Historic Cost Accounting versus Fair Value Accounting: A Comparative Effect on Profitability: Evidence from Nigeria Quoted Manufacturing Firms

Amaefule, Leonard Ph.D & Awheme, Blessing Ewoma, M.Sc.
Department of Accountancy,
Faculty of Management Science,
Imo State University,
Owerri, Imo State, Nigeria.

Okoro, Charles Ugochukwu HND, M.Sc. ANAA & Davies, Stanley Diepiriye, M.Sc. ACA, ACIT, ANAA
Department of Accountancy,
School of Management Science,
Ken Saro-Wiwa Polytechnic,
Bori, Rivers State, Nigeria

Abstract

This study examined the effect of Historic Cost Accounting (HCA) and Fair Value Accounting (FVA) practices on profitability of quoted manufacturing firms in Nigeria. Secondary data was obtained from 10 quoted manufacturing firms from 2015 - 2019 from the Nigerian Stock Exchange Fact book and annual reports of the quoted manufacturing firms. The variables considered were profit after tax as dependent variable while historic cost of equity, historic cost of non-current assets, fair value cost of equity and fair value cost of non-current assets were used as predictor variables. Panel data methodology was employed and the fixed effects model was used as estimation technique at 5% level of significance. Fixed effects, random effects and pooled estimates were tested and the Hausman test was used to determine the best fit. The fixed effect result shows fair value accounting can explain 55.1 percent variation on profit after tax. The beta coefficient of the variables shows that the variables have positive no significant effect on profit after tax of the manufacturing firms while historic cost accounting explain 72.5 percent variation on profit after tax. The beta coefficient of the variables shows that the variables have positive but no significant effect on profit after tax of the manufacturing firms. The study observed that there is ambiguity in the interpretation of the instrument conveying the principles, recommendations and application of fair value accounting method and this has given rise to several arbitrary and conflicting interpretations – especially as it suits the reporting body corporate. Premised upon the foregoing, the study recommends among others that accounting professionals and research fellows; relevant accounting institutions and government agencies, and system operators should continue to address the issue of measurement with a view to providing sustainable solution.

Key words: *Historic Cost Accounting, Fair Value Accounting, Profit after Tax, Non-Current Assets, Cost of Equity*

Introduction

An increasing number of international accounting standards are encouraging and or requiring the use of fair value accounting for financial reporting purposes. The International Accounting Standards Board (IASB) and Financial Accounting Standards Board (FASB) have agreed to a global uniform framework that establishes a standard definition of fair value that is

applicable in ascertaining the worth of assets and liabilities without involving market value. In recent years, there has been substantial controversy over the use of fair value accounting as opposed to the historical cost accounting method. While financial statements are designed to reflect reality, opinions vary as to which method best represents that reality. This is because, a firm's choice of accounting treatment for various assets can have a significant impact on its financial statements and management decision(s) regarding future corporate action(s). It is important that the appropriate method should be applied. This paper reviews fair value accounting by comparing it with historical cost accounting and the effects it has on manufacturing firms' profitability.

As in Amaefula, Okoye, Kalu and Nwosu, (2018) noted that the whole essence of accounting (financial) report is to convey realistic, timely, accurate, and relevant information to a varied groups and stakeholders of an organization. This postulation is supported by the framework upon which the study and practice of accounting rely. They are the Accounting Concepts and Conventions, and Standards. These ideal guidelines are not ambiguous in terms of interpretation; neither is they Omnibus in their application. They are complementary, practice-able without bias and ensured stability, sustainability and did promote reliability of accounting financial reports. Accounting practice does not support 'window dressing'; profit speculation and or anticipation (it rather encourages the provision for possible losses); inconsistency; partial disclosure; and other forms of manipulation in the carrying value of the firm's assets and liabilities. The accounting reports at all-time are expected to present the 'true and fair view' of the reporting entity.

As in IFRS 13, it addresses how to measure fair value, but it does not stipulate when fair value can or should be used - Sourced from (http://www.pwc.com.ifrs-19). This position of IFRS 13 could – if not checked – encourage fraudulent practices leading to doubt in the integrity of system operatives and the correctness of financial statements published by firms. AlJeburi, & Al-Yasiri (2019), in their study –'Application of IFRS 13 and its Impact on the Sincerity and Fairness of the Financial Statements for Iraqi Companies' recommended amongst others that, 'there is a need for a serious work towards shifting from historical cost in recording non-current assets to the fair market value of these assets'.

These accounting methods differ in opinion on how management should present the firm's records to shareholders and other users of accounting information. The ambiguity and controversies surrounding the appropriate method of accounting, query the relevance of these methods of accounting formulated. The weakness observed in the preparation of firms' financial statements using the historical cost accounting and the ambiguity surrounding the proper understanding, interpretation and application of the fair value accounting creates confusion in the discussion of fair value versus historical cost methods of accounting.

Again, IFRS 13, Fair value management, provides a common framework for measuring fair value where it is required and or permitted by another IFRS'. Premised upon the foregoing, fair value method as recommended by the IASB describes fair value as the price at which knowledgeable and willing parties will exchange or settle assets or liabilities. Fair value accounting is the practice of declaring the value of the asset or liabilities (Financial Standards Accounting Board [FASB], 2011). Under fair value accounting, a company may decide to resets the prices of certain assets on its statement of financial position every quarter to reflect changes in the market price; thus, called "mark-to-market accounting. For instance, the firm is supposed to determine the value of its security by considering the exit price. This exit price is considered as the fair value of the security based on the assumption that the transaction took place between willing and knowledgeable participants – the buyer and the seller of the security. However, the use of exit price may fail to reflect the fairness of the asset or liability value especially when one participant is not knowledgeable or willing to transact. For instance, forced liquidations of assets may result in remarkable lower prices than its fair value carrying amount.

To attain the status of a going concern is largely dependent of the business' ability to make profit. Every business should earn sufficient profits to survive and grow over a long period of time. It is the index to the economic progress, improved national income and rising standard of living. No doubt, profit is the legitimate object, but it should not be over emphasized. Management should try to maximize its profit keeping in mind the welfare of the society. Thus, profit is not just the reward to owners but it is also related with the interest of other segments of the society.

