The Interpretation of Financial Statements

Chapter 16

1

Why use ratio analysis

- Provides framework
- Comparison to previous years
- Trends identified
- Identify areas of concern
- Targets can be set
- Comparison to other similar organisations

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Limitations

- Accounting statements present a limited picture
- Accounting policies can distort any inter-firm comparisons and trend analysis
- Historical
- Ratios can be misleading if used in isolation
- Effects of inflation ignored
- Year end figures in statements may not be representative of whole year

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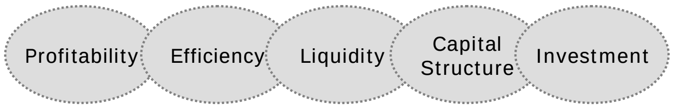
Ratio analysis



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Data for ratio illustrations

Profit Statements for year ended 31 December		
Turnover		9,885
Less cost of sales		
Opening stock	500	
Net purchases	6,800	
Closing stock	(850)	(6,450)
Gross profit		**3,435**
less expenses		(1,200)
Net operating profit (PBIT)		**2,235**
Less interest payable		(162)
Net profit before tax		2,073
Less taxation		(413)
Profit after interest and tax		**1,660**
less dividends preference		(100)
less dividends ordinary		(800)
Retained profit for the year		760
Retained profit b/f		1,200
Retained profit c/f		1,960
Market price of shares	*1.21*	
8 million ordinary shares issued		

Balance sheet as at 31 December			
Fixed assets			8,595
Current assets			
Stock	850		
Debtors	780		
Bank	120	1,750	
Current liabilities			
Creditors	585		
Bank/ short term loans	500	(1,085)	665
Long term liabilities			
Debentures			(1,800)
			7,460
Capital and reserves			
Ordinary shares	8,000		4,000
Preference shares			1,000
Retained profit			1,960
Reserves			500
			7,460

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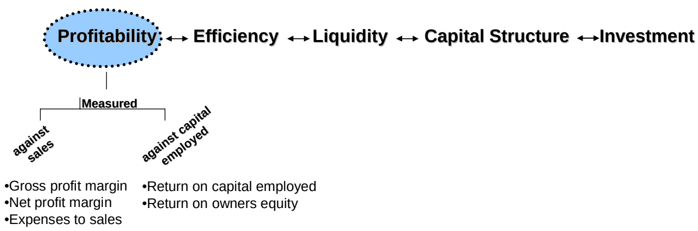

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Gross profit margin

<u>Gross Profit</u> x 100
Sales

This indicates the margin of profit between sales and cost of sales.

7 PROFITABILITY

Net profit margin

<u>Net Profit</u> x 100
Sales

This shows the amount of profit after all expenses are deducted.

8 PROFITABILITY

Expenses to sales

$$\frac{\text{Expenses}}{\text{Sales}} \times 100$$

This shows the percentage of sales needing to cover expenses. This ratio assesses the ability of management in controlling expenses of the business.

9 PROFITABILITY

Return on Capital Employed (ROCE)

Usually net profit before interest and tax

$$\frac{\text{Net Profit}}{\text{Capital employed}} \times 100$$

share capital + reserves + Loans

This shows the ratio of net profit to the investment in the business.

10 PROFITABILITY

Return on Owners Equity (ROOE)

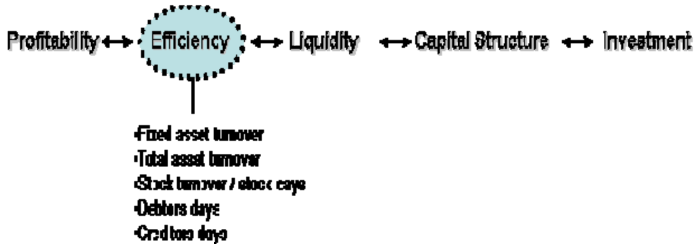
Can be before or after interest and tax

$$\frac{\text{Net Profit}}{\text{Shareholders funds}} \times 100$$

Should only relate to ordinary shareholders

This ratio assesses the return (profit) for the ordinary (equity) shareholders alone.

11 PROFITABILITY



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Fixed asset turnover

$$\frac{\textbf{Sales}}{\textbf{Fixed Assets}}$$

This shows the number of times that the fixed assets are turned over in the period. A high rate of return indicates that a business is operating efficiently and is making the best possible use of assets. A low rate suggests inefficient use of assets.

