FINANCIAL STATEMENTS ANALYSIS AND INVESTMENT DECISIONS IN NIGERIAN BANKS (A STUDY OF DIAMOND BANK PLC)

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Abstract
The annual financial report provided by the accounting system is considered the main source of information for investment decision making. It is therefore important for the banking sector to fully disclose matters concerning their operations. Hence, the validity and accuracy of the decisions depend on the proper analysis of financial statements. Investment decision makers rely on information obtained from financial statements to predict profit margins, Return on capital employed, return on investments, etc. Without financial statements, it will be difficult to determine the profit and evaluation of the performance of the banking sector and companies. It is necessary that Accountants take further steps in ensuring that the true and fair view of the actual worth of businesses are also incorporated in the financial statements published by them. This study aims at ascertaining the relevance of financial statement analysis on investment decisions in the Nigerian banking sector with emphasis on Diamond Bank Plc. The target population of the study is 150 respondents from Diamond bank main branch and sample size of 110 respondents was determined using Taro Yamane's formula. Stratified random sampling was used to determine the respondents. The study used both primary and secondary data, including interview and annual reports of Diamond Bank Plc. Data collected was analyzed using SPSS version 21. Data analysis involved statistical computations for averages, percentages, and correlation and regression analysis. The study established that financial statement analysis is very important for investment decision making. It is recommended that commercial banks devise a self-assessment form with benchmarks on the key areas of assessments to be codified within a document for clients to read and use it for self-assessment. From such assessment, banks can develop categories for customers, based on the investment decision making, the security expected and term of the investment. This would serve to minimize the time taken in investment decision analysis.

Keywords: Financial Statement Analysis, Investments Decision making, Trend Analysis Ratio analysis and Cost volume analysis.

A. Introduction
Investment decision making is a critical situation at any given time. Since good decisions will culminate into success and bad decisions may lead to crashing of an entity, it becomes an intrinsic value effort of the decision makers to be thorough in effectively analyzing the parameters for such decisions using financial statement analysis. The financial statement which contains the financial information of an organization is usually the basis of its financial planning analysis and decision making. This financial information is required in the prediction, comparison and evaluation of the organization's profit making ability amidst uncertainty as well as in financial and investment decision making. Financial statement analysis implies a process whereby information relating to the organization as a whole is evaluated based on strength, weakness, opportunities and threats (SWOT).

In Anaja and Onoja (2015), financial statement was defined according to Ohison (1999) as written reports that summarize the financial status of an organization for a stated period of time. This includes an income statement and balance sheet or statement of the financial position describing the flow of resources, profit and loss and the distribution or retention of profit. According to Companies and Allied Matters Decree (CAMA, 1990) and International Finance Reporting Standard (IFRS), the financial statement of any organization includes, statement of account policies, statement of financial positions (balance sheet), income statement (description of profit and loss), cash flow statement (reports on a company's cashflow activities, particularly its operating, investing and financing activities), statement of retained earnings, notes to the account, the auditor's and director's reports, a value added statement for the year, a five year financial summary, and the group financial statement in the case of a holding company.

The financial statement also comprises of statement of equity changes and are often complex and may include an extensive set of notes to the statement and explanation of financial policies and management discussion and analysis (IASB, 2007). These set of notes
typically describe each item on the balance sheet, income statement and cashflow statement in further detail and are considered an integral part of the financial statements.

The financial statement and associated notes are presented and reported critically for investment decision making by existing and prospective investors so as to earn optimal returns on their investments. This shows that financial statement methods in terms of information disclosure pattern, transparency, auditing, reporting standards, regulatory control and flexibility, corporate governance, and financial scandals have influence on investment decision making in any organization, especially in financial institutions with extensive range of investment activities that require comprehensive financial facts that can be obtained from a financial statement.

Financial statement analysis is an evaluative method of determining the past, current and projected performance of a company. Several techniques are commonly used as part of financial statement analysis including horizontal analysis, which compares two or more years of financial data in both Naira and percentage form; vertical analysis, where each category of accounts on the balance sheet is shown as a percentage of the total account; and ratio analysis, which calculates statistical relationships between data - sets.

Decision making process requires financial as well as non-financial information. The most important financial information needed in the process of business decision comes from accounting. To assist investors in making quality and precise investment decisions, both public and private organizations are under legal obligation to disclose financial information relating to their operations. In addition, they tend to retain existing investors and to attract potential ones through the publication of their financial statements where the capital stock of an organization is widely held and its affairs are of interest to general public relations (Amedu, 2008).

The perceived relevance of the financial statement are to provide information about the financial position, performance and changes in financial position of a firm that is useful to a wide range of users in making management and investment decisions. The various users of financial statements can be grouped into two broad divisions - internal and external users. The internal users are the Management team and employees while the external users include prospective investors, financial institutions, government regulatory agencies, media, trade creditors, education/ research institutions, customers, stock exchange, vendors and general public.

Financial statement are often prepared according to national standards, corporate governance, professional ethics, and code of ethics to avoid financial reporting fraud and scandals that might hinder effective decision making process by management and other users of the report. The purpose of ethics in financial accounting reporting with expected standards is to re-orientate corporate organization on the need to abide by a code of conduct that facilitates public confidence in their services (Okafor, 2006).

B. Statement of the Problem

In modern business environment, the survival of any firm depends on the strategic decisions made by its management. This is achieved through financial statements analysis, which is a big challenge to most countries like Nigeria that has shortage of professional Accountants and financial analysts.

