

Emerging importance of financial statement analysis

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Abstract

Financial statement analysis (or financial analysis) is the process of reviewing and analyzing a company's financial statements to make better economic decisions. These statements include the income statement, balance sheet, statement of cash flows, and a statement of retained earnings. Financial statement analysis is a method or process involving specific techniques for evaluating risks, performance, financial health, and future prospects of an organization. It is used by a variety of stakeholders, such as credit and equity investors, the government, the public, and decision makers within the organization. These stakeholders have different interests and apply a variety of different techniques to meet their needs. These reports are usually presented to top management as one of their bases in making business decisions. This paper seeks to represent the same.

Keywords: Financial Statement, Cash Flows, Ratio Analysis, Users of Accounting Information

Introduction

Methods

- **Past Performance** - Across historical time periods for the same firm (the last 5 years for example),
- **Future Performance** - Using historical figures and certain mathematical and statistical techniques, including present and future values, this extrapolation method is the main source of errors in financial analysis as past statistics can be poor predictors of future prospects.
- **Comparative Performance** - Comparison between similar firms. These ratios are calculated by dividing a (group of) account balance(s), taken from the balance sheet and / or the income statement, by another, for example :

Net income / equity = return on equity (ROE)

Net income / total assets = return on assets (ROA)

Asset Management Ratios gauge how efficiently a company can change assets into sales.

Stock price / earnings per share = P/E ratio

Comparing financial ratios is merely one way of conducting financial analysis. Financial ratios face several theoretical challenges:

- They say little about the firm's prospects in an absolute sense. Their insights about relative performance require a reference point from other time periods or similar firms.
- One ratio holds little meaning. As indicators, ratios can be logically interpreted in at least two ways. One can partially overcome this problem by combining several related ratios to paint a more comprehensive picture of the firm's performance.
- Seasonal factors may prevent year-end values from being representative. A ratio's values may be distorted as account balances change from the beginning to the end of an accounting period. Use average values for such accounts whenever possible.
- Financial ratios are no more objective than the accounting methods employed. Changes in accounting policies or choices can yield drastically different ratio values.

Fundamental analysis

Financial analysts can also use percentage analysis which involves reducing a series of figures as a percentage of some base amount. For example, a group of items can be expressed as a percentage of net income. When proportionate changes in the same figure over a given time period expressed as a percentage is known as horizontal analysis. Vertical or common-size analysis, reduces all items on a statement to a "common size" as a percentage of some base value which assists in comparability with other companies of different sizes. As a result, all Income Statement items are divided by Sales, and all Balance Sheet items are divided by Total Assets. Another method is comparative analysis. This provides a better way to determine trends. Comparative analysis presents the same information for two or more time periods and is presented side-by-side to allow for easy analysis.

Tools/methods of financial statement analysis

There are two main methods of analyzing financial statements: horizontal or trend analysis, and vertical analysis. These are explained below along with the advantages and disadvantages of each method.

Horizontal Analysis

Horizontal analysis is the comparison of financial information of a company with historical financial information of the same company over a number of reporting periods. It could also be based on the ratios derived from the financial information over the same time span. The main purpose is to see if the numbers are high or low in comparison to past records, which may be used to investigate any causes for concern. For example, certain expenditures that are high currently, but were well under budget in previous years may cause the management to investigate the cause for the rise in costs; it may be due to switching suppliers or using better quality raw material.

This method of analysis is simply grouping together all information, sorting them by time period: weeks, months or years. The numbers in each period can also be shown as a percentage of the numbers expressed in the baseline

(earliest/starting) year. The amount given to the baseline year is usually 100%. This analysis is also called dynamic analysis or trend analysis.

Vertical Analysis

Vertical analysis is conducted on financial statements for a single time period only. Each item in the statement is shown as a base figure of another item in the statement, for a given time period, usually for year. Typically, this analysis means that every item on an income and loss statement is expressed as a percentage of gross sales, while every item on a balance sheet is expressed as a percentage of total assets held by the firm.

Vertical analysis is also called static analysis because it is carried out for a single time period.