13 EFFICIENCY

Total asset turnover

$$\frac{\textbf{Sales}}{\textbf{Total assets}}$$

This shows the number of times that the total net assets are turned over in the period. A high rate of return indicates that a business is operating efficiently and is making the best possible use of assets. A low rate suggests inefficient use of assets.

14 EFFICIENCY

Stock turnover

Cost of sales
Average stock

Stock turnover is the average number of times per year that the whole value of stock is purchased and resold. The quicker stock is told the quicker profit will be made on that item. A low rate of turnover shows that old stock is being left on the shelves.

15 EFFICIENCY

Stock days

Stock can also be measured by examining the number of days on average that stock is held.

Average stock x 365
Cost of sales

16 EFFICIENCY

Debtors days

Trade Debtors x 365
Credit Sales

Indicates how quickly debtors pay. This ratio can be expressed as the number of days credit taken by debtors.

17 EFFICIENCY

Creditors days

$$\frac{\text{Trade Creditors}}{\text{Credit Purchases}} \times 365$$

Indicates how long before creditors are paid. This ratio can be expressed as the number of days credit taken before payment.

18 EFFICIENCY

Return on Capital Employed (ROCE)

Note: the combination of net profit margin and the asset turnover gives the return on capital employed.

Profit Margin x Asset Turnover

$$\frac{\text{Sales}}{\text{Capital Employed}} \times \frac{\text{Net Profit}}{\text{Sales}} \times 100 = \frac{\text{Net Profit}}{\text{Capital Employed}} \times 100$$

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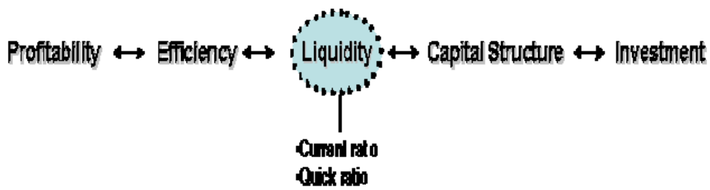

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Current ratio

Current Assets
Current Liabilities

This is a measure of the short term solvency of a business.

21 LIQUIDITY

Current ratios – sector norms

Industry Type	Current Ratio
Manufacturing	2.5 – 4.5 : 1
Wholesalers	2 : 1
Retail/Supermarkets	0.8 : 1
Hotels, restaurants, fast foods	0.4 : 1

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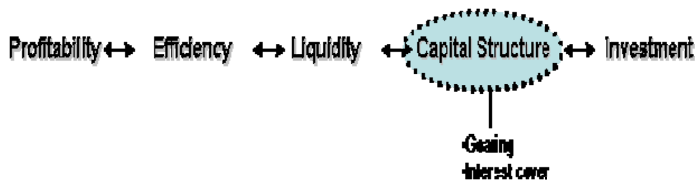
Acid-test ratio

$$\frac{\textbf{Current Assets - Stock}}{\textbf{Current Liabilities}}$$

Also know as quick ratio. Indicates the ability of a business to pay off short term liabilities without resorting to the liquidation of stock or the sale of fixed assets.

23 LIQUIDITY



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Capital structure

Capital structure measures the funding mix of a business.

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Financing

Through debt	Through equity
Interest must be paid on the debt	Dividends will be paid to shareholders
Interest is tax deductible	Dividends are not tax deductible
Debt generally cheaper	Equity requires higher returns to compensate for risk
Debt is risky because interest must be paid	Dividends are at discretion of management and may be deferred
Loan must be repaid	Equity does not require repayment

26 CAPITAL STRUCTURE

Gearing

$$\frac{\textbf{Preference shares and long term loans}}{\textbf{All shareholders funds and long term loans}}$$

This is the ratio of fixed interest debt and capital to ordinary share capital.

27 CAPITAL STRUCTURE

Gearing

The higher the ratio of debt to equity, the more dependent the organisation is upon borrowed funds, and the greater the risk that it will be unable to meet interest payments on these funds as they fall due.

Low gearing = where debt is less than capital & reserves.	< 100%
Neutral gearing = debt = capital & reserves.	= 100%
High gearing = debt is greater than capital & reserves.	> 100%

28 CAPITAL STRUCTURE

Interest cover

$$\frac{\textbf{Profit before interest}}{\textbf{Interest payable}}$$

The ability of a company to meets its interest commitments, measured by expressing the profit before interest as a multiple of the interest paid and payable.