The financial data obtained from financial statements must be analyzed to provide meaningful information for decision makers' use. Decisions without correct information may impede the growth of an organization. A sustained success will depend on how good decisions are made based on the proper analysis of financial statements.

In Nigeria, it has become common practice by financial institutions to adopt creative accounting in anticipation of sourcing for equity capital from the capital firms. Although this approach in financial reporting process often leads to overvaluation of assets and company's net worth in the views of prospective shareholders and other stakeholders, Okoye and Alao (2008) opined that "creative accounting is the transformation of financial accounting figures from what they actually are to what preparers desire by taking advantage of the existing rules and/or ignoring some or all of them".

Another perceived problem of financial statement disclosure is the non-compliance to
industry corporate governance, ethics, and regulatory standards which is prevalent in the financial institutions of Nigeria. Although several studies have been done on financial analysis in Nigeria, no work has been carried out on its relevance on investment decision making, especially in Diamond Bank Plc. Hence, this study aims at filling the gap by investigating the relevance of financial statement analysis on investment decisions in Diamond Bank Plc. This will be of immense benefit to banks for improving the banking performance, financial analysts, investors, companies and financial organizations and will also help them to appreciate the importance of sound financial statements in the provision of information necessary for decision making.

Objectives of the Study
The aim of this study is to investigate the relevance of financial statement analysis on investment decisions in Nigeria by assessing the effects of trend analysis, ratio analysis, and fund-flow analysis on investment decisions making in Diamond Bank Plc.

C. Conceptual Framework
Financial statements greatly influence investment decisions by informing investors about the investment project analysis, corporate financial positions, and corporate financial performances. Some important attributes of an ideal financial statement are; Relevance, Capable of verification, Uniformity, Consistency, Understandability, Completeness, Timeliness, and Accuracy.

![Conceptual Framework Diagram]


Trend Analysis
This deals with computing ratios and comparing them with previous year ratios of the same company to assess the performance of the company, Vestine et al, (2016). When more than two years are involved, index numbers are used instead of percentage changes. Essentially, one year is selected as the base year and is set to 100%. To measure real growth, the value of the index can be compared with either the consumer price index or any specific price index for the industry.

Ratios on Investment Decision Making
Investment decision of a firm is one which is expected to produce benefits to the firm over a long period of time and it can pass as both tangible and intangible assets (Porter, 1995).
Investment decisions require special attention because they influence the firm’s growth in the long-term and affect the risk of the firm. They involve commitment of large amount of funds. They are irreversible at substantial loss and are among the most difficult decisions to make. (Quirin, 1997). Investments are classified in many ways such as; Expansion of existing business, Expansion of new business and Replacement and modernization. Ratio analysis is the judgmental process which aims at evaluating the current and past financial positions and the results of an entity, the primary objectives of determining the best possible estimate about the future conditions and performances. The ratio analysis is divided into four major categories that address different areas of management concern. Viz; 1) Liquidity (a short run look at the firm’s ability to pay its bills as they become due); 2) Solvency (a longer run look at firm’s survival); 3) Profitability (relating profit — before or after tax to sales, total assets employed or owners investment); and 4) Efficiency (selected measures that measure how well the firm is employing its resources).

Profitability ratios measure how well a company is performing by analyzing how profit was earned relative to sales, total assets and net worth (Manasse, 2005). Profitability ratios are the most important even though liquidity ratios have been the longest used in history of financial analysis (Horrigan, 1968). Three key financial business ratios are used to measure a company’s profitability. Viz; Return on Sales (Profit Margin) Ratio, which measures the profits after taxes on the year’s sales. The higher this ratio, the better prepared the business is to handle down trends brought on by adverse conditions; Return on Assets (ROA) Ratio, which shows the after-tax earnings of assets and is a key indicator of a company’s profitability. It matches net profits after taxes with the assets used to earn such profits. A high percentage rate will tell you the company is well run and has a healthy return on assets; and Return on Net worth Ratio, which measures the ability of a company’s management to realize an adequate return on the capital invested by the owners in the company.

According to Saleemi (2009), efficiency ratios measure the quality of a business’ receivables and how efficiently it uses and controls its assets, how effectively the firm is paying suppliers, and whether the business is overtrading or under trading on its equity (using borrowed funds). Five key financial business ratios are used to measure a company’s efficiency. Viz; Collection Period Ratio, which is helpful in analyzing the collectability of accounts receivable, or how fast a business can increase its cash supply. Although businesses establish credit terms, they are not always observed by their customers, in analyzing a business, you must know the credit terms it offers before determining the quality of its receivables. While each industry has its own average collection period (number of days it takes to collect payments from customers), there are observers who feel that more than 10 to15 days over terms should be of concern;

Sales to Inventory Ratio, which provides a standard for comparing stock-to-sales ratios of a business with others in the same industry. When this ratio is high, it may indicate a situation where sales are being lost because the inventories are under-stocked and/or customers are buying elsewhere. If the ratio is too low, this may show that inventories are obsolete or stagnant; Assets to Sales Ratio, rates sales to the total investment that is used to generate those sales. An abnormally high percentage may indicate that a business is not being aggressive enough in its sales efforts, or that its assets are not being fully utilized. A low ratio may indicate that a business is selling more than can be safely covered by its assets; Sales to Net Working Capital Ratio, measures the number of times working capital turns over annually in relation to net sales. This ratio should be viewed in conjunction with the Assets to Sales Ratio. A high turnover rate can indicate over-trading (excessive sales volume in relation to the investment in the business) and also may indicate that the business relies extensively upon credit granted by suppliers or the bank as a substitute for an adequate margin of operating funds.