LITERATURE REVIEW

Historical Cost Accounting

Fair Value Accounting

The following is the absolute content of the International Financial Reporting Standard 13 -Fair Value Management - IFRS 13, Fair value management', provides a common framework for measuring fair value where required or permitted by another IFRS.IFRS 13 defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The key principle is that fair value is the exit price, from the perspective of market participants who hold the asset or owe the liability, at the measurement date. It is based on the perspective of market participants rather than the entity itself, so fair value is not affected by an entity's intentions towards the asset, liability or equity item that is being fair valued. A fair value measurement requires management to determine four things: the particular asset or liability that is the subject of the measurement (consistent with its unit of account); the highest and best use for anon-financial asset; the principal (or, in its absence, the most advantageous) market; and the valuation technique. IFRS 13 addresses how to measure fair value, but it does not stipulate when fair value can or should be used. Sourced from (http://www.pwc.com.ifrs-19)

The first definition is inappropriate in determining the fair value of an asset or liability. As a result, the FASB and IASB have agreed on a modified method to determine fair value. Instead of basing market price on an exit price, the new rules allow companies to look for the most advantageous market for an asset or liability when assigning it a fair market value. Determining the true market value of an asset is sometimes controversial, especially for assets that do not have active and liquid markets. By definition, the fair value does not need the existence of an active market. In case of market inexistence, IASB offers guideline that looks at the type of assets or liabilities. For instance, for property, plant and equipment, depreciated replacement cost is recommended if market based evidence is unascertainable. For biological assets (animals and plants), IASB suggest the use of discounted present values of future cash flows (Weetman, 2011).

Later, FASB introduced FASB ASC 820 – *Fair Value Measurements and Disclosures* (SFAS 157) (Zyla, 2010). The main aim of this statement is to offer additional guidance and information on issues that relate to fair value and its measurement. FASB ASC 820 – *Fair Value Measurements*, in technical terms, does not bring in any new accounting principle rather it provides financial analysts and auditors with additional information on how the FASB intends fair value to be measure in any instance it is required in financial reporting (Zyla, 2010). The FAS 159 – *the Fair Value Option (FVO) on Financial Assets and Financial Liabilities*-brings in the fair value option that a company may use in their first and successive measurements of their particular financial liabilities and assets on contract basis (American Academy of Actuaries Life Financial Reporting Committee [AAALFRC], 2009). The changes of fair value recorded in this contract basis are reported in the earnings. FAS 159 improves financial reporting by reducing volatility in reported earnings that originate from related financial assets and liabilities without incorporation of complex accounting provisions. Some of the notable financial assets and liabilities include insurance contracts, leases, convertible

debt security, deposit liabilities, credit union, subsidiary investment, employment (pre- and post-) benefits and entities with variable interests. The disclosures made through FAS 159 must incorporate the main reason for choosing this option, additional information for items in the balance sheet and the value of gains or losses quoted in the income statement as well as in the balance sheet (AAALFRC, 2009).

Fair Value versus Historical Cost Accounting

Fair value accounting is an improvement to the traditional form of accounting – the historical cost accounting. Under historical cost accounting, the initial price paid by the company during the purchase of the asset or incurrence of the liability is the one that matters. The price reflected on the balance sheet either is the purchase price or at a value reduced by obsolescence, depreciation or depletion (Nobes, 1997). For a financial asset, the price on the balance sheet does not change until the security is liquidated. Historical cost accounting is easy to understand because it is based on a fixed price that is always completely known, specifically the actual price that a company paid. Historical cost accounting is generally easier to follow since it is based on fixed and certain inputs. While this eliminates uncertainty from the initial valuation decision, it creates uncertainty in future periods about the true value of assets (Meunier, 2012). In both fair value accounting and historical cost accounting methods, the value of assets depicted on the balance sheet is always lower due to the depreciation, depletion and obsolescence.

In the financial industry, for example, certain assets, such as securities that have been labeled "trading securities" or "available-for-sale securities" may either appreciate or depreciate according to market movements and have always been subject to market-based pricing. However, the values can only decline for securities labeled as "held-to-maturity securities". In addition, these debt securities are reported as an amortized form rather than depreciation (Stickney, Well, Schipper & Francis, 2006). Such securities include bonds and leases. Accounting rules require firms to determine if certain assets, such as goodwill, have been impaired. If the value of an "impairable" asset falls and is not expected to recover, the firm must record a charge for other-than-temporary impairment (OTTI) which lowers the value of the asset on the balance sheet. This OTTI charge is permanent and cannot be reversed even if the asset eventually recovers its market value (Goldman Sachs Asset Management, 2008). However, the firm would still be able to benefit from the recovery in value by either collecting the cash flows from the asset or selling the asset at the higher price and realizing a capital gain.

Generally, it is anticipated that when an entity bases its financial statements on fair value accounting method, the value or amounts will fluctuate from time to time compared to when historical cost accounting is used. The value of items that are accounted for using historical cost method change at a lower rate, thus, it is considered less volatile. In fair value accounting, the recognized values change from time to time, hence, higher volatility. This volatility emanates because this accounting method summarizes "the stream of expected future cash flows: a change in expectation relating to any of the cash flow changes in the fair value" (Barth, 2004). The volatility within the financial statements does not imply that there is a flaw in financial reporting rather it is one that is always anticipated. The proponents of fair value accounting consider the historical cost accounting less volatile not because it is superior but because it provides a company's results that are not based on possible subjective appraisals or some other valuation methods.

Effects on the Statement of Financial Position

Under FAS 159, the choice of accounting treatment for recording certain financial assets, which do not required adherence to specific fair value accounting rules, can result in a dramatic impact on the Statement of Financial Position, especially for companies with large investment portfolios such as insurance or bank holding companies. In amortized cost, financial securities held up to maturity and notably debt securities are always carried on the balance sheet at the acquisition price paid by the entity. Thus, from one quarter to another there will be no volatility in the prices of individual securities. On the other hand, with fair value accounting, the price of debt security is adjusted with accordance to the market price at a given time. Such gyrations noted in fair value accounting would have significant impact on the daily operation of the business.

Since a balance sheet is a measure of a company's financial position, it is a crucial financial document to any business entity. For instance, the law requires financial institutions (banks) and insurance companies to maintain certain level of equity – usually portrayed on the balance sheet (Zyla, 2010). Standard accounting defines equity as the difference between assets and liabilities. Thus, as these two figures vary, equity also varies – increases or decreases. Because banks rely on leverage ratio, a small variation in the value of their assets will have a greater impact on their size of equity. For example, during the 2008-2010 economic meltdown, there were financial crisis that led to the decline of asset values (Zyla, 2010). In turn, as the value of assets declined, the equity of banks declined. The position of many banks as shown on the balance sheets deteriorated. This situation called for financial institutions to raise more equity in order to bring their balance sheet back to position required by government regulations.

