Chapter

18 Financial Analysis

Financial analysis

The objective of financial statements is to provide information to all the users of these accounts to help them in their decision-making. Note that most users will only have access to published financial statements.

Interpretation and analysis of financial statements involves identifying the users of the accounts, examining the information, analysing and reporting in a format which will give information for economic decision making.

Types of users

Investors ï look at the risk of their investment, profitability and future growth.

Managers / employeesï have access to more information and will want to know the stability of the company and profitability.

Creditors ï are interested in the liquidity, as they just want to be paid on time.

Banks ï are interested in the performance and liquidity of organisations for lending purposes

Government departments - have various uses.

Other groups including the local community on green issues, jobs etc.

18.1 Analysing performance through ratios

Ratios are an effective way of analysing the financial statements. A ratio is 2 figures compared to each other, and can either be in % terms or in absolute terms.

When analysing performance through the use of ratios it is important to use comparisons. A single ratio is meaningless and is only of use when compared with other ratios, competitors, and over time.

Ratio uses

To compare results over a period of time
To measure performance against other organisations
To compare results with a target
To compare against industry averages

Ratios can be grouped into 3 main areas:

1	Performance	-	how well the business has done (profitability)
2	Position	-	short term standing of the business (liquidity)
3	Potential	-	what the future holds for the business

Exam technique for analysing performance

The following steps should be adopted when answering an exam question on analysing performance:

Step 1 Review figures as they are and comment on them.
Step 2 Calculate relevant ratios according to performance, position and potential (if possible)

1 Performance (profitability) – how well has the business done	
Return on capital employed (ROCE)	Profit before interest & tax (PBIT) X 100% Capital employed (CE)
Operating profit margin	PBIT X 100% Turnover
Asset turnover	Turnover (number of times) Total assets
(Operating profit margin x asset turnover = ROCE)	
Return on equity (ROE)	Profit after tax x 100% Shareholder funds (capital + reserves)
2 Position (liquidity)– short term standing of the business	
Current ratio	Current assets (number of times) Current liabilities
Quick ratio	Current assets ï inventory (number of times) Current liabilities
Gearing - equity	Debt capital X 100% Equity (shareholders funds)
Gearing – total	Debt capital X 100% Debt + equity (total capital)
Interest cover	Profit before interest & tax (PBIT (number of times) Interest paid
Trade payable days	Trade payables x 365 days Cost of sales (or purchases)

Inventory days	Inventory x 365 days Cost of sales
Trade receivable days	Trade receivable x 365 days Sales
Working capital cycle	Trade receivable days + inventory days ï trade payable days
3 Potential (investor) – what investors are looking at	
Earnings per share (EPS)	Profit after tax Number of shares
P/E ratio	Share price Earnings per share
Dividend yield	Dividend per share X 100% Share price
Dividend cover	Earnings per share Dividend per share

The above is not the complete list, but are the main ratios.

Step 3 Add value to the ratios by:

Interacting with other ratios and giving reasons

a) State the **significant fact or change** (i.e. increase or decrease)

b) **Explain the change** or how it may have occurred by looking at the business activities and other information.

c) Explain the significance of the ratio in terms of **implications for the future** and how it fits in with the userôs needs.

d) **Limitations** of the ratio analysis. Look at the 2 figures used to compute the ratio and criticise them. Also look at other factors which may distort the information (creative accounting, seasonal fluctuations etc.)

Another way of at discussing the ratio's is to adopt the 3W's for each ratio calculated:	
WHAT	What has happened to the figures or ratios? Have they increased or decreased?
WHY	Explain why the changes may have occurred by giving examples (think creatively!).
WOW	How do these changes affect the user of the information ï WOW thatôs great or not so great!

18.2 Ratios in detail

We shall now look at some of the ratios in detail explain how they can be interpreted.

