Effect of Accounting Information on Investment in Nigerian Poultry Agricultural Sector

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Abstract:
The purpose of this study was to establish the effect of accounting information on investment in Nigerian Poultry Agricultural Sector. Specifically the study investigated on the effects of profitability, gearing ratio and growth opportunity on investment in Nigerian agricultural sector. This study adopted a descriptive design which is described as a method of collecting information by interviewing or administering a questionnaire to a sample of individuals. The instrument of data collection for this research was a secondary guide as the study used secondary data. The study targeted all the investors in the industry. The sample of this study is 68 investors because the target population is infinite. Descriptive statistics such as mode, median, mean, standard deviation, etc were used to perform data analysis. These measures were calculated using Statistical Package for the Social Sciences (SPPS 20) software. SPSS tool (Statistical Package for the Social Sciences) was used to organize and analyze data. The study findings indicated that there was increase in number of investments in agricultural sector in Nigeria for the last three years. The results indicate that the variables; profitability, gearing ratio and growth opportunity were satisfactory in explaining investment. This conclusion is supported by the R square of 0.885. This means that the combined effect of the predictor variables (profitability, gearing ratio and growth opportunity) explains 88.5% of the variations in investment in agricultural sector. The results reveal that profitability, gearing ratio and growth opportunity are statistically significant in explaining investment in agricultural sector in Nigeria.

Key Words: Accounting information, Investment, Gearing Ratio, Opportunity

BACKGROUND AND RESEARCH PROBLEM

Accounting provides a vital service to broad and diverse users. Investors use financial accounting information for investment decisions; government agencies need it particularly for tax purposes while regulatory agencies use it to determine whether existing statutory pronouncements are complied with, among others (Kajola and Adedeji, 1999). According to Meyer (2007), “accounting plays a significant role within the concept of generating and communicating wealth of companies”. Financial statements still remain the most important source of externally feasible information on companies. Nevertheless, in the wake of the recent accounting scandals and economic meltdown where billions of naira of investment and retirement wealth have disappeared, the very integrity and survivability of the value relevance of this service has been called to question.

Accounting is an information system that is used for communication purposes and for the purpose of aiding decision making. According to Bello (2009), accounting is believed to be an information infrastructure used by economic units to achieve various economic decisions. Corporate organizations use accounting to communicate to all stakeholders about their operating performance and position at a particular time period. The process through which companies communicate to the public about their operations is called financial reporting. Corporate financial reporting is the medium through which companies communicate to the external society about their operational performance in terms of profitability, efficiency, and responsibility (Abubakar, 2010; Nzekwu, 2009). Financial reporting of a corporate entity constitutes a combination of qualitative and quantitative financial reports, which are referred to as a firm’s bill of health. Various stakeholders take their decisions relative to a firm’s performance and position based on the accounting information supplied by it in its annual financial reports and accounts.
Financial reporting by companies is effected via the preparation and publication of financial statements. These financial statements are required to exhibit certain degree of quality in terms of their information contents. Mines & Wahlen (2006) and Belkaoui (2002) opined that accounting information contained in the financial reports should possess certain qualities as relevance, verifiability, understandability, neutrality, timeliness, comparability, and completeness. When the financial reports disclose quality accounting information, according to Benston (2007), the decision of the users (investors, management, government, employees, creditors, analysts) of the reports could as well be qualitative and informed. The users of the financial reports use the reports frequently in passing judgments on the viability of a company. According to Ghofar & Saraswati (2008), investors in many cases are too dependent on the quality of accounting disclosure. However, the quality of information disclosure in the financial reports of companies has been an area of debate by both accounting theoreticians and those in practice (Van Beest, Braam & Boelens, 2009).

A more recent debate in the financial accounting literature regards the relevance of accounting information for firms of the so-called New Economy (Lopes, 2001). Due to the failure of traditional accounting measures to recognize and measure the intangible assets, it is argued that accounting will lose relevance for valuation and users’ investment decision purposes (Barth, Landsman & Lang, 2008; Iu & Clowes, 2004). While there have been a number of studies on this topic in developed countries (Collins, Maydew and Weiss, 1997; Beisland, Hamberg and Navak, 2010), one is not aware of any expansive study that has explored the subject of value relevance of accounting information in Nigeria. It has not been comprehensively researched primarily because of problems with data availability (Negah 2008). Literature on capital research in accounting in Nigeria is so scanty and insufficient that it is difficult to determine value relevance of accounting information in this country.

