

Finance Management & Planning

Financial Ratios – Part 2

- Recap of Last week
 - Profitability Ratios - continued
 - Liquidity Ratios
- This Week
 - Activity Ratios
 - Leverage Ratios

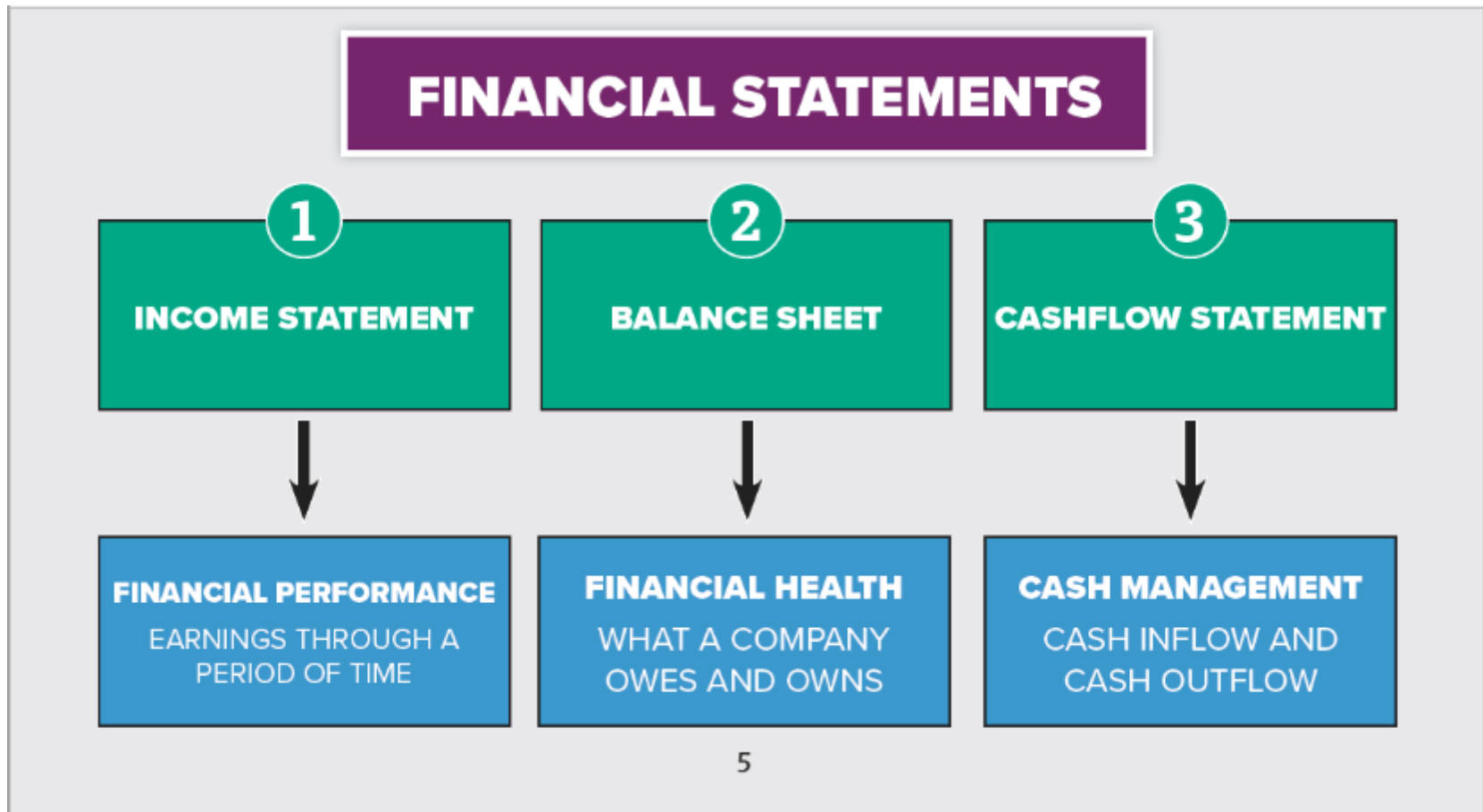
Financial Ratios

Statistical Information within your business



The Financial Statements

Financial statements measure the financial health of the organisation:



