is value relevant as it has significant impact on share prices. Specifically, Level 1 and Level 2 fair value financial assets were found to have positive significant influence on the share price of listed financial services companies in Nigeria while Level 3 fair value financial assets were found to be negatively and insignificantly influencing the share prices. Lastly, audit quality was found to be positively and significantly influencing the value relevance of fair value financial assets of listed financial services companies in Nigeria. The study recommends among others, the need for regulatory authorities to create an active market for financial instruments to fully achieve the fundamental objective of fair value and to limit the uncertainty and ambiguities around the application of level 3 fair value hierarchy. Also, investors should plan and allocate their investments to companies with lower information risk (i.e companies with lower level 3 fair value estimates) in making appropriate investment decisions relating to financial instruments such as stocks, bonds, and fixed interest deposit.

**Keywords:** Audit quality, fair value hierarchy, financial instruments, financial services, Value relevance,

### **1.0 Introduction**

Corporate reporting is prepared in order to assist investors and other stakeholders to examine the risk associated with investment and making efficient and effective business and economic decisions. Information contents of financial reports are expected to be relevant and represent true financial position of the companies. Several efforts have been made by International Accounting Standard Board (IASB) to review the existing standards in order to ensure that information contents of financial statements closely represent the underlying economic reality of a reporting entity. One of such efforts is the introduction of IFRS 13 (fair value measurement hierarchy for financial instruments) which set out a single framework for fair value measurements of certain assets and liabilities. Generally, IFRS 13 requires companies to measure certain assets/liabilities (generally financial instruments) at estimates of the prices they would receive if they were to sell the assets or would pay to settle the liabilities. It primarily applies to financial instruments (financial assets and liabilities) which include assets held as collateral, cash, shares, loans,

Debenture, investment security; and derivatives instruments such as financial or commodity derivatives). However, three major groups of non-financial assets-property, plant, equipment (IAS 16) investment property (IAS 40) and intangible assets (IAS 38) are also subjected to fair value measurement.

Reporting financial assets and liabilities at fair value is expected to increase transparency and higher information quality. This will result in financial report that is more transparent and in consistent with underlying economic realities, thus increasing the value relevance of information contents of financial statement. Value relevance which has been used severally to proxy information quality of financial reports can be used to examine how book values and accounting earnings are reflected into the market value of the companies. Empirical studies have shown that fair value accounting will lead to a financial statement that is more informative, higher quality and provide more relevant accounting figures. (Barth, Landsman & Lang, 2008). However, contrary opinions suggest that certain implementation issues that arise when a fair value regime is adopted can make the entity's businesses appear more volatile than they actually are which essentially affect the stock prices (Goncharov, 2015). This subjectivity and managerial discretion allowed in fair value estimates can be exploited by managers to pursue their interest against the shareholder's interest. This will consequently, lead to lower confidence in the stock market thereby increasing cost of capital. The key issue in the fair value debate is whether fair value accounting is relevant for investment decisions as well as market reaction to fair value measurements.

Fair value accounting proved to be more relevant for economic decision because it increases transparency in financial reporting and present financial results that are closely aligned with underlying economic realities (Goncharov, 2015). However, the reliability of its measurement has always been a contending issue (Bosch, 2012). In order to address the concern related to the reliability of fair value measurement, IASB issued IFRS 13 which set out a single framework for measuring fair value and specifies the disclosure about fair value measurement. The new framework for fair value measurement plays a greater role which ultimately encourages existing stockholders, potential investors and other stakeholders because it explains which kind of input, assumptions and technical methods were used in the estimation process.

In line with IFRS 13, companies are required to disclose the inputs used in measuring the fair value of financial instruments. In order to achieve this, the standard defines three levels measurement hierarchies. The levels of this fair value hierarchy are based on the quality of the input factors used in the measurement process and these levels of measurements are categorized as level one, level two and level three fair value hierarchies. Much emphasis and consideration is given to level one fair value measurement hierarchy in respect of quoted prices in active markets (market based prices). Level two involves some adjustments on market prices from quoted prices of comparable items in active markets, identical items in inactive markets or other market-related information. While level three involves the use of unobservable (firm generated) prices in fair value measurements. Thus, the reliability of fair value measurement is expected to decrease in the absence of observable market information.

More specifically, financial assets and liabilities can be categorized as Level 1, Level 2 or Level 3 depending on how tradable and liquid the instruments are. For instance, quoted stock can be

categorized as Level 1 assets provided that they are traded in an active market. However, the assets should be classified as Level 2 asset if the stock is quoted on a small non-active market. Lastly, non-quoted stocks should be classified as Level 3 assets, given that there are no similar stocks traded on an active market. Thus, in order to ensure more reliability in fair value measurement, IFRS 13 requires the maximum use of Level 1 (quoted prices) while minimizing unobservable inputs to conditions where active market information is not reasonably available, (IASB, 2012).

Several arguments have been canvassed by both standards setters and academics to the fact that fair value accounting provides the most relevant information for investors (Barth, Beaver, & Landsman, 2001; IASB, 2012; Goncharov 2015;). Therefore, fair value accounting is expected to lead to financial reporting that is of high quality and more relevant for business and economic decisions. However, discretion allowed under fair value accounting can be abused by the managers (especially when valuation techniques are used) in order to increase their wealth against the general interest of the shareholders. Managers can use fair value accounting to overestimate or underestimate the value of financial assets and liabilities, depending on what they set out to achieve (Siekkinen, 2016). The use of valuation models or comparable prices requires judgments. Such valuations can lead to the inclusion of incorrectly estimated gains and losses into income. Landsman (2007) corroborated the view that the use of valuation models and unobservable inputs in estimating fair values can lead to biased income. Therefore, it can be argued that increased usage of valuation model, especially level three fair value measurement hierarchy, has a tendency of increasing agency cost related to information asymmetry. The potential conflict of interest between managers and shareholders is one of many agency situations that instigate agency cost.

It is obviously a fundamental fact that accounting standards alone are not sufficient in reducing agency cost related to information asymmetry between the management and investors. This is because principle-based accounting standards give room for management discretion in the estimation process (Song et al, 2010). However, this managerial incentive to opportunistically manipulate the information content of financial statements can be reduced through strong external mechanisms such as higher external audit quality (Song et al., 2010; Defond & Zhang, 2014). Therefore, to minimize the agency cost and information asymmetry relating to fair value accounting, there must be effective and strong external mechanisms. Managerial activities should be checked and examined by an independent external auditor. Thus, the quality of external auditor determines to a large extent the reliability and relevance of information contents of financial statements (Defond & Zhang, 2014). Independence and higher audit quality have the tendency of increasing the information quality of fair value (Siekkinen, 2016). Furthermore, Defond and Zhang (2014) opine that high audit quality limits management opportunism and reduces agency costs due to the high information quality of financial statements. As an important aspect of external mechanisms, higher audit quality is expected to decrease incentives for opportunistic behaviour, thus increasing investors' trust in accounting numbers and therefore higher value relevance of the information contents of financial statements. Therefore, it is imperative to ascertain whether the value relevance of fair value measurement hierarchy is influenced by audit quality.

Financial services companies play a vital role in economic development by channeling funds from surplus spending units to deficit spending units of the economy thereby stimulating economic activities of a nation. Apart from the usual deposit and credit facility, most of the activities of financial services sector revolve around financial instruments (including shares traded on an exchange, debt securities, investments securities, treasury bills, federal government bonds, loans and advances and derivatives). As a result, they are exposed to fluctuations in the values of these instruments. Most of the financial instruments are measured at fair value as they represent significant part of financial services company's financial statements. Specifically, IFRS 13, IFRS 7 and IFRS 9 require entities to measure, recognize and disclose these instruments at their fair values in the financial statement. Therefore, the value relevance of fair value financial instruments measurement hierarchy especially in financial services sectors need to be investigated given the greater subjectivity and the discretionary power of management in the estimation of fair value particularly the level 2 and level 3 fair value estimates.

The major activities of financial services companies are centered on financial instruments trading (financial assets and liabilities). Consequently, stockholders and other potential investors would be interested in the values reported for the financial instruments. This gives investors sufficient information to assess financial services' financial position and earnings potential. Many financial instruments such as shares traded on an exchange, debt securities, investments securities, treasury bills, federal government bonds, loans and advances and derivatives are measured and reported at fair value (Landsman, 2005). Thus, financial services companies are highly exposed and susceptible to the fluctuations in the values of these instruments.

