
ACCOUNTING ESTIMATES AND PROFITABILITY OF LISTED AGRICULTURAL COMPANIES IN NIGERIA

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ABSTRACT

The objective of this study was to examine the effect of accounting estimates on financial performance of listed agricultural companies in Nigeria. The study adopted an ex post factor research design. Data for analysis was gathered from 4 out of 5 listed agricultural companies from 2011 – 2020, using purposive sampling. The secondary data gathered, was analyzed using pooled multiple regression. The regression result show a very weak effect of provision for bad debt, provision for employee benefits on profit after tax at 15.9%. The R^2 stood at 2.5%. The test of hypotheses revealed that provision for bad debt has negative insignificant effect on profit after tax of listed agricultural companies in Nigeria while, provision for employee benefits has positive insignificant effect on profit after tax of listed agricultural companies in Nigeria. The study thus recommends that proper estimates should be made accurately in order to capture actual bad debt which serves as incurred burden on the company so as to make plans that will shield such burden against the profit of the companies. Also, Companies should be more focused on their estimates on employees' benefits since it signals employee motivation. This will enable companies make right welfare policies with regards to estimates made on employee benefits.

Keywords: Accounting estimates, profit after tax provision for bad debt, provision for employee benefits

INTRODUCTION

It is generally believed that financial reports are meant to provide information for the evaluation of an entity's "financial health," which is needed by different users to inform sound economic decisions- making. Financial reports are essentially stewardship reports prepared by management, and aimed at depicting the financial status of the entity in terms of performance, financial position, and changes in financial position. Abubakar and Olowe (2019) argued that financial statements are reports showing the financial status and operational results of business entities. In particular, the International Accounting Standards Board's Conceptual Framework for the preparation and presentation of financial statements posits that the primary objective of financial reporting is to make available, financial information useful to financial statement users in making financial decisions. Studies on determinants of companies' decisions suggests that financial reports provide quantitative sensitivity disclosures about accounting estimates "material" and "highly uncertain" accounts requiring judgment (SEC 2002; SEC 2003). Accounting estimates comprise a large and growing component of financial statements, making the dividing line between fact and conjecture largely unknown to investors (Lev et al., 2010).

Due to the Eron case and capital market inefficiencies, investors were led by estimates-based accounting information to misallocate resources which resulted to market failures and loss of

investment on the part of shareholders. As a result, Security and Exchange Commissions all over the world mandate companies to provide quantitative accounting estimate information so as to make available, material information to be used by investors for more valuable investment decision. Glendening (2014) lend credence to this by hinting that adequate accounting estimate reporting informs investors about the reliability of accounting estimates which increases the value relevance of reported financial figures.

The common accounting estimates seen in accounting reports include defined-benefit pension plans, provision for bad debt (PBD), sales estimates and provision for employee benefits (PEB) (Cassell et al., 2013). Though management has ultimate responsibility for financial reporting and judgement on provision/estimates, stakeholders of companies are concerned about the faithfulness of such estimates reported. Thus, auditors and the audit committees are given oversight responsibilities to ascertain the true position and reliability of such estimates because such estimates consequently affect the profitability of companies (Cohen et al., 2004). Thus, this study sought to examine the effects of accounting estimates on profitability of listed agricultural companies in Nigeria. The study employed PBD and PEB as dimensions of accounting estimates and used profit after tax (PAT) as a proxy of profitability. The study therefore, formulates the following hypotheses:

H₀₁: PBD has no significant effect on PAT of listed agricultural companies in Nigeria.

H₀₂: PEB has no significant effect on PAT of listed agricultural companies in Nigeria.

LITERATURE REVIEW

Concept of Accounting Estimates

The history of a business may show that a portion of receivable balances is not recovered due to unforeseen circumstances. Therefore, it may be prudent to create estimates of doubtful debts in addition to other specific estimates (Wood & Sangster, 2009). These estimates may be calculated on the basis of past experience concerning recoverability of debts. However, creating a general provision has been on the decline after revisions in the International Financial Reporting Standards (IFRS). Specifically, International Accounting Standards (IAS) 39 prohibits creation of general provisions on the basis of past experience due to the subjectivity involved in creating such estimates. Instead, reporting entities are required to carry out impairment review to determine the recoverability of the receivables and any associated allowance.