Accounts Payable to Sales Ratio measures how a company pays its suppliers in relation to the sales volume being transacted. A low percentage would indicate a healthy ratio, a high percentage may indicate that the business may be using suppliers to help finance operations.

D. Theoretical Framework

**Proprietary and residual equity theory**

Proprietary equity theorists such as Husband (1938) insisted that the accounting process of companies must be conducted from the shareholders’ perspective. Staubus (1952, 1959), developed the residual equity theory which considered that accounting must be done from the perspective of the residual equity holders. Under the proprietary view, transactions and events
are analyzed, recorded and accounted for as to their immediate effect on the proprietors. Financial statements are prepared from the viewpoint of the proprietors and are meant to measure and analyze their net worth expressed by the accounting equation:

(1)  **Assets - Liabilities - Equity, proprietorship or net worth**

In the proprietary view, the assets are considered the proprietors' assets, and the liabilities are the proprietors' liabilities. According to Newlove and Garner (1951), under proprietary theory' liabilities are negative assets minus negative properties, which must be sharply defined and separated in the accounting process." Revenues are increases in proprietorship and expenses are decreases. Net profits, "the excess of revenues over expenses accrues directly to the owners. It represents an increase in the wealth of the proprietors" (Hendriksen and VanBreda, 1992). Staubus (1959) narrowed the concept of owners to common stockholders and considered preference shareholders as liability holders and stressed the importance to investors of the estimation of future cash receipts. The accounting equation becomes:

(2)  **Assets - Specific Equities (Liabilities + Preferred Stock) = Residual Equity**

The proprietary approach represents an agency view of the company where the main responsibility of management is to manage the firm in the best interests of the owners. As the assets and liabilities are considered the owners' assets and liabilities, the maximization of profits equals maximization of the increase in the shareholders' net assets.

**Entity theory and enterprise or social theory**

Under the entity view, transactions are analyzed as to their effect on the accounting entity. Financial statements are prepared from the viewpoint of the entity. The income statement is meant to calculate income for distribution and analyze the company’s performance over a period, whereas the balance sheet serves to indicate the security or riskiness of the company’s financial position. Under the different varieties of entity theory, the accounting equation may take the following forms.

1)  $E \text{ assets} = Z \text{ liabilities}$ (Paton, 1922)
2)  $Z \text{ assets} = I \text{ equities}$ (Paton, 1922)
3)  $Z \text{ assets} = I \text{ equities} + Z \text{ liabilities}$ (Hendriksen and Van Breda, 1992).

The balance sheet is secondary to output, income and value added considerations. The balance sheet equation expressing the enterprise theory according to Meyer (1973) is: 4)  

\[ \text{Assets} = \text{Investors' input contributions}. \]

In the entity view as expressed in equation 3, the assets are considered the company's assets, and the liabilities are the company's liabilities. Alternatively, as expressed in equation 4, the assets are considered the company's assets and the equities are all the financial stakeholders’ equities. Entity theory views the entity as "having a separate existence - an arm's length relationship with its owners. The relation to the owners is regarded as not particularly different from that to the long-term creditors" (Lorig, 1964). Suojanen (1954)'s enterprise or social theory sees the large listed corporation as an institution with social responsibilities. Companies' actions affect many different stakeholders such as stockholders, creditors, customers, employees, the government as a taxing and regulatory authority and the public at large, (Hendriksen and Van Breda, 1992; Kam, 1990; Suojanen, 1954).

Suojanen traces this institutionalization of the large enterprise to the separation of management and ownership leading to increasingly large proportions of income being retained within the company to reduce the corporation’s dependence on external financing. Large corporations may decide to pay only 'conventionally adequate dividends' because this ties in with their survival and growth objectives, (Suojanen, 1958).

**DuPont Mean- Variance of Portfolio Investment Theory**

According to Adebimpe (2009), DuPont equation is an expression which breaks return on equity down into three parts. The name comes from the DuPont Corporation, which created and implemented this portfolio formula into their business operations in the 1920s. It was adopted from Markowitz Mean-Variance Portfolio theory which states that profit of a firm is a function of total sales, total assets, shareholder equity contribution and the liabilities (debts).
This formula is known by many other names, including DuPont analysis, DuPont identity, the DuPont model, the DuPont method, or the strategic profit model.

\[
\text{ROE} = \frac{\text{Net income}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Total assets}} \times \frac{\text{Average assets}}{\text{Shareholder equity}}
\]

In the DuPont equation, ROE is equal to profit margin multiplied by asset turnover multiplied by financial leverage. Under DuPont analysis, return on equity is equal to the profit margin multiplied by asset turnover multiplied by financial leverage. By splitting ROE (return on equity) into three parts, companies can more easily understand changes in their ROE over time. Components of the DuPont Equation: Profit Margin is a measure of profitability.

It is an indicator of a company's pricing strategies and how well the company controls operating costs. If the profit margin of a company increases, every sale will bring more money to a company's bottom line, resulting in a higher overall return on equity; Asset Turnover (Asset turnover is a financial ratio that measures how efficiently a company uses its assets to generate sales revenue or sales income for the company) and Financial Leverage (Financial leverage refers to the amount of liabilities/debts that a company utilizes to finance its operations, as compared with the amount of equity that the company utilizes).