With respect to the implementation of fair value accounting in developing economies particularly Nigeria, financial services sector is faced with the challenge of illiquid and inactive market for most financial instruments particularly debt instruments (PwC 2015). The absence of active markets has led to situation where valuation models are applied and have increased the possibility of inherent measurement error or management induced error in fair value estimates. This consequently, provides incentives for financial services industry in Nigeria to rely mostly on discretionary fair value measurement for financial assets and liabilities, thus increasing the risk of accounting earnings manipulation and reducing the value relevance of fair value accounting (PwC 2015). The reliability of fair value measurement of financial assets and liability is to a larger extent based on the level of market liquidity and financial transparency. However, in most developing economies there is relatively high market illiquidity and inactive market for financial instruments. As a result, the inputs and methods of fair value measurements is still highly subjective and the valuation less reliable (Chambers, 2008).

More so, the use of fair value measurements hierarchy especially for developing countries like Nigeria has been a major challenge due to weak regulatory environment. In particular, the absence of active markets for financial instruments as well as weak regulatory environment and fair value assessment gap has made it extremely difficult for auditors and accountants to carry out their engagement seamlessly and control the fair value measurements (PwC 2015). This argument was aptly corroborated by Benston (2008) who pointed out that fair values other than those taken from quoted prices (level 1) could be readily manipulated by opportunistic and overzealous manager and could be very difficult for auditors to detect and challenge. Also, high

cost of fair value estimation may also pose a serious challenge because the estimation requires huge resources such as knowledge in valuation techniques, and special training to enable the auditors and accountants to estimate and audit the financial instruments fairly and objectively.

Furthermore, the excessive use of valuation techniques has, to a very large extent aggravated more managerial discretion and subjectivity into financial reporting process. Consequently, it has extensively magnified the complexity and estimation uncertainty in financial statements, thus increasing the burden and complexity in audit process. In addition, there is high tendency that managers may take advantage of the discretion allowed under fair value accounting of financial assets and liabilities in order to manipulate reported earnings. The incentives for earnings manipulation and managerial opportunistic behaviour can be minimized with high audit quality (Defond & Zhang, 2014). Therefore, the independent assurance of the credibility of accounting information given by auditors is important for investors in making accurate investments decision (Siekkinen, 2016; Defond & Zhang, 2014). As an important aspect of external mechanisms, higher audit quality is expected to decrease incentives for opportunistic behaviour, thus increasing investors' trust in accounting numbers and therefore higher value relevance of the information contents of financial statements. The premise is that high audit quality minimizes managerial opportunistic behaviour in relation to fair value accounting of financial assets and liabilities. More so, by constraining incentives for managerial misuse of accounting discretion, high audit quality will enhance investors' confidence in financial statement, which subsequently results to higher value relevance of the information contents of financial statements. Therefore, it on this premise that the study seeks to examine the moderating role of audit quality on the value relevance of fair value measurements in the financial services industry in Nigeria.

Several studies, particularly in the developed markets, have examined the value relevance of fair value measurement hierarchy. For example, Siekkinen, (2016); Goh et al, (2015); Ehalaiye (2014); Song et al (2010); Barth (1994); among others, provide empirical evidence that fair value estimations improve the credibility of the information contents of financial statements, and overall value relevance when compared with historical cost information. In addition, several studies have investigated the moderating role of corporate governance on the value relevance of fair value of financial instruments (Siekkinen, 2016; Song et al., 2010). However, to researchers' knowledge and understanding, studies on fair value accounting are not well explored and there is little documentary evidence regarding the value relevance of fair value financial instruments measurements hierarchy, especially in developing countries, like Nigeria, where there is an inactive market for financial instruments. The fundamental question that is yet to be resolved in the literatures is: whether audit quality has moderating impact on the value relevance of fair value measurement hierarchy and this provides motivation for carrying out this study.

The broad objective of this study is to examine the moderating effect of audit quality on value relevance of fair value financial instruments measurements hierarchy of listed financial services companies in Nigeria. The specific objectives are to Ascertain the extent to which Level one, Level two and level three fair value measurements hierarchy for financial assets affect the share prices of listed financial services companies in Nigeria.

As all the listed firms in Nigeria are required to comply with IFRS for annual period beginning on or after January 1<sup>st</sup>, 2012, the study covers 2012-2018. This period is considered because fair value accounting became prominent following the adoption of IFRS in Nigeria. The study focuses on the listed financial services industry in Nigeria. This is based on the grounds that significant part of financial services financial statements consists of financial instruments which are required to be measured at fair value.

The study benefits a wide range of users. It contributes to the academic literature on the relevance of fair value measurement hierarchy; it benefits the regulatory bodies, both nationally and internationally and the users of financial reports. In addition, the study contributes to the ongoing debate concerning the role of audit quality on the value relevance of fair value financial instruments measurements hierarchy. Audit quality is one of the important elements affecting the reliability of financial reports. Therefore, this study examines whether higher audit quality can mitigate the problems (noise and bias) associated with fair value accounting.

## **2.0 Literature Review Theoretical Framework**

The value relevance of fair value hierarchy disclosure has been widely discussed in the literature particularly in developed countries. Several attempts have been made to provide empirical evidence regarding the relevance of fair value accounting for financial instruments. Prior literature such as Rozki and Mita, 2017; Siekkinen, 2016; Siekkinen, 2015; Goh, et. al (2015); Sweet and Zhang (2015) Ehalaiye (2014); Bosch, 2012; Song, Thomas and Yi, 2010; Kolev, 2008; Goh, Ng and Yong, 2009; among others, argued that fair value accounting is overall value relevance and have incremental explanatory power when compared with the historical cost basis.

Song et al (2010) examine the value relevance of FAS 157 fair value hierarchy information and the impact of corporate governance mechanisms taking into consideration quarterly data of U.S banking firms in 2008. The study estimates the association between share prices and fair value of assets and liabilities using the modified Olson model (1995) to tests the value relevance of fair value measures for each of the three disclosure levels. The findings indicate fair value hierarchy of financial instruments disclosure are value relevant at all levels, however, the value relevance of Level 1 and Level 2 fair values was found to be greater than the value relevance of Level 3 fair values. This result is consistent with the notion that investors place less value on less reliable fair value measurements. Further, taking the strength of corporate governance into account, the study examines whether the value relevance of fair value measurement hierarchy levels varies across six individual governance mechanisms (i.e., board independence, audit committee financial expertise, the frequency of annual audit committee meetings, the percent of shares held by institutional investors and the auditor's firm size). The study found that the value relevance of Level 3 fair value is greater for firms with strong corporate governance. Overall, the study provides empirical evidence that the fair value hierarchy required by FAS 157 provides useful information to investors and the strength of corporate governance appears to mitigate the information asymmetry problem arising from relatively less reliable fair value inputs. The finding of this study is limited as it only represents observations during the first three quarters of 2008 based on the financial data of European firms. More so, replicating the study in a developing country like Nigeria where most financial instruments lack active market may result in different findings.

Kolev (2009) examined the concern that fair value estimates for assets and liabilities not traded in active markets (i.e mark-to-model) are too unreliable to be used in financial reporting using disclosure mandated by Statement of Financial Accounting Standards (FAS) 157 “Fair Value Measurements”. Using a sample of large financial institutions for the first and second quarters of 2008, the results indicate a significant positive association between stock prices and fair values of net assets measured using unadjusted market prices (Level 1), other observable inputs (Level 2), and significant unobservable inputs (Level 3). Further, the estimated coefficients on the mark-to-model estimates (Levels 2 and 3) are consistently lower than those on the mark-to-market fair values (Level 1), however, the difference is significant only for Level 3 net assets. In addition, the study suggests that the valuation gap is more pronounced for firms with lower equity capital and fewer financial experts on the Audit Committee, as well as for companies that develop their mark-to-model estimates internally. Although, the results of this study is consistent with earlier studies, providing evidence that fair value hierarchy are overall value relevant and enhance the investors’ confidence; the potency of this result may differ between a developed market and a developing market like the NSE. Also, a study having a recent and wider period may produce more robust results.

In a similar context, Bosch (2012) examined the value relevance of the fair value financial instruments hierarchy based on the financial data of European banks over the period 2006 to 2010 financial years. Using the value relevant setting, the results indicate that fair values of financial instruments are value relevant but investors perceive the reliability of level 3 fair value as significantly lower than the reliability of level 1 and level 2 fair values. This suggests that the investors only doubt the reliability of fair values whose inputs are based on discretionary assumptions. In addition, the study also found a weak significant impact on regulatory capital while the reclassification of financial assets in general has influence on the reliability of reported fair values. Although, the results of this study is consistent with earlier studies, providing evidence of value relevance of fair value at all levels and in addition provide more robust results regarding the reliability of reclassification of financial assets, the potency of this results may differ between a developed market and a developing market such as NSE. More so, replicating the study in a developing country like Nigeria where most financial instruments lack active market may result in different findings.