- Grouped into categories relating to a particular aspect of financial performance or position.
 - Profitability
 - Efficiency
 - Liquidity
 - Financial Gearing
 - Investment (of more interest to external stakeholders)
- Atrill & McLaney chapter: 6
 - Analysing and interpreting financial statements

Profitability Ratios Formula

$$\text{Gross Profit Margin} = \frac{\text{Gross Profit}}{\text{Sales}} \times 100$$

$$\text{Net Profit Margin} = \frac{\text{Net Income}}{\text{Sales}} \times 100$$

$$\text{Operating Profit Margin} = \frac{\text{Operating Profit}}{\text{Sales}} \times 100$$

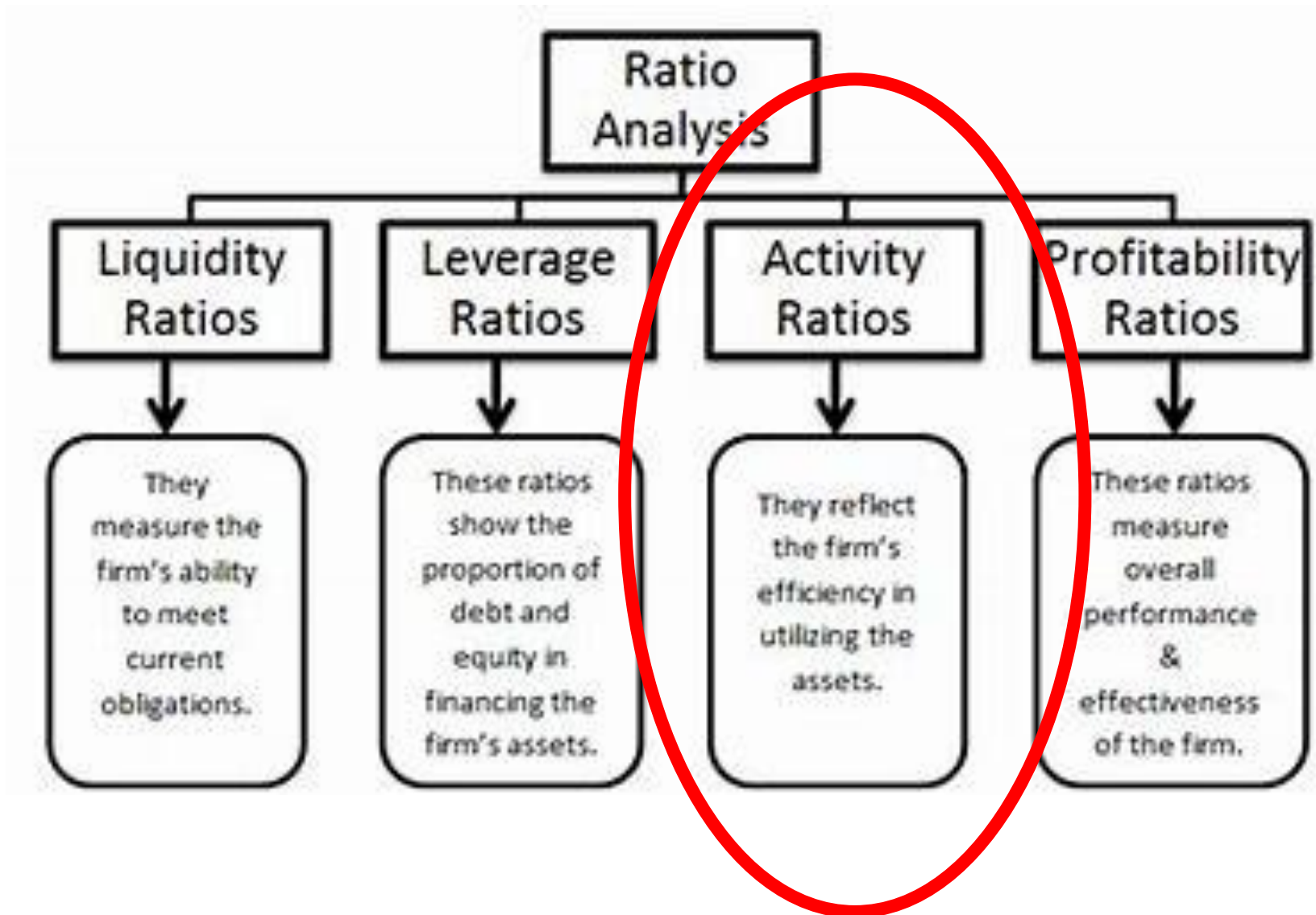
$$\text{Return on Assets} = \frac{\text{Net Income}}{\text{Assets}} \times 100$$

