Penang Sangam High School

Accounting-Year 11

Strand 5: Analysis and Interpretation of Financial Statements

Sub-strand: ANALYSING ACCOUNTING REPORTS - VERTICAL

LESSON - Week 22

Achievement indicators:

RATIO ANALYSIS OF A SOLE TRADER

Financial statements are statements based on historical, facts and figures. They reflect a careful combination of recorded facts, accounting principles, concepts and conventions, personal judgments and sometimes estimates. In accounting ratios are used to analyze and interpret the accounting data. This helps the business to compare ratios and performances with those in the same industry.

Analysis of Financial Statements – is generally the calculation of ratios and percentages Interpretation of Financial statements – is commenting on the ratios, which will aid in decision making.

There are **three** sets of ratios and percentages:

- Profitability Ratios
- Financial Stability Ratios
- Management Effectiveness ratio

Measures of Earning Capacity / Profitability Ratios

Earning capacity or ability to maintain or improve profitability is one of the most important objectives of any business entity. This is an area of interest to all types of end users of accounting data

	Ratio	Formula	Purpose/ Significance
1	Gross profit ratio **or** Gross Profit %	$\frac{\text{Gross profit}}{\text{Net Sales}}$ OR $\frac{\text{Gross Profit}}{\text{Net Sales}} \times \frac{100}{1}$	**-measures the gross profit earned per dollar of sales** **- it indicates the margin of profit available to cover operating expenses** **High gross profit is important to the business's economic viability.** **Declining gross profit means low sales margin and expensive buying.**
2	Net profit ratio **or** Net Profit %	$\frac{\text{Net profit}}{\text{Net Sales}}$ Or $\frac{\text{Net Profit}}{\text{Net Sales}} \times \frac{100}{1}$	**- measures net profit per dollar of sales** **- indicates net margin per dollar after all expenses** **- High net profit means high profits.** **- Net Profit is dependent on the gross profit and volume of sales.**
3.	Return on owners' equity ratio or Return on owners' equity %	$\frac{\text{Net profit}}{\text{Av/ Closing capital}}$ or $\frac{\text{Net profit}}{\text{Av/Closing capital}} \times \frac{100}{1}$ Average capital = opening capital + closing capital ÷ 2	**- measures return on investments or assets provided by the owner** **- measures how effectively invested funds are used**
4	Rate of return on total assets ratio Or Rate of return on		**- measures the net profit derived from every dollar of asset employed by the business**

	total assets %age	$\frac{\text{Net profit + interest expense}}{\text{Average total assets}}$ $\frac{\text{Net .Op profit + int exp}}{\text{Average total assets}} \times \frac{100}{1}$	

5	Expense to sales ratio Or Expenses to sales percentage	$\frac{\text{Total operating expenses}}{\text{Net sales}}$ OR $\frac{\text{Total Op. expenses}}{\text{Net sales}} \times \frac{100}{1}$ **Individual expenses** a) $\frac{\text{Selling and Dist Exp}}{\text{Net sales}} \times \frac{100}{1}$ b) $\frac{\text{Administrative Expense}}{\text{Net sales}} \times \frac{100}{1}$ c) $\frac{\text{Financial Expense}}{\text{Net sales}} \times \frac{100}{1}$	**- measures the ratio of expenses in relation to the sales dollar**
6	Mark – up Ratio Mark Up %	$\frac{\text{Gross Profit}}{\text{Costs of Goods Sold}}$ OR $\frac{\text{Gross profit}}{\text{Cost of goods sold}} \times \frac{100}{1}$	**- measures the gross profit based on the cost price**
B	**Measures of Financial Stability or Liquidity Ratios** **Means the ability to meet financial requirements in both short term and long term so that the business could continue to operate as usual**		
1	Working capital/current or solvency ratio	$\frac{\text{Current Assets}}{\text{Current Liabilities}}$	**- measures the ability to meet current debts**