29 CAPITAL STRUCTURE

Profitability ↔ Efficiency ↔ Liquidity ↔ Capital Structure ↔ Investment

- Earnings per share (EPS)
- Price earnings ratio (PE)
- Dividend cover
- Dividend yield

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Earnings per share (EPS)

$$\frac{\textbf{Profit available for ordinary dividend}}{\textbf{Number of equity shares issued}}$$

Earnings is measured in pence / cents and is concerned with the profits available to ordinary shareholders from which a dividend can be paid.

31 INVESTMENT

Price/earnings ratio (PE)

$$\frac{\textbf{Market Price}}{\textbf{Earnings per share}}$$

Market price as a multiple of the latest earnings per share. Used as a relative measure of stock market performance.

Relates the EPS to the price the shares sell at in the market. The greater the PE the greater the demand for shares.

32 INVESTMENT

Price/earnings ratio (PE)

The P/E ratio depends mainly on four things:

- The overall level of the stock market (e.g. bull or bear).
- The industry in which the company operates.
- The company's record.
- The markets view on the company's prospects.

P/E ratio	Commentary
<8	The market feels that these companies have poor future prospects and/or are trading in unfashionable business sectors.
8-12	The market feels that these companies have reasonable prospects but are unsure regarding if and when these companies will shine.
12-20	The market feels these companies have very good prospects and that these prospects are beginning to be reflected in the share price as demand for the share increases. Companies with P/Es of 15 are considered good safe blue chip investments
>20	These are the boom stocks or high flyers. Their potential is generally reflected already in their share price and the demand for the share is on the increase. These type of companies tend to be young high flyers who retain all their profits for future growth.

33 INVESTMENT

Dividend cover

$$\frac{\textbf{Profit available to pay dividend}}{\textbf{Dividends paid and proposed}}$$

This ratio indicates the proportion of available profits, which is distributed to shareholders, and the amount which is retained by the organisation.

34 INVESTMENT

Dividend yield

$$\frac{\textbf{Dividend per share}}{\textbf{Price per share}}$$

The real rate of return on investment in shares.

35 INVESTMENT

Dividend yield

The average dividend yield for the major world markets over the last twenty years

	Dividend Yield %
UK	2.7%
Ireland	1.8%
Eurobloc (ex UK)	2.4%
USA	1.5%
Japan	0.9%
Asia pacific (ex Japan)	3.1%

(Source: Irish Times Business Supplement)

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Setting the context

- The age of the business
- The size of the business
- The economic and political environment
- Industry Trends

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Company performance – number of years

- Have sales increased or decreased and by what percentage?
- Has operating profit increased or decreased and by what percentage?
- Has loan interest increased or decreased and by what percentage?
- Check the long-term loans in the balance sheet to see if they have increased/decreased.
- Compare profit after tax to see if it has increased or decreased.
- Calculate percentage increase/decrease in fixed assets.
- If assets have been increased, has this been financed through increased loans or issued share capital?
- Check to see if the business has cash or an overdraft, and is this increasing or decreasing?
- Check current assets and liabilities for any major increases.
- Check the percentage increase/ decrease in long-term loans.

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Company comparison

- Check both businesses are in the same industry/sector
- Compare the size of each business. This is normally done, by comparing the total asset levels in the balance sheet (fixed assets + current assets- current liabilities).
- Compare sales and profit levels.
- Compare financing. For example is one company highly geared and the other low geared?
- Compare cash balances/overdraft levels.

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Sector overviews

Hospitality and tourism performance is commented on throughout chapter 16 and should be read and studied carefully.

For a retail overview the performance of Arnotts is analysis in a case study from page 339 of the text book.

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Hospitality ratios

Ratio	Formula
Occupancy ratios	Rooms occupied x 100 / Rooms available Number of guests x 100 / Guest capacity Actual room revenue x100 / Potential room revenue
Average room rate	Room revenue / Rooms occupied
Average rate per guest	Room revenue / Number of guests
Average spend	Sales / Number of covers
Sales mix	Rooms revenue x 100 / Total hotel revenue Food revenue x 100 / Total hotel revenue Bar revenue x 100 / Total hotel revenue

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