In the non-financial sector such as manufacturing, wholesale and retail industries, the balance sheet values are less important compared to financial sector but they still have a real impact. Investors and creditors rely on the value of assets in determining the credit worth of an entity - lenders consider the value of assets as collateral while investors consider the value of asset as the indication of the entity's operation status now and probably in future (Zyla, 2010). The decline of assets will cause problems within the entity; for instance, the company will not be able to service its loans and at the same time, it will not attract investors because of pessimism resulting from that decline. In summary, fair value accounting will have effects on balance sheets of entities; however, financial institutions are likely to be more affected than non-financial sector.

Effects on Income Statement

Fair Value Option (FVO) election choice may have a substantial effect on income statement and earnings. Whilst certain changes in values are only reflected on the balance sheet, OTTI (Other-Than-Temporary Impairment) changes that flow through income statement have a direct impact on net income; for instance, the value of available for sale securities. FAS 115, states categorically that trading assets are held with an aim of disposing them in the near future (Laux & Leuz, (2010). Securities like bonds and treasury bills are marketable securities thus they are reported at fair value whereby the changes noted are recognized in the income statement. Thus, considering OTTI charges, some negative but significant impacts on earnings may emanate from this rule. Therefore, many firms are hesitant to take these charges unless regulators or auditors force them. According to FAS 157, the OTTI for both market movements and credit impairments are required. However, the 2009 amendments required OTTI charges on credit impairments only.

FASB considers any security – bond or treasury – with a book value that is greater than market value as impaired. After OTTI occurs, the gross loss recorded is equal to the difference between the book value and the fair value (Deutsche Bank Group, 2009). This difference is recorded in the income statement as a reduction of the earnings. In the book value entry, the change is recorded as a decline of the security value. Changes in value due to market

movements no longer flow through the income statement but are still reflected in the amounts carried on the balance sheet. Fair value accounting is now more aligned with the existing accounting treatment for individual loans. For individual loans, credit impairments result in income statement charges; however, they do not result from the shifts of interest rates.

Concept of Profitability

Accounting profit according to (http://en.wiktionary.org/wiki/profit)is "total income or cash flow minus expenditures". It also provided the origin and historical development of the word 'profit' as from Middle English - profit, from Old French - profit, from Latin - profectus (ie "advance, progress, growth, increase, profit"), from proficere ("to go forward, advance, make progress, be profitable or useful"). From the foregoing, we can deduce that profit is head word for profitable – hence Profitability.

As in Lord Keynes remarked that profit is the engine that drives the business enterprise. Profit is the yardstick for judging not just the economic, but the managerial efficiency and social objectives also.

Profitability means ability to make profit from the business activities of an entity – be it a body corporate or an enterprise. It shows how efficiently the management can make profit by using all the resources available in the market. According to Harward & Upton, "profitability is the 'the ability of a given investment to earn a return from its use.

After Tax (PAT)

Rambler: Let no man anticipate uncertain profits.

Manipulation of Financial Statements

Both the historical cost and fair value accounting methods have some faults in that entities may use them to manipulate their financial positions and results. For instance, a firm using historical cost accounting method may manipulate its figures on depreciation in order to increase or overestimate the useful life of an asset or its residual value. In that case, the firm will overestimate its income. Entities use this shrewd way of inflating income to attract investors and creditors by deceiving them about the profitability and financial position of the business (Belinna, Yen & Yang, 2008). Using historical cost accounting, the management teams have more leeway to hide bad investment decisions and avoid the consequences of declining levels of equity and assets. Thus, it is unlikely for any entity to disclose its financial failure through historical cost accounting method.

Using fair value accounting, entities can still manipulate their financial statements, however, in different ways. For instance, the management team can decide to take large OTTI charge in a single quarter. This action implies that the entity's asset value is underestimated. Thus, in such situation, the entity will benefit from higher earnings in subsequent periods, as cash flows are stronger than what the values carried on the balance sheet would suggest. To investors who consider returns on equity, the financial statements of such a company will look promising because the equity is low (as manipulated) compared to its returns (Belinna, et al., 2008). Using fair value accounting, the entity incurs a loss before enjoying future subsequent benefits. However, in historical cost accounting, the benefits to the firm comes first then loss thereafter. Therefore, in either method used by an entity, the investors and creditors are likely to suffer from these manipulations.

Regardless of the accounting method a firm chooses, ethical dilemmas are likely to occur among executive management. Corporate executives who are usually incentivized with regard to the financial performance of the entity are likely to deploy any means, even manipulation, in order to attain their goals (Belinna et al., 2008). For instance, an executive who earns extra incentive based on net income may want to delay taking OTTI charges for fear

of losing a bonus. Conversely, an executive whose key metric is return on equity may want to accelerate charges. Based on such dilemmas, it is quite challenging because the accounting decision undertaken by any entity is relatively subjected to the underlying interests of its top management.

Objections to Fair Value Accounting

Many entities are still opposing fair value accounting because of its pro-cyclicality and other associated flaws in the mark to market. As the economic cycle falls, asset prices also fall, depressing earnings for companies more than under the historical cost method. This leads to raising capital when company valuations are low, further compounding the problems for a company. In fair value accounting, it is very difficult to ascertain the exact fair value of an asset or liability (American Bankers Association, 2011). For instance, in a situation where a secondary market of an asset does not exist, it is very difficult to replace such an asset with an identical one. Thus, the determination of fair value of that asset is then up to the prudence of the executive. For assets without market prices, fair value accounting relies on appraisals and the calculations of reproduction costs as well as index numbers. However, these methods are based on discretions of management. Thus, fair value accounting is a subjective method of accounting; hence, the termed fairness may not imply fair value because of subjectivity.

