

Role Of Ratio Analysis In Business Decisions:

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Abstract— Accounting information provided by means of financial statements- The income statement and the Balance Sheet are often in summarized form. Viewed on the surface, the truths about the results and the financial position of a business hidden in them remain veiled. To be of optimal benefit and as well enable the users make well – informed decisions, financial statements need to be analyzed by means of ratios. Therefore, in order to establish the role of ratio analysis in business decisions both the Financial Accounting and the Management will be considered .

Index Terms— Ratio Analysis, Business, Accounting and Decision Making.

1 INTRODUCTION

The two primary objectives of every business are profitability and solvency. Profitability is the ability of a business to make profit, while solvency is the ability of a business to pay debts as they come due. (Hermanson et al, 1992: 824). However, the achievement of these objectives requires efficient management of resources of the business through planning, budgeting, forecasting, control, and decision – making. Also, the strengths and weakness of the business need to be identified and necessary corrective measures applied. Interestingly, accounting provides information that facilitates these functions.

Basically, accounting measures and communicates economic information needed for decision –making. Thus, the American Accounting Association (in Okezie, 2002:1) defined accounting as “the process of identifying, measuring and communicating economic information to permit informed judgments and decisions by the information”. Statement and the Balance Sheet. The Income Statement shows the profitability or profitability or operational result of a business, while the balance sheet shows the solvency or financial position of a business.

Decision-making calls information. Bittel et al. (1984:340) observed: “Managers want information because they need to make decisions. The proper use of information is an important part of decision-making.” Remarkably, one of the effective ways of providing information needed for decision-making is ratio analysis.

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divestment, expansion or contrition, capital-organization and reconstruction, and so on cannot be properly made without the aid of financial ratios. They give cue to the financial strengths and weaknesses of a business, and highlight aspects of a business requiring further investigation. Financial information provided in financial statements is useful in business decisions. However, it must be noted that financial statements are means to an end not an end in themselves. Thus the use of financial statements in decision-making is not always easy owing to the problem of summarized nature of the information contained in financial statements, they need to be analyzed and interpreted by means of financial ratios to enable management and stakeholders understand them and make well-informed business decisions. Therefore, this research paper is carried out to show how ratio analysis help managers, shareholders, investors, creditors, and other stakeholders make informed judgments and decisions about the past performance, present condition, and futures potential of a business.

2. RESEARCH QUESTIONS

- i. Is ratio analysis useful in evaluating and prediction the performance of a business as well as intensifying areas that regret improvement?
- ii. Do you agree with the fact that ratio analysis facilitates proper understanding of information contained in financial statements?
- iii. Is ratio analysis useful to management investors, shareholders and creditors in their business divisions?
- iv. Does financial ratio helps to unravel the mass of truth hidden in financial statements?
- v. Are there obstacles that affect the proper use of ratio analysis in business decisions?

3. LITERATURE REVIEW

3.1 The concept of financial statement analysis

Yes, business decisions of make or buy, investment or

According to Hermanson et al (1992:824), "financial statement analysis consists of applying analysis tools and techniques to financial statements and other relevant data to show important relationships and obtain useful information." Therefore, financial statement analysis can be defined as the breaking down, interpretation, and translation of data contained in financial statements to provide information and show important relationships among the items of financial statements and drawing conclusion about the past performance, current financial position, and future potentials of a business.

3.2 PARTIES INTERESTED IN FINANCIAL STATEMENT ANALYSIS:

With particular reference to business organizations, parties interested in financial statement analysis are divided into two categories, namely: internal users and external users. The internal users include management and employees of an organization, while external include shareholders, investors, creditors, debenture/bond holders, financial analysis, etc..

- Management and Employees
- Shareholders/Owners
- Investors and Creditors
- Debenture/bond holders
- Financial analysts

3.3 Objectives of financial statement analysis

According to Needles et al. (1996:770) financial statement analysis is used to achieve two basic objectives:

3.3.1. Assessment of Past Performance and Current Position

Financial statement analysis helps in assessing or judging the past performance of a business by taking a look at the trend or historical sales, expenses, net income cash flow, and return on investment. Also an analysis of current position will tell for example, what assets the business owns and what liabilities must be paid.