In Nigeria, fairly related literature are on accounting systems (Jagetia and Nwadike, 1983); corporate financial reporting (Wallace, 1988); Weak Form Efficiency of the Nigerian Stock Market: Further Evidence (Olowe, 1999); communications in accounting: problems and solutions (Adeyemi and Ogundele, 2003); relevance of financial statement to stakeholders’ investment decisions (Kantude, 2005); determinants of upward and downward trending of the stock market prices (Nwude, 2010). The above mentioned studies provide no significant validity of existing empirical evidence of value relevance of accounting information in the developing Nigerian Stock Market. As a result, the study attempts to fill the gap in literature by investigating the effect of accounting information to capture or summarize information that affects investment in Nigerian agricultural sector.

**Objectives**

The purpose of this study was to establish the effect of accounting information on investment in Nigerian Poultry Agricultural Sector.

The specific objectives that guided the study are:

i. To establish the extent to which profitability affects investment in Nigeria agricultural sector

ii. To establish the extent to which gearing ratio affects investment in Nigeria agricultural sector

iii. To establish the extent to which growth opportunity affects investment in Nigeria agricultural sector

**THEORETICAL FRAMEWORK**

**Signaling Theory**

Aduda and Chemarum (2010) state that the signaling model was first proposed by Brennan and Copeland in 1988. According to the signaling theory, financial information acted as a means of passing information from managers to stockholders. The signaling model of stock splits showed that stock splits served as costly signals of managers’ private information because trading costs increased as stock prices decreased. They built up the hypothesis from Fama et al. (1969), who suggested that by announcing splits, a company could reduce any information asymmetries that might have existed between stockholders and management. The signaling hypothesis suggests that an announcement of a stock dividend conveys new information to the market (Pathirawasam, 2009). Pathirawasam examines Foster and Vickrey’s 1978 paper of daily returns around announcement dates. The primary motive of the paper was to determine whether stock dividend announcements caused investors to change their expectations concerning future firm prospects. They analyzed daily market model residuals around announcement day for 82 stock dividend announcements over the period 1972–74. The sample was controlled for news announcements and cash dividend announcements within three days of the declaration date. They hypothesized that the mean of the declaration day residuals would be greater than zero due to information content of stock dividend and their results are in-line with the hypothesis.

Arthurs, Busenitz, Hoskisson and Johnson (2009) discovered that signals have the effect of sensitizing the market and therefore indirectly affect consumer preference. The findings of their study on signaling and IPOs supported the signaling theory and can be used to further explain the signaling theory with regard to bonus issues and stock splits. During the announcement of bonus shares and stock splits, the signals before the announcement
allow for the sensitization of the shareholders as well as other consumers. Bonus splits and stock splits therefore act as a signal that the company is doing well and has the potential to make huge profit mark-ups.

Dhar and Chhaochharia (2008) postulate that by using the signaling theory, managers issue bonus shares and stock splits, especially in undervalued firms, so as to express confidence in a company and lead to an increase in the number of shareholders in the company. In this way, the announcement of a bonus share is a signal to the profitability of a company and therefore an attractive investment to shareholders. Mishra (2005) opines that the announcement of bonus shares is a signalling effect because it reflects on the good standing of a company. To this effect, Mishra notes that there are significant positive abnormal returns for a five-day period prior to the announcement of a bonus issue.

Financial Distress Theory

Financial distress can be subdivided into four sub-intervals: deterioration of performance, failure, insolvency, and default. Whereas deterioration and failure affect the profitability of the company, insolvency and default are rooted in its liquidity. Theoretically, the outcome of each interval can be positive, implying that the company breaks the downward trend, or negative indicating the continuing deterioration of the firm value and a movement downwards from one sub-interval of the spiral to another. In many real cases, when entering financial distress, the company traverses all the stages of decline (Mueller, 1986).

Financial distress is characterized by a sharp decline in the firm’s performance and value (Opler & Titman, 1994). This part of the overall process has two important characteristics: moving down the spiral from one phase to another the sharp decline accelerates, whereas the length of each stage becomes shorter and shorter. Obviously, this decline of performance can continue longer than the economic failure of the company. The length of insolvency depends on the maturity structure of the firm’s debt, whereas default is dependent on the date of maturity followed by renegotiation and turnaround or liquidation and is, therefore, the shortest stage of financial distress. The biggest challenge in financial distress is to recognize adverse processes as early as possible in order to gain more time for response. The later financial distress is anticipated, the more time pressure and the more questionable is the success of counter measures (Opler & Titman, 1994).

The Financial Management of the Small Enterprise conducted by Ismail (2009) emphasized the common belief that better financial information means better control and higher chance of success. Accounting information is information provided by accountants and accounting systems. This information is usually presented in financial statements such as the income statement and the balance sheet. It also includes any financial ratios extracted from these financial statements. Accounting systems are responsible for analyzing and monitoring the financial condition of firms, preparation of documents necessary for tax purposes, providing information to support the many other organizational functions such as production, marketing, human resource management, and strategic planning. Without such a system it will be very difficult for SMEs to determine performance, identify customer and supplier account balances and forecast future performance of the organization. The primary purpose of an accounting information system (AIS) is the collection and recording of data and information regarding events that have an economic impact upon organizations and the maintenance, processing and communication of such information to internal and external stakeholders (Stefanou, 2006).