During the financial crisis of 2008, many financial firms cited the switch to fair value accounting as a cause of their problems (Laux & Leuz, 2010). For instance, during the crisis the shares of Barrick Gold Corporation (ABX) declined at a higher rate. Researchers attributed the fall to the market illiquidity and increased risk aversion because of volatility in reporting its financial position and income. For instance, The American Bankers' Association (ABA) objected to the standard because of its use of exit pricing, OTTI charges for market movements, the inability to recover OTTI charges and the use of fair value pricing for all financial instruments (American Bankers Association, 2011). Due to some faults, FASB and IASB have made some changes on their rules. For instance, they only require OTTI charges on credit impairments. Therefore, an entity that holds a security with a market value higher than its balance sheet value can already sell the asset to realize that appreciation or simply hold the asset and later enjoy the better-than-forecasted cash flows.

Empirical Review

Al Jeburi & Al-Yasiri (2019),in their study the 'Application of IFRS 13 and Its Impact on the Sincerity and Fairness of the Financial Statements for Iraqi Companies' the study aimed at; showing the importance of accounting measurement which, is based on the fair value in maximizing the qualitative characteristics of the accounting information that result from the financial statements of the institutions according to the international accounting standards, and clarifying the significance of these statements as a tool to disclose the information which are required for its users. To assess the hypotheses, a questionnaire was distributed to a sample of accountants and auditors. The data was analyzed by the use of SSPS program. The study recommended that there is a need for a serious work towards shifting from historical cost in recording non-current assets to the fair market value of these assets.

Amaefule, Okoye, Kalu, and Nwosu (2018) did a comparative study on the effect of fair value measurement and historical cost measurement on the performance of quoted firms in Nigeria. The study employed the ex-post facto research design and analyzed data obtained from Nigerian Stock Exchange between 2007 – 2011 HCA and 2012 – 2016 for FVM using paired sample T Test as statistical tool. They found out that there exists positive but insignificant difference in the Profit after Tax (PAT) of the firms. They also found that there exists negative but insignificant effect on earnings per share. The study recommended that

Accounting Standards should be reviewed on the fair value practices in IFRS to encourage improved operations of firms across national borders.

Al-Khadash and Khasawneh (2014) examined the effects of applying fair value accounting under IAS 40 on the volatility of earnings. The study majorly focused on how the addition of unrealized gains and losses in the income statement might affect the incremental explanatory power of earnings. Quantitative data were collected from the Jordanian Shareholding Companies listed on Amman Stock Exchange for the period of 2002-2009. The Ohlson valuation model (1995) and the Theil technique (1971) were utilized. Findings revealed that unrealized gains and losses affect the net income and the results of cross-sectional regression indicate that net income and book values jointly and individually are positively and significantly related to stock prices. The incremental information of net income is greater than that of book values and the addition of unrealized gain in income increases the explanatory power of the model.

Ghafeer and Abdul-Rahman (2014) sought to shed some light on this issue by restating some of the financial assets of an insurance company, applying fair value instead of historical-cost based valuations, and comparing data emerged by using historical costs principle and fair value principle. The study employed a simple comparison approach to establish the difference between the net income of firms during the periods of fair value and historical cost accounting bases. With the aid of bar charts and percentages, the study find that the numbers on the face of the income statement change considerably and observe that the magnitude of these changes varies between the two policies; the indication being that a change from historical cost to fair-value accounting could achieve different results.

Ijeoma (2013) assessed the impact of fair value measurement on financial instrument of firms in Nigeria. Data collection was carried out through field survey method involving the use of questionnaire administered to 188 samples. The method of data analysis was the Kruskal-Wallis rank sum test statistic. From the result of the analysis, it was observed that the implementation of Fair Value measurements gives sufficient precision in assessing firm's financial position and earning potential. Also observed was that the possibility of measurement errors in financial instrument measured on Fair Value basis was high. The study thus concluded that Fair value is the best reflection of the expected future cash flow as it predicts the ability of the entity to take advantage of opportunities or to react to adverse situations.

Awang & Mokhtar (2012), researched on the comparative analysis of current values and Historical Cost in Business Zakat Assessment: An Evidence from Malaysia. The primary objective of the study was to compare the use of existing values as opposed to historical cost in Zakat valuation. They note that the proponents of current value accounting foresee that several problems might arise if computation of Zakat is based on the historical cost financial statement. They note further that their finding was supported by previous studies which conclude that the use of historical cost data may lead to a negative wealth transfer from the rich to the poor. Furthermore, they posit that in contemporary financial accounting practice, the valuations of inventories, as well as the problem of valuation of receivables, need to be reconciled between Zakat rules and the generally accepted accounting principles by which balance sheets conform to Anglo-American accounting conventions.

Bessong & Charles (2012) carried out a comparative examination of the effect of fair value accounting and historical cost accounting on the reported profits on manufacturing companies in Nigeria. Data collected related to the period 2010 (pri-IFRS adoption period) and were adjusted to present a 'fair value view' of financial statements abinitio prepared under historical cost. The data were analyzed using the multiple regression techniques to establish the relationship between the dependent and the independent variables for the particular year 2010. Explanatory variables used in their study were depreciation, taxation, and dividend. Based on their results, the authors concluded that the profit measurement method (i.e. the

method of accounting) adopted directly influences the amount calculated as depreciation, determines the amount charged as taxes and stipulates the amount paid as a dividend from the reported profit of a given period. Though there has been research on IFRS and Fair Value in other parts of the world, very little research on this topic has been done in Nigeria.

Kochiyama (2011) examined the economic consequences of fair value accounting and a change in the distribution rule in Japan. The study employed Lintner's partial adjustment model alongside the multiple regression model in the analysis of data collected from Japanese Commerce Law financials. The results show that the change in the distribution rule influenced companies' dividend policies, especially Japanese firms, as they tend to pay out revaluation profits as allowed by the Company Act.

Rodríguez-Pérez, Slof, Solà, Torrent and Vilardell (2011) on assessing the impact of FVA on financial statement analysis, the study reviewed the question of whether a change from historical cost to fair value affects the analysis of financial statements and, particularly, to which extent it modifies users' (or analysts') perceptions of a firm's efficiency and profitability, without using stock market data. The study restated the financial investments and tangible fixed assets of a sample of 85 Spanish insurance companies. The authors applied fair value valuation model instead of historical-cost valuations method thereby stimulating perception of analysts' of these firms' efficiency and profitability for both sets of data using data envelopment analysis (DEA). They found that the numbers on the face of the financial statements changed considerably and observed that the size of these changes varies between companies and classes of assets. However, only in a few cases does a change in the valuation basis leads to a relevant change in DEA scores; within their sample, the overall assessment of companies remains largely the same for efficiency and profitability under both valuation bases. These findings seem to indicate that a change from historical-cost to fair-value accounting could alter analyst perceptions of a limited number of companies but likely will not have a significant impact on the appraisal of the majority of them.