Performance ratios

1 ROCE

Return on capital employed (ROCE) = Profit before interest and tax (PBIT) x 100%
Capital employed

The ROCE measures profitability and shows how well the business is utilising its capital to generate profits. Capital employed is debt and equity. Equity is shareholders funds (share holdersô funds) and debt is non current liabilities. Capital employed can be found from the statement of financial position by taking the shareholders funds (share capital and reserves) and long term debt.

The ROCE can be broken down into 2 parts, operating profit margin and asset turnover.

A low ROCE is either caused by a low profit margin or high capital employed. A high ROCE is either caused by high profit margin or low capital employed. It is therefore important to look at the profitability, assets, liabilities and share capital when trying to give reasons for the change in ROCE.

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2 Operating profit margin

Operating profit margin = PBIT x 100%
Turnover

This is the ratio of operating profit to sales or turnover. A high operating profit margin is due higher sales prices or low costs. Other factors to consider include inventory valuation, overhead allocation, bulk discounts and sales mix.

Low profit margins are not normally good news as it suggests poor performance. But there may be other factors to consider relating to the business activities and industry. For example the company may be entering a new market which requires low selling prices.

Other profit margin ratios can also be calculated:

- Gross profit / turnover
- Profit after tax / turnover
- Advertising costs / turnover
- Distribution costs / turnover
- Cost of sales / turnover

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3 Asset turnover

Asset turnover = Turnover / Total assets or capital employed

This shows how much sales are generated for every £1 of capital employed. A low asset turnover indicates that the business is not using its assets affectively and should either try to increase its sales or dispose of some of the assets.

A company with old non current assets that are almost completely depreciated will show a high asset turnover, whereas a company with recently acquired non current assets will show a low asset turnover. Different accounting policies will also give different ratios, for example using the cost model to or re-valuation model.

The age of the non current assets is important in understanding the ratio. Recently acquired non current assets will not be generating revenues to their full extent.

Interaction between ROCE, operating profit margin and asset turnover:

ROCE = PBIT / Turnover x Turnover / CE = PBIT / CE

(ROCE = operating profit margin x asset t/o)

Position ratios

1 Current ratio (CA) or working capital ratio

CA = Current assets / Current liabilities (times)

The current ratio measures the short term solvency or liquidity; it shows the extent to which the claims of short-term creditors are covered by assets. The current ratio is essentially looking at the working capital of the company. Effective management of working capital ensures the organisation is running efficiently. This will eventually result in increased profitability and positive cash flows. Effective management of working capital involves low investment in non productive assets like trade receivables, inventory and current account bank balances. Also maximum use of free credit facilities like trade payables ensures efficient management of working capital.

The normal current ratio is around 2:1 but this varies within different industries. Low current ratio may indicate insolvency. High ratio may indicate not maximising return on working capital. Valuation of inventories will have an impact on the current ratio, as will year end balances and seasonal fluctuations.

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2 Quick ratio or acid test

Quick ratio = Current assets less inventories / Current liabilities (times)

This ratio measures the immediate solvency of a business as it removes the inventories out of the equation, which is the item least representing cash, as it needs to be sold. Normal is around 1: 1 but this varies within different industries.

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3 Trade payable days (turnover)

Year end trade payables / Credit purchases (or cost of sales) x 365 days

This is the length of time taken to pay the suppliers. The ratio can also be calculated using cost of sales, as credit purchases are not usually stated in the financial statements.

High trade payable dayôs is good as credit from suppliers represents free credit. If itôs too high then there is a risk of the suppliers not extending credit in the future and may lose goodwill. High trade payable days may also indicate that the business has no cash to pay which indicates insolvency problems.

Limitations in the trade payable dayôs ratio are:

- Year-end trade payables may not be representative of the year.
- Credit purchases are VAT exclusive in the income statement, whereas trade payables are including VAT in the statement of financial position.

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4 Trade receivable days (turnover)

Year end trade receivables / Credit sales (or turnover) x 365 days

This is the average length of time taken by customers to pay.

A long average collection means poor credit control and hence cash flow problems may occur. The normal stated credit period is 30 days for most industries.

Changes in the ratio may be due to improving or worsening credit control. Major new customer pays fast or slow. Change in credit terms or early settlement discounts are offered to customers for early payment of invoices.