Bawa et al. (2018) note that “accurately evaluating credit risks posed by financial institutions’ loan granting decisions cannot be underestimated” in lieu of the large credit defaults in recent years. Also, Bawa et al. (2018) notes that credit-recording methods are not new phenomena. They have been used for decades to group customers into two categories: good credit and bad credit. Credit worthy or good credit customers are likely to repay their debt whereas bad credit customers are likely to default. A proper bad debt accounting entry for debtors can provide a good measurement for solving debts related problems, However, every interested business entity must have seen the warning sign in the year 2000, regarding debts.

Zhang (2012) verified the implications of the rapid rate of growth in consumer debt and attributed it to aggressive and overly generous credit granting policies amongst others; and called for banks and companies to be cautious about how they handle debts granting. Walther (1997) opine that many borrowers are attracted by the “massive inflows of foreign capital through the U.S. capital

market depressed loan rates that contributed to credit expansion by making additional loan funds available at relatively lower costs. Therefore, paying close attention to the efficiency of recording and follow up of receivables (debts) is worthwhile.

Furthermore, Li (2008) discovered that default receivables (debts) recording and verification has gained considerable attention. Banks are called upon to be efficient in accounting because it helps them develop the risk of default hence; banking authorities can determine the overall strength of the banking system and its ability to handle adverse debt default conditions. The best method for analyzing and recording bad debt hence making an estimate for debts that are likely to go bad will depend not only on the data structure, the characteristics of the data but more largely on the ability of the persons handling the task to classify the data, and lastly on the objectives of classification.

According to the generally Accepted Accounting Principles (GAAP), bad debt can be estimated in three ways. The first method is an Income Statement approach where a bank or company makes an estimate of the percentage of its credit sales, which will ultimately prove uncollectible. In the second and third methods, the statement of financial position approaches is used (International Financial Reporting Standards Foundation [IFRSF], 2015). Unlike the Income Statement approach, which only records an expense without consideration of existing allowance for bad debts, the statement of financial position approach adjusts the amount estimated to be uncollectible based on the amount of bad debt expense. The uncollectible amount can be based on aging of receivables or forecast of the amount of overall accounts receivable, which are expected to be uncollectible. In most cases, there is little or no evidence to determine the details of how each and every individual company arrives at its estimate for bad debts. What is important is that the amount should be based on GAAP and also that the amount will involve estimates and subjective judgment.

Profitability

Profitability measures a company's financial performance in terms of the profits made and appreciation in value as shown by increase in the worth of the entity (Bawa et al., 2018). Indrayani (2018) opined that financial performance is the level of performance of a business over a time period, expressed in the form of profits made or losses incurred during that period of time, as well the availability of cash flows. The measure of profitability includes, but not limited to profit after tax (PAT), return on assets and return on equity. But this study is limited to PAT of companies, as it is an amount in value that corresponds to amount value of estimates made unlike other forms of profitability which are ratios.

PAT indicates a lot about the overall financial health of the enterprises. It specifically reveals how much money is generated after tax and expenses of the company. According to Belsoi et al. (2017), PAT is a financial measure used to evaluate a company's financial performance; by revealing the proportion of profit from the financial operations of the entity during the period under review (usually one accounting year).

Theoretical Framework

This study is anchored on the signaling theory (Merton et al., 1985) which holds that agents send information to principals in order to create credible relationship. Managers have more firsthand information about the company than investors do, but they are always reluctant to provide transparent information to shareholders. So, the estimates reported by managers might be window dressed in such a way that it is overstated and affects the actual financial performance of a

company. Sometimes, the reported estimates serve as information, and is used as a signal for the company's future projection proficiently.

Empirical Review

Anichebe and Nangih (2021) assessed the effects of accounting estimates on information misstatements of financial reports of Small and Medium Enterprises in Nigeria. The study examined the impacts of depreciation estimates, impairment loss, inventory estimates, goodwill estimates and estimated useful life of assets on financial reports. The study found that wrong estimates may lead to, but are not the only cause of misstatements in financial reports. Similarly, Olaoye and Adeniyi (2020) examined the influence of accounting manipulations on financial performance of listed companies in Nigeria. They specifically examined the causes of accounting discretions and the influence of accounting manipulations on financial performance of companies. The study adopted a descriptive research design and collected data through survey. Descriptive statistical tools and Ordinary Least Squares regression were employed to analyze data. The study found that accounting manipulations negatively influence performance of companies sampled; and recommends that stakeholders should institute effective policies and stringent penalties for violators, to check incidences of accounting manipulations among Nigerian companies.