$$\text{Return on Equity} = \frac{\text{Net Income}}{\text{Shareholder's Equity}}$$

Liquidity Ratios

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

$$\text{Quick Ratios (or Acid Test Ratio)} = \frac{\text{Current Assets Less Stock}}{\text{Current Liabilities}}$$



Activity Ratios

$$\text{Days Sales Outstanding (DSO)} = \frac{\text{Accounts Receivable (i.e. Debtors)}}{\text{Average Revenue per Day}}$$

$$\text{Inventory Turnover} = \frac{\text{Cost of Goods Sold}}{\text{Average Inventory}}$$

$$\text{Days Payable Outstanding (DPO)} = \frac{\text{Accounts Payable (i.e. Creditors)}}{\text{Average COGS per day}}$$

$$\text{Where Average Revenue per Day} = \frac{\text{Annual Revenue}}{365}$$

$$\text{Where Average COGS per Day} = \frac{\text{Annual COGS}}{365}$$

Financial Ratios

Year	2017
Revenue	100000
COGS	80000
Gross Profit	20000
Gross Margin %	20.0%
SG&A	10000
Operating Profit	10000
Operating Profit %	10.0%
Interest + Tax	5000
Net Income	5,000
Net Profit %	5.0%

Balance Sheet	
Year	2017
Fixed Assets	100,000
Stock	20,000
Cash and Cash Equivalents	35,000
Debtors	30,000
Other Current Assets	5,000
Current Assets	75,000
Total Assets	175,000

Creditors	50,000
Accruals	10,000
Current Liabilities	60,000
Long Term Liabilities	50,000
Total Liabilities	110,000

Net Assets	65,000
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$$\text{Days Sales Outstanding (DSO)} = \frac{\text{Accounts Receivable (i.e. Debtors)}}{\text{Average Revenue per Day}}$$

$$\text{Average Revenue per Day} = \frac{100,000}{365} = 273.97$$

$$\text{Days Sales Outstanding (DSO)} = \frac{30,000}{273.97}$$

$$\text{Days Sales Outstanding (DSO)} = 109.5 \text{ Days}$$

So what does this mean ?

How could the business improve this ?

Financial Ratios

Year	2017
Revenue	100000
COGS	80000
Gross Profit	20000
Gross Margin %	20.0%
SG&A	10000
Operating Profit	10000
Operating Profit %	10.0%
Interest + Tax	5000
Net Income	5,000
Net Profit %	5.0%

Balance Sheet	
Year	2017
Fixed Assets	100,000
Stock	20,000
Cash and Cash Equivalents	25,000
Debtors	30,000
Other Current Assets	5,000
Current Assets	75,000
Total Assets	175,000
Creditors	50,000
Accruals	10,000
Current Liabilities	60,000
Long Term Liabilities	50,000
Total Liabilities	110,000

Net Assets	65,000
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$$\text{Inventory Turnover} = \frac{\text{Cost of Goods Sold}}{\text{Average Inventory}}$$

$$\text{Inventory Turnover} = \frac{80,000}{20,000} = 4 \text{ Turns per Year}$$

4 turns a year equates to stock being refreshed every 91 days

So what does this mean ?