Trend Analysis

It is one of the most useful form of horizontal analysis in making comparative studies of the financial statements for a number of years. For calculating trend percentages any year is selected as the "base year". Each item of the base year is assumed to be equal to 100 and on that basis the percentage of each item of each year is calculated. The trend percentage is helpful in revealing-increase or decrease in various items.

Accounting ratios

A ratio is simply one number expressed in relation to another and a study of the relationships between various items or a group of items is known as ratio analysis. Its simplifies and summarizes a long array of accounting data to provide useful information regarding the liquidity; solvency; profitability; etc.

Cash flow statements

It shows inflows and outflows of cash and cash equivalents during a particular period and analysis the reason for changes in balance of cash between the two balance sheet dates. A firm may earn huge profits yet it may have paucity of cash or when it suffers loss it may still have plenty of cash. The reasons for these deviations can be analysed and understood by preparing cash flow statement.

Funds flow statement

A fund flow statement is designed to show the changes in the assets, liabilities and capital of the firm between the dates of two balance sheets. It indicates the causes of changes in the working capital of an enterprises during the year. It also discloses the sources from which funds were obtained by the enterprise and the specific uses to which such funds were applied.

Breakeven point analysis

Breakeven point is the point where total costs are exactly equal to the total sales. At this point, there is neither any profit nor any loss. It can be also termed s no profit no loss point.

Key financial statements & how they are analyzed

The main types of financial statements are the balance sheet, the income statement and the statement of cash flows. These accounting reports are analyzed in order to aid economic decision-making of a firm and also to predict profitability and cash flows.

The Balance Sheet

The balance sheet shows the current financial position of the firm, at a given single point in time. It is also called the

statement of financial position. The structure of the balance sheet is laid out such that on one side assets of the firm are listed, while on the other side liabilities and shareholders' equity is shown. The two sides of the balance sheet must balance as follows:

$$\text{Assets} = \text{Liabilities} + \text{Shareholders' Equity}$$

The main items on the balance sheet are explained below:

Current Assets

Current assets held by the firm refer to cash and cash equivalents. These cash equivalents are assets that can be easily converted into cash within one year. Current assets include marketable securities, inventory and accounts receivable.

Long-term Assets

Long-term assets are also called non-current assets and include fixed assets like plant, equipment and machinery, and property, etc. A firm records depreciation of its fixed, long-term assets every year. It is not an actual expense of cash paid, but is only a reduction in the book value of the asset. The book value is calculated by subtracting the accumulated depreciation of prior years from the price of the assets.

$$\text{Total Assets} = \text{Current Assets} + \text{Book Value of Long-Term Assets}$$

Current Liabilities

Current liabilities of the firm are obligations that are due in less than one year. These include accounts payable, deferred expenses and also notes payable.

Long-term Liabilities

Long-term liabilities of the firm are financial payments or obligations due' after one year. These include loans that the firm has to repay in more than a year, and also capital leases which the firm has to pay for in exchange for using a fixed asset.

Shareholders' Equity

Shareholders' equity is also known as the book value of equity or net worth of the firm. It is the difference between total assets owned by a firm and total liabilities outstanding. It is different from the market value of equity (stock market capitalization) which is calculated as follows: number of shares outstanding multiplied by the current share price.

Balance Sheet Analysis

The balance sheet is analyzed to obtain some key ratios that help explain the health of the firm at a given point in time. These metrics are as follows:

Debt-Equity Ratio = Total Debt / Total Equity

The debt-equity ratio is also called a leverage ratio. It is calculated to assess the leverage, or gearing, of a firm to show how much it relies on debt to finance its activities. This ratio has pertinent implications for the financial health of the firm and the risk and return of its shares.

Market-to-Book Ratio = Market Value of Equity / Book Value of Equity

The market-to-book ratio is used to reflect any changes in a firm's characteristics. The variations in this ratio also show any value added by the management and its growth prospects.

Enterprise Value = Market Value of Equity + Debt – Cash

The enterprise value of a firm shows the underlying value of the business. It reflects the true value of the firm's assets, not including any cash or cash equivalents, while unencumbered by the debt the firm carries.