Limitations in the trade receivable dayôs ratio are:

- Year-end trade receivables may not be representative of the year.
- Credit sales are VAT exclusive in the Income statement, whereas trade receivables are including VAT in the statement of financial position.

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5 Inventory days

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

Average inventory can be arrived by taking this yearôs and last yearôs inventory values and dividing by 2 - (Opening inventories + closing inventories) / 2

This ratio shows how long the inventory stays in the company before it is sold. The lower the ratio the more efficient the company is trading, but this may result in low levels of inventories to meet demand.

A lengthening inventory period may indicate a slow down in trade and an excessive build up of inventories, resulting in additional costs.

The disadvantage of this ratio is that the average calculation based on beginning and year-end inventory may not represent actual average in year.

Other limitations in the stock ratios are:

- Inclusion of obsolete stock
- Different stock valuation policies

Inventory turnover is the reciprocal of inventory days

$$\frac{\text{Cost of sales}}{\text{Average inventory}} \quad \text{number of times}$$

It shows how quickly the inventory is being sold. It shows the liquidity of inventories, the higher the figure the quicker the inventory is sold.

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6 Working capital cycle (operating/trading/cash cycle)

This is the time between paying for goods supplied and final receipt of cash from their sale. It is desirable to keep the cycle as short as possible:

The working capital cycle therefore should be kept to a minimum to ensure efficient and cost effective management.

Working capital cycle for a trade

Inventories days (time inventories are held before being sold)

Plus

Trade receivables days (how long the credit customers take to pay)

Minus

Trade payables days (how long the company takes to pay its suppliers)

Equals

Working capital cycle (in days)

Working capital cycle in a manufacturing business

Average time raw materials are in stock (raw materials/purchases x 365 days)

Plus

Time taken to produce goods

- **Work in progress days (work in progress / cost of goods sold x 365 days)**
- **Finished goods days (finished goods / cost of goods sold x 365 days)**

Plus

Time taken by customers to pay for goods (receivable days)

less

Period of credit taken from suppliers (payable days)

Equals

Working capital cycle (in days)

The shorter the cycle, the better it is for the company
Moving inventories rapidly Collecting debts quickly Taking the maximum credit possible
The shorter the cycle, the lower the companyôs reliance on external supplies of finance like bank overdrafts which is costly.
Excessive working capital means too much money is invested in inventories and trade receivables. This represents lost interest or excessive interest paid and lost opportunities (the funds could be invested elsewhere and earn a higher return).
The longer the working capital cycle, the more capital is required to finance it.

Overtrading

When a company is trading at a very fast pace, it will be generating sales on credit with speed, therefore have a large volume of trade receivables. It will also be purchasing inventories on credit at a fast pace and therefore have a large volumes of trade payables. If the company doesnôt have enough capital (finance), it will find it difficult to continue as there are insufficient funds to meet all the costs.

Overtrading occurs when a company has inadequate finance for working capital to support its level of trading. The company is growing rapidly and is trying to take on more business that its financial resources permit ie it is ñ**under-capitalised**ò.

Symptoms of overtrading	**Remedies for overtrading**
• Fast sales growth • Increasing trade payables • Increasing trade receivables • Fall in cash balances and increasing overdraft.	Short-term solutions • Speeding up collection from customers. • Slowing down payment to suppliers. • Maintaining lower inventory levels Long term solutions • Increase the capital by equity or long-term debt.

Overtrading may result in insolvency which means companies have severe cash flow problems. This means that a thriving company, which may look very profitable, is failing to meets its liabilities due to cash shortages.

Over-capitalisation

This is the opposite of over trading. It means a company has a large volume of inventories, trade receivables and cash balances but very few trade payables. The funds tied up could be invested profitably.