**The Modern Portfolio Theory (MPT)**

Harry Markowitz (1991) developed a theory of "portfolio choice," which allows investors to analyze risk relative to their expected profit. Markowitz's theory is today known as the Modern Portfolio Theory (MPT). The MPT is a theory of investment which attempts to maximize portfolio expected profit for a given amount of portfolio risk, or equivalently minimize risk for a given level of expected profit, by carefully choosing the proportions of various assets. The Modern Portfolio Theory also called Portfolio Management Theory encourages asset diversification to hedge against market risk as well as risk that is unique to a specific company. It aids an investor to classify, estimate, and control both the kind and the amount of expected risk and profit. The fundamental concept behind the MPT is that assets in an investment portfolio should not be selected individually.

According to William, (2011), the best measure of a company is its profitability, which is necessary for its growth. If a company does not grow, its stock will trend downward. Increasing profits are the best indication that a company can pay dividends and that the share price will trend upward. Investors will put their money at a cheaper rate to a profitable company than to an unprofitable one; consequently, profitable companies can use leverage to increase stockholders' equity even more.

Michael (2013) on the degree of reliance of the published financial statements by corporate investors, survey research design was employed by which data were generated by means of questionnaire administered on one hundred and fifty corporate investors and senior management officials of the selected banks. The descriptive statistics and percentage analysis were used for the data analysis and the hypotheses were tested using test statistic. The results reveal that one of the primary responsibilities of management to the investors is to give a standardized financial statement evaluated and authenticated by a qualified auditor or financial experts. It also showed that investors do understand the financial statement well before making investment decisions. This indicated that investors depend heavily on the credibility of auditors/financial expert approval of financial statements in making investment decisions and as such published financial statements is very important in the investors' decision making. The study recommends that adequate care and due diligence should be maintained in preparing financial statements.

It is generally believed that published financial statements have failed in its responsibility to provide credible information for investors and other users (Duru, 2012).

Popoola et a/., (2014) investigated published financial statement as correlate of investment decision among commercial bank stakeholders in Nigeria. The findings of their study revealed that, balance sheet is negatively related with investment decision, while income statement, notes on the account, cash flow statement, value added statement and five-year financial summary are positively related with investment decision making. It also revealed that
components of published financial statement significantly predicted good investment decision making for commercial bank stakeholders.

Adebayo et al, (2013), examined the impact of accounting information system in assisting organizations in making sound and effective investment decisions. Regression analysis and Karl Pearson’s correlation showed that accounting information system is an indispensable tool in investment decision making in today’s turbulent world. They discovered from the test of hypotheses that financial statements are useful for forecasting company performance and are relied upon for investment decision making. It was concluded that financial statements play a vital role in investment decision making and recommends that no investment decision should be taken without consideration of company’s financial statements.

The above findings are from previous studies which indicate that financial statements play an important role in investment decision making. But they didn’t show how investors are going to obtain and understand those information contained in financial statements for proper investment decision.

Methodology

This study adopted descriptive survey design. The target population of this study comprised of 150 managers of Diamond Bank Plc, Abuja Headquarters including eight board of directors members, thirty senior managers, thirty-two middle managers and eighty lower managers stationed at Diamond Bank Plc, Abuja Headquarters. Managers were used because they are the ones taking major decisions in commercial banks. Stratified random sampling was used to determine the respondents. A sample size of 110 respondents (staff of Diamond Bank Plc, Abuja Headquarters) was determined from a total population of 150 individuals using the formula by Taro Yamane (1967).

Using the Yamane ‘s formula, the proportions of the sample size and the computed sample strata are shown in Table 1.

Table 1: Sampling Frame

<table>
<thead>
<tr>
<th>Area of Operation</th>
<th>Population</th>
<th>Proportions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Board of directors</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Senior Managers</td>
<td>30</td>
<td>16</td>
</tr>
<tr>
<td>Middle Managers</td>
<td>32</td>
<td>18</td>
</tr>
<tr>
<td>HQ Staff</td>
<td>80</td>
<td>70</td>
</tr>
<tr>
<td>Total</td>
<td>150</td>
<td>110</td>
</tr>
</tbody>
</table>

Research Findings and Discussions

Trends Analysis

This section basically needed to establish the effect of trend analysis on investment decisions making in Diamond Bank Plc. It was important in providing a clear understanding of the use of financial statement analysis in investment decision making.
### Table 2: Trend analysis of the Diamond Bank Plc

<table>
<thead>
<tr>
<th></th>
<th>BASE YEAR 2006-2007</th>
<th>Percentage (%) figures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deposits</td>
<td>100</td>
<td>123</td>
</tr>
<tr>
<td></td>
<td></td>
<td>170</td>
</tr>
<tr>
<td></td>
<td></td>
<td>185</td>
</tr>
<tr>
<td></td>
<td></td>
<td>214</td>
</tr>
<tr>
<td>Advances</td>
<td>100</td>
<td>124</td>
</tr>
<tr>
<td></td>
<td></td>
<td>161</td>
</tr>
<tr>
<td></td>
<td></td>
<td>187</td>
</tr>
<tr>
<td></td>
<td></td>
<td>224</td>
</tr>
<tr>
<td>Net profit</td>
<td>100</td>
<td>148</td>
</tr>
<tr>
<td></td>
<td></td>
<td>201</td>
</tr>
<tr>
<td></td>
<td></td>
<td>202</td>
</tr>
<tr>
<td></td>
<td></td>
<td>162</td>
</tr>
</tbody>
</table>

**Source:** Diamond Bank Plc.

From the data in the above Table 2, there is a continuous increase in deposits, there is an increase of advances and there is an increase in net profits till 2010 but there is a fall in 2011. The overall performance of the bank is satisfactory.