The Income Statement

The purpose of an income statement is to report the revenues and expenditures of a firm over a specific period of time. It was previously also called a profit and loss account. The general structure of the income statement with major components is as follows:

Sales revenue- Cost of goods sold (COGS)= Gross profit-Selling,

General and administrative costs (SG&A)- Research and development (R&D)= Earnings before interest, taxes, depreciation and amortization (EBITDA)- Depreciation and amortization= Earnings before interest and taxes (EBIT)- Interest expense= Earnings before taxes (EBT)- Taxes= Net income

The net income on the income statement, if positive, shows that the company has made a profit. If the net income is negative, it means the company incurred a loss.

Earnings per share can be derived from knowing the total number of shares outstanding of the company:

Earnings per Share = Net Income / Shares Outstanding

Income statement Analysis

Some useful metrics based on the information provided in the income statement and the balance sheet are as follows:

Profitability ratios

1. **Net profit margin:** This ratio calculates the amount of profit that the company has earned after taxes and all expenses have been deducted from net sales.

Net profit Margin = Net Income / Net Sales

2. **Return on Equity:** This ratio is used to calculate company profit as a percentage of total equity.

Return on Equity = Net Income / Book Value of Equity

Valuation ratios

Price to earnings ratios (P/E ratio)

The P/E ratio is used to evaluate whether the value of a stock is proportional to the level of earnings it can generate for its stockholders. It assesses whether the stock is overvalued or undervalued.

(P/E) Ratio = Market Capitalization / Net Income = Share Price / Earnings per Share

The statement of cash flows

The statement of cash flows shows explicitly the sources of the firm's cash and where the cash is utilized. It is essentially a statement whereby the net income is adjusted for non-cash expenses and any changes to the net working capital. It also reflects changes in cash coming from, or being used by, investing and financing activities of the firm. The structure and main components of the cash flow statement are as follows:

Cash from operating activities

= Net income + Depreciation ± Changes in net working capital

Cash from financing activities

= New debt + New shares - Dividends - Shares repurchased

Cash from investment activities

= Capital expenditure - Proceeds from sales of long-term assets

All three of the above determine the bottom line: changes in cash flows.

Cash Flows Statement Analysis

In order to measure how much cash is available to the company for investments without outside financing or money diverting from operations, it is useful to conduct a simple cash flow statement analysis. The free cash flow, as the name suggests, allows a company to be able to pay dividends, repay its debts, buy back its stock and also make new investments to facilitate future growth. The excess cash produced by the company, free cash flow, is calculated as follows:

Net Income + Amortization/Depreciation - Changes in Working Capital - Capital Expenditures = Free Cash Flow

Some analysts also study the cash flow from operating activities to see if the company is earning "quality" income. In order for the company to be doing extremely well, the cash from operating activities must be consistently greater than the net income earned by the company.

Other financial statement information

Apart from the key financial statements, complete financial reporting statements also include the following:

Business and Operating Review

The business and operating review is also called "management discussion and analysis". It serves as a preface to all the complete reporting statements in which the management talks about recent events, discloses essential information regarding expansion and future plans, and discusses significant developments in the business industry.

The business and operating review is a good place for the company to share any good news with the general public. They have room to elaborate on plans that would help enhance the company's image and address any unpleasant events that may have occurred, to show the customers that they truly care about talking openly to their customers.

Statement of Change in Shareholders' Equity

The statement of change in shareholders' equity is also known as equity analysis. It provides information about all the changes in the company's equity value over a certain time period. It reconciles the opening balances of the equity accounts with the closing balances. There are two types of changes expressed in the statement of change in shareholders' equity:

Changes arising from any transactions conducted with shareholders of the company. For example, issuing new shares, paying dividends, purchasing treasury stock, and issuing bonus shares, etc.

Changes that are a result of alterations in the comprehensive income of the company. These changes might include revaluation of fixed assets, net income for the period and fair value of for-sale investments, etc.