Differences in working capital for different industries

	Manufacturing	Retail	Service
Inventories	High volume. WIP and finished goods	Goods for re-sale only, usually low volume	No or very little inventories
Trade receivables	High levels of debtors, as dependant on a few customers	Very low levels as most goods bought by cash	Usually low levels as services are paid for immediately
Trade payables	Low to medium levels of payables	Very high levels of trade payables due to the huge purchases of inventory	Low levels of payables

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7 Gearing

Gearing is the relationship between debt and equity. Debt is normally long term liabilities that the organisation has. Equity is all the share capital and reserves. There are two ways that the gearing ratio can be calculated are:

- Equity gearing = debt capital vs equity capital
- Total gearing = debt capital vs total capital

Equity gearing ratio = $\frac{\text{Debt capital}}{\text{Equity}}$ x 100%

(Capital and reserves)

(100% = same amount of debt and equity)

Total gearing ratio = $\frac{\text{Debt capital}}{\text{Total capital}}$ x 100%

(Shareholder funds + debt capital)

(50% = same amount of debt and equity)

Gearing is one of the most widely used terms in accounting. Gearing is the relationship between equity and debt, i.e. how much of the total capital is in the form of equity and debt. Gearing is relevant to the long-term financial stability of a business.

Gearing (also known as capital gearing) is calculated from a company's financing structure as shown in its statement of financial position.

Debt capital consists of:	**Equity capital consists of:**
▪ Long-term loans (debentures, loan stock etc.) ▪ Preference share capital ▪ May also include bank overdrafts, but not necessarily All the above are known as interest bearing capital.	▪ Ordinary share capital ▪ Share premium ▪ Retained profits or losses ▪ Any reserves All the above are known as shareholder funds

The other question is do we use the book values of the capital (as it appears in the statement of financial position) or the market values? Both are acceptable and depend on the information available. Short term debt can also be incorporated into the gearing ratio if this is material and has an impact on decision making.

The significance of gearing on shareholders is the financial risk for a geared and un-geared company. It means that there is a greater volatility in returns for the shareholders. Highly geared companies have higher proportion of their profits being used for obligatory interest payments and preference dividends. This leaves fewer profits for distribution to the shareholders.

Other effects of highly geared company are cash flow problems as a result of obligatory payments and share prices are often more volatile, as there is more financial risk.

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8 Interest cover

$$\text{Interest cover} = \frac{\text{Profit before interest and tax (PBIT)}}{\text{Interest payable}} \quad \text{(no. of times)}$$

Interest cover shows the safety of earnings, that shareholders look at. Interest cover looks at the proportion of profits that must be allocated to meeting interest charges. Interest payable is on long term finance.

Potential

1 Earnings per share (EPS)

EPS = Profit available to ordinary shareholders (PAT) (p per share)
Weighted average number of shares in issue

This ratio shows the profitability of each share, i.e. the amount of potential dividend available per share. The EPS is a very important ratio and is published in the annual accounts of companies (IAS 33).

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2 Price earnings (PE) ratio

PE = Market share price (no. of times)
EPS

The PE ratio is the most widely quoted investorsô ratio. It shows the market confidence in a company by taking the current market share price in relation to the most recent EPS. A high PE ratio indicates good growth prospects.

PE ratios of different industries are available as published information. If the PE and EPS are known, the share price of a company can be established as follows:

EPS x PE ratio

This is useful when valuing shares for unlisted companies, by taking an industry similar PE ratio.

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3 Dividend yield

Dividend yield= Dividend per share x 100%
Market share price

The dividend yield is the cash return on the share (not the whole return which is cash dividend and capital growth). The dividend yield can only be calculated for listed companies as the share price is required. The higher the share price, the lower the dividends yield.

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4 Dividend cover

Dividend cover = Profit available to ordinary shareholders (PAT) (no. of times)
Annual dividend

Or = EPS
Dividend per share

Dividend cover shows the safety of the dividend payments. How many times can the company pay the current level of dividends out of the profits currently being earned?

18.3 Cash flow statement analysis

The cash flow statement is a primary financial statement and shows the cash generating ability of the organisation.

Cash generated from operations can be compared against the operating profit. If there are high profits and low cash being generated this may suggest over trading.

