Synopsis of Vertical and Horizontal Ratio Analysis and it's Pros and Cons

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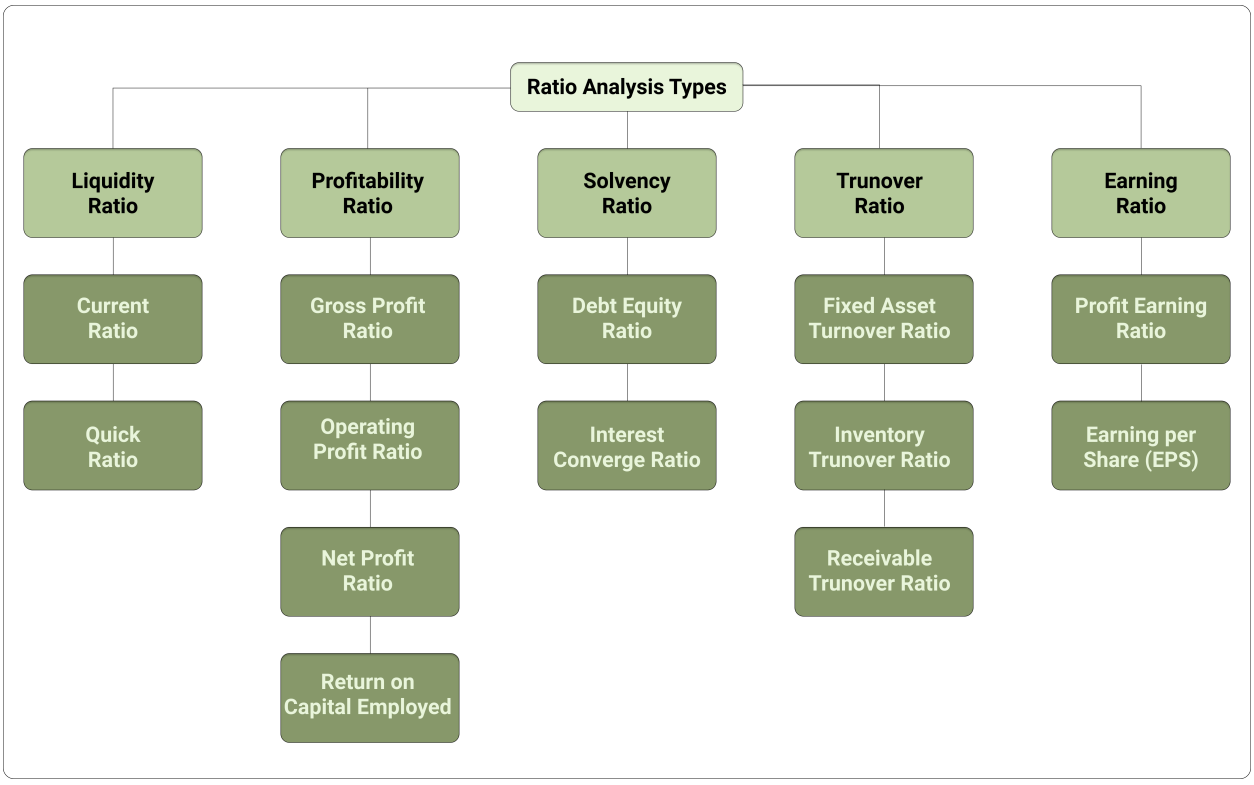
What is the ratio analysis and types of ratio analysis?

Ratio analysis lays the framework for financial analysis. Ratio analysis is used by its readers of the financial statements for gaining a better understanding of the wellbeing of a company. **Ratio analysis is a quantitative method of gaining insights into company's liquidity, profitability, debt, activity, market, solvency, convergence ratio and operational efficiency by studying its financial statements such as balance sheet, income and profit & loss statements.** Ratio analysis is a cornerstone of fundamental equity analysis and can be defined as "**the process of ascertaining the financial ratios that are used for indicating the ongoing financial performance of a company**". Below are the list of of ratio analysis of five types.



1. **Liquidity Ratio** helps in measuring the ability of a company to take care of its short-term debt obligations. A higher liquidity ratio represents that the company is highly rich in cash.

a. **Current Ratio** used to indicate the liquidity of an organisation is being able to meet its debt obligations in the next twelve months. A higher current ratio will indicate that the organisation is highly capable of repaying its short-term debt obligation.

$$CurrentRatio = CurrentAssets/CurrentLiabilities$$

b. **Quick Ratio** used to ascertain information pertaining to the capability of a company in paying off its current liabilities on an immediate basis.

$$QuickRatio = (CashorCashEquivalent + MarketableInvestments + AccountReceivables)/CurrentLial$$

2. **Profitability Ratio** helps in measuring the ability of a company in earning sufficient profit.

a. **Gross Profit Ratio** are calculated in order to represent the operating profits of an organisation after making necessary adjustments pertaining to the cost of goods sold (COGS).

$$GrossProfitRatio = (GrossProfit/NetSales) * 100$$

b. **Operating Profit Ratio** used to determine the soundness of an organisation and its financial ability to repay all the short term and long term debt obligations.

$$OperatingProfitRatio = (EarningBeforeInterestandTaxes/NetSales) * 100$$

c. **Net Profit Ratio** are calculated in order to determine the overall profitability of an organisation after reducing both cash and non-cash expenditures.