Woodruff (2001) conducted a study titled: The Systematic Access for Analyzing the Market Opportunities, aimed to illustrate the importance of the product demand analysis, being the cornerstone of the economic activity in defining and identifying the investment opportunities, in order to assist the investor make the final estimation of the profits. The researchers presented his study theoretically with some statistical entrances with making a field study. The study concluded many results most important was: not to invest in an unprofitable market having no ability to purchase even if the product was desirable.

Helfert & Erich (2001) where of the view that financial statements provide an overview of a business or person’s financial condition in both short and long term. All the relevant financial information of a business enterprise, presented in a structured manner and in a form easy to understand. The four basic financial statements include: Balance sheet; also referred to as statement of financial position or condition, reports on a company’s assets, liabilities and ownership equity at a given point in time. Income statement; income statement also referred as profit and loss statement, earnings statement, operating statement or statement of operation is a company’s financial statement that indicates how the revenue is transformed into net income. The purpose of the statement is to show managers and investors whether the company made or a lot of money during the period being reported. (Angelico & Nikbakht, 2000) Profit& Loss account; provide information on the operation of the organization. These include sale and the various expenses incurred during the processing state. (Kundabanyanga, 2004) State of retained earnings; explains the changes in the company earnings over the reporting period. Statements reports on a company’s cash flow activities, particularly it’s operating, investing and financing activities. (International accounting standards board, 2007).
Several studies suggest that high-quality financial reporting, through its role in governance, can reduce over-investment. For example, Lambert et al. (2007) argue that high-quality financial reporting reduces managers’ ability to appropriate assets to themselves and improves the coordination between managers and investors with respect to capital investment decisions. Bushman and Smith (2001) suggest that high-quality financial reporting increases investment efficiency by encouraging investments in high return projects, by reducing investments in low-return projects, and by reducing the expropriation of investors’ wealth. In this regard, Biddle et al. (2009) provide empirical evidence that high-quality financial reporting among firms reporting under U.S. GAAP increases investment efficiency. Specifically, they find that high-quality financial reporting is associated with lower investment among firms that are more likely to overinvest. For a sample of private firms in emerging markets over the period 2002-2005, Chen et al. (2011b) also find that financial reporting quality positively affects investment efficiency. Collectively, the studies noted above suggest that an accounting choice (e.g., historical cost accounting with strict impairment rules) characterized by more timely loss recognition will reduce over-investment.

**METHODOLOGY**

This study adopted a descriptive design which is described as a method of collecting information by interviewing or administering a questionnaire to a sample of individuals. This research design was appropriate for this study as it answers research questions who, what, where, when and how is the problem. This study used mixed sampling techniques, specifically both stratified random sampling and simple random sampling. Stratified random sampling was preferred because; the population to be sampled was divided into homogenous groups based on characteristics considered important to the indicators being measured. This method also helped to achieve gain in precision, flexible in the choice of the sample design for different strata and finally one is able to get estimates of each stratum in addition to the population estimate (Kothari, 2004).

The instrument of data collection for this research was a secondary guide as the study used secondary data. The study targeted all the investors in the industry. The choice of all investors was to act as a control for the response of the respondents and because of their perceived lack of bias, impartiality in answering the study questions. In addition, they were more preferred than general employees since general employees are perceived to be unaware of the pertinent issues affecting the investment industry.

The sample of this study is 68 investors because the target population is infinite. The sample of 68 was generated using Fisher et al. formula.

\[ n = p(1 - p) \left( \frac{z}{d} \right)^2 \]

Where:
- \( n \) = sample size;
- \( z \) = the table value for the level of confidence, for instance;
  - 95% level of confidence =1.96,
  - 90% level of confidence =1.645,
  - 99% level of confidence=2.576
- \( d \) = margin of error;
- \( p \) = proportion to be estimated, Fisher et al. (1993) recommends that if you don’t know the value of \( p \) then you should assume \( p=0.5 \)

Therefore the sample size for the study is 68 investors.

Descriptive statistics such as mode, median, mean, standard deviation, etc were used to perform data analysis. These measures were calculated using Statistical Package for the Social Sciences (SPSS 20) software. SPSS tool (Statistical Package for the Social Sciences) was used to organise and analyse data. This is because it is user friendly and gives all the possible analysis. The data was presented in form of tables, pie charts, column and bar graphs.