Cash generated from operating activities can also be compared to long term borrowings to see how well the business is generating cash to meet its obligations. It can also be compared against the capital expenditure to see how much of the investment on new non current assets was financed by the operating activities.

Return on capital employed for cash can also be established as follows:

Cash generated from operating activities / capital employed x 100%

Difference between cash and profit

The cash flow statement shows all the cash in and cash out for the organisation for that period. It shows the cash generating ability of the organisation. The income statement on the other hand shows the profitability of the business during that period. The income statement is prepared using the accruals concept. This is where expenses and revenue are recognised in the period that they are incurred and not in the period the cash is paid or received. This is why you have a difference between cash and profit.

18.4 Limitations of ratio analysis

A ratio on its own is meaningless. Accounting ratios must always be interpreted in relation to other information, for example:

- Budgeted or target figures
- 5 or 10 year trend
- Industry averages
- Against a company in a similar industry

Ratios based on historic cost accounts do not give a true picture of trends, because of the effects of inflation and different accounting policies. Investorsô ratios particularly have a disadvantage, because investment means looking into the future and the past may not always be indicative of the future.

Comparing the financial statements of similar businesses can be misleading:

1 Use of **different accounting policies** (depreciation, inventory valuation, non current asset valuation, capitalisation of borrowing costs etc)

2 The companies may not be of **similar size**. One may be part of a large group and therefore have access to economies of scale, which result in lower costs.

3 The companies may be operating in the same industry, but they may have different markets, and therefore different product ranges and sales mix. Segmental accounts are useful in this respect.

Accounting policies

Different accounting policies that can be adopted will have an impact on the ratios calculated and therefore make comparisons more difficult. The different accounting policies affect the income statement and the statement of financial position and these impacts on all the major ratios like ROCE and gearing.

1 **Non current assets** can be valued using the cost model or revaluation model. This will have an impact on the statement of financial position and income statement, with higher or lower depreciation charges.
2 **Capitalisation of borrowing costs** is optional, resulting in the statement of financial position and income statement being affected. Capitalisation reports higher profits (as less interest expense) and higher capital employed (high non current assets).
3 **Inventory valuation** at the year end will result in higher or lower cost of sales and therefore different profit figures. FIFO and weighted average method are allowed.
4 **Finance leases** are capitalised with the obligation being set up as well. This will have an impact on both gearing and ROCE. Operating leases are not capitalised.
5 **Defined benefit pension plan** has different methods of dealing with actuarial gains and losses which go through the income statement and therefore affect profitability.
6 **Goodwill** on acquisition used to be amortised through the income statement. It is not now and only impairment losses go through the income statement. This will make profitability more volatile. The statement of financial position will show the goodwill indefinitely and therefore ROCE will be lower.
7 **International company** comparisons adds another layer of problems, where different accounting policies are used.

Creative accounting

Creative accounting (also known as aggressive accounting or earnings management) distorts financial analysis of company accounts. Creative accounting is done by organisations to perhaps enhance the balance sheet or performance by either exploiting loopholes in the accounting standards or deliberately not showing certain items. Listed companies especially have added pressures for the maintenance and increase of share prices; this obviously has an impact on the valuation of the company. As share prices are stipulated by the market, the information fed to the market can be manipulated to ensure this.

There has been a severe crackdown on misleading accounts especially with the disasters like Enron and WorldCom. In the USA there are now huge financial penalties and even jail sentences for directors deliberately misleading users of the accounts. In the UK the directors are legally obliged to produce true and fair accounts.

Some examples of creative accounting include:
1 **Timing of transactions**. Delaying or hurrying up the despatch of invoices at the year end to increase or decrease sales. This will aid in profit smoothing which listed companies may employ. Early recognition of revenue will also smooth profits
2 **Choice of accounting policies** may not reflect the true substance of the transactions. Although these areas of abuse have been identified in the accounting standards and abuse of things like setting up provisions are now not possible.