	OR Working Capital %age OR Working Capital in $	OR $\frac{\text{Current Assets}}{\text{Current Liabilities}} \times \frac{100}{1}$ OR CA – CL = $	with the current assets - the rule of thumb is 2:1 - it indicates the ability of the business to meet its debts as it falls due in the short term 3-6 months
2.	Quick Asset or Acid Test or Liquid Capital ratio Quick Asset %	$\frac{\text{CA – Cl stock -prepayment)}}{\text{CL – Bank overdraft secured}}$ OR $\frac{\text{Quick Assets}}{\text{Quick Liabilities}} \times \frac{100}{1}$ Quick Assets = Current Assets – (closing stock + prepayment) Quick Liabilities = current liabilities – bank overdraft (limit)	- measures the ability to meet immediate debts using the most liquid assets - the rule of thumb is 1:1
3	Proprietorship ratio / Owners Equity / Equity ratio Proprietorship %	$\frac{\text{Owners' Equity}}{\text{Total Assets}}$ OR $\frac{\text{Owners' Equity}}{\text{Total Assets}} \times \frac{100}{1}$	- measures the percentage of assets or funds provided by the owners - the ratio should at least be 50%, a very high level shows overcapitalization by the owners
4	Debt ratio	$\frac{\text{Total External Liabilities}}{\text{Total Assets}}$ OR	- measures the amount of assets or funds provided by the external parties - the acceptable level is below 50%

	Debt to total asset %	$\frac{\text{Total Ex Liabilities}}{\text{Total Assets}} \times \frac{100}{1}$	
5.	Debt to Equity Ratio based on liabilities Debt to Equity %	$\frac{\text{Total External Liabilities}}{\text{Owners' Equity}}$ Or $\frac{\text{Total Ex. Liabilities}}{\text{Owners Equity}} \times \frac{100}{1}$	- **measures the outsiders claim in relation to the owners' equity** - **the acceptable level is below 50%**
C	**MEASURES OF THE EFFECTIVENESS OF CERTAIN MANAGEMENT POLICIES** **All ratios and percentages indicate the effectiveness of the management in controlling and managing their resources to its best advantage. However, some results are specifically related to certain policies of the management**		
1	Rate of inventory turnover OR Rate of Stock Turnover in Days/Months/ Weeks	$\frac{\text{COGS}}{\text{Av. Stock}}$ = No. of times OR $\frac{\text{Av. Stock}}{\text{COGS}}$ x days/ Wks/months	- **measures how quickly inventory is sold** - **measures the number of times during the period that average inventory is sold**
2.	Debtors turnover Or Accounts Receivable turnover in Days/Months/Weeks	$\frac{\text{Net credit sales}}{\text{Average debtors}}$ = No. of times $\frac{\text{Av. debtors}}{\text{Net Credit sales}}$ x days/ wks/months	- **measures the time taken by the debtors to pay their debts** - **It indicates how quickly accounts receivable or debtors pay their debts and helps the business to judge the effectiveness of credit control and collection policies.** **Greater the time taken by debtor to settle their accounts, greater will be the incidence of bad and doubtful debts**

Limitations of Ratio Analysis

1. Items that cannot be quantified in monetary terms are not included in the ratio analysis.
2. Single year's figures are meaningless unless compared to the previous year of the business trend.
3. Calculations are based on historical cost ignoring the changes in the price level.
4. Different businesses may have different accounting policies which make comparison rather difficult in the same industry.

Activity

The following statements have been prepared for the KCF Company for the year ended 31 March 2013.

Statement of Financial Performance for KCF Enterprise For the year ended 31 March 2013

		2013 $	
Net sales (50% credit)		15000	
Less cost of goods sold		10 000	
Gross profit			5 000
Less Operating Expenses			4 000
Net profit			1000
Statement of Financial Position for KCF Enterprise As at 31 March 2013			
Owners Equity	$	$	$
Capital		30 000	
Add Net profit		1 000	
		31 000	
Less Drawings		3 000	28 000
This is represented by:			
Current Assets			
Debtors	2 850		

Stock	8 700	11 550	
Current Liabilities			
Bank	1 300		
Creditors	4 000	5 300	
Working Capital			6 250
Add Non – Current Assets Less Non –			35 900
Current Liabilities Mortgage			42 150
			14 150
			28 000

Required:

A. Calculate the following ratios and percentage for 2013 correct to two decimal place

Show all working

a) Mark – up %
b) Gross profit ratio
c) Net profit %
d) Total Operating Expense %
e) Return on owners' Equity ratio
f) Acid test ratio
g) Debtors turnover in number of times