Bleck and Liu (2007) studied the relationship of market transparency (opacity) and prices of assets both under historical accounting and mark-to-market (fair value) system of accounting. They find out that, the greater the transparency of the financial market the more frequent and more severe crashes in asset prices under the historical cost accounting regime. Also, that the historical cost accounting can make the financial market more rather than less volatile, which runs counter to the conventional wisdom, and that historical cost accounting will not only incentivize but also enable the manager to conceal the firm's real performance (Bleck & Liu (2007). They argued further that many logical compensation structures are hardly feasible in reality, particularly given the illiquidity and inefficiency of many financial markets.

Reis and Stocken (2007) examined the strategic consequences of historical cost and fair value measurements. In their 6th proposition, they noted that expected firm profits are higher, expected consumer surplus is lower, and, in aggregate, expected social welfare is greater when companies use fair value than when they use historical cost. They added that companies could better coordinate their prices when their accounting reports are prepared using fair value rather than historical cost. Accordingly, when companies use fair value, they obtain higher prices, manufacture more inventories, and get higher expected profits. Amongst other things they conclude saying, the analyzed a model where firms make sequential manufacturing and pricing choices in a duopoly. After manufacturing inventory but before naming prices, companies report their inventory at either historical cost or fair value. In the absence of price uncertainty, a report prepared using either measurement completely reveals a firm's inventory level. In contrast, the presence of cost uncertainty reduces the in formativeness of a report drawn up using historical cost whereas one prepared using fair value continues to reveal a firm's inventory holding ultimately'.

Methodology

This study used quasi experimental research design to compare the effect of historic cost accounting and fair value accounting on the profitability of selected manufacturing firms in Nigeria. The sample size was limited to the 10 quoted manufacturing firms that are reporting to the Nigerian stock exchange for the period of 5 years (2015-2019). The reason for the sample size is for easy source and reliability of required data from the annual reports submitted to the exchange.

Data Analysis

The method of data analysis to be used in this study was the panel data multiple linear regressions using Ordinary Least Square (OLS) method. This approach, which is a quantitative technique, includes tables and the test of the hypotheses formulated by using ordinary least square regression analysis at 5% level of significance.

Moreover, in order to undertake a statistical evaluation of our analytical model, so as to determine the reliability of the results obtained and the coefficient of correlation (r) of the regression, the coefficient of determination (r^2), the student T-test and F-test will be employed.

Coefficient of Determination (r^2) Test –This measures the explanatory power of the independent variables on the dependent variables. For example, to determine the proportion of economic growth in our model, we used the coefficient of determination. The coefficient of determination varies between 0.0 and 1.0. A coefficient of determination says 0.20 means that 20% of changes in the dependent variable is explained by the independent variable(s).

F-Test: This measures the overall significance. The extent to which the statistic of the coefficient of determination is statistically significant is measured by the F-test. The F-test can be done using the F-statistic or by the probability estimate. We use the F-statistic estimate for this analysis.

Student T-test: measures the individual statistical significance of the estimated independent variables at 5% level of significance.

Durbin Watson Statistics: This measures the co-linearity and autocorrelation between the variables in the time series. It is expected that a ratio close to 2.00 is not auto correlated while ratio above 2.00 assumed the presence of autocorrelation.

Regression coefficient: This measures the extent in which the predictor variables affect the dependent variables in the study.

Probability Ratio: It measures also the extent in which the predictor variables can explain change to the dependent variables given a percentage level of significant.

Model Specification

The study adopts the panel data method of data analyses which involve the fixed effect, the random effect and the Hausman Test.

Pooled Effect Model

$$PAT_{it} = f(\beta_1 HVE + \beta_2 HVFA + . \quad \varepsilon_{it} \qquad 1$$

$$PAT_{it} = f(\beta_1 FVE + \beta_2 FVFA + . \quad \varepsilon_{it} \qquad 2$$

Fixed Effects

The fixed effects focus on whether there are differences by using a fixed intercept for each of the different cross-sectional structures. If we assume that the dummy variable for manufacturing firms is 1 or 0, then D_i, which is the dummy variable for firm i, can be expressed as:

$$PAT_{it} = f(\beta_1 HVE + \beta_2 HVFA + . \quad \varepsilon_{it} \qquad 3$$

$$PAT_{it} = f(\beta_1 FVE + \beta_2 FVFA + . \quad \varepsilon_{it} \qquad 4$$

The dummy variables are expressed as follows: if $j = i$, then $Di = 1$; otherwise $Di = 0$[2].

To further investigate the fixed effect, Adebayo (2012) analyzed whether the independent variables affect the dependent variable, this regress the effect of the independent variables on the dependent variables.Because the fixed effects account for both cross-sectional and time-series data, the increased covariance caused by individual-firms differences is eliminated, thereby increasing estimation-result efficiency.

Random Effects

Random effects focus on the relationship with the study sample as a whole; thus, the samples are randomly selected, as opposed to using the entire population. The total sample regression (a function of the random effect) can be expressed as:

$$PAT_{it} = \sum_{j=1}^{N} \beta_0 + \beta_1 HVE + \beta_2 HVFA + U \ldots\ldots\ldots 5$$

$$PAT_{it} = \sum_{j=1}^{N} \beta_0 + \beta_1 FVE + \beta_2 FVFA + U \ldots\ldots\ldots 6$$

If this is represented with random variables, then $\beta_{oj} = \overline{\beta}_0 + \mu_j$, which indicates that the difference occurs randomly, and the expectation value of β_{oi} *is* $\overline{\beta}_0$[5]. 7

Where

PAT = Profit after tax of the manufacturing firms

HVE = Historic value of equity
HVFA = Historic value of fixed assets
FVE = Fair value of equity
FVFA = Fair value of fixed assets

Hausman Test

The Hausman test YairMundlak, (1978) is the most commonly used method for evaluating fixed and random effects. If variables are statistically correlated, then the fixed-effects estimation is consistent and efficient, whereas the random- effects estimation is inconsistent, and the fixed-effects model should be adopted. Conversely, if the variables are statistically uncorrelated, then the random-effects estimation is consistent and efficient, whereas the fixed-effects estimation is consistent but inefficient, and the random-effects model should be adopted.-

A-prior Expectation of the Result

The explanatory variables are expected to have positive and direct effects on the dependent variables. That is a unit increase in any of the variables is expected to increase profit after tax of the manufacturing firms. This can be express mathematically as β1, β2,> 0.