3 **Capitalising of expenses** as non current assets. This will lead to increased profits. WorldCom did this type of creating accounting which amounted to billions of dollars being capitalised.

4 **Off balance sheet finance.** This is where the company undertakes finance but excludes it from the statement of financial position. A good example is using special purpose entities to house the liabilities, which the company does not own. This would then exclude them from consolidation so users of the accounts are unaware of the debt. Enron engaged in this type of creative accounting. This has now bee rectified with the accounting standards for reporting substance over form.

Interpretation of financial obligations included in the accounts

Financial obligations reported in the accounts need to be understood properly.

1 **Redeemable debt**. The company will have to re-pay the debt at the redemption date or between the two redemption dates (i.e. 20X5/20X9, means debt can be redeemed any time between 20X5 and 20X9). If the company is having cash flow problems, then the users of the accounts will need to know when the debt will be repaid.

2 **Contingent liabilities**. Under IAS 37 provisions, contingent liabilities and contingent assets, contingent liabilities are not recognised in the financial statements. Contingent liabilities are less than 50% probable but not remote. The users of the accounts need information from the notes to make a proper assessment. Especially as the probability figure can be manipulated.

3 **Earn out arrangements.** These arrangements occur during acquisition of another company. The parent company agrees to pay additional money if certain events are achieved in the future (i.e. certain level of profit being achieved by the subsidiary). Again IAS 37 will apply and it all rests on the probability of the event being achieved. If it is less than 50% then the amount will not be recognised in the financial statements, so users of the accounts will need to find that information from the notes to the accounts.

Lecture Example 18.1
The following are the accounts for Umar plc.

Summarised statement of financial position at 30 June

	20X2		20X1	
Non current assets	£'000	£'000	£'000	£'000
Plant, property & machinery		260		278
Current assets				
Inventory	84		74	
Trade receivables	58		46	
Bank	6		50	
		148		170
		408		**448**
Capital and reserves				
Ordinary share capital (50p shares)		70		70
8% preference shares (£1 shares)		50		50
Share premium account		34		34
Revaluation reserve		20		-
Profit and loss account		62		84
		236		**238**
Non current liabilities				
5% secured loan stock		80		80
Current liabilities				
Trade payables	72		110	
Taxation	20		20	
		92		130
		408		**448**

Summarised income statement for the year ended 30 June

	20X2		20X1	
	£'000	£'000	£'000	£'000
Sales		418		392
Opening inventory	74		58	
Purchases	324		318	
	398		376	
Closing inventory	(84)		(74)	
		(314)		(302)
Gross profit		**104**		**90**
Interest	4		4	
Depreciation	18		18	
Sundry expenses	28		22	
		(50)		(44)
Profit before tax		54		46
Taxation		(20)		(20)
Profit after tax		34		26
Dividends ï ordinary	12		10	
Dividends ï preference	4	(16)	4	(14)
Retained profit		**18**		**12**

Calculate and comment on the following ratios for Umar plc

1 ROCE
2 Gross profit margin
3 Asset turnover
4 Current ratio
5 Quick ratio
6 Inventory turnover ratio
7 Inventory days
8 Trade receivable days
9 Trade payable days
10 Equity gearing
11 Total gearing
12 Interest cover
13 Dividend cover
14 EPS
15 PE if market value of ordinary shares is 240p in 20X2

Lecture example 18.2 – financial analysis (May 2006 – CIMA)

You advise a private investor who holds a portfolio of investments in smaller listed companies.

Recently, she has received the annual report of the BZJ Group for the financial year ended 31 December 20X5. In accordance with her usual practice, the investor has read the chairmanôs statement, but has not looked in detail at the figures. Relevant extracts from the chairmanôs statement are as follows:

ñFollowing the replacement of many of the directors, which took place in early March 20X5, your new board has worked to expand the groupôs manufacturing facilities and to replace non-current assets that have reached the end of their useful lives. A new line of storage solutions was designed during the second quarter and was put into production at the beginning of September. Sales efforts have been concentrated on increasing our market share in respect of storage products, and in leading the expansion into Middle Eastern markets. The growth in the business has been financed by a combination of loan capital and the issue of additional shares. The issue of 300,000 new $1 shares was fully taken up on 1 November 20X5, reflecting, we believe, market confidence in the groupôs new management. Dividends have been reduced in 20X5 in order to increase profit retention to fund the further growth planned for 20X6. The directors believe that the implementation of their medium- to long term strategies will result in increased returns to investors within the next two to three years.ò

The groupôs principal activity is the manufacture and sale of domestic and office furniture. Approximately 40% of the product range is bought in from manufacturers in other countries.

