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Ratio Analysis

Q.1. What is meant by accounting ratios? How are they useful?

Answer: A relationship between various accounting figures, which are connected with each other, expressed in mathematical terms, is called accounting ratios.

According to **Kennedy and Macmillan**, "The relationship of one item to another expressed in simple mathematical form is known as ratio."

Robert Anthony defines a ratio as – "simply one number expressed in terms of another."

Accounting ratios are very useful as they briefly summarise the result of detailed and complicated computations. Absolute figures are useful but they do not convey much meaning. In terms of accounting ratios, comparison of these related figures makes them meaningful. For example, profit shown by two-business concern is Rs. 50,000 and Rs. 1,00,000. It is difficult to say which business concern is more efficient unless figures of capital investment or sales are also available.

Analysis and interpretation of various accounting ratio gives a better understanding of the financial condition and performance of a business concern.

Q.2. What do you mean by ratio analysis? What are the advantages of such analysis? Also point out the limitations of ratio analysis.

Answer: Ratio analysis is one of the techniques of financial analysis to evaluate the financial condition and performance of a business concern. Simply, ratio means the comparison of one figure to other relevant figure or figures.

According to **Myers**, " Ratio analysis of financial statements is a study of relationship among various financial factors in a business as disclosed by a single set of statements and a study of trend of these factors as shown in a series of statements."

Advantages and Uses of Ratio Analysis

There are various groups of people who are interested in analysis of financial position of a company. They use the ratio analysis to workout a particular financial characteristic of the company in which they are interested. Ratio analysis helps the various groups in the following manner: -

1. **To workout the profitability:** Accounting ratio help to measure the profitability of the business by calculating the various profitability ratios. It helps the management to know about the earning capacity of the business concern. In this way profitability ratios show the actual performance of the business.
2. **To workout the solvency:** With the help of solvency ratios, solvency of the company can be measured. These ratios show the relationship between the liabilities and assets. In case external liabilities are more than that of the assets of the company, it shows the unsound position of the business. In this case the business has to make it possible to repay its loans.
3. **Helpful in analysis of financial statement:** Ratio analysis help the outsiders just like creditors, shareholders, debenture-holders, bankers to know about the profitability

and ability of the company to pay them interest and dividend
4. **Helpful in comparative analysis of the performance:** Wi
analysis a company may have comparative study of its perfor
years. In this way company comes to know about its weak po
them.
5. **To simplify the accounting information:** Accounting ratios are very useful as they briefly summarise the result of detailed and complicated computations.
6. **To workout the operating efficiency:** Ratio analysis helps to workout the operating efficiency of the company with the help of various turnover ratios. All turnover ratios are worked out to evaluate the performance of the business in utilising the resources.
7. **To workout short-term financial position:** Ratio analysis helps to workout the short-term financial position of the company with the help of liquidity ratios. In case short-term financial position is not healthy efforts are made to improve it.
8. **Helpful for forecasting purposes:** Accounting ratios indicate the trend of the business. The trend is useful for estimating future. With the help of previous years' ratios, estimates for future can be made. In this way these ratios provide the basis for preparing budgets and also determine future line of action.

Limitations of Ratio Analysis

In spite of many advantages, there are certain limitations of the ratio analysis techniques and they should be kept in mind while using them in interpreting financial statements. The following are the main limitations of accounting ratios:

1. **Limited Comparability:** Different firms apply different accounting policies. Therefore the ratio of one firm can not always be compared with the ratio of other firm. Some firms may value the closing stock on LIFO basis while some other firms may value on FIFO basis. Similarly there may be difference in providing depreciation of fixed assets or certain of provision for doubtful debts etc.
2. **False Results:** Accounting ratios are based on data drawn from accounting records. In case that data is correct, then only the ratios will be correct. For example, valuation of stock is based on very high price, the profits of the concern will be inflated and it will indicate a wrong financial position. The data therefore must be absolutely correct.
3. **Effect of Price Level Changes:** Price level changes often make the comparison of figures difficult over a period of time. Changes in price affects the cost of production, sales and also the value of assets. Therefore, it is necessary to make proper adjustment for price-level changes before any comparison.
4. **Qualitative factors are ignored:** Ratio analysis is a technique of quantitative analysis and thus, ignores qualitative factors, which may be important in decision making. For example, average collection period may be equal to standard credit period, but some debtors may be in the list of doubtful debts, which is not disclosed by ratio analysis.
5. **Effect of window-dressing**: In order to cover up their bad financial position some companies resort to window dressing. They may record the accounting data according to the convenience to show the financial position of the company in a better way.
6. **Costly Technique**: Ratio analysis is a costly technique and can be used by big business houses. Small business units are not able to afford it.
7. **Misleading Results**: In the absence of absolute data, the result may be misleading. For example, the gross profit of two firms is 25%. Whereas the profit earned by one is just Rs. 5,000 and sales are Rs. 20,000 and profit earned by the other one is Rs. 10,00,000 and sales are Rs. 40,00,000. Even the profitability of the two firms is same but the magnitude of their business is quite different.
8. **Absence of standard university accepted terminology:** There are no standard ratios, which are universally accepted for comparison purposes. As such, the significance of ratio analysis technique is reduced.