Presentation of Results

Table 1: Test of Models

Historic Cost Accounting			
Correlated Random Effects - Hausman Test			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	11.132140	5	0.0000
Fair Value Accounting			
Correlated Random Effects - Hausman Test			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	16.046354	5	0.0000

Source: extract from E-view 9.0

In testing the validity of the models, the fixed effects on the cross section Redundant Fixed Effect- Likelihood Ratio, the P- value is 0.000 indicating that the effects are significant. Select the random effect and perform the Correlated Random Effects- Hausman test, testing the random effects model against the fixed effects model. The null hypothesis in that case is that both tests are consistent estimators and the random effects model is efficient. Under the alternative hypothesis, only the fixed effect is consistent. Since the p- value is 0.000, the null hypothesis is rejected and, therefore, the fixed effects model is to be preferred.

Table 2: Fair Value Accounting and Profitability of Manufacturing Firms

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Pooled Regression Results				
FVE	0.026953	0.146952	0.183410	0.8548
FVFA	0.282018	1.577221	0.178807	0.8584
C	37.38354	11.20893	3.335157	0.0011
R-squared	0.009169	Mean dependent var		31.05858
Adjusted R-squared	0.031775	S.D. dependent var		8.713159
S.E. of regression	8.850506	Akaike info criterion		7.244918
Sum squared resid	9478.106	Schwarz criterion		7.379289
Log likelihood	-454.0523	Hannan-Quinn criter.		7.299511
F-statistic	0.223934	Durbin-Watson stat		0.925630
Prob(F-statistic)	0.951572			
Fixed Regression Results				
FVE	0.101833	0.108339	0.939949	0.3493
FVFA	0.350664	1.129981	0.310327	0.7569
C	33.61862	8.225617	4.087063	0.0001
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.551375	Mean dependent var		31.05858
Adjusted R-squared	0.476605	S.D. dependent var		8.713159
S.E. of regression	6.303628	Akaike info criterion		6.657284
Sum squared resid	4291.458	Schwarz criterion		7.082793
Log likelihood	-403.7376	Hannan-Quinn criter.		6.830163
F-statistic	4.374210	Durbin-Watson stat		1.971452
Prob(F-statistic)	0.000000			
Random Regression Results				
FVE	0.094913	0.108003	-0.878801	0.3813
FVFA	0.344406	1.129398	-0.304947	0.7609

C	33.96440	8.403128	4.041875	0.0001
	Effects Specification			
			S.D.	Rho
Cross-section random			6.817617	0.5391
Idiosyncratic random			6.303628	0.4609
	Weighted Statistics			
R-squared	0.018447	Mean dependent var		9.114318
Adjusted R-squared	0.022113	S.D. dependent var		6.196411
S.E. of regression	6.262623	Sum squared resid		4745.674
F-statistic	0.454802	Durbin-Watson stat		1.785435
Prob(F-statistic)	0.809103			
	Un-weighted Statistics			
R-squared	0.004451	Mean dependent var		31.05858
Sum squared resid	9523.237	Durbin-Watson stat		0.893128

Source: Extract From E-View 9.0

The result presented in the table above, reveal the impact of fair value accounting on the profitability of manufacturing firms, evidence from the pooled effect result shows that the independent variables can explain 0.9 percent variation on profit after tax. The F-statistics and the probability value justifies that the model is insignificant. The Durbin Watson statistics justifies the absence of serial auto correlation in the model. However, the β coefficient of the variables shows that the variables have positive but no significant effect on profit after tax of the manufacturing firms.

The result presented in the table above, reveal the impact of fair value accounting on the profitability of manufacturing firms, evidence from the fixed effect result shows that the independent variables can explain 55.1 percent variation on profit after tax. The F-statistics and the probability value justifies that the model is significant. The Durbin Watson statistics justifies the absence of serial auto correlation in the model. However, the β coefficient of the variables shows that the variables have positive but no significant effect on profit after tax of the manufacturing firms.

The result presented in the table above, reveal the impact of fair value accounting on the profitability of manufacturing firms, evidence from the random effect result shows that the independent variables can explain 18 percent variation on profit after tax. The F-statistics and the probability value justifies that the model is insignificant. The Durbin Watson statistics justifies the absence of serial auto correlation in the model. However, the β coefficient of the variables shows that the variables have positive but no significant effect on profit after tax of the manufacturing firms.

Table 3: Historic cost Accounting and Profitability of Manufacturing Firms

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Pooled Regression Results				
HVE	-1.805780	1.350264	-1.337353	0.1837
HVFA	-8.124443	14.59937	-0.556493	0.5789
C	135.2006	103.6090	1.304912	0.1944
R-squared	0.040053	Mean dependent var		18.89680
Adjusted R-squared	0.000281	S.D. dependent var		81.22169
S.E. of regression	81.23310	Akaike info criterion		11.67933
Sum squared resid	785259.1	Schwarz criterion		11.81509
Log likelihood	-723.9583	Hannan-Quinn criter.		11.73448
F-statistic	0.993032	Durbin-Watson stat		1.569351
Prob(F-statistic)	0.425079			
Fixed Regression Results				
HVE	1.568731	1.415965	2.107889	0.0404
HVFA	9.316737	1.893476	2.628034	0.0213
C	126.0272	108.3645	1.162993	0.2474
	Effects Specification			
Cross-section fixed (dummy variables)				
R-squared	0.725306	Mean dependent var		18.89680
Adjusted R-squared	0.523227	S.D. dependent var		81.22169
S.E. of regression	82.15953	Akaike info criterion		11.79433
Sum squared resid	715520.0	Schwarz criterion		12.22423
Log likelihood	-718.1455	Hannan-Quinn criter.		11.96898
F-statistic	5.843626	Durbin-Watson stat		1.718954
Prob(F-statistic)	0.000000			
Random Regression Results				
HVE	1.805780	1.365664	1.322273	0.1886
HVFA	8.124443	14.76587	0.550218	0.5832
C	135.2006	104.7906	1.290197	0.1995
	Effects Specification			
			S.D.	Rho
Cross-section random			0.000000	0.0000
Idiosyncratic random			82.15953	1.0000
	Weighted Statistics			
R-squared	0.040053	Mean dependent var		18.89680
Adjusted R-squared	0.000281	S.D. dependent var		81.22169
S.E. of regression	81.23310	Sum squared resid		785259.1
F-statistic	0.993032	Durbin-Watson stat		1.569351
Prob(F-statistic)	0.425079			
	Unweighted Statistics			
R-squared	0.040053	Mean dependent var		18.89680
Sum squared resid	785259.1	Durbin-Watson stat		1.569351