Need for financial statement analysis

The purpose of financial statement analysis is to examine past and current financial data so that a company's performance and

financial position can be evaluated and future risks and potential can be estimated. Financial statement analysis can yield valuable information about trends and relationships, the quality of a company's earnings, and the strengths and weaknesses of its financial position.

Financial statement analysis begins with establishing the objective(s) of the analysis. For example, is the analysis undertaken to provide a basis for granting credit or making an investment? After the objective of the analysis is established, the data is accumulated from the financial statements and from other sources. The results of the analysis are summarized and interpreted. Conclusions are reached and a report is made to the person(s) for whom the analysis was undertaken.

To evaluate financial statements, a person must:

1. Be acquainted with business practices,
2. understand the purpose, nature, and limitations of accounting,
3. Be familiar with the terminology of business and accounting, and
4. Be acquainted with the tools of financial statement analysis.

Financial analysis of a company should include an examination of the financial statements of the company, including notes to the financial statements, and the auditor's report. The auditor's report will state whether the financial statements have been audited in accordance with generally accepted auditing standards. The report also indicates whether the statements fairly present the company's financial position, results of operations, and changes in financial position in accordance with generally accepted accounting principles. Notes to the financial statements are often more meaningful than the data found within the body of the statements. The notes explain the accounting policies of the company and usually provide detailed explanations of how those policies were applied along with supporting details. Analysts often compare the financial statements of one company with other companies in the same industry and with the industry in which the company operates as well as with prior year statements of the company being analyzed.

Comparative financial statements provide analysts with significant information about trends and relationships over two or more years. Comparative statements are more significant for evaluating a company than are single-year statements. Financial statement RATIOS are additional tools for analyzing financial statements. Financial ratios establish relationships between various items appearing on financial statements. Ratios can be classified as follows:

1. **Liquidity ratios:** Measure the ability of the enterprise to pay its debts as they mature.
2. **Activity (or turnover) ratios:** Measure how effectively the enterprise is using its assets.
3. **Profitability ratios:** Measure management's success in generating returns for those who provide capital to the enterprise.
4. **Coverage ratios:** Measure the protection for long-term creditors and investors.

Horizontal analysis and vertical analysis of financial statements are additional techniques that can be used effectively when evaluating a company. Horizontal analysis spotlights trends and establishes relationships between items

that appear on the same row of a comparative statement thereby disclosing changes on items in financial statements over time. Vertical analysis involves the conversion of items appearing in statement columns into terms of percentages of a base figure to show the relative significance of the items and to facilitate comparisons. For example, individual items appearing on the income statement can be expressed as percentages of sales. On the balance sheet, individual assets can be expressed as a percentage of total assets. Liabilities and owners' equity accounts can be expressed in terms of their relationship to total liabilities and owners' equity.

Financial statement analysis has its limitations. Statements represent the past and do not necessarily predict the future. However, financial statement analysis can provide clues or suggest a need for further investigation. What is found on financial statements is the product of accounting conventions and procedures (LIFO or FIFO inventory; straight-line or accelerated depreciation) that sometimes distort the economic reality or substance or the underlying situation. Financial statements say little directly about changes in markets, the business cycle, technological developments, laws and regulations, management personnel, price-level changes, and other critical analytical concerns.

Problems with financial statement analysis

Financial statement analysis is a brilliant tool to gauge the past performance of a company and predict future performance, but there are several issues that one should be aware of before using the financial statement analysis results blindly, as these issues can interfere with how the results are interpreted. Some of the issues are:

Comparability between Companies

This is a big issue for analysts because they can seemingly compare financial statement analyses between different companies on the basis of ratios used, but in reality it may not paint an accurate picture. The financial ratios of two different companies may be compared to see how they match up against each other, but each company may aggregate all their information different from each other in order to draw up their accounting statements. This may lead to incorrect conclusions drawn about a company in relation to other companies in the industry.

Comparability between Periods

The change in accounts where financial information is stored may skew the results of the financial statement analysis, from one period to the next. For example, if a company records an expense in one period as cost of goods sold, while in another period, it is recorded as a selling and distribution expense, the analysis between those two periods would not be comparable.