### Use of Financial Statement Information in Investment Decision Making

Stakeholders can use experience in dealing with the company to invest, interest and long term plans of the investor, management quality information, the constitution of the board of directors as well as the way management issues are done in an organization (Craig, 2009). The respondents were asked whether clients used financial statements in assessing Diamond bank financial position in a move to invest.

### Table 3: Respondents views on the use of financial statement analysis

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>84</td>
<td>90</td>
</tr>
<tr>
<td>No</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>93</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 3 shows the opinion of the respondents as to whether they use financial statements information in making any move to invest. The table shows that majority (about 90 percent) of the respondents do use financial information in a move to invest. Only very few of them (about 10 percent) do not use financials information.

The use of financial information is popular because, financial statements do contain valuable information that is key to determining profitable investments. Such information includes return on equity, return on assets, asset-liability ratios, liquidity ratios, debt to equity ratios etc. Such information shows clearly, whether the company is performing or not. Therefore, the study recommends that financial information is a main source of information to use in making any investment move.

### The Adequacy of Diamond Bank Financial Information for Use in Investment Decision Making

Table 3 shows the opinion of the respondents with regards to the adequacy of the financial information prepared by Diamond Bank Plc.

### Table 4: Respondents view on the Adequacy of Financial Statement Analysis in Investment Decision Making

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>64</td>
<td>68</td>
</tr>
<tr>
<td>No</td>
<td>29</td>
<td>32</td>
</tr>
<tr>
<td>Total</td>
<td>93</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 4 shows that many respondents (about 68 percent) are of the opinion that the Diamond Bank Plc financial information is adequate to use in the investment decision making process. A few of them (about 32 percent) stated that the Diamond Bank Plc financial
statements are not adequate to use in the process of investment decision making. There are many reasons why financial statements could be inadequate. Such reasons include, data manipulation, lack of skills in the preparation of financial statements and impairments i.e. refusal to report some key information as per IFRS guidelines. Financial statements are prepared as per the International Financial Reporting Standards (IFRS) guidelines. These guidelines dictate things to follow to ensure good quality of all reports (NBAA, 2010).

**Financial Statements that are used in Investment Decision Making**

Respondents were asked on the financial statements that are used during investment decision making. To establish the relationship between the rankings of financial statements to the investment decision, computation was made and to determine the explanatory variation in the investment decision resulting from the type of financial statement, its ordinal squared value was calculated. The measure of association was meant to indicate the size of effects on the investment decision based on either the investment being short or long term. The larger indicates greater influence of the financial statement in determining the term of the investment.

**Table 5: Measure of Association between the Ranking of Financial Statements and Investment Decision**

<table>
<thead>
<tr>
<th>Financial Statement</th>
<th>Eta</th>
<th>Eta squared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance Sheet</td>
<td>.495</td>
<td>.245</td>
</tr>
<tr>
<td>Cash Flow Statement</td>
<td>.395</td>
<td>.156</td>
</tr>
<tr>
<td>Projected Balance Sheet</td>
<td>.267</td>
<td>.071</td>
</tr>
<tr>
<td>Projected Income Statement</td>
<td>.130</td>
<td>.0169</td>
</tr>
<tr>
<td>Projected Cash Flow Statement</td>
<td>.500</td>
<td>.250</td>
</tr>
<tr>
<td>Income Statement</td>
<td>.573</td>
<td>.329</td>
</tr>
<tr>
<td>Other factors</td>
<td>.289</td>
<td>.084</td>
</tr>
</tbody>
</table>

Table 5 indicates that the current income statement has the greatest influence in determining the term of investment (eta = .573) and further indicates that the decision to grant a short or along term investment is influenced 32.9% (eta = .329) by the income statement produced by a borrower. Secondly, the projected cash flow statement is ranked second in influencing term of investment (eta = .500 and eta squared = .25) and finally in the balance sheet (eta = .495). The combined effect size of the balance sheet, income statement and the projected cash flow account for 82% of the influence on the terms of investment (combined eta squared = .82). Other factors account for less than 10% (eta = .084). However, they are also important in determining the term of the investment decision to a client.

The study concludes that, while there are other factors that determine the terms of investment decision, financial statements forwarded by the customer remain most important. And in their order of priority, the income statement is the most important, seconded by the projected cash flow statement and finally the balance sheet. Apparently, the banks are more interested in the future cash flow to determine the term of the investment and not the past cash flow statements which have a lower effect size in influencing term investment decisions. This finding is similar to *Hernandez and Perez (2004)* who found a preference by credit institutions for statements that are budgetary in nature, in credit appraisal.

Regression analysis was done to determine the effect of trend analysis on investment decision making in Diamond bank Plc and the following results were obtained. The results of the analysis are shown in Table 6.
A regression analysis was conducted to determine the significant relationship of trend analysis on investment decision making. Table 6 shows the coefficient of determination guidelines. Financial statements are prepared as per the International Financial Reporting Standards (IFRS) is 0.570; therefore, about 57.0% of the variation in the investment decision making is explained by trend analysis.

The regression equation appears to be relatively useful for making predictions since the value of Rsquared is slightly more than half.