Relatedly, Lugovsky and Kuter (2020) investigated the effect of accounting policies and accounting estimates and its role in the preparation of fair financial statements in digital economy in Russia. The study adopted an exploratory research design and considered the main problems and limitations of reliable preparation and presentation of reporting financial information. The study concluded that the degree or choice of freedom provided by standard setters to preparers has serious influence on reporting data presented to users. It added that the reliability of financial reports is influenced by other factors, including but not limited to the choice of accounting, depreciation policies, legality of transactions and changes in accounting estimates.

Abubakar and Olowe (2019) assessed effects of trade receivables on performance of selected listed companies in Nigeria. The study surveyed 10 companies listed on the Nigerian stock exchange from 2012 to 2018; and employed multiple regression method to test the formulated hypotheses. The dimensions for accounts receivable were accounts receivable ratio, debt ratio and revenue growth whereas company performance was measured using return on equity. The result of the analysis showed that accounts receivable ratio, debt ratio and revenue growth had a positive significant influence on company performance.

Also, Bawa et al. (2018) studied the influence of inventory management on performance of quoted manufacturing companies in Ghana, using secondary data. The sample was 140 company-year observations drawn from 14 manufacturing companies listed on the Ghana Stock Exchange (GSE) for a 10-year period, 2007-2016. Data collected were tested using Pearson correlation and multiple regression analysis. The findings showed that inventory management had no effect on company's performance. The result showed that the independent variable was insignificantly related to dependent variable for the period.

Furthermore, Indrayani (2018) examined fixed assets depreciation method and company profits in Indonesia. The study used descriptive research design and used descriptive statistics to analyze data. The variables for the study were straight line method, double declining method and profit for the year. It was concluded that the depreciation method and policy had significant effect on the

company profit. In addition, Nwaorgu (2017) examined the effect of accounting estimates on profitability of listed agricultural companies in Nigeria. Using regression analysis, the study found no significant effect of PBD on profitability of companies but found significant effect of PEB on profitability of companies.

METHODOLOGY

The study adopted ex-post facto research design due to the fact that, the audited financial statements of listed agricultural companies are already in existence. The study specifically restricted itself to listed agricultural companies, so as to be able look at companies with future projection proficiency in line with the signaling theory and as a result of the federal government's economic diversification plans. The study adopts the model of Nwaorgu (2017). The justification for model adoption is premised on the fact that, both PEB and PBD are proven estimates used by agricultural companies in Nigeria. The study intends to improve upon the earlier model used by Nwaorgu (2017) since it contained only 28 observations which is not suitable for an ordinary least square regression (See Gujarati & Sangeetha, 2007). The data used in the study was collected from 4 out of 5 listed agricultural companies from 2011 – 2020. This is to enable the study meet the recommended >30 observations by Gujarati and Sangeetha (2007) as it will present a more robust result than the result earlier obtained in the work of Nwaorgu (2017). 4 companies (sample) are chosen judgmentally because one company (Ellalakes PLC) does not have complete data for the time frame stipulated. The multiple regression technique using ordinary least square regression (OLS) method is adopted to test the influence of the independent variable on the dependent variable. The study is specified as follows:

$$PAT_{ft} = \alpha + \beta_1 PBD_{ft} + \beta_2 PEB_{ft} + U_{ft}$$

Where:

α = Constant

PAT = Profit after tax proxy by log of profit after tax.

PBD = Provision for liabilities/provision for bad debt (Log of total PBD).

PEB = Provision for employee benefits (Log of total PEB).

ft = **Company** (i) at time (t)

U = Error term used in the model.

$\beta_1 - \beta_2$ = Beta coefficient of the independent variables.

Decision Rule

Accept the null hypothesis if the calculated value is greater than the significant level of 0.05.

DATA PRESENTATION AND ANALYSIS

Table 1: Descriptive Statistics

	Descriptive Statistics							
	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Std. Error
PROF	40	4.80	7.14	5.9056	.06790	.42941	.000	.374
PBD	40	3.79	6.18	5.1928	.12256	.77511	-.473	.374
PEB	40	3.88	7.00	5.9260	.09777	.61838	-1.007	.374
Valid N (listwise)	40							

Source: Authors computation (2022)

Table 1 presents the descriptive statistics of all the variables. N (40) represents the number of observations. PAT reflects a mean of 5.9056 and a standard deviation of 0.42941, with a minimum and maximum value of 4.80 and 7.14 respectively. PBD has a mean of 5.1928 with a deviation of 0.77511. PBD also has a minimum and maximum value of 3.79 and 6.18 respectively. The result also reveal that PEB has a minimum and maximum value of 3.88 and 7.00 respectively and reflects a mean of 5.9260 with a deviation of 0.61838. The result of the descriptive statistics indicates that all the variables are normalized with Skewness values between -2.00 and +2.00. This indicates the absence of extreme data capable of distorting the outcome of the regression result.