3.3.2 Assessment of Future Potential Related Risk

Information about the past and present (performance) is useful only to the extent that it bears on decisions about the future (potentials). Financial statement analysis thus help for example investors to judge the earning potential of a company. It also enables creditors to assess the potential debt paying ability of the company. Therefore financial statement analysis helps in assessing the riskiness of an investment or loan by making it easy to predict the future profitability and liquidity of a business.

3.4 Sources of information for financial statement analysis

According to Needles et al. (1996:773), the major sources of information about publicly held corporations are reports published by the company, SEC reports, business periodical, and credit and investment advisory services.

3.4.1 Reports Published by the Company

The annual report of a publicly held corporation is an important source of financial information.

3.4.2 SEC Reports

Annual, quarterly and current financial reports filed by publicly held corporations with the Securities and Exchange Commission (SEC) are sources of information for analysis of financial statements.

3.4.3 Business Periodicals

Financial magazines and newspapers contain reports about the performance of companies.

3.4.4 Credit and Investment Advisory Services

They provide data and information about the performance of companies as well as on industry norm. For example, Dun and Bradstreet Corporation in USA offers an annual analysis using fourteen ratios of 125 industry groups

3.5 RATIO ANALYSIS

Dansby et al. (2000:845) defined ratio as "fractional relationship of one number to another". On the other hand, Needles et al. (1996:795) defined ratio analysis as "a technique of financial analysis in which meaningful relationship is shown between the components of financial statements". Ratio analysis is often expressed proportionately to show the relationship between figures in the financial statements. Ratios are guides or shortcuts that are useful in evaluating a company's financial position and operations and making comparisons with results in previous years or with other companies. The primary purpose of ratio is to point out areas needing further investigation. They should be used in connection with a general understanding of the company and its environment. (Needles et al., 1996:786).

Thus, Lasher (1997:69) noted are most meaningful when used in comparison. For that reason, it is difficult to make a generalization about with a good or acceptable value is for any particular figure. One measure alone does not tell the whole story about a company and one measure should never be the sole basis for a financial decision". Hermanson et al. (1992:840) added: "standing alone, a single financial ratio may not be informative. Greater insight can be obtained by computing and analyzing several related ratios for a company".

3.5.1 USES AND OBJECTIVES OF RATIO ANALYSIS

Basically, ratio analysis is used in determining:

1. The short-term and long-term liquidity of a firm or the ability of the firm to meet its short-term (current) and long-term financial obligations.
2. The riskness or long-term solvency of a business. That is, the level of gearing or leverage or the extent the firm is financed by debt.
3. The Performance, profitability or overall earning power of a business.
4. The assets utilization or efficiency in the use of assets of a business to generate sales revenue.
5. The potential return and risk associated with owning shares or investing in the stock a company

3.5.2 TYPES OF RATIO ANALYSIS:

3.5.2.1 Liquidity (short-term solvency) ratios:

Liquidity Ratios include Current Ratio and Quick or Acid Test Ratio

3.5.2.2 Current Ratio:

Current ratio can be calculated as follows:

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liability}}$$

3.5.2.3 Quick (Acid Test) Ratio:

Quick or acid Test Ratio can be calculated as follows:

$$\text{Quick or Acid Test Ratio} = \frac{\text{Quick Assets}}{\text{Current Liabilities}}$$

i.e, $\frac{\text{Current Assets} - \text{Inventory}}{\text{Current Liabilities}}$

3.5.2.4 Profitability (activity) ratios:

Profitability ratios include Return on SALES, return on Assets, and Return on Equity.

3.5.2.5 Return on sales (ROS):

ROS refers to Net profit Margin.

3.5.2.6 Gross profit margin

This is otherwise known as the percentage of Gross profit to Net sales.

5.2.8 Net profit margin

It is a measure of the proportion of net sales that remains after the deduction of all costs and expenses. It indicates the ability of a firm to control operating and non-operating expenses.

Net profit margin can be calculated as follows:

$$\text{Net Profit Margin} = \frac{\text{Net Income}}{\text{Net Sales}} \times 100$$

3.5.2.9 Return on assets (ROA)

. ROA can be divided into two, namely; return on operating Assets and Return on Total Assts. However, in general terms and for the purpose of this study, ROA refers to return on Total Assets.