The relationships in the research questions were determined using the following Ordinary Least Squares (OLS) regression model prescribed by Faraway (2002), Cohen, West & Aiken, (2003). The use of ordinary Least Squares Regression is preferred due to its ability to show whether there is appositive or a negative relationship between independent and dependent variables (Castillo, 2009). In addition, OLS is useful in showing linear elasticity/sensitivity between independent and dependent variables (Cohen, West & Aiken, (2003). For instance, the current study would like to know the percentage by which responses on accounting information increases or decreases when responses on profitability, gearing ratios and growth opportunities change by 1 percent. Furthermore, OLS was useful in showing whether the identified linear relationship is significant or not.
Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e

Where:

i. \ Y = the value of the dependent variable
ii. \ \{ \beta_i; \ i=1,2,3 \} = The coefficients representing the various independent variables.
iii. \ \{ X_i; \ i=1,2,3 \} = Values of the various independent (covariates) variables.
iv. \ e is the error term which is assumed to be normally distributed with mean zero and constant variance.

Y = Investment
X_1 = profitability
X_2 = Gearing
X_3 = Growth opportunity

Investment will be measured by the capital expenditure invested in agricultural sector. Profitability will be measured by Return on Assets (ROA). Gearing ratio will be measured by total debt to Equity ratio to be obtained from financial statements. The growth opportunity of the firm will be measured by growth in sales as shown by the following formula:

Sales growth = sale in year t – sales in year t-1)/ sales in year t-1

RESULTS AND FINDINGS

The study findings indicated that there was increase in number of investments in agricultural sector in Nigeria for the last three years. Results in Figure 1 shows that there was a slight increase from 15.32 in 2010 to 15.62 in the year 2012.

![Figure 1: Trend Analysis for Investment of the Firm](image)

The study sought to find out extent to which profitability affects investment in Nigeria agricultural sector. Results in Figure 2 indicate that the trend for profitability for the last three years (2010 to 2012) has been increasing steadily. The rise in profitability implies that there are many investors investing in the agricultural sector in Nigeria.
The trend analysis for gearing ratio in the agricultural sector increased slightly in the years of study. In the year 2010 the ratio was at 4.86 and increased to 6.54 in 2011 and finally shot to 7.43 in the year 2012. The rise in the gearing ratios implies that more people are getting interested in investing in the agricultural sector hence the drastic change in the sector.

The trend in firm growth opportunity recorded an increase from year 2010 up to 2012. There was a slight increase in the year 2010 from 1.39 to 1.41 in 2011 and 1.44 in the year 2012. This changes and shift of the opportunity of the firm is as a result of changes in the opportunities being offered by the agricultural sector.
In order to establish the statistical significance of the independent variables on the dependent variable (investment) regression analysis was employed. The results indicate that the variables; profitability, gearing ratio and growth opportunity were satisfactory in explaining investment. This conclusion is supported by the R square of 0.885. This means that the combined effect of the predictor variables (profitability, gearing ratio and growth opportunity) explains 88.5% of the variations in investment in agricultural sector.

### Table 1: Model Summary

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>0.941</td>
</tr>
<tr>
<td>R Square</td>
<td>0.885</td>
</tr>
<tr>
<td>Std. Error of the Estimate</td>
<td>0.48597</td>
</tr>
</tbody>
</table>

Analysis of variance (ANOVA) on Table 2 shows that the combined effect of profitability, gearing ratio and growth opportunity was statistically significant in explaining changes in investments in agricultural sector in Nigeria. This is demonstrated by a p value of 0.000 which is less that the acceptance critical value of 0.05.

### Table 2: ANOVA

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>115.917</td>
<td>3</td>
<td>38.639</td>
<td>163.608</td>
<td>0.000</td>
</tr>
<tr>
<td>Residual</td>
<td>15.115</td>
<td>64</td>
<td>0.236</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>131.032</td>
<td>67</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3 displays the regression coefficients of the independent variables. The results reveal that profitability, gearing ratio and growth opportunity are statistically significant in explaining investment in agricultural sector in Nigeria.

### Table 3: Regression Coefficient

<table>
<thead>
<tr>
<th>Variable</th>
<th>Beta</th>
<th>Std. Error</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>13.998</td>
<td>0.102</td>
<td>137.518</td>
<td>0.000</td>
</tr>
<tr>
<td>ROA</td>
<td>0.594</td>
<td>0.237</td>
<td>2.51</td>
<td>0.015</td>
</tr>
<tr>
<td>Gearing ratio</td>
<td>0.13</td>
<td>0.03</td>
<td>4.378</td>
<td>0.000</td>
</tr>
<tr>
<td>Growth opportunity</td>
<td>0.582</td>
<td>0.173</td>
<td>3.354</td>
<td>0.001</td>
</tr>
</tbody>
</table>

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