Regression of the estimated model summary

To enable the study rely on the outcome of the regression result, further data validity check was done, using the Variance Inflation Factor (VIF), Tolerance level and Durbin Watson (DW) statistics. The VIF statistics for all the independent variables stood at 1.112 while the tolerance level statistics stood at 0.900. This indicates the absence of multicollinearity problems among the variables under investigation (Kouisoyiannis, 1977; Gujarati & Sangeetha, 2007). Also, the DW statistics result of 1.234 further substantiates the absence of autocorrelation. This shows the appropriateness of fitting of the model of the study with the two independent variables.

Table 2: Model Summary

Model Summary										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change F	df1	df2	Sig. F Change	Durbin-Watson
1	.159 ^a	.025	-.027	.43523	.025	.481	2	37	.622	1.234
a. Predictors: (Constant), PEB, PBD										
b. Dependent Variable: PAT										

Source: Authors computation (2022)

Table provides an R value of 0.159, which shows that, there is a very weak of PEB and PBD on PAT at 15.9%. Also the R² stood at 0.025. The R² otherwise known as the coefficient of determination shows the percentage of total variation in PAT that can be explained by PBD and PEB. Thus the R² value of 0.025 indicates that 2.5% of variation in PAT of listed agricultural companies can be explained by a variation in PEB and PBD, while the remaining 97.5% (i.e. 100-R²) could be accounted by other variables not included in this model.

The adjusted R² of -0.027 indicates that if other factors are considered for this study, this result will deviate from it by only 0.052 (i.e. 0.025 – -0.027). This result shows that there will be a deviation from the result examined by 5.2%. Table 2 further shows the significant change of 0.622 with a variation of change at 2.5% indicate that the set of PBD and PEB a whole, contribute insignificantly to variance in PAT.

Table 3: Coefficients

Coefficients table ^a							
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	5.442	.723		7.524	.000		
1 PBD	-.042	.095	-.076	-.447	.658	.900	1.112
PEB	.115	.119	.166	.970	.338	.900	1.112

a. Dependent Variable: PAT

Source: Authors computation 2022

The regression result as presented in the coefficient table above to determine the effect of PBD and PEB on PAT shows that when the independent variables are held stationary; the PAT variable is estimated at 5.442. This simply implies that when all variables are held constant, there will be increase in the PAT of listed agricultural companies up to the tune of 5.442 units occasioned by factors not incorporated in this study. Thus, a unit increase in PBD will lead to decrease in the PAT by 7.6% but a unit increase in PEB will lead to increase in PAT by 16.6%.

Test of Research Hypotheses

H₀₁: PBD has no significant effect on PAT of listed agricultural companies in Nigeria.

Given that the significant level is 0.05 and the calculated value for PBD (0.658) is greater than the significant level, the study accept the null hypothesis and reject the alternative hypothesis. Thus, PBD has no significant effect on PAT of listed agricultural companies in Nigeria.

H₀₂: PEB has no significant effect on PAT of listed agricultural companies in Nigeria.

Given that the significant level is 0.05 and the calculated value for PEB (0.338) is greater than the significant level, the study accepts the null hypothesis and reject the alternative hypothesis. Thus, PEB has no significant effect on PAT of listed agricultural companies in Nigeria.

In view of the results of H₀₁ and H₀₂, and the results on Table 2 which reveals that, the overall significance value for F-Statistics of the model is 0.622 as against the accepted significance probability level of 0.05. We infer that accounting estimates have no significant effect on PAT of listed agricultural companies in Nigeria.

CONCLUSION AND RECOMMENDATIONS

The following conclusions becomes pertinent as a result of the findings above. The study concludes that, accounting estimate has 2.5% effect on PAT of listed agricultural companies in Nigeria which is insignificant. Specifically, PBD has a negative insignificant effect on PAT of listed agricultural companies in Nigeria. Furthermore, PEB has positive effect but an insignificant effect on PAT of listed agricultural companies in Nigeria. In consonance with the conclusion reached, the study recommends that proper estimates should be made accurately in other to capture actual bad debt which serves as incurred burden on the company so as to make adequate plans that will shield such burden against profits of agricultural companies; and that agricultural companies should be more focused on their estimates on employees benefits since it signals employee motivation. This will enable the companies make employee-friendly policies that cater for their welfare based on estimates made on employee benefits.

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