Using modified Ohlson model (1995), Song (2014) investigated the effects of market volatility on the value relevance of fair values of U.S. financial services companies for the period of 2008 to 2013. The finding reveals that market volatility negatively affects value relevance of fair values. Specifically, market-based fair values, (Level 1 fair values) and fair values estimated based on observable market inputs (Level 2 fair values) are significantly priced lower when market volatility is high. On the contrary, pricing of fair values estimated based on unobservable non-market inputs (Level 3 fair values) is not affected by market volatility. This implies that fair values are priced at a significant discount when market volatility is high and this is because investors understand the effects of market volatility on fair values and price them accordingly.



In a similarly vein, Arouri, Bellalah et al, (2012), examine the relevance of fair value accounting for financial instruments, using French listed companies, the study find that volatility of fair value income does not significantly affect stock price and price volatility, and thus has no risk-relevant information.

In a related study, Goh et al. (2015) investigated market pricing of banks fair value assets reported under SFAS 157 since 2008 financial crises using a quarterly data from 2008 to 2011. Their study analyse how investors differentially price mark-to-model and mark-to-market assets relative to fair value estimates as reported by banks. They found that Level 3 fair value estimates are typically priced lower than Level 1 and Level 2 fair value estimates between 2008 and 2011. However, the difference between the pricing of the different estimates reduces over time, suggesting that as market conditions stabilize in the aftermath of the 2008 financial crisis, the reliability concerns about Level 3 estimates has been reduced to a large extent. Further, the study document that the pricing of the Level 1 and Level 2 fair value estimates of assets is lower for banks with lower capital adequacy as a result investors are concerned that banks with lower capital adequacy might have to liquidate their assets at fire-sale prices and not based on the firms' reported fair value estimates.

Siekkinen (2015) investigated the impact of audit quality on the value relevance of fair value using a sample of all the listed financial firms from all 28 European countries which consists 546 firm-year observations from year 2013 to 2014. The findings reported that the non-audit service (proxy for audit independence) have a positive association with level 3 fair value assets. On the contrary, in analyzing client important (a proxy for audit quality), the study finds that firms that are more important to their audit firm disclose fair value estimates of a lower quality. Also, for countries with weaker investors' protection and legal tradition, the findings indicate that firms with Big 4 auditors have a lower value relevance of fair value estimates than non-Big 4 auditors. Although, the results of this study is consistent with earlier studies, providing evidence on the impact of audit quality on the value relevance of fair value accounting taking into consideration different measures of audit quality, the potency of this results may differ between a developed market and a developing market such as Nigeria. Further, a study having a recent and wider period, may incorporate recent happenings and produce a different result.

Sweet and Zhang (2015) examined the value relevance of fair value financial assets during and after the 2008 financial crisis with a sample size of 186 United State listed banks. The period of the study ranged from 2008 to 2009 and 2012 to 2013, comparing the results to the value relevance during and after the financial crises respectively. Based on the quarterly data from the banking industry, the results indicate that both fair value disclosure and non-fair value disclosure provide investors with decision-related information. However, the value relevance of fair value assets was found to be slightly greater than value relevance of non-fair value assets, and the difference is larger during recession period. In addition, the findings reported that the value relevance of Level 3 financial assets is lower than the value relevance of Level 1 and Level 2 financial assets, and lower than the value relevance of non-financial assets. This result is true in the recession period and the normal economic period. Also, the result indicates that corporate governance mechanisms have positive impact on bank stock prices, and fair value disclosure is

more useful for firms with weak corporate governance. Although, the results of this study is consistent with earlier studies, providing evidence of value relevance of fair value financial instruments disclosure at all level of hierarchy; the efficacy of this results may differ between a developed market and a developing market like the NSE.

In another study, Siekkinen (2016) assessed board characteristics and the value relevance of fair values using the financial data of all the 28 European countries during the period 2012 to 2013. The results indicate that fair value measurement hierarchy is overall value relevant to investors. In addition, the study found that, board characteristics, in a post IFRS 13 regime, play a significant role on how investors react to fair value estimates made using internally generated inputs. It is assumed that the increased monitoring from effective and stronger board will to a large extent decrease the incentive for managerial opportunistic behaviour which consequently reduces information asymmetry and enhance investor confidence in fair value estimates. Specifically, board independence and diversity was found to have a positive effect on level three fair value estimates. More so, the results show that firms with larger boards have lower information quality of internally generated fair value estimates. Again, even though, this is the first study to analyse how IFRS 13 has affected the value relevance, the sample consists of only European firms and as such the result cannot be globally generalized. Also, the study covers only 2012 to 2013 financial year, consequently, the results may not hold over time. Therefore, a study having recent and wider period, may incorporate recent happenings and produce a more robust result.

Rozki and Mita (2017) investigate the influence of corporate governance mechanisms on the value relevance of fair value assets under IFRS 13. The study used data of Indonesia and Malaysia's non-financial listed companies covering the period of two years with 300 firm-year observations. The findings of the study revealed that fair value at each level of hierarchy is significantly relevant. Further, taking the impact governance mechanisms into consideration, the results revealed that audit committee effectiveness, board effectiveness and family ownership strengthen the value relevance of fair value estimates, particularly for fair value level 2 and 3. Hence, fair value accounting information directly influences the value of securities in the capital market. Though, the result in the study is in line with prior studies and conducted within a developing market like the Nigerian stock market, the period of the study however, covered only two years and focused on non-financial firms. Therefore, a study having a wider period and specifically focused on financial sectors in which more assets and liabilities are fairly valued may produce more robust results.

Sapkauskiene and Orlovskij (2017) carried out extensive review of literature on the usefulness of fair value estimates for financial decision making using secondary data from dedicated scientific articles. The study revealed that there are still ongoing problems with reliability of information mainly because of managerial estimation process and human factors in general. The study concluded with emphasis that the situation with fair value estimates (especially those of level three) has been improving recently, and that level three estimates can indeed be used in the current financial decision process, but with some level of skepticism. Although, the results of this study is consistent with earlier studies, it only provided conceptual evidence on the value

relevance of fair value accounting taking into the consideration different literature on value relevance of fair value measures. As the study is largely conceptual, it had no any empirical data to substantiate the findings of the study.

Toluwa and Power (2019), conceptually analyzed the usefulness of fair value accounting. Using a library research methodology, the study revealed contentious issues relating to fair value measurement and verification as well as the cyclical effect of fair value accounting. Further, the study revealed that the reliability of fair value accounting approach is largely dependent on market liquidity and the presence of active market for financial instruments. Again, this study is conceptual and there is need to conduct an empirical study to ascertain the value relevance of fair value accounting in an emerging country like Nigeria. This will help to know if results will oppose or corroborate with extant studies.

Bratten et al, (2016) examined the usefulness of fair value for predicting banks' future earnings using two approaches to measure the level of banks' exposure to fair value accounting, which are balance sheet and income approach. Using a sample of 3104 bank year observations between 1992 and 2006 in United States of America, the study provide evidence that information embedded in the fair value estimates of balance sheet measure of fair value exposure can help predict future interest revenue from trading securities, realized gains and losses on settlement of derivatives and realized income available for sale securities thereby making earnings from more fair value accounting exposed banks to be better predictors of future earnings. Again, this study focuses extensively on predictability of earnings and failed to address the value relevance of fair value accounting.

Ehalaiye (2014), examined the predictive power of bank fair value using a sample of 5,730 U.S Banks quarters between 2008 to 2010. The study categorised the balance sheet financial instruments fair value into measurement hierarchy levels and used multivariate regression analysis to predict earnings one to three quarters ahead and document evidence that a predictive association exist between Level one fair value measurements hierarchy and future operating earnings of banks. As the US financial market is more liquid and sophisticated when compared to the developing markets like Nigerian financial market. Further, the study only focused on predictive ability of fair value accounting. This study therefore is aimed at examining market reaction to fair value estimate and considered a less developed financial market environment like Nigeria to establish the applicability or otherwise.

Xu (2013) investigated the effect of fair value accounting on earnings management of both private and public banks in the United States of America using a sample of 2,896 bank year observations. The results revealed that positive association between fair value measurements and earnings management is primarily driven by available-for-sale assets. Further, Fair value was decomposed into the various levels and tested against earnings management and the results revealed that the more level two fair value measurement hierarchy is used, the more likely earnings are managed. Thus, the less predictive current reported earnings are. The focus of his study was earnings management and not value relevance.