3.5.2.10 Return on operating assets

The formula is:

$$\text{Return on Operating Assets} = \frac{\text{Net Operating Income}}{\text{Average Operating Assets}}$$

Or

$$\text{Net Operating Assets} / \text{Average Total Assets (Where there are no non-operating assets)}$$

3.5.2.11 Return on total assets

Return On Total Assets quantifies the success of the efforts of a business in using its assets earn profit by stating net income or profit after tax as a percentage of total assets.

$$\text{Return on Total Assets} = \frac{\text{Net Income}}{\text{Average Total Assets}} \times 100$$

3.5.2.12 Return on equity (ROE)

ROE can be calculated as follows

$$\text{ROE} = \frac{\text{Net Income}}{\text{Average Stockholder's Equity}} \times 100$$

3.5.2.13 Assets management (efficiency) ratios

Asset management Ratios include: Inventory Turnover, Average Days' Inventory On Hand, and Accounts Receivable Turnover, Average Collection period for Accounts Receivable, Total Assets Turnover, and Fixed Assets Turnover.

3.5.2.14 Inventory turnover

Inventory Turnover measures the number of times in which the average inventory or stock is sold in a give period.

The ratio is calculated as follows:

$$\text{Inventory Turnover} = \frac{\text{Cost of goods sold}}{\text{Average Inventory}}$$

3.5.2.15 Average days' inventory on hand

This is a measure of average number of days taken to sell inventory. It is an extension of inventory turnover and thus helps a firm to know the speed at which it sells inventory or stock.

The ratio computed as follows.

$$\text{Average days' inventory on hand} = \frac{365 \text{ days}}{\text{Inventory Turnover}}$$

$$\text{Accounts Receivable Turnover} = \frac{\text{Net Credit Sales}}{\text{Average Accounts Receivable}}$$

Or

$$\frac{\text{Net Sales}}{\text{Accounts Receivable}}$$

Average collection period for accounts receivable (acp)

A comparison of the average collection period with the credit extended customers by a company or the firms, credit extension policy will provide further insight into the quality of accounts receivable.

$ACP = 365 \text{ days} / \text{Accounts Receivable Turnover}$
Total assets turnover (tat)

$TAT = \text{Net Sales} / \text{Average Total Assets (excluding investments)}$

Fixed assets turnover (fat)

$FAT = \text{Net Sales} / \text{Average fixed Asset}$

3.5.2.16 Debt Ratio

Debt Ratio measures the relationship between total debt and equity in supporting assets of a business

Debt ratio calculated as follows:

$\text{Debt ratio} = \text{Total Liabilities} / \text{Total Assets} \times 100$

3.5.2.17 Equity (proprietary) Ratio

This is the opposite of debt ratio. It measures the extent to which assets of the financed by stockholders or owners of the business

Equity Ratio can be calculated as follows:

$\text{Equity Ratio} = \text{Stockholders' Equity} / \text{Total Assets} \times 100$

3.5.2.18 Debt-To-Equity Ratio

This ratio is a measure of mix of debt (total liabilities) and equity within the firm's total capital

3.5.2.19 Leverage (Gearing) Ratio

This is similar to ratio but the only difference is that it measures the size of long-term liabilities or fixed-interest debts in comparison with the stockholders' or owners' equity

Leverage (Gearing) ratio can be calculated as follows:

$\text{Leverage Ratio} = \text{Long-term Liabilities} / \text{Stockholders' Equity}$

Better the firm is using its assets to generate sales. In other words, the larger the total assets turnover, the larger will be the income on each (naira) invested in the assets of the business. (Hermanson et al., 1992: 834). TAT can be calculated as follows. $TAT = \text{Net Sales} / \text{Average Total Assets (excluding investments)}$ Investments are excluded from the formula since they are not intended to produce sales. (Dansby et al., 2000:834). In other words, the ratio is known as Turnover of Operating Assets, because it to generate sales revenue. (Hermanson et al., 1992:837). Fixed assets turnover (fat) Fixed assets Turnover (FAT) measures the capacity of fixed assets in producing sales.