$$NetProfitRatio = (NetProfit/NetSales) * 100$$

d. **Returned on Capital Employed (ROCE)** used to determine the profitability of an organisation with respect to the capital that is invested in the business.

$$ROCE = (EarningBeforeInterestandTaxes/CapitalEmployed)$$

3. **Solvency Ratio** used to evaluate whether a company is solvent and well capable of paying off its debt obligations or not.

a. **Debt Equity Ratio** used to calculate the leverage of an organisation. An ideal debt-equity ratio for an organisation is 2:1.

$$DebtEquityRatio = (TotalDebts/ShareholdersFund)$$

b. **Interest Converge Ratio** used to determine the solvency of an organisation in the nearing time as well as how many times the profits earned by that very organisation were capable of absorbing its interest-related expenses.

$$InterestCoverageRatio = (EarningBeforeInterestandTaxes/IntersetExpense)$$

4. **Turnover Ratio** used to determine how efficiently the financial assets and liabilities of an organisation have been used for the purpose of generating revenues.

a. **Fixed Asset Turnover Ratio** used to determine the deficiency of an organisation in utilising its fixed assets for the purpose of generating revenues.

$$FixedAssetsTurnoverRatio = (Netsales/AverageFixedAssets)$$

b. **Inventory Turnover Ratio** used to determine the speed of a company in converting inventories into sales.

$$InventoryTurnoverRatio = (CostofGoodsSold/AverageInventories)$$

c. **Receivable Turnover Ratio** used to determine the efficiency of an organisation in collecting or realising its account receivables.

$$ReceivablesTurnoverRatio = (NetCreditSales/AverageReceivables)$$

5. **Earning Ratio** used for the purpose of determining the return that an organisation generates for its investors.
    a. **Profit Earning (P/E) Ratio** indicates the profit earning capacity of the company.

$$ProfitEarningRatio = (MarketPricePerShare/EarningPerShare)$$

    b. **Earning Per Share (EPS)** signifies the earning of an equity holder based on each share.

$$EPS = (NetIncome - PreferredDividends)/(WeightedAveregeofOutstandingShares)$$

What are the key difference between Vertical vs Horizontal Ratio Analysis and why we use them?

The primary difference between vertical and horizontal financial analysis is that **vertical analysis is focused on the relationships between the numbers in a single reporting period, or one moment in time**, on the other hand **horizontal analysis looks at amounts from the financial statements over a horizon of many years**.

Vertical Ratio Analysis

1. Vertical Analysis refers to the analysis of the financial statement in which each item of the statement of a particular financial year is analysed, by comparing it with a common item. So, it is also known as common-size analysis.
2. In vertical analysis, the line of items on a balance sheet can be expressed as a proportion or percentage of total assets, liabilities or equity. However, in the case of the income statement, the same may be indicated as a percentage of gross sales, while in cash flow statement, the cash inflows and outflows are denoted as a proportion of total cash inflow.
3. For this purpose, **common size financial statements** are used, wherein the correlation of various items of the statement with a common item is denoted as a percentage of that common item, i.e. the bottom line.
4. With the help of this analysis, the percentages so computed can be directly compared with the result of the equivalent percentages of the past years or other companies operating in the same industry, irrespective of their size. So, common size financial statement not only helps in intra-firm comparison but also in inter-firm comparison.
5. Vertical analysis refers to the tool used to study financial statement by making a comparison of each line of the item as a proportion of the base figure within the statement, i.e. assets, liabilities, sales or equity.
6. Vertical analysis is used to report the stakeholder about the portion of line items to the total, in the current financial year.
7. Vertical analysis aims at showing an insight into the relative importance or proportion of various items on a particular year's financial statement.
8. In vertical analysis, each item of the financial statement is compared with another item of that financial statement.

Horizontal Ratio Analysis

1. Horizontal Analysis is that type of financial statement analysis in which an item of financial statement of a particular year is analysed and interpreted after making its comparison with that of another year's corresponding item.
2. It is a useful tool for gauging the trend and direction over the period. In this analysis, the line of items is compared in comparative financial statements or ratios over the reporting periods, so as to record the overall rise or fall in the company's performance and profitability
3. **Comparative financial statements** reflect the profitability and financial status of the concern for various accounting years in a comparative manner. It should be kept in mind that the data of two or more financial years can be compared only when the accounting principles are the same for the respective years.
4. In this analysis, the very first year is considered as the base year and the entities on the statement for the subsequent period are compared with those of the entities on the statement of the base period. The changes are depicted both in absolute figures and in percentage terms.
5. Horizontal Analysis refers to the process of comparing the line of items over the period, in the comparative financial statement, to track the overall trend and performance.
6. Horizontal Analysis is undertaken to ascertain how the company performed over the years or what is its financial status, as compared to the prior period.
7. The primary aim of horizontal analysis is to keep a track on the behaviour of the individual items of the financial statement over the years.
8. In horizontal analysis, the items of the present financial year are compared with the base year's amount, in both absolute and percentage terms.

9. The vertical analysis is used to compare the results of one company's financial statement with that of another, of the same industry. Further, vertical analysis can also be used for the purpose of benchmarking.
10. Helpful in both intra-firm comparison and inter-firm comparison

9. The horizontal analysis is helpful in comparing the results of one financial year with that of another.
10. Helpful in intra-firm comparison.