Diafei et al, (2015), investigated the usefulness of fair values in improving the predictive ability of earnings based on a sample of international (non-U.S.) banks from 24 countries during 2009-2012. The study provides empirical evidence that the fair value measurement hierarchy classification levels affect earnings' ability to predict future cash flows and future earnings and that the discretionary fair value components (Level two and Level three assets) reduces earnings' predictive power. The focus of his study was on earnings predictability and not value relevance.

Bello (2009) critically examined the incremental quality of additional inflation disclosure of quoted cement companies operating in Nigeria from 1995 to 2006. Using the framework of Edwards, Bells and Olson's residual income model and multivariate regression analysis, the study found a substantive evidence of incremental quality financial reports through additional disclosure of general purchasing power and current cost model. On the contrary, the study observed no incremental information of inflation adjustments beyond traditional reporting in absolute term. By implication, the findings from the study suggest that joint reporting of historical cost and inflationary adjustments is necessary improvement in information quality of corporate reports. The study only focused on inflationary adjustments and failed to consider the implication of fair value adjustments in corporate reports as well as market reaction to fair value measurement hierarchy of financial instruments.

Yao, et at. (2015) examined the usefulness of fair values in improving the predictive ability of earnings of international banks. The sample of the study consisted of 200 international (non-U.S.) banks from 24 countries from 2009 to 2012. The study employed fair value intensity, fair value level one and fair value levels two and three as proxies for fair value accounting and current pre-tax return on assets as moderating variable. They found that increasing use of fair values on financial instruments improves the capability of current earnings to predict future earnings and cash flows. In addition, they provide empirical evidence that fair value measurement hierarchy classification levels affect earnings' ability to predict future earnings and that the non-discretionary fair value element (Level one asset) improves the predictability of current earnings whereas the discretionary fair value components (Level 2 and Level 3 assets) weaken the predictive power of earnings.

Agency theory describes the relationship that exists where the principal delegates responsibilities to the agent to carry out a given assignment. The theory established the conflict of interest which arise between the shareholders (principal) and those charged with the responsibility of running the affairs of the business (agent). Hence the purpose of agency theory is to encourage the management to direct the affairs of the firm in line with shareholders' interest and thereby minimizing the conflict of interest. Jensen and Meckling (1976) argue that the conflict of interest between the shareholders and management will lead to a situation where the agent will not always act in the best interest of the principal. Thus, the conflict of interest between managers and shareholders is one of the many agency situations that create agency costs.

Financial reporting plays a vital role in minimizing agency costs, as it is about communicating economic information to stakeholders (Watts & Zimmerman, 1986). Essentially, agency theory deals with information asymmetry which arise when managers have more information about the firm than the shareholders. This can be significantly reduced by disclosing relevant and reliable

information. In reality, managers use their inside information to communicate a true and fair view of the firm's financial performance to various stakeholders (Barth et al. 2001). Arguably, managers could have incentive to manipulate fair value estimates that promote their interest leading to biases in the information presented in the entity's financial statement (Ehalaiye et al. 2017). Therefore, if managers can manipulate fair value estimate (especially level three fair value estimate) to achieve a predetermined objective, then it is logical to assert that the more incorrectly estimated fair value numbers are, the more contradictory and distorted the value relevance of the information content of financial statement will be.

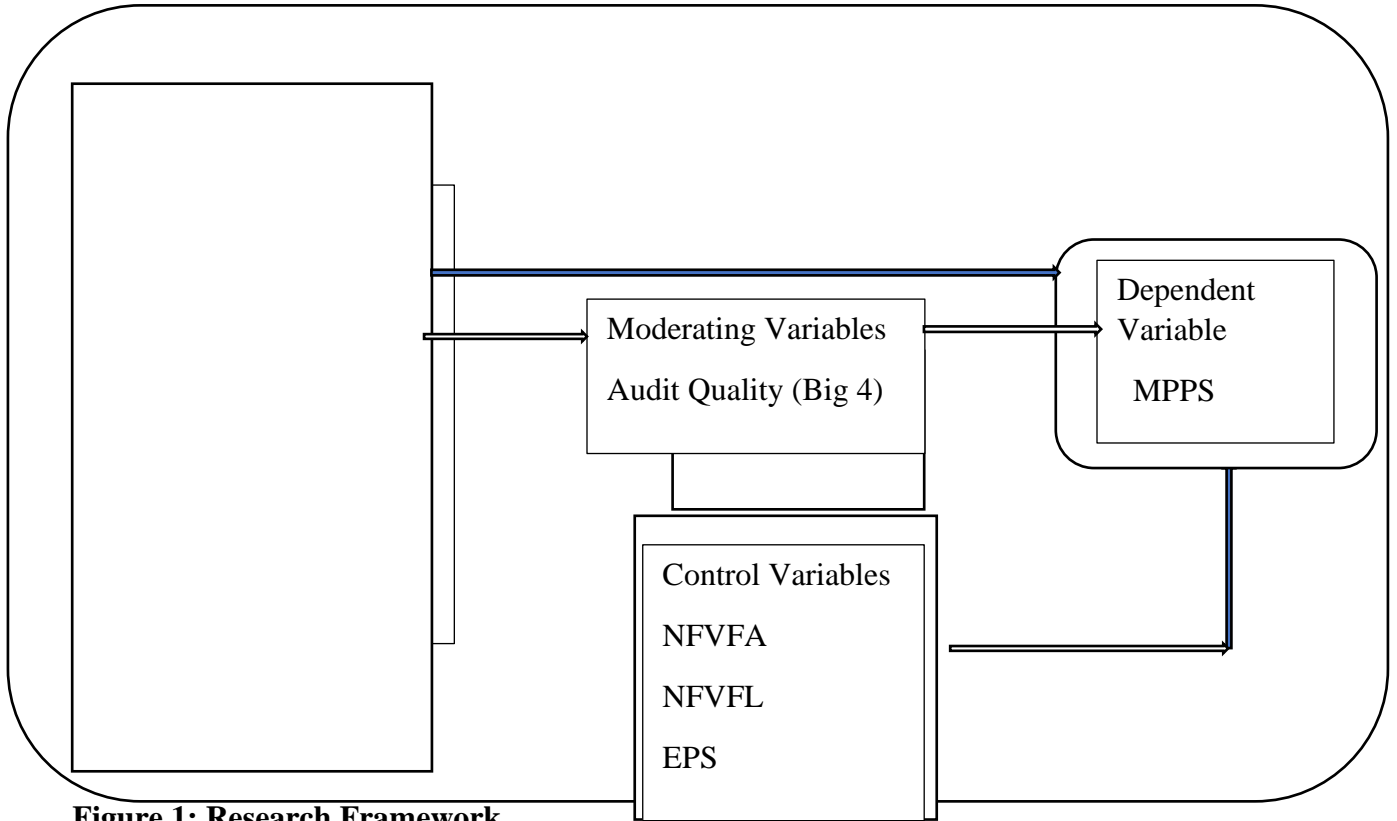
Further, in relation to the role of audit quality, Defond and Zhang (2014) succinctly argue that high audit quality is expected to constrain managerial opportunistic behaviours. Since the auditors are expected to assure the reliability and relevance of information contents of financial statements, hence it can be argued that high audit quality reduces the agency costs related information asymmetry as a result of higher information quality of financial statements.

In addition, agency theory buttresses the importance of external mechanisms particularly high audit quality in ensuring higher information quality of fair values. Hence it can be argued that high audit quality is an effective mechanism in monitoring managerial manipulation of the information contents of the financial statements. According to Dittmar and Mahrt-Smith (2007), effective monitoring of managers can to a large extent be used as shareholders' weapon against the risk of managers' ineffective use of corporate assets.

Signaling theory explains the responsiveness of investors to market information. The theory became prominent following the work of Spence (1973) on examination of signaling in job market and that of Ross (1977) study of managerial incentives. In particular, Spence (1973) opines that signaling theory is basically focused on bridging the information asymmetry which exists between the sender and the receiver of information. This is achievable by having one party sending the signal that will reveal relevant information which will be interpreted and utilized by the receiver in relevant decision making. (Brian, Trevis, Duane & Christopher, 2011). Financial instrument's fair value signals the information to market on the reliability and quality of the information as contained in the statements of financial position so as to guide the investors in making appropriate investment decision. Additionally, signaling theory supports the view that financial statements are prepared by the directors in order to communicate the financial performance and position (signals) to both existing and potential investors for making informed investment decisions. The directors communicate (signal unobservable qualities of their firm) to interested parties through the information disclosed in the annual reports. The relevance of the information contained in such signal is in turn determined by the extent to which it influences the decision making of the information user based on their interpretation of the signals.