4. ADVANTAGES OF RATIO ANALYSIS

Ratio Analysis is widely used as a powerful tool of fi-

ancial statement analysis. It establishes the numerical or quantitative relationship between two figures of a financial statement to ascertain strengths and weaknesses of a firm as well as its current financial position and historical performance. It helps various interested parties to make an evaluation of certain aspect of a firm's performance. The Advantages are :

- Forecasting and planning
- Budgeting
- Communication
- Measurement of Operating Efficiency
- Aid to Decision Making
- Indication of Overall Profitability
- Indication of Long-Term Solvency Position
- Simplification of Financial Statements
- Indication of Liquidity Position
- Control Inter-firm Comparison

4. LIMITATIONS OF RATIO ANALYSIS

According to Hermanson et al. (1992:846), "financial analysis relies heavily on informed judgment. Percentages and ratios are guides to aid comparison and useful in uncovering potential strengths and weaknesses. However, the financial analysis should seek the basic causes behind changes and established trends." This means that, although financial ratios help us identify areas of the business that, although financial ratios help us identify areas of the business that requires further investigation, make informed business decisions and asks the right questions, they do not provide answers or solutions due to the following limitations:

- Inflation
- Window Dressing
- Historical Information
- Uniqueness of Companies
- Limited Information
- No Universal Standards
- Interpretation
- Underestimation

5.1 Question 1

Do you agree that Ratio Analysis facilitates proper understanding of information contained in financial statements?

Table 1: Ratio analyses as a facilitator of proper understanding of financial statements

Responses	Mgt. Staff	Non-mgt. staff	Total
Yes	5 20%	15 75%	20 100%
No	0 0%	0 0%	0 0%
Total	5 20%	15 75%	20 100%

Source: Questionnaire

As shown in the table above all the 20 (100%) of respondents agreed that Ratio Analysis facilitates proper understanding of information contained in financial statements

ranges should be formatted as follows:

Question

5.2.2 Question

Do you think that Ratio Analysis is useful to management, investors, shareholders and creditors in their business decisions?

Table 2: Usefulness of ratio analysis in business decisions

Responses	Mgt. Staff	Non-mgt. staff	Total
Yes	5 20%	13 65%	18 90%
No	0 0%	2 10%	2 10%
Total	5 20%	15 75%	20 100%

Source: Questionnaire

The table above shows that 18 out of 20 or (90%) out (100%) of the respondents agreed that Ratio Analysis is useful to management, investors, shareholders, and crediting in their business decisions

5.3 Question 3

Does financial ratio help to unravel the mass of truth hidden in financial statement?

Table 6: Financial ratio in unravel the mass of truth that was hidden in financial statement.

Responses	Mgt. Staff	Non-mgt. staff	Total
Yes	5 25%	14 70%	19 95%
No	0 0%	1 50%	1 50%
Total	5 25%	15 75%	20 100%

Source: Questionnaire

above it shows that all the mgt, staff agreed that financial ratio help to unravel the mass truth hidden in the financial statement while 14 (70%) of the Non mgt staff also agreed bringing a total of 19 (95%) of the respondent disagree with that fact.

6. CONCLUSION

Financial statements contain lots of information summarized in figures. Viewed on the surface, they do not provide enough information about the viability of the reporting entity. Thus, they need to be analyzed by means of financial ratios to unravel the mass of truth hidden in them, and to enhance decision-making.

Ratio analysis helps to reveal, compare and interpret salient features of financial statements. When applied to a set of financial statements, financial ratios highlight significant aspects of the financial position and operational results of a business requiring further investigation. They help to identify the strengths and weaknesses of a business.

In fact, ratio analysis helps to evaluate the past performance, the present condition, and the future prospects of a business. It enables us to ask the right questions about a business, and paves way to finding the useful an-

swers. Such analysis therefore, aids planning, control, forecasting and decision- making.

7. RECOMMENDATIONS

With reference to the findings of the study, the researcher recommends the following:

1. Users of financial statements need to have at least, a fair knowledge of accounting so as to enable them understand and appreciate accounting information.

2. Prospective investors should properly analyze the financial statements of companies before deciding to invest in the companies.

3. Users of financial statement who are not knowledgeable enough to analyze or understand the information contained in them should seek the services of qualified financial analysts, accountants, stockbrokers, bankers, etc.

4. In view of the remarkable influence which accounting informations have on the decisions of the users, it is pertinent that only qualified and honest persons should and audit financial statements.

5. Financial ratios should be used with careful examination and proper understanding of the meaning, implication and effect of the actual figures shown in financial statements, in order to avoid making wrong judgments, conclusions and decision.

6. Financial ratios should be judiciously used by firms, investors, lenders, shareholders, managers, and other stakeholders, in view of their numerous benefits and limitations

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