Table 7 presents the results of the Analysis of Variance (ANOVA) on trend analysis versus investment decision making. The ANOVA results for regression coefficients indicate that the significance of the F is 0.00 which is less than 0.05. This indicates that the regression model statistically significantly predicts the outcome variable (meaning it is a good fit for the data). Therefore, there is a significant relationship between trend analysis and Investment decision making.

Table 8 shows that there is a positive relationship since the coefficient of trend analysis is 0.806 which is significantly greater than zero. The t statistics (7.095) is also greater than zero. This demonstrated that the trend analysis had a positive influence on investment decision making. Correlation coefficients show that trend analysis (Xj) is significant (p-value = 0.000.0) in investment decision making (Y). The fitted model from this analysis is shown below:

\[ Y = 0.609 + 0.806X \]

Ratio analysis

Ratio analysis in investment decision making was taken into consideration from two aspects; Understanding ratio analysis in investment decision making and ratio analysis as a tool of investment decision making.

Investment Ratios of Diamond Bank Plc.
The study sought the view of the respondents with regards to investors’ use of ratios on investment decision making. Ratios were calculated using equation in the theories.

**Table 9: Investment Ratios of Diamond Bank Plc.**

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earnings per Share</td>
<td>18.9</td>
<td>18.6</td>
<td>16.4</td>
<td>31.6</td>
<td>33.8</td>
</tr>
<tr>
<td>Dividend per Share</td>
<td>9.75</td>
<td>12.00</td>
<td>13.20</td>
<td>14.20</td>
<td>15.1</td>
</tr>
<tr>
<td>Dividend cover</td>
<td>1.30</td>
<td>1.63</td>
<td>1.67</td>
<td>1.68</td>
<td>1.75</td>
</tr>
</tbody>
</table>

*Source: Author’s calculations and Annual Financial Reports of Diamond Bank Plc.*

In the year 2007, Diamond Bank Plc experienced a sharp increase in earnings per share going up by 497%. This was caused by the change in profit for the financial year attributable to equity holders from N64m to N325m. Another positive shock occurred in 2010 when diluted earnings went up from N289m to N591m, primarily due to the revaluation of properties. It is important that assets are revaluated in order to keep the real value of assets on balance sheet. Earnings per share in 2011 increased by 7% to 33.8 percent, reflecting the improvement in the operating profit and the effect of the additional shares issued in 2009, more importantly due to the property profits.

Dividend cover needs to be sustainable in the future. The reason behind it is that if the dividend cover is too low, there is a possibility that the company will not be able to pay out the investors. If the investors are not satisfied, they may invest their money in another company. Dividend cover of Diamond Bank Plc says that earnings available for dividend cover the actual dividend by 1.58 times on average during the last 5 years.

**Ratio analysis as a tool for investment decision making**

Ratio analysis as a tool for investment decision making was analyzed and respondents’ opinions against the statements were recorded using the scale shown below: 1 - Strongly disagree; 2 - Disagree; 3 - Indifferent; 4 - Agree; 5 - Strongly agree.

**Table 10: Respondents views on Ratio Analysis in Investment Decision Making**
Analysis of the responses to the statement that strategic decision is made by the board of directors through the use of ratios analysis, revealed that 52% of the respondents strongly agreed, 25%, agreed, 13% were neutral, 10% disagreed while none strongly disagreed. This implies that Diamond Bank Plc strategic decisions are made by the board of directors through the use of ratios analysis.

Analysis of the responses to the statement that decisions of the management largely depend on use of ratios analysis, revealed that 39% of the respondents strongly agreed, 43%, agreed, 13% were neutral, 3% disagreed while 2% strongly disagreed. This means that there is a good link and decisions of the management largely depend on use of ratios analysis.

When the responses to the statement that decisions about the perception of investment is made through use of ratios analysis were analyzed, it was found that 43% of the respondents strongly agreed, 31%, agreed, 16% were neutral, 7% disagreed while 3% strongly disagreed. This shows that Diamond bank Plc decisions about the perception of investment is made through the use of ratios analysis.

Analysis of the responses to the statement that decisions as to whether the enterprise is making profits or not is made via use of ratios revealed that 52% of the respondents strongly agreed, 25%, agreed, 13% were neutral, 10% disagreed while none strongly disagreed. This means that decisions as to whether the enterprise is making profits or not is made via use of ratios. Analysis of the responses to the statement that time factor in decision making is largely dependent on the use of ratios analysis revealed that 39% of the respondents strongly agreed, 43%, agreed, 13% were neutral, 3% disagreed while 2% strongly disagreed.

When the responses to the statement that decisions about overall performance of the organization via growth, effectiveness, productivity etc. is made through use of ratios analysis revealed that 43% of the respondents strongly agreed, 22%, agreed, 23% were neutral, 12% disagreed while none strongly disagreed.

When the responses to the statement that management can easily make effective decisions that would move the enterprise forward through use of ratios analysis were analyzed, it was found that, 54% of the respondents strongly agreed, 30%, agreed, 13% were neutral, 3% disagreed while none strongly disagreed.
Rating of Profitability Ratios in Investment Decisions Making

The respondents were required to answer the questions requiring them to rate the profitability ratios on the scale of 1 to 5. Where 1 - Strongly disagree; 2 - Disagree; 3 - Indifferent; 4 - Agree; 5 - Strongly agree. The table below shows the various profitability ratios and how they are rated by Diamond Bank Plc in making their investment decisions.