The proponents of Efficient Market Hypothesis (EMH) believe that changes in stock prices results from the accounting information available in the market. For value relevance, the Efficient Market Hypothesis explains movement in stock prices resulting from accounting information available in the market. EMH was originally developed by Fama (1970) who argues that a change in stock price is a reflection of available information in the market. This means that market efficiency depends on available information in the market and how the market participants react to such information. The EMH considers market to be efficient and there is large number of

rational investors who have access to equal information about the movement in stock prices. The information is almost freely available to all market participants.



**Figure 1: Research Framework**  
**Source: Author (2020).**

**3.0 Research Methodology**

The study employed correlational design. This design for the study is considered appropriate, in that, it is good in determining the relationship and degree of effect of audit quality on the value relevance of fair value measurements hierarchy. The study population covers all the financial services firms listed on the Nigerian Exchange Group as at 31<sup>st</sup> December, 2018. Based on NSE website listed financial services firms are 59 as at that date ([www.nse.com.ng](http://www.nse.com.ng)). The sample size was limited to 36 financial services firms due to non-availability of data needed for the period of the study (2012-2018). This problem arose either from the missing or incomplete data as a result of de-listing (post selection bias) or missing data. Specifically, 16 companies for which complete annual reports for 2012-2018 were not available were eliminated and 7 firms which have been de-listed during the period were also removed. The full list of the total and adjusted population is attached in appendix 1 and 2. The adjusted population of this study is provided in table 3.1, below:

In line with the philosophical paradigm, research approach and design, and to achieve the setout objectives, data for this study were collected mainly from secondary sources. The use secondary data is in line with extant studies that have examined the value relevance of fair value accounting. Secondary data are relevant because given the nature of the research: all information and data

needed were available in the annual reports. The research data was collected from the year-end annual reports, and the share price information of the selected firms. The annual reports are downloaded from the website of the NSE for the period under the study. The share price is collected from the website of Cash-craft asset management limited. In analyzing the data for this study, a multiple regression technique and descriptive statistics was used.

To test the value relevance of fair value financial instrument measurement hierarchy, the study estimates the association between share prices and fair values of financial assets and liabilities using a modified Ohlson (1995) model. This model has been extensively used and supported in the literature (Siekkinen, 2016; Goh et al. 2015; Bosch, 2012; Song et al. 2010). First the book value is divided into book value of assets and book value of liabilities. Thereafter, the book value of assets and book value of liabilities were segregated into fair value and non-fair value assets and liabilities. Lastly, fair value assets and liabilities were partitioned into Level 1, Level 2 and Level 3 assets and liabilities respectively. The study uses the number of outstanding shares as a deflator to mitigate scale effects (Barth & Clinch, 2009). Hence, all variables are on a per share basis. Due to the low frequency of fair value liability reporting in the sample, the study combined level 1 and 2 fair value liabilities (Song et al., 2010; Siekkinen, 2016).

To test whether the value relevance of fair value financial instruments measurement hierarchy is influenced by audit quality; the moderating variable is included in model 2. All levels of fair value financial assets only are moderated with audit quality because the frequency and amount of fair value assets greatly exceed those of fair value liabilities (Song et al., 2010; Siekkinen, 2016). In addition, the study tests for differences in the pricing of assets under each fair value hierarchy by conducting F-tests of the differences in the coefficients across the fair value hierarchy for financial assets.

The original Olson model (1995) is stated as follows:

$$MVE_{it} = \alpha_0 + b_1BVE_{it} + b_2NI_{it} + e_{it} \dots\dots\dots \text{Based Model}$$

Where

$MVE_{it}$  = the market value of equity of firm i at time t,

$BVE_{it}$  = the book value of equity of firm i at time t,

$NI_{it}$  = the net income of firm I at time t.

$e_{it}$  = the error term.

To test the hypotheses formulated in the study, panel multiple regression models with an error term ( $\epsilon$ ) is specified in econometric form as shown below:

$$MPS_{it} = \beta_0 + \beta_1NFVFA_{it} + \beta_2FVFA1_{it} + \beta_3FVFA2_{it} + \beta_4FVFA3_{it} + \beta_5FVFL1\&2_{it} + \beta_6FVFL3_{it} + \beta_7NFVFL_{it} + \beta_8EPS_{it} + \epsilon_{it} \dots\dots\dots \text{(Model 1)}$$

$$MPS_{it} = \beta_0 + \beta_1NFVFA_{it} + \beta_2FVFA1_{it} + \beta_3FVFA2_{it} + \beta_4FVFA3_{it} + \beta_5FVFA1_{it} * AUDQ_{it} +$$

$$P \quad \beta_6FVFA2_{it} * AUDQ_{it} + \beta_7FVFA3_{it} * AUDQ_{it} + \beta_8FVFL1\&2_{it} + \beta_9FVFL3_{it} + \beta_{10}NFVFL_{it} + \beta_{11}ES_{it} + \epsilon_{it} \dots\dots\dots \text{(Model 2)}$$

Where

MPS = Market price per share

FVFA1 = Fair Value Financial Assets Level 1

FVFA2 = Fair Value Financial Assets Level 2

FVFA3 = Fair Value Financial Assets Level 3

NFVFA = Non- Fair Value Financial Assets

FVFL1 = Fair Value Financial Liabilities Level 1&2

FVFL1&2 = Fair Value Financial Liabilities Level 3

NFVFL = Non-Fair Value Liabilities

AUDQ = Audit Quality

FVFA1<sub>it</sub>\*AUDQ = Moderating effect between audit quality and Fair value financial assets level1

FVFA2<sub>it</sub>\*AUDQ = Moderating effect between audit quality and Fair value financial assets2

FVFA3<sub>it</sub>\*AUDQ = Moderating effect between audit quality and Fair value financial assets3

EPS = Earnings per share

ε = error term

it = Banks and Time

**Table 1:**  
**Variable Measurements**

Variables	Proxy	Type	Definition and Measurements	Source
Market Price Per Share	MPPS	Dependent	Share prices – exactly three months after the publication of the audited annual accounts	Oyerinde (2011)
Fair Value financial assets Level1	FVFA1	Independent	Level 1 (quoted prices in active market) fair value financial assets divided by the number of outstanding shares	Siekkinen, (2016)
Fair Value financial assets Level2	FVFA2	Independent	Level 2 (quoted prices of comparable items in similar active market) fair value financial assets divided by the number of outstanding shares	Song et al. (2010)
Fair Value financial assets Level3	FVFA3	Independent	Level 3 (unquoted/firm generated prices) fair value financial assets divided by the number of outstanding shares	Goh et al. (2015)



Fair Value financial liabilities Level1&2	FVFL1&2	Independent	Level 1&2 fair value financial liabilities divided by the number of outstanding shares	Song et al. (2010)
Fair Value financial liabilities Level3	FVFL3	Independent	Level 3 fair value financial liabilities divided by the number of outstanding shares	Song et al. (2010)
Non fair value financial assets	NFVFA	Control	Non fair value financial assets divided by the number of outstanding shares	Goh et al. (2015)
Non fair value financial liabilities	NFVFL	Control	Non fair value financial liabilities divided by the number of outstanding shares	Bosch, (2012)
Earnings Per Share	EPS	Control	Profit for the year divided by the number of outstanding shares	Song et al. (2010)
Audit Quality	AUDQ	Moderating variable	Dummy variable which equals '1' if a firm uses Big4 audit firm and '0' otherwise. The Big 4 audit firms are KPMG, Delloitte, Earnest & Young and Price-water House Cooper (PWC).	Siekkinen, (2016)

**Source:** Authors Compilation, 2023.

#### 4.0 Results and Discussions

In this section, the study results are presented and discussed. The descriptive statistics are first presented in Table 1, followed by the correlation analyses and then the regression result.

**Table 2: Summary of Descriptive Statistics**

Variable	Obs	Mean	Std. Dev.	Min	Max	Skewness	Kurtosis
MPPS	252	3.59	6.32	0.5	29.4	2.6458	9.3021
FVFA1	252	355815.9	274280.7	3420	1982897	1.4209	6.7085
FVFA2	252	254693.9	136856.1	4409	564000	0.3246	2.2194
FVFA3	252	232584.8	111774	409	705856	0.5819	3.6459
FVFL1&2	252	272064.6	171535	540	890340	1.0399	3.9931

FVFL3	252	390711.8	249016.1	2663	993243	0.6476	2.4520
FVFA1*AUDQ	252	261314.2	266041.3	0	984006	1.0013	2.9769
FVFA2*AUDQ	252	191898.2	162865.5	0	563091	0.4122	2.0772
FVFA3*AUDQ	252	171208	133866.4	0	549043	0.1951	2.1431
NFVFA	252	297851.8	207087.4	7045	951711	1.0956	3.4558
NFVFL	252	222336	166874.9	5564	857878	1.3423	4.5934
EPS	252	3.05	6.60	-23.1	31.7	1.6739	9.3425
AUDQ	252	0.75	0.44	0	1	-1.1304	2.2779

**Source: STATA output. (2023)**

The results in Table 2 above provide some insight into the nature of listed financial services firms that reported their financial statements in line with IFRS 13 financial instruments measurement hierarchy for the period 2012 to 2018. It shows the mean (average), standard deviation (degree of dispersion), the minimum, maximum, skewness and kurtosis for each of the variable. The result shows that market price per share has a mean of 3.6 within the sample period and a standard deviation of 6.32 indicating wide dispersion of data from the mean. This means that there is wide variation in the market prices of listed financial services firms in Nigeria. The minimum is 0.5 and a maximum of 29.4 indicating that more observations are far from the mean on both sides. The skewness values of 2.6 and kurtosis of 9.3 suggest some little departure from symmetry for the variable.