How could the business improve this ?

Financial Ratios

Year	2017
Revenue	200000
COGS	80000
Gross Profit	20000
Gross Margin %	20.0%
SG&A	10000
Operating Profit	10000
Operating Profit %	10.0%
Interest + Tax	5000
Net Income	5,000
Net Profit %	5.0%

Balance Sheet	
Year	2017
Fixed Assets	100,000

Stock	20,000
Cash and Cash Equivalents	20,000
Debtors	30,000
Other Current Assets	5,000
Current Assets	75,000

Total Assets	175,000
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Creditors	50,000
Accruals	10,000
Current Liabilities	60,000
Long Term Liabilities	50,000
Total Liabilities	110,000

Net Assets	65,000
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$$\text{Days Payable Outstanding (DPO)} = \frac{\text{Accounts Payable (i.e. Creditors)}}{\text{Average COGS per day}}$$

$$\text{Days Payable Outstanding (DPO)} = \frac{50,000}{219.18}$$

$$\text{Days Payable Outstanding (DPO)} = 228.13 \text{ Days}$$

So what does this mean ?

How could the business improve this ?

Financial Ratios



Year	2017	2018	2019	2020
Revenue	100000	150000	165000	180000
COGS	80000	110000	120000	128000
Gross Profit	20000	40000	45000	52000
Gross Margin %	20.0%	26.7%	27.3%	28.9%

Balance Sheet				
Year	2017	2018	2019	2020
Fixed Assets	100,000	90,000	80,000	70,000
Stock	20,000	30,000	50,000	60,000
Cash and Cash Equivalents	20,000	15,000	10,000	8,200
Debtors	30,000	25,000	20,000	30,000
Other Current Assets	5,000	10,000	10,000	10,000
Current Assets	75,000	80,000	90,000	108,200
Total Assets	175,000	170,000	170,000	178,200
Creditors	50,000	35,000	33,000	33,000
Accruals	10,000	10,000	5,000	2,000
Current Liabilities	60,000	45,000	38,000	35,000
Long Term Liabilities	50,000	45,000	40,000	35,000
Total Liabilities	110,000	90,000	78,000	70,000
Net Assets	65,000	80,000	92,000	108,200
Ordinary Shares	60,000	60,000	60,000	60,000
Retained Earnings	5,000	20,000	32,000	48,200
Shareholders Equity	65,000	80,000	92,000	108,200

$$\text{Days Sales Outstanding (DSO)} = \frac{\text{Accounts Receivable (i.e. Debtors)}}{\text{Average Revenue per Day}}$$

$$\text{Inventory Turnover} = \frac{\text{Cost of Goods Sold}}{\text{Average Inventory}}$$

$$\text{Days Payable Outstanding (DPO) } = \frac{\text{Accounts Payable (i.e. Creditors)}}{\text{Average COGS per day}}$$

Calculate the above formulae for 2018 , 2019 and 2020.

Remember the average inventory is current year and prior year.

Ratio's Calculated so Far

Year	2017	2018	2019	2020
Current Ratio	1.25	1.78	2.37	3.09
Quick Ratio	0.92	1.11	1.05	1.38
Days Sales Outstanding	109.50	60.83	44.24	60.83
Inventory Turns	4.00	3.67	2.40	2.13
Days Payable Outstanding	228.13	134.47	104.74	97.14

Next Week - Bank Holiday

Next lecture 22/04

Gearing Ratio's

Investor Ratio's

Review Assignment information