**Table 11: Profitability ratios**

<table>
<thead>
<tr>
<th>Ratio</th>
<th>N</th>
<th>Min.</th>
<th>Max.</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dividend yield (DY)</td>
<td>93</td>
<td>1</td>
<td>5</td>
<td>2.78</td>
<td>1.05</td>
</tr>
<tr>
<td>Dividend pay-out (DPO)</td>
<td>93</td>
<td>1</td>
<td>5</td>
<td>2.70</td>
<td>.993</td>
</tr>
<tr>
<td>Dividend per share (DPS)</td>
<td>93</td>
<td>1</td>
<td>5</td>
<td>2.74</td>
<td>.984</td>
</tr>
<tr>
<td>Earnings per share (EPS)</td>
<td>93</td>
<td>1</td>
<td>5</td>
<td>2.89</td>
<td>1.188</td>
</tr>
<tr>
<td>Earnings yield (EY)</td>
<td>93</td>
<td>1</td>
<td>5</td>
<td>3.31</td>
<td>1.050</td>
</tr>
<tr>
<td>Gross profit to sales (GPS)</td>
<td>93</td>
<td>2</td>
<td>5</td>
<td>4.00</td>
<td>.943</td>
</tr>
<tr>
<td>Net profit Margin (NPM)</td>
<td>93</td>
<td>3</td>
<td>5</td>
<td>4.18</td>
<td>.772</td>
</tr>
<tr>
<td>Operating profit to sales</td>
<td>93</td>
<td>3</td>
<td>5</td>
<td>4.19</td>
<td>.736</td>
</tr>
<tr>
<td>Return on capital employed</td>
<td>93</td>
<td>3</td>
<td>5</td>
<td>4.96</td>
<td>.759</td>
</tr>
<tr>
<td>Return on equity (ROE)</td>
<td>93</td>
<td>2</td>
<td>5</td>
<td>4.19</td>
<td>.786</td>
</tr>
<tr>
<td>Profit/ Volume Ratio (PVR)</td>
<td>93</td>
<td>3</td>
<td>5</td>
<td>4.04</td>
<td>.720</td>
</tr>
</tbody>
</table>

Table 11 shows the results of the analysis. It can therefore be seen that only two ratios are frequently used thus return on equity (ROE) and net profit to sales. Also, used moderately are the profit volume ratio, return on capital employed (ROCE), net profit margin, gross profit to sales and earnings yield. These ratios were obtained from the audited financial statements which again are highly relied upon on making the investment decisions.

The Variables looked at in Assessing Company's Financial Position

The variables that stakeholders look at to determine the financial position of a firm from financial statements help them to make investment decision. The gearing ratios, liquidity ratios, and profitability ratios are the key financial variables that stakeholders look at in the process of investment decision making. These ratios clearly shows whether a company is performing or not and therefore clearly guides investors whether to invest or not. Regression analysis was used to determine the effect of ratio analysis on investment decision making.

**Table 12: Model Summary showing Effect of Ratio Analysis on Investment Decision Making.**

The results show that the coefficient of determination R squared 0.626 which imply that 62.6% of the variation in investment decision making is explained by ratio analysis. The regression equation appears to be relatively useful for making predictions since the value of R squared is near 1. This means that when ratio analysis was used the investment decision making of Diamond Bank Plc in Nigeria changed by 62.6%.

**Table 13: Coefficient results showing the effect of ratio analysis on investment decision making Coefficients (a)**
The result in Table 13 shows a beta coefficient of 0.849 which implies a strong positive relationship between ratio analysis and investment decision making. The findings further showed that the test was statistically significant with the significance value of 0.000 which is less than the p-value of 0.05. The t statistics (7.967) was also greater than zero. This demonstrated that ratio analysis had a positive influence on the investment decision making.

Correlation coefficients show that Ratio analysis (X2) is significant (p-value = 0.0000) in investment decision making (Y). The fitted model from this analysis is shown below: 

\[ Y = 0.849 + 0.776X2 \]

Cost volume analysis

Reliability of NPVs calculated from financial information

In finance, the net present value (NPV) or net present worth (NPW) is defined as the sum of the present values (PVs) of incoming and outgoing cash flows over a period of time. Incoming and outgoing cash flows can also be described as benefit and cost cash flows, respectively. The difference between the present value of cash inflows and the present value of cash outflows. The difference between the present value of cash inflows and the present value of cash outflows (Adam, 2008).

Table 14 shows the reliability respondents have with the net present values calculated from financial statements data. The table shows that majority of the respondents consider the net present values calculated as reliable.

Table 14: Extent to which Financials help Investor to take Opportunities

This implies that majority of the respondents are financial information users and they are knowledgeable. Their confidence in the net present values calculated from the financial data implies that they know what financials contain and display. In addition, the data shows that investors can use financial statements to determine whether their investments will pay or not pay at the end of the day. Net present values give assurances to investors that their investments will yield positive returns at the end of the day. A negative net present value would make investors abandon an investment out-rightly. Thus, it is recommended that investors need to be good users of financial information as the net present values calculated are reliable.