Fair value level 1 financial assets (FVFA1) have a mean of approximately 356billion Naira with a standard deviation of 274billion Naira indicating that there is wide variation in the fair value level 1 financial asset across the listed financial services companies in Nigeria. The minimum and maximum were approximately 3.42billion Naira and 1.98 trillion Naira respectively. This implies that significant part of financial services financial assets are measured using level one fair value hierarchy. The skewness values of 1.4 and kurtosis of 6.7 indicate little departure from symmetry for the variable.

Fair value level 2 financial assets has a mean of about 254 billion indicating that a good part of financial services financial assets are measured at level two hierarchy. The standard deviation of approximately 137billion Naira indicates that on the average, observations have a relatively high deviation from the mean. From the result the minimum fair value level two financial assets is approximately 4.4billion Naira while the maximum is 564 billion. The skewness values of 0.32 and kurtosis of 2.21 suggest no significant departure from symmetry; as such the data set on Fair value level 2 financial assets appears to be relatively normal.

The mean value of fair value level 3 financial assets is approximately 233 billion naira with the standard deviation of about 112 billion Naira, this indicates that on the average, observations have a relatively high deviation from the mean. The minimum is 409million Naira while the

maximum is approximately 706 billion. The skewness values of 0.58 and kurtosis of 3.6 indicates a slight departure from symmetry for the variable.

Fair value Level 1 and 2 financial liabilities have a mean value of about 272 billion Naira indicating that on the average a good proportion of financial services' financial liabilities is measured at fair value level 1 and 2 hierarchy. The standard deviation of approximately 171 billion Naira indicates that on the average, observations have a relatively high deviation from the mean. From the result the minimum fair value level 1 and 2 financial liabilities is approximately 540million Naira while the maximum is 890 billion. The skewness values of 1.03 and kurtosis of 3.99 indicate some degree of departure from symmetry for the variable.

Fair value level 3 financial liabilities have a mean value of 390 billion and a standard deviation of about 249 billion, indicating a wide gap across sample firms regarding level three financial liabilities. The minimum value of level three fair value liabilities is approximately 2.7 billion while the maximum value is about 993 billion. The skewness values of 0.64 and kurtosis of 2.45 suggest no significant departure from symmetry; as such the data set on Fair value level 3 financial liabilities appears to be relatively normal.

The interaction between Fair value level 1 financial assets and audit quality (FVFA1\*AUDQ) has a mean value of approximately 260billion, a standard deviation of 266billion and maximum of 984billion. Further, the interaction of Fair value level 2 financial assets and audit quality (FVFA2\*AUDQ) has an average of approximately 192billion, a standard deviation of 163billion and maximum of 563billion. Lastly, Fair value level 3 financial assets when interacted with audit quality (FVFA3\*AUDQ) produces an average of 171billion, a standard deviation of approximately 134billion and maximum of 549billion. All interacted variables have a minimum of 0 because of the dichotomous variable effect on the data. The closeness of the mean with their respective standard deviations shows that there is less dispersion of data regarding the interaction variables. Further, the interaction of Fair value level 1 financial assets and audit quality (FVFA1\*AUDQ) has skewness values of 1.00 and kurtosis of 2.97 indicating a slight departure from symmetry for the variable. However, the interaction of Fair value level 2 and Level 3 financial assets and audit quality have skewness values of 0.41 and 0.19 and kurtosis values of 2.07 and 2.14 respectively. This suggests no significant departure from symmetry; as such the data set on the interaction of Fair value level 2 and Level 3 financial assets and audit quality appears to be relatively normal.

The mean value of audit quality among the sampled firms stands at approximately 74.6%. This implies that about 74% of financial services companies in Nigeria were audited by Big 4 audit firms. The minimum is 0 and maximum is 1. The skewness values of -1.13 and kurtosis of 2.27 indicate some degree of departure from symmetry for the variable.

**Table 2: Correlation Matrix Table**

	MPS	FVFA1	FVFA2	FVFA3	FVFL1&2	FVFL3	FVFA11*A UDQ	FVFA2*A UDQ	FVFA3*A UDQ	NFVF A	NFVF L	EPS
MPS	1											
FVFA1	0.38	1										
FVFA2	0.64	0.43	1									
FVFA3	0.27	0.25	0.27	1								
FVFL1&2	0.41	0.26	0.31	0.42	1							
FVFL3	0.22	0.37	0.13	0.33	0.52	1						
FVFA1*	0.45	0.27	0.34	0.46	0.92	0.56	1					
AUDQ												
FVFA2*	0.41	0.25	0.29	0.45	0.47	0.54	0.39	1				
AUDQ												
FVFA3*	0.47	0.35	0.49	0.23	0.36	0.44	0.43	0.34	1			
AUDQ												
NFVFA	0.09	0.36	0.32	0.17	0.19	0.15	0.16	0.20	0.14	1		
NFVFL	0.22	0.46	0.54	0.23	0.21	0.26	0.23	0.26	0.38	0.37	1	
EPS	0.09	0.11	-0.05	0.11	0.15	0.07	0.11	0.19	-0.02	0.02	0.03	1
AUDQ	0.26	0.22	0.036	0.17	0.10	0.14	0.24	0.09	0.29	0.11	0.21	-0.07

**Source: Author, using STATA 13.**

The results from Pearson correlation indicate a positive association between market price per share and Level 1, Level 2 and Level 3 fair value financial assets and liabilities. This is in line with the argument that association exist between fair value accounting and market price per share.

Specifically, Table 4.2 above reveals a correlation coefficient of 0.38 between market price per share and level one fair value financial assets. This implies that level one fair value financial assets is positively related to market price per share of listed financial services firms in Nigeria. The correlation matrix shows that the relationship between fair value level two financial assets and market price per share is 0.64. This shows that there is a positive relationship between level two fair value financial assets and market price of listed financial services firms in Nigeria. This is in line with the expectation of IASB that fair value accounting particularly the new measurements criteria will enhance investor’s confidence as it provides decision useful information to users of financial statement. Level three fair value financial assets were also found to be positively correlated with market price per share to the tune of 0.27. Further, correlation matrix also reveals that Fair value financial liabilities level1&2 and Level 3 are positively correlated with market price per share with coefficient of 0.41 and 0.22 respectively.

The relationships amongst independent variables were found to be very weak as expected which may not pose any multicollinearity problem. Gujarati (2004) declares that correlation above 0.8

between variables is a concern as it indicates excessive correlation. High correlation among pairs of independent variables leads to high standard errors and hence bias estimates as the effect of individual explanatory variable on the dependent variable cannot be efficiently determined through the multivariate regression analysis. The result of multicollinearity test using Variance Inflation Factor (VIF), which is an advanced test of exact relationship among explanatory variable is presented in the subsequent section.

**Regression Results**

**Table 3: Summary of Regression Results**

Variable	Coefficient	Std. Err.	t-value	p-value
FVFA1	5.86	2.68	2.19	0.030***
FVFA2	4.18	0.57	7.28	0.000***
FVFA3	0.81	4.44	0.18	0.856
FVFL1&2	13.97	5.64	2.48	0.014***
FVFL3	4.28	7.75	0.55	0.582
NVFA	-11.58	3.82	-3.03	0.003***
NVFL	-7.17	3.09	-2.31	0.022***
EPS	0.08	0.04	1.85	0.065*
Constant	-29.7	3.98	-7.46	0.000***
R <sup>2</sup>	0.53			
F-Stat	17.6			
F-Sig	0.000			

10% levels of Significance \*

5% levels of Significance \*\*

1% level of Significant \*\*\*

**Source: Author: Author’s computation**

From the result in table 4.5.1 above, the overall value relevance of fair value measurements hierarchy is presented using the R-square and the coefficients. Overall, the results reveal R-square of 0.53, implying that the explanatory power of the model is 53%. This implies that about 53% of the total variation in MPPS of listed financial services firms in Nigeria is jointly and strongly explained by all the explanatory variables included in the model of the study. This is consistent with prior studies on value relevance of fair value accounting (Song et al., 2010; Siekkinen, 2016). The F-statistic is 17.6 which is significant at one percent. This suggests that the model of the study is fit in explaining the value relevance of fair value measurement hierarchy of listed financial services companies in Nigeria. The results from this finding therefore provide substantial evidence that fair value measurements hierarchy is value relevant. This suggests that investors place high premium in fair valuation in making business and economic decisions.