Operational Information

Analysts do not take into account operational information of a company, as only financial information is analyzed and reviewed. There may be several indicators in operational information of the company which may be predictors of future performance, for example, the number of backlogged orders, any changes in licenses or warranty claims submitted to the company or even changes in the culture and work environment. Therefore, analysis of financial information may only relay half the story.

Limitations of Accounting & Financial Reporting

Accountancy assists users of financial statements to make better financial decisions. It is important however to realize the limitations of accounting and financial reporting when forming those decisions. Following are the main limitations of accounting and financial reporting: Different accounting policies

1. Different accounting policies and frameworks

Accounting frameworks such as IFRS allow the preparers of financial statements to use accounting policies that most appropriately reflect the circumstances of their entities.

Whereas a degree of flexibility is important in order to present reliable information of a particular entity, the use of diverse set of accounting policies amongst different entities impairs the level of comparability between financial statements.

The use of different accounting frameworks (e.g. IFRS, US GAAP) by entities operating in different geographic areas also presents similar problems when comparing their financial statements. The problem is being overcome by the growing use of IFRS and the convergence process between leading accounting bodies to arrive at a single set of global standards.

2. Accounting estimates

Accounting requires the use of estimates in the preparation of financial statements where precise amounts cannot be established. Estimates are inherently subjective and therefore lack precision as they involve the use of management's foresight in determining values included in the financial statements. Where estimates are not based on objective and verifiable information, they can reduce the reliability of accounting information.

3. Professional judgment

The use of professional judgment by the preparers of financial statements is important in applying accounting policies in a manner that is consistent with the economic reality of an entity's transactions. However, differences in the interpretation of the requirements of accounting standards and their application to practical scenarios will always be inevitable. The greater the use of judgment involved, the more subjective financial statements would tend to be.

4. Verifiability

Audit is the main mechanism that enables users to place trust on financial statements. However, audit only provides 'reasonable' and not absolute assurance on the truth and fairness of the financial statements which means that despite carrying audit according to acceptable standards, certain material misstatements in financial statements may yet remain undetected due to the inherent limitations of the audit.

Use of historical cost

Historical cost is the most widely used basis of measurement of assets. Use of historical cost presents various problems for the users of financial statements as it fails to account for the change in price levels of assets over a period of time. This not only reduces the relevance of accounting information by presenting assets at amounts that may be far less than their realizable value but also fails to account for the opportunity cost of utilizing those assets.

The effect of the use of historical cost basis is best explained by the use of an example.

Due to the disadvantages associated with the use of historical cost, some preparers of financial statements use the revaluation model to account for long-term assets. However, due to the limited market of various assets and the cost of regular valuations required under revaluation model, it is not widely used in practice.

An interesting development in accounting is the use of 'capital maintenance' in the determination of profit that is sustainable after taking into account the resources that would be required to 'maintain' the productivity of operations. However, this accounting basis is still in its early stages of development.

5. Measurability

Accounting only takes into account transactions that are capable of being measured in monetary terms. Therefore, financial statements do not account for those resources and transactions whose value cannot be reasonably assigned such as the competence of workforce or goodwill.

6. Limited predictive value

Financial statements present an account of the past performance of an entity. They offer limited insight into the future prospects of an enterprise and therefore lack predictive value which is essential from the point of view of investors.

7. Fraud and error

Financial statements are susceptible to fraud and errors which can undermine the overall credibility and reliability of information contained in them. Deliberate manipulation of financial statements that is geared towards achieving predetermined results (also known as 'window dressing') has been an unfortunate reality in the recent past as has been popularized by major accounting disasters such as the Enron Scandal.

8. Cost benefit compromise

Reliability of accounting information is relative to the cost of its production. At times, the cost of producing reliable information outweighs the benefit expected to be gained which explains why, in some instances, quality of accounting information might be compromised.

Conclusion

Financial statement analysis has its limitation. Statements represent the past and do not necessarily predict the future. However financial statement can provide clues or suggest a need for further investigation. Financial statement will help business owners and other interested people to analyze the data in financial statement to provide them with better information about such key factors for decision making and ultimate business survival.

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