

ANALYSIS AND INTERPRETATION OF FINANCIAL STATEMENTS

Study unit 8

FAC1601

OVERVIEW

○ Profitability

- Return on equity
- Return on assets
- Gross profit %
- Profit margin
- Financial leverage and effect

○ Liquidity

- Current ratio
- Acid test or quick ratio
- Trade receivables collection period
- Trade payables settlement period
- Inventory turnover rate
- Inventory-holding period

○ Solvency

- Debt-equity ratio
- Times interest earned ratio

○ Limitations

PROFITABILITY RATIOS

PROFITABILITY RATIOS

- ⦿ Measures profit for period in relation to
 - ⦿ Sales
 - ⦿ Assets
 - ⦿ Equity
- ⦿ Use to estimate future
 - ⦿ Returns on invested funds
 - ⦿ Growth
- ⦿ Express in %
- ⦿ Compare year on year or across companies

RETURN ON EQUITY (ROE)

$$\frac{\textit{Profit before tax}}{\textit{Total equity}} \times \frac{100}{1}$$

- ⦿ Rate of return earned on funds invested by owners
- ⦿ Total equity
 - ⦿ Sole proprietor
 - ⦿ Capital contribution + total comprehensive income - drawings
 - ⦿ Partnership
 - ⦿ Capital contributions + current accounts + reserves
 - ⦿ Close corporation
 - ⦿ Members' contributions + retained earnings + reserves
 - ⦿ Company
 - ⦿ Ordinary issued shares + retained earnings + reserves

RETURN ON ASSETS (ROA)

$$\frac{\textit{Profit before interest and tax}}{\textit{Total assets}} \times \frac{100}{1}$$

- ⦿ Profitability of entity as a whole
 - ⦿ Not only equity funded assets, but also debt funded
- ⦿ Measures effective use of assets to generate profit
- ⦿ Profit **before interest and tax**
 - ⦿ Link to operation, therefore exclude interest
- ⦿ Decrease
 - ⦿ Could indicate lack of management's commitment to use assets optimally
 - ⦿ Assets acquired close to y/e not yet fully utilised

FINANCIAL LEVERAGE

$$\frac{\text{Return on equity}}{\text{Return on assets}} \times \frac{100}{1}$$

- ⦿ Extent to which borrowed funds are used successfully
 - ⦿ Positive returns > borrowing cost
- ⦿ Acceptable norm : 1

FINANCIAL LEVERAGE EFFECT

- ◉ Return on equity LESS Return on assets
- ◉ Explains how much equity investors benefitted from efficient use of borrowed funds.

GROSS PROFIT %

$$\frac{\text{Gross profit}}{\text{Sales}} \times \frac{100}{1}$$

- Assess

- Control over inventory costs
- % income left from sales to meet other operating costs

- Linked to variations in:

- Sales volumes
- Selling prices
- Cost of sales

PROFIT MARGIN

$$\frac{\textit{Profit before tax}}{\textit{Sales}} \times \frac{100}{1}$$

- ◉ Management's ability to operate entity with success
 - ◉ Cover costs AND make profit

LIQUIDITY RATIOS

LIQUIDITY RATIOS

- Ability to meet short-term financial obligations
- Compare to prior year rate

CURRENT RATIO

$$\frac{\textit{Current assets}}{\textit{Current liabilities}}$$

- ⦿ Acceptable ratio 2:1
- ⦿ Current assets
 - ⦿ Cash and cash equivalents
 - ⦿ Accounts receivable
 - ⦿ Inventory
 - ⦿ Pre-payments
- ⦿ Current liabilities
 - ⦿ Accounts payable
 - ⦿ Short-term portion of long term borrowings
 - ⦿ Short-term borrowings

ACID TEST

$$\frac{\text{Current asset LESS Inventory}}{\text{Current liability}}$$

- ⦿ Acceptable ratio:1
- ⦿ Ability to meet obligations at very short notice

TRADE RECEIVABLES COLLECTION PERIOD

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

- ⦿ # days to collect payments for credit sales
- ⦿ Collection period
 - ⦿ Date of credit sale → payment by customer
 - ⦿ Should be shorter than trade payables settlement period
- ⦿ Average trade receivables
 - ⦿ (Opening balance + Closing balance)/2

TRADE PAYABLES SETTLEMENT PERIOD

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

- ⦿ # days to pay creditors
 - ⦿ Longer period → Use to fund operations
- ⦿ Average trade receivables
 - ⦿ (Opening balance + Closing balance)/2
- ⦿ Credit purchases
 - ⦿ Cost of sales + Closing Inventory - Opening inventory

INVENTORY TURNOVER RATE

$$\frac{\text{Cost of Sales}}{\text{Average inventory}}$$

- ⦿ # of times inventory is converted to sales during period
- ⦿ Efficiency in managing stock levels
- ⦿ Low
 - ⦿ Excessive storage, insurance & other holding costs
 - ⦿ Damaged goods or low sales volumes
- ⦿ Average inventory
 - ⦿ $(\text{Opening balance} + \text{closing balance})/2$
- ⦿ Opening balance prior year
 - ⦿ $\text{Cost of sales} + \text{closing balance} - \text{Purchases}$

INVENTORY-HOLDING PERIOD

$$\frac{\textit{Average inventory}}{\textit{Cost of sales}} \times 365$$

- ⦿ # days inventory is held before sold
- ⦿ High number of days
 - ⦿ High investment in equity
 - ⦿ Less cash available to meet short-term obligations

SOLVENCY RATIOS

DEBT-EQUITY RATIO

$$\frac{\textit{Total debt}}{\textit{Total equity}} \times 100$$

- Ability to repay debt

TIMES INTEREST EARNED RATIO

$$\frac{\textit{Profit before interest and tax}}{\textit{Finance costs}}$$

- ⦿ Ability to pay interest on debt
- ⦿ Aka interest cover

LIMITATIONS

LIMITATIONS

- ⦿ Inflation
 - ⦿ Overstate profits
 - ⦿ Understate assets at cost
- ⦿ Outdated information
- ⦿ Interpretation requires knowledge