Study Notes: Business Finance & Accounting

Main ratios (introduction)

In our introduction to interpreting financial information we identified five main areas for investigation of accounting information. The use of ratio analysis in each of these areas is introduced below:

Profitability Ratios

These ratios tell us whether a business is making profits - and if so whether at an acceptable rate. The key ratios are:

Ratio	Calculation	Comments
Gross Profit Margin	[Gross Profit / Revenue] x 100 (expressed as a percentage	This ratio tells us something about the business's ability consistently to control its production costs or to manage the margins its makes on products its buys and sells. Whilst sales value and volumes may move up and down significantly, the gross profit margin is usually quite stable (in percentage terms). However, a small increase (or decrease) in profit margin, however caused can produce a substantial change in overall profits.
Operating Profit Margin	[Operating Profit / Revenue] x 100 (expressed as a percentage)	Assuming a constant gross profit margin, the operating profit margin tells us something about a company's ability to control its other operating costs or overheads.
Return on capital employed ("ROCE")	Net profit before tax, interest and dividends ("EBIT") / total assets (or total assets less current liabilities	ROCE is sometimes referred to as the "primary ratio"; it tells us what returns management has made on the resources made available to them before making any distribution of those returns.

Efficiency ratios

These ratios give us an insight into how efficiently the business is employing those resources invested in fixed assets and working capital.

Ratio	Calculation	Comments
Sales /Capital Employed	Sales / Capital employed	A measure of total asset utilisation. Helps to answer the question - what sales are being generated by each pound's worth of assets invested in the business. Note, when combined with the return on sales (see above) it generates the primary ratio - ROCE.
Sales or Profit / Fixed Assets	Sales or profit / Fixed Assets	This ratio is about fixed asset capacity. A reducing sales or profit being generated from each pound invested in fixed assets may indicate overcapacity or poorer-performing equipment.
Stock Turnover	Cost of Sales / Average Stock Value	Stock turnover helps answer questions such as "have we got too much money tied up in inventory"?. An increasing stock turnover figure or one which is much larger than the "average" for an industry, may indicate poor stock management.
Credit Given / "Debtor Days"	(Trade debtors (average, if possible) / (Sales)) x 365	The "debtor days" ratio indicates whether debtors are being allowed excessive credit. A high figure (more than the industry average) may suggest general problems with debt collection or the financial position of major customers.
Credit taken / "Creditor Days"	((Trade creditors + accruals) / (cost of sales + other purchases)) x 365	A similar calculation to that for debtors, giving an insight into whether a business is taking full advantage of trade credit available to it.

Liquidity Ratios

Liquidity ratios indicate how capable a business is of meeting its short-term obligations as they fall due:

Ratio	Calculation	Comments
Current Ratio	Current Assets / Current Liabilities	A simple measure that estimates whether the business can pay debts due within one year from assets that it expects to turn into cash within that

Quick Ratio (or "Acid Test"	Cash and near cash (short-term investments + trade debtors)	Not all assets can be turned into cash quickly or easily. Some - notably raw materials and other stocks - must first be turned into final product, then sold and the cash collected from debtors. The Quick Ratio therefore adjusts the Current Ratio to eliminate all assets that are not already in cash (or "near-cash") form. Once again, a ratio of less than one would start to send out danger signals.

Stability Ratios

These ratios concentrate on the long-term health of a business - particularly the effect of the capital/finance structure on the business:

Ratio	Calculation	Comments
Gearing	Borrowing (all long-term debts + normal overdraft) / Net Assets (or Shareholders' Funds)	Gearing (otherwise known as "leverage") measures the proportion of assets invested in a business that are financed by borrowing. In theory, the higher the level of borrowing (gearing) the higher are the risks to a business, since the payment of interest and repayment of debts are not "optional" in the same way as dividends. However, gearing can be a financially sound part of a business's capital structure particularly if the business has strong, predictable cash flows.
Interest cover	Operating profit before interest / Interest	This measures the ability of the business to "service" its debt. Are profits sufficient to be able to pay interest and other finance costs?

Investor Ratios

There are several ratios commonly used by investors to assess the performance of a business as an investment:

Ratio	Calculation	Comments
Earnings per share ("EPS")	Earnings (profits) attributable to ordinary shareholders / Weighted average ordinary shares in issue during the year	A requirement of the London Stock Exchange - an important ratio. EPS measures the overall profit generated for each share in existence over a particular period.
Price-Earnings Ratio ("P/E Ratio")	Market price of share / Earnings per Share	At any time, the P/E ratio is an indication of how highly the market "rates" or "values" a business. A P/E ratio is best viewed in the context of a sector or market average to get a feel for relative value and stock market pricing.
Dividend Yield	(Latest dividend per ordinary share / current market price of share) x 100	This is known as the "payout ratio". It provides a guide as to the ability of a business to maintain a dividend payment. It also measures the proportion of earnings that are being retained by the business rather than distributed as dividends.