Table 15: Coefficient results showing the relationship between cost analyses on investment decision making

The beta coefficients of Cost volume analysis versus investment decision making results in Table 14 showed that there was significant relationship between investment decision making
and the cost volume analysis and this relationship was positive since the coefficient of investment decision making is 0.591 which is significantly greater than zero. The t statistics (5.942) was also greater than zero. This demonstrated that the investment decision making had a positive influence on cost volume analysis in the Diamond Bank Plc. Correlation coefficients show that cost volume analysis (X3) is significant (p-value = 0.0000) in investment decision making (Y). The fitted model from this analysis is shown below:

\[ Y = 1.382 + 0.591X3 \]

**Regression Results**

The results show that the coefficient of determination was 0.696 which mean that 69.9% of variation in investment decision making is explained by trend analysis, ratio analysis and cost volume analysis. The regression equation appears to be relatively useful for making predictions. R square and adjusted R is high; therefore, this implies that there is a high variation that can be explained by the model.

**Table 16: Model Summary of the Combined Effect**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.634</td>
<td>0.398</td>
<td>0.361</td>
<td>0.527</td>
</tr>
</tbody>
</table>

The ANOVA results for regression coefficients on Table 16 showed that the significance of the F statistics is 0.000 which is less than 0.05. This implied that there was a significant relationship between trend analysis, ratio analysis and cost volume analysis affecting the dependent variable - the investment decision making.

**Table 17: ANOVA results showing the combined effect ANOVAb**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Regression</td>
<td>22.101</td>
<td>4</td>
<td>5.548</td>
<td>10.000</td>
<td>.000</td>
</tr>
<tr>
<td>Residual</td>
<td>0.700</td>
<td>35</td>
<td>0.020</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>31.801</td>
<td>39</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

e. Dependent Variable: Investment decision making

The study sought to determine the beta coefficient of the variables. The findings are presented in Table 17. The regression model was written as:

\[ \text{Investment decision making} = 0.404 + 0.293 (X1) + 0.415 (X2) + 0.020 (X3) \]

**Table 18: Coefficient results showing the combined effect Coefficients**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>0.404</td>
<td></td>
<td>1.008</td>
<td>.300</td>
</tr>
<tr>
<td>Trend Analysis</td>
<td>0.203</td>
<td>0.863</td>
<td>0.274</td>
<td>1.712</td>
</tr>
<tr>
<td>Ratio Analysis</td>
<td>0.415</td>
<td>0.192</td>
<td>0.422</td>
<td>2.159</td>
</tr>
<tr>
<td>Cost Volume Analysis</td>
<td>0.020</td>
<td>0.058</td>
<td>0.024</td>
<td>0.130</td>
</tr>
</tbody>
</table>

e. Dependent Variable: Investment decision making

From the data in the above table, the established regression equation was:

\[ Y = 0.404 + 0.293 X1 + 0.415 X2 + 0.020 X3 \]

The Beta Coefficients in the regression show that all of the tested variables had positive relationship with investment decision making. The findings show that all the variables tested were statistically significant with p-values less than 0.05. Xi = 0.293 which implied that a unit change in the trend analysis resulted into a 0.293 change in investment decision making.

X2 = 0.415; this implied that unit change in the ratio analysis will result into a 0.415 change in investment decision making. X^3 0.020; implied that one-unit change in the cost volume analysis will result into a 0.020 change in investment decision making.

**E. Conclusions**
The research study revealed that financial statement analysis performs a crucial role on investment decisions making. This is achieved by implementing the best fundamental concepts of financial statement analysis for any Bank. Diamond Bank Plc used as a case study revealed that for any Bank to be successful, it should endeavor to make use of financial statement analysis because accounting itself is a language of business, and before venturing into any business, one must know the right method to achieve the stated goals and objectives. Also, studies have shown that successful utilization of accounting information requires a fit between three factors. First, a fit must be achieved with dominant view in the organization or perception of the situation. Second, the financial statement analysis must fit when problems are normally solved, i.e. the technology of the organization.

Thirdly, the accounting information must fit with the culture of the organization i.e. the norms and value system that characterizes the organization. There is also a high level of awareness pertaining to the role of accounting information system and managerial efficiency which is not limited to senior and management staff alone but also cuts across intermediate and junior staff whose operations are also governed by the accounting information system. It is evident that the accounting information factors loom large among factors, which contribute to the overall corporate efficiency.

**Recommendations**

We recommended that commercial banks devise a self-assessment form with benchmarks on the key areas of assessments to be codified within a document for clients to read and use it for self-assessment. From such assessment, banks can develop categories for customers, based on the investment decision making, the security expected and terms of the investment.

Specifically, the following should be put in place to ensure that financial statements’ role in investment decisions making is achieved.

1. *Every financial institution should ensure that all material facts as regards the assets and equity of the organization should be reflected in their yearly financial statement. As such, the financial institutions should adhere to the demand of subjecting their financial statement to statutory audit as a way of authenticating their contents.*

2. *The financial statement should be prepared using a language and terms a layman can understand because the technical terms do not mean much to the investors. Prompt provision of the financial statements at the end of each financial year is necessary and the profit after tax should be reported precisely and accurately with actual figures to avoid the use of percentages so that any layman can make good investment decision.*

3. *Investment decision should be based on the financial statement and the volume of liabilities acquired by financial institutions should be minimal to avoid its negative effect on the profit of the bank which will discourage prospective investors.*

4. *Banks and companies should carry out educational enlightenment programs from time to time to enable investors understand the financial report fully. Investors should attach much importance to the annual reports so that banks and companies can really know the extent of their responsibility in preparing the financial statement.*

5. *Banks and companies should sponsor research into the information needs of their investors and how best to communicate this information to them. There should be a review of annual report of banks and companies by the authority concerned, in order to effect the much-needed changes raised by investors considering the changing economic trend in the country.*

**References**