**Table 4: Summary of Regression Results (With Moderating Variables)**

Variable	Coefficient	Std. Err.	t-value	p-value
FVFA1	6.94	1.88	2.79	0.006***
FVFA2	3.78	0.37	5.99	0.000***
FVFA3	-1.48	2.82	-0.33	0.744
FVFL1&2	-52.68	16.51	-3.18	0.002***
FVFL3	-7.77	6.27	-0.92	0.358
FVFA1*AUDQ	16.54	8.83	3.43	0.001***
FVFA2*AUDQ	11.19	2.99	3.45	0.001***
FVFA3*AUDQ	9.77	3.09	1.82	0.070***
NFVFA	-10.02	3.49	-2.98	0.003***
NFVFL	-9.39	1.86	-2.96	0.003***
EPS	0.63	0.05	1.62	0.107
Constant	-26.62	2.71	-6.14	0.000***
R <sup>2</sup>	0.57			
F-Stat	49.32			
F-Sig	0.000			

\*Indicate significance at the 10% levels

\*\*Indicate significance at the 5% levels

\*\*\*Indicate significance at the 1% levels

**Source: Author: Author's computation**

The Table 4 above presents the result after introducing moderating variables to the model. This allows us to determine whether the value relevance of fair value financial assets is influenced by external audit quality. The F-Statistic value of 49.3 which is significant at 1% level indicates that the model is fit and has the statistical power to predict the relationship between the dependent and independent variables. R<sup>2</sup> value of 57% indicate that the independent and moderating variables in the model explain the systematic variation in the market price per share of listed financial services firms in Nigeria. As expected, the inclusion of moderating variable has increased the explanatory power of the model. These results provide statistical support for the hypotheses of the study to be tested based on the output of the model 2.

**Table 5: Differences between the coefficients of Level 1, Level 2 & Level 3 Hierarchy**

	F-Stat	p-value
FVFA1 = FVFA2	1.59	0.209
FVFA1 = FVFA3	6.7	0.010***
FVFA2 = FVFA3	3.43	0.065*

10% levels of Significance \*

5% levels of Significance \*\*

1% level of Significant \*\*\*

**Source: Author: Author's computation**

The study tests for differences in the pricing of assets under each fair value hierarchy by conducting F-tests of the differences in the coefficients across the fair value hierarchy for financial assets. The results in Table 4.5.3 above reveal that value relevance of level 1 and 2 fair value financial assets are not significantly different, thus implying that investors attached almost the same value to both level 1 and 2 fair value assets, this is in line with the study conducted by Song et al (2010). On the other hand, the results show that coefficient for level 1 and level 2 hierarchy is significantly different from that of level 3 fair value hierarchy at 1% and 10% respectively. This suggests that importance the investors attached to Level 1 and Level 2 fair value assets is significantly higher than the Level 3 fair value assets. This perhaps due to the fact that investors tend to attach more value to Level 1 and Level 2 input because they are based on observable market information (quoted prices in active markets and quoted prices of comparable items in similar actives markets). Further, it appears that investors are concerned about the reliability and information risk of Level 3 estimates because it is largely based on unobservable and firm generated prices.

From the summary of regression result in Table 4.5.2, Level 1 fair value assets was found to be positively and significantly influencing market price of listed financial services companies in Nigeria. The positive association between market value per share and Level 1 fair value measurement implies that as more financial assets of financial services companies are fairly valued using the observable market information such as quoted prices in active market, the higher the possibility that investors will repose more confidence on the accounts and annual reports of the company. The finding of this study is in line with the several extant studies (Siekkinen, 2016; Goh et al., 2015; Zhang & Tama-Sweet, 2015 Song et al., 2010) which provide empirical evidence that Level 1 fair value hierarchy which is based on observable market information is positively and significantly influencing the market prices. This is not surprising as investors tend to attach more value to Level 1 estimate as it provides them with more accurate and corporate value of their assets (Song, et al., 2010). This result underscores the fact that investors are able to verify the value disclosed because they are available in an active market, hence investors could clearly understand a company's operation and economic situation in order to make accurate investment decision.

Furthermore, the relationship between Level 2 fair value financial assets measurement hierarchy and share prices of listed financial services companies in Nigeria is positive and statistically significant. This indicates that an increase in Level 2 fair value assets results in an increase in the market price of listed financial services companies in Nigeria. In addition, the positive association between the Level 2 fair value estimates and market price could probably be based on the fact that even though Level 2 fair value estimates involve some adjustment, however, it is based on observable inputs from quoted prices of comparable items in an active market. The finding of this study is in line with extant studies such as Siekkinen, (2016); Goh et al., (2015); Song et al., (2010) which provide documentary evidence that level 2 fair value hierarchy which is based on adjusted observable market information is positively and significantly influencing the market prices.

Also, the relationship between Level 3 fair value financial assets measurement hierarchy and share prices is negative and statistically not significant. This implies that Level 3 fair value financial assets have a negative and insignificant relationship with market prices of listed financial services companies in Nigeria. The general perception is that more Level three fair value measurements will result in high agency cost and information asymmetry relating to fair value accounting because it is based on unobservable firm-generated inputs which provides managers more flexibility in managing the valuation of level three financial instruments. The expectation is that more level three fair value measurements will lead to a rise in earnings management practices because they are based on unobservable inputs which provide managers more flexibility in managing the valuation of Level 3 financial assets and as such, investors place less weight on level three fair value assets relative to Level 1 and Level 2.

However, it is worthy to state that this insignificant influence on share price may be as a result of the fact that there is an absence of active and efficient markets for financial instruments coupled with a weak regulatory environment. This to a large extent may have resulted in a situation where valuation models are applied which increase the possibility of inherent measurement error or management induced error in fair value estimates. Consequently, the coefficient of level three fair value measurements might not be representative or even biased. This perhaps accounts for the insignificant relationship between Level 3 fair value measurement hierarchy and share prices of listed financial services companies in Nigeria. This finding is in line with our prior argument and a valid concern that overstating or understating reported fair values caused by the managerial estimation process renders Level 3 fair value estimates potentially misleading and hence less value relevant. The finding of this study is consistent with Bosch (2012) who argues that investors only doubt the reliability of fair values whose inputs are based on discretionary assumptions. However, it contradicts the study conducted by Siekkinen, (2016), Goh et al., (2015), Song et al., (2010), and Kolev, (2008), who provide empirical evidence that Level 3 fair value measurement hierarchy is positively and significantly influencing the market prices. This is not surprising because these studies were conducted in an environment with efficient and active markets for financial instruments.



Again, the relationship between Level 1&2 fair value financial liabilities measurement hierarchy and share prices is negative and statistically significant. This indicates that Level 1&2 fair value liabilities have a negative and significant relationship with share prices of listed financial services companies in Nigeria. The negative relationship between share price and Level 1&2 fair value financial liabilities implies that as more financial liabilities of financial services companies are fair valued using the observable market input, the higher the possibility that investors will repose low confidence and consequently lead to a decrease in the share prices of listed financial services companies in Nigeria.

The fair value financial assets Level 1 and Level 2 appear to be positively and significantly influencing the market prices even before the introduction of interaction variable (Audit Quality-Big 4) as shown in model 1 above. This means fair value financial assets Level 1 and Level 2 are value relevant and enhance investors' confidence. However, the introduction of moderating variable of audit quality (Big-4) improves the explanatory power of the model represented by  $R^2$  which is the multiple coefficients of determination. This suggests that companies with a Big-4 auditor have higher information quality regarding fair value estimates, hence, value relevance of fair value estimates are significantly affected by audit quality.

