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Study Unit 8

Analysis and Interpretation of Financial Statements

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Study Unit 8: Analysis and Interpretation of Financial Statements

PROFITABILITY RATIOS

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Profitability Ratios

1. Return on Equity (ROE) %
2. Return on Assets (ROA) %
3. Gross Profit % (margin)
4. Profit margin %
5. Financial Leverage Ratio
6. Leverage Effect

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1. Return On Equity (ROE)

- Return on equity (ROE) measures the profitability of the capital investment made by equity owners.
- ***Formula:***

$$\frac{\text{Profit before tax}}{\text{Total Equity}} \times 100 = x\%$$

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2. Return On Assets (ROA)

- Return on Assets (ROA) measures how effectively the entities assets are being used to generate profit
- ***Formula:***

$$\frac{\text{Profit before interest and tax}}{\text{Total Assets}} \times 100 = x\%$$

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3. Gross Profit % (margin)

- GP% is a measure of the gross profit earned on sales.
- ***Formula:***

$$\frac{\text{Gross profit}}{\text{Sales}} \times 100 = x\%$$

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4. Profit Margin

- The Profit Margin % is a measure of net profit, that is, how much net profit the entity makes for every R1 of revenue it generates
- ***Formula:***

$$\frac{\text{Profit before tax}}{\text{Sales}} \times 100 = x\%$$

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5. Financial Leverage Ratio

- The Financial Leverage Ratio measure the efficiency with which borrowed funds are used, that is, are the returns being generated for equity owners higher than the cost of the borrowed funds
- ***Formula***:

$$\frac{\text{ROE}}{\text{ROA}}$$

- A leverage ratio greater than one indicates that the entity is generating higher returns on the assets than the cost of borrowing incurred to fund the assets

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6. Financial Leverage Effect

- The Leverage Effect further assists in explaining how much equity investors are benefiting from the use of borrowed funds.
- ***Formula:***

$$\text{ROE (\%)} - \text{ROA (\%)} = x\%$$

- *A positive % figure indicates that borrowed funds are being used efficiently and resulting in higher returns to equity owners than the cost of borrowing funds*

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LIQUIDITY RATIOS

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Liquidity Ratios

1. Current ratio
2. Acid Test (Quick) ratio
3. Trade receivables collection period
4. Trade payables payment period
5. Inventory holding period
6. Inventory turnover rate

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1. Current Ratio

- The current ratio measures the extent to which current assets could be used to settle current liabilities (measures liquidity – ie ability to pay debts as they become due)
- ***Formula:***

$$\frac{\text{Current assets}}{\text{Current liabilities}} = x : 1$$

- Acceptable ratios vary from industry to industry, but a 2 : 1 ratio is generally indicative of good liquidity
- If the ratio is less than 1 : 1, the entity may have problems settling liabilities as they become due.

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2. Acid Test (Quick) Ratio

- The acid test ratio is a stricter measure of liquidity as it excludes inventories.
- ***Formula:***

$$\frac{\text{Current assets - Inventories}}{\text{Current liabilities}} = x : 1$$

- Acceptable ratios vary from industry to industry, but a 1 : 1 or higher ratio is generally indicative of good liquidity

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3. Trade Receivables Collection Period

- The trade receivables collection period indicates how long (in days) it takes for trade receivables to be collected, and is a useful measure of the entities debt collection policy.

Formula:

$$\frac{\text{Average trade receivables}}{\text{Credit sales}} \times 365 = \text{x days}$$

- The shorter the collection period the better the liquidity position of the entity

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4. Trade Payables Settlement Period

- The trade payables settlement period indicates how long (in days) it takes the entity to settle trade payables.

Formula:

$$\frac{\text{Average trade payables}}{\text{Credit purchases}} \times 365 = \text{x days}$$

- Entities will generally try and ensure that trade payables are settled over a longer period than trade receivables are collected.

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5. Inventory Holding Period

- The inventory holding period measures the number of days that it takes the entity to convert inventory into sales.

Formula:

$$\frac{\text{Average Inventory}}{\text{Cost of Sales}} \times 365 = \text{x days}$$

- Entities will generally try and ensure a lower period, as this reduces the value of the investment in inventory required.

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6. Inventory Turnover Rate

- The inventory turnover rate indicates the number of times inventory acquired is converted into sales (turned over) in a financial year or period. This provides a measure of the efficiency with which the entity manages inventory levels.

Formula:

$$\frac{\text{Cost of Sales}}{\text{Average Inventory}} = \text{x number of times}$$

- The higher the inventory turnover rate, the better the management of inventory.

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SOLVENCY RATIOS

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Liquidity Ratios

1. Debt – Equity Ratio
2. Times Interest Earned Ratio

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1. Debt – Equity Ratio

- The debt – equity ratio measures total debt (both current and non current debt) to the equity of the entity.

Formula:

$$\frac{\text{Total Debt}}{\text{Total Equity}} \times 100 = x\%$$

- If the debt level is greater than the equity level (ie ratio is more than 100%), it is clear that more debt is used than equity to finance the entities assets.
- This increases the risk that the entity may not be able to repay the debt.

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2. Times Interest Earned Ratio

- The times interest earned ratio indicates the ability of the entity to be able to meet its interest expense obligations from available profits.

Formula:

$$\frac{\text{Profit before interest and tax}}{\text{Finance costs (interest exp)}} = \text{x times}$$

- If the ratio drops below 1 times, this indicates that the entoty does not have sufficient profits to cover the interest expense, which may result in default on borrowings.