Source: Extract From E-View 9.0

The result presented in the table above, reveal the impact of historic cost accounting on the profitability of manufacturing firms, evidence from the pooled effect result shows that the independent variables can explain 0.4 percent variation on profit after tax. The F-statistics and the probability value justifies that the model is insignificant. The Durbin Watson statistics justifies the absence of serial auto correlation in the model. However, the β coefficient of the

variables shows that the variables have positive but no significant effect on profit after tax of the manufacturing firms.

The result presented in the table above, reveal the impact of historic cost accounting on the profitability of manufacturing firms, evidence from the fixed effect result shows that the independent variables can explain 72.5 percent variation on profit after tax. The F-statistics and the probability value justifies that the model is significant. The Durbin Watson statistics justifies the absence of serial auto correlation in the model. However, the β coefficient of the variables shows that the variables have positive but no significant effect on profit after tax of the manufacturing firms.

The result presented in the table above, reveal the impact of historic cost accounting on the profitability of manufacturing firms, evidence from the random effect result shows that the independent variables can explain 4 percent variation on profit after tax. The F-statistics and the probability value justifies that the model is insignificant. The Durbin Watson statistics justifies the absence of serial auto correlation in the model. However, the β coefficient of the variables shows that the variables have positive but no significant effect on profit after tax of the manufacturing firms.

Discussion of Findings

The estimated regression model proved that fair value accounting explained 55.1 percent variation on profit after tax of the manufacturing firms while historic cost accounting explained 72.5 percent variation on profit after tax of the manufacturing firms. This implies that historic cost accounting have greater impact on profitability of the manufacturing firms than fair value accounting. The beta coefficient of the variables indicate that fair value of equity can increase profit after tax by 1.0 percent for a unit increase on the variable while the historic value of equity can add 15.6 percent which implies that historic value of equity have greater impact on profitability of the manufacturing firm. Furthermore, historic cost of noncurrent assets indicates that for a unit increase, profit after tax will increase by 3.5 percent while fair value accounting will increase by 9.3 percent. The findings of this study indicate that fair value accounting method have greater impact on profitability than historic cost accounting. The findings of this study confirm the findings of Amanamah and Owusu (2016) as in Amaefule, et al (2018) whose respondents were of the view that measuring methods available were not accurate, of 60% claim that majority of the assets do not have an active market making it difficult to accurately determine their fair value; 52% of the sample assert there is lack of skilled and qualified values while 60% said there is no strong regulatory body to carry out the valuation and manage the measurement methods. 47% of the respondents indicated that Ghanaian stock markets are young and not efficient; therefore, the study holds that the cost of shares in most listed companies might not represent the true and fair value of the company's shares in the Ghanaian stock market.

Conclusion

Choosing the appropriate accounting method can be difficult, as there are advantages and disadvantages to each. This article has reviewed fair value accounting method in comparison with historical cost accounting. Historical cost method is considered easy to use and simple to understand. However, the proponents of fair value accounting consider historical cost accounting as obsolete because of flaws such as it focuses on cost of acquisition rather than in the value of an asset during times of significant inflation; which leads to thevalue of assets and liabilities being carried on to the year financial statements at their cost; thus leading to the asset and liability value unchanged. According to many, historical cost accounting does not reflect reality or the current market situation. Fair value accounting on the other hand quotes the current value of assets and liability as per the market conditions. In fair value accounting,

FASB and IASB have given guidelines on how assets and liabilities should be valued. For instance, statement FAS 157 calls for assets and liabilities to be valued using the market price. Moreover, FAS 159 calls for entities to measure the value of assets and liabilities on contractual basis. Like historical cost, fair value accounting affects the financial statements – balance sheet and income statement. However, there is no direct impact towards the statement of cash flows unless there is a tax benefit granted when using fair value accounting (Moran, 2010). Fair value accounting has some flaws like subjectivity and complexity. However, the IASB and FASB have worked out a common resolution on these issues. Finally, comparing the number of issues and its advantages, fair value accounting is superior compared to historical cost accounting.

Recommendations

1. There is ambiguity in the application of fair value and historic cost accounting, therefore the professional accounting bodies should continue to address the issue of measurement with a view of providing solution. Accounting professional bodies such as AASB, FASB an IASB should be specific in their conceptual framework which measurement should be used for different assets and be consistent across all borders.
2. Stock valuation methods employed by Nigerian firms may need to be reviewed to ensure realistic values of the inventories reported in the financial statements; there is need to guide against the erosion of owners' capital by way of undervaluation of stock while also ensuring the avoidance of overvaluing of stocks, to guide against fictitious figures
3. There should be constant review of accounting standards regarding the Fair Value Measurement practices by International Accounting Standards Board (IASB) so as to provide a uniform measurement parameter for all forms of assets and liabilities across industries and national borders so as to discourage arbitrary interpretations and application of the Fair Value Accounting method.
4. That accounting professionals and research fellows; relevant accounting institutions and government agencies, and system operators should continue to address the issue of measurement with a view to providing sustainable solution.

REFERENCES

Ahmad, F.B. & Aladwan (2015). The effect of fair value accounting on Jordanian investment properties: An empirical study on Jordanian listed real estate companies. *International Journal of Financial Research, 6(4), 99 – 113.*

Alaryan, L.A., Haija, A.A.A. & Ali, M.A. (2014), The Relationship between Fair Value Accounting and Presence of Manipulation in Financial Statements, *International Journal of Accounting and Financial Reporting, 4(1), 221-237.*

AlJeburi, F. A & Al-Yasiri K. N,(2019)Application of IFRS 13 and its Impact on the Sincerity and Fairness of the Financial Statements for Iraqi Companies, *Journal of Advanced Research in Dynamical & Control Systems, Vol. 11, 01-Special Issue, 1787 - 1798*

Alkababji, M.W. (2016). The extent of compliance with the disclosure requirements for Fair Value Measurement (IFRS13): A Study on the Annual Reports of Palestinian Corporations, *European Journal of Accounting, Auditing and Finance Research, 4(4), 65 – 88.*

Al-Sakini, S. & Al-Awawdeh, H. (2015). The effect of accounting conservatism and its impacts on the fair value of the corporation: An empirical study on Jordanian public joint-stock industrial companies.*International Journal of Business and Social Science 6(7), 229 – 241.*

Amaehufule, L. I, Okoye, E. I, Kalu, E. O, & Nwosu, S. U. (2018). Fair Value Measurement versus Historical Cost Accounting: A comparative effect on firms' performance in Nigeria. *Research Journal of Finance and Accounting*, 9(10), 165 – 175.