Extracts from the annual report of the BZJ Group are as follows:

BZJ Group: Consolidated income statement for the year ended 31 December 20X5

	2005	2004
	$ô000	$ô000
Revenue	120,366	121,351
Cost of sales	(103,024)	(102,286)
Gross profit	17,342	19,065
Operating expenses	(11,965)	(12,448)
Profit from operations	5,377	6,617
Interest payable	(1,469)	(906)
Profit before tax	3,908	5,711
Income tax expense	(1,125)	(1,594)
Profit for the period	2,783	4,117
Attributable to:		
Equity holders of the parent	2,460	3,676
Non controlling interest	323	441
	2,783	4,117

BZJ Group: Summarised consolidated statement of changes in equity for the year ended 31 December 20X5 (attributable to equity holders of the parent)

	Accum. profit	*Share capital*	*Share premium*	*Reval. reserve*	*Total 2005*	*Total 2004*
	$000	*$000*	*$000*	*$000*	*$000*	*$000*
Opening balance	18,823	2,800	3,000		24,623	21,311
Surplus on revaluation of properties				2,000	2,000	
Profit for the period	2,460				2,460	3,676
Issue of share capital		300	1,200		1,500	-
Dividends paid 31/12	(155)				(155)	(364)
Closing balance	21,128	3,100	4,200	2,000	30,428	24,623

BZJ Group: Consolidated statement of financial position as at 31 December 20X5

	2005		*2004*	
	$000	*$000*	*$000*	*$000*
Non-current assets:				
Property, plant and equipment	40,643		21,322	
Goodwill	1,928		1,928	
Trademarks and patents	1,004		1,070	
		43,575		24,320
Current assets:				
Inventories	37,108		27,260	
Trade receivables	14,922		17,521	
Cash	-		170	
		52,030		44,951
		95,605		69,271
Equity:				
Share capital ($1 shares)	3,100		2,800	
Share premium	4,200		3,000	
Revaluation reserve	2,000		-	
Accumulated profits	21,128		18,823	
		30,428		24,623
Non controlling interest		2,270		1,947
Non-current liabilities				
Interest bearing borrowings		26,700		16,700
Current liabilities:				
Trade and other payables	31,420		24,407	
Income tax	1,125		1,594	
Short-term borrowings	3,662		-	
		36,207		26,001
		95,605		69,271

(a) Calculate the earnings per share figure for the BZJ Group for the years ended 31 December 20X5 and 20X4, assuming that there was no change in the number of ordinary shares in issue during 20X4. (3 marks)

(b) Produce a report for the investor that

(i) Analyses and interprets the financial statements of the BZJ Group, commenting upon the groupôs performance and position; and (17 marks)

(ii) Discusses the extent to which the chairmanôs comments about the potential for improved future performance are supported by the financial statement information for the year ended 31 December 20X5. (5 marks)

(Total 25 marks)

Lecture example 18.3 – Financial analysis (May 2007 CIMA)

You are the accounting adviser to a committee of bank lending officers. Each loan application is subject to an initial vetting procedure, which involves the examination of the application, recent financial statements, and a set of key financial ratios.

The key ratios are as follows:

- Gearing (calculated as debt/debt + equity, where debt includes both long- and short-term borrowings);
- Current ratio;
- Quick ratio;
- Profit margin (using profit before tax).

Existing levels of gearing are especially significant to the decision, and the committee usually rejects any application from an entity with gearing of over 45%.

The committee will