Similarly, fair value financial assets level 3 was found to be positive and insignificant prior to the introduction of moderating variable (Audit quality- Big 4) as indicated in model 1 above, which means investors place lower value on the Level 3 estimates probably because its largely based on discretionary estimates. However, the moderating variable of audit quality has enhanced the value relevance of Level 3 fair value estimates. The coefficient of Level 3 fair value measurement changed from insignificant at all levels in model 1 to positive and significant at 1% in model 2 after the introduction of moderating variable of audit quality. This suggests that audit quality plays a significant role in moderating the value relevance of Level 3 fair value estimate. High audit quality is expected to increase the quality of information content of financial statements, thereby decreasing information asymmetry between investors and managers and consequently increase the value relevance of fair value estimates. High audit quality which is an essential part of the external control mechanisms of the management enhances the credibility of financial reports (Defond & Zhang, 2014).

Finally, the result revealed that all fair value hierarchies are value relevant and the value relevance of Level one and Level two fair values tend to be greater than the value relevance of Level three fair value estimate. In addition, the results of the F-test presented on Table 4.5.3 indicate that the coefficient for Level 1 and Level 2 hierarchy is significantly different from that of level 3 fair value hierarchy. This suggests that investors price level 1 and Level 2 fair value assets significantly higher than level 3 fair value assets. This implies that investors are willing to pay more for Level 1 and Level 2 fair value financial assets than Level 3 fair value financial assets. Investors tend to attach more value to Level 1 and Level 2 estimates because they are based on observable market input (quoted prices in active markets and quoted prices of comparable items in similar active markets), while Level 3 is based on the use of unobservable (firm generated) inputs in fair value measurements which creates incentives for managerial opportunistic behavior. Thus, increasing information asymmetry related to agency cost, thereby making Level 3 estimates less relevant when compared to Level 1 and Level 2 estimates. Further,

the use of Level 3 inputs requires management discretion which when used opportunistically may result in earnings manipulation which to a large extent may reduce the quality of reported earnings and consequently lower value relevance. More succinctly, it appears that investors perceived reliability concern with respect to the valuation of Level 3 instruments. The finding of this study is in line with the study conducted by Goh et al., (2015) and Song et al., (2010) who provided empirical evidence that value relevance of Level one and Level two fair value is significantly higher than the value relevance of Level three fair value estimates. However, the finding contradicts evidence provided by Siekkinen, (2016) who argue that the value relevance of fair values is not monotonically decreasing when descending from Level 1 to Level 3.

The findings of this study can enhance a better understanding of the impact of the moderating role of audit quality on the value relevance of fair value financial instruments measurements hierarchy. It is imperative for academia, regulatory authorities, standard-setters, investors and analyst to gain insight on the effects of fair value accounting on share prices of listed financial services companies in Nigeria. The findings of this study indicated that fair value financial instruments measurements hierarchy are value relevant at all levels of hierarchy. In addition, the results show that high audit quality has a significant impact on the value relevance of fair value financial instruments measurement hierarchy of listed financial services companies in Nigeria.

The findings from this study have several policy implications which form the bases of contribution of this study to existing knowledge with respect to fair value accounting in Nigeria. It provides bases for beneficial policy decision framework for a number of stakeholders in corporate finance. Given the nature of variables tested and the evidences documented from the outcome of the analysis, the findings of the study will be useful to financial services companies, regulatory bodies, auditors, investors and standard setters.

The findings of this study can be relied upon by financial services companies, given that significant part of financial services financial statements consists of financial instruments which are required to be measured at fair value, the impact of fair value financial instruments hierarchy at levels highlight the significant of fair value accounting in enhancing the credibility of the information contents of corporate reporting. This justifies the requirement of IFRS 13 which categorises fair value measurement in to hierarchy Level 1, Level 2 and Level 3 fair value hierarchy. This enables the financial services companies to have clear measurement criteria that ensures reliability of accounting information as well as enhancing investors' confidence. This finding will be especially useful for management of financial services companies in formulating policies with regards to fair value accounting.

Additionally, the findings of this study can also be relied upon by investors in making appropriate investment decisions relating to financial instruments such as stocks, bonds, fixed interest deposit and so forth. The results indicate that Level 1 and Level 2 fair value financial instruments hierarchy are significantly more relevant than Level 3 fair value hierarchy. This will enable investors to plan and allocate their investments to companies with lower information risk (i.e companies with lower Level 3 fair value estimates). This is justified as investors can place their trust on Level 1 and Level 2 estimates because they are based on observable market input, hence

more reliable. This serves as a positive signal to investors and financial analyst who rely on information contents of financial statements to make business and economic decisions.

Furthermore, the study examined the moderating role of audit quality on the value relevance of fair value accounting in a comprehensive manner and discovered that higher audit quality enhanced the value relevance of fair value estimate. Consequently, this study validates the premise that higher audit quality results to a higher value relevance of accounting information of listed financial services companies in Nigeria. Therefore, high information quality will, to a large extent enhance the efficiency of investors' investment decisions. Thus, this study provides insights that will guide investors to allocate their investments to companies with high audit quality because it provides empirical evidence that companies with high quality audits disclose fair value with the lowest information risk. Furthermore, the results in this study imply that high audit quality reduces the tendency by management to engage in earnings management related to fair value estimates of financial assets and liabilities.

The findings of this study also have important implications to key stakeholders as standard setters. It is believed that the findings of this study provide a framework for international standards setters for understanding not only the effects of IFRS 13: financial instruments measurements hierarchy, but also for the review of future standards relating to fair value estimates. For instance, the study document that investor attach less value to Level 3 fair value estimates possibly because of information asymmetry which results in higher information risk and moral hazard problems. However, to the extent that companies have higher audit quality, these problems could be drastically minimized. Investors have higher confidence in fair value estimates made by firms with higher audit quality.

Finally, this study contributes to the extant literature on audit quality and fair value accounting by strengthening the connection between these two important areas of research in the financial service companies in Nigeria. In particular, the study contributes to fair value literature by extending the studies conducted by Siekkinen, (2016), Goh et al., (2015); Song et al., (2010); into less developed countries such as Nigeria.

## **5.0 Conclusions and Recommendations**

Using a panel data multiple regression model, this study provides strong evidence that fair value measurements hierarchy are value relevant to investors. From the results and findings of this study, a number of conclusions were reached. Firstly, the results revealed fair value measurements hierarchy for financial instruments are overall value relevant and strongly explain the systematic variation in share prices of listed financial services companies in Nigeria.

Secondly, the results reveal that the value relevance of Level 1 and Level 2 fair values tend to be greater than the value relevance of Level 3 fair value estimate. Investors price level 1 and level 2 fair value assets significantly higher than level 3 fair value assets. It is evident that investors attach more value to Level 1 and Level 2 estimates because they are based on observable inputs. It appears that investors perceive reliability concerns with respect to the valuation of Level 3 instruments, hence, consider them less relevant.

Thirdly, considering whether the value relevance of fair value measurement hierarchy is influenced by audit quality (BIG4), this study provides strong evidence that audit quality (Big 4) is strongly associated with value relevance of fair values. This means investors have higher confidence in fair value estimates made by companies with Big-4 auditors than non-Big 4 auditors. This conclusion is in line with the theoretical assertions that the Big-4 auditors are associated with higher audit quality. Effective monitoring by independent external auditors will to a large extent decrease managerial opportunistic tendencies and thereby increasing investors' confidence in fair value estimates.

In line with the findings and conclusion of this study, the following recommendations are provided:

1. The study recommends the need for regulatory authorities to create an active market for financial instruments in order to fully achieve the fundamental objective of fair value. Also, there is need for effective supervisory and regulatory framework to limit the uncertainty and ambiguities around the application of level 3 fair value hierarchy.

2. This will go a long way in improving the reliability of fair value measurements and enhance investors' confidence.

3. Financial Reporting Council of Nigeria and other regulatory authorities should endeavor to limit the uncertainty in financial market by setting the necessary rules to value financial assets and liabilities in a clear guideline, particularly in respect to Level 3 fair value estimate. In addition, stiff penalties should be imposed on entities or managers that abuse the discretions allowed in Level 3 fair value measurements.

4. The study further recommends that regulatory authorities should device means of encouraging listed financial services companies in Nigeria to employ the service of Big4 audit firm so as to enhance high audit quality. The results indicate that high audit quality is strongly associated with the value relevance of fair values and inspires investors' confidence in fair value estimates made by companies with Big-4 auditors.

5. Investors should plan and allocate their investments to companies with lower information risk (i.e companies with lower level 3 fair value estimates) in making appropriate investment decisions relating to financial instruments such as stocks, bonds, fixed interest deposit. The study provide signal to investors who rely on information contents of financial statements to make business and economic decisions. Investors can place their trust on Level 1 and Level 2 estimates because they are based on quoted prices (observable market input), hence more reliable.

6. Potential investors should target companies with high quality auditors because high audit quality reduces the tendency by management to engage in earnings management related to fair value estimates of financial assets and liabilities.

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