Amanamah, R. & Owusu, E. K. (2016), Perception on Fair Value Measurement in Ghana: Evidence from Account Personnel, *African Journal of Applied Research (AJAR), 2 (2), 22-34.*

Ashford, C.C. (2011), Fair Value Accounting: Its Impacts on Financial Reporting and how it can be Enhanced to provide more Clarity and Reliability of Information for Users of Financial Statements, *International Journal of Business and Social Science, 2(20), 12-19.*

Awang, R. N., & Mokhtar, M. Z. (2012), Comparative Analysis of Current Values and Historical Cost in Business Zakat Assessment: Evidence from Malaysia,*International Journal of Business and Social Science, 3(7), 286 – 298.*

Bessong, P. K., & Charles, E. (2012), Comparative Analysis of Fair Value and Historical Cost Accounting on Reported Profit: A Study of Selected Manufacturing Companies in Nigeria,*Research Journal of Finance and Accounting, 3(8), 132 – 249.*

Dickinson, G. & Liedtke, P.M. (2004), Impact of a Fair Value Financial Reporting System on Insurance Companies: A Survey, *The Geneva Papers on Risk and Insurance, 29(3), 540-581.*

Edward, E. O., & Bell, P. W. (1991), Theory of Measurement of Business Income, Los Angeles: University of California Press,*International Journal of Scientific Research and Innovative Technology,4(9),80-90.*

Elfaki, A.A.A. & Hammad, S.M.E. (2015), the Impact of the Application of Fair Value Accounting on the Quality of Accounting Information: An Empirical Study on a Group of Companies Listed on the Khartoum Stock Exchange, *International Journal of Academic Research in Accounting, Finance and Management Sciences, 5(1), 148–160.*

Emerson, D. J., Karim K. E., & Rutledge, R. W. (2010), Fair Value Accounting: A Historical Review of the Most Controversial Accounting Issue in Decades,*Journal of Business and Economic Research 8(4), 77 – 86.*

Ene, G.S., Chilarez, D. & Dindire, L.M. (2014), Relevance and Credibility of the Fair Value Measurement during the Crisis, *Procedia Economics and Finance, 8, 306 – 312.*

Ghafeer, N.M. & Abdul-Rahman, A.A. (2014), The Impact of Fair Value Measurements on Income Statement: IFRS 13 "An Application Study in Insurance Companies", *Research Journal of Finance and Administration, 5(16), 120-127.*

Harward & Upton (1961), "Introduction to Business Finance", Mc Graw Hill, New York.

IASB (2011), International Financial Reporting Standard 13 Fair Value Measurements, Available on-line at: http://eifrs.ifrs.org

Ijeoma, N. B. (2013), The Impact of Fair Value Measurement on Financial Instrument of Firms in Nigeria, *International Journal of Advancements in Research & Technology, 2(11), 90 – 96.*

Ijeoma, N. B. (2014), The Contribution of Fair Value Accounting on Corporate Financial Reporting in Nigeria, *American Journal of Business, Economics and Management, 2(1), 1 – 8.*

Ikpefan, O.A. & Akande, A.O. (2012), International Financial Reporting Standard (IFRS): Benefits, Obstacles and Intrigues for Implementation in Nigeria, *Business Intelligence Journal, 5(2), 299-307.*

Isenmila, P.A. & Adeyemo, K.A. (2013), Mandatory Adoption of International Financial Reporting Standards (IFRS) in Nigeria: The Unresolved Institutional Question, *Mediterranean Journal of Social Sciences, 4(1), 175-184.*

Jaijairam, P. (2013), Fair Value Accounting vs. Historical Cost Accounting, the Clute Institute: *Review of Business Information Systems, 17(1), 1-6.*

Jarolim, M. & Öppinger, C. (2012), Fair Value Accounting in times of Financial Crisis, ACRN *Journal of Finance and Risk Perspectives, 1(1), 67-90.*

Karen, T. C. & Alan, D. (2011), An Evaluation of the Implementation of Fair Value Accounting: Impact of Financial Reporting, *Journal of Business & Economics Research 9(1), 1 - 16.*

Liu, Y. (2010), The Study of the Application Status of Fair Value Accounting in China. *International Journal of Business and Management, 5(9), 155-158.*

Matiş, D. & Bonaci, C. G. (2008), Fair Value Accounting for Financial Instruments– Conceptual Approach and Implications. *Timisoara Journal of Economics 1(2), 191 - 206.*

Okafor, C. & Ogiedu, O. (2012), Perceptions of Fair Value Accounting: Evidence from Nigeria, *JORIND, 10 (3), 417 – 432.*

Osisioma, B.C., Okoye, E.I. & Ijeoma, B.N. (2014), A Model for Implementation of Fair Value Accounting in Corporate Financial Reporting, *SOP Transactions on Economic Research, 1(2), 10 – 34.*

Rodríguez-Pérez, G., Slof, J., Solà, M., Torrent, M., & Vilardell, I. (2011),Assessing the Impact of Fair-Value Accounting on Financial Statement Analysis: *A Data Envelopment Analysis Approach. ABACUS 47(1), 61 - 84.*

Umobong, A.A. (2015), IFRS Adoption and Firms' Performance: A Comparative Analysis of Quoted Food and Beverage Manufacturing Firms In Nigeria. *European Journal of Accounting Auditing and Finance Research, 3(8), 70-83.*

Zhuang, X. & Luo, Y. (2015), Relevance between the Degree of Industrial Competition and Fair Value Information: Study on the Listed Companies in China, *Journal of Industrial Engineering and Management, 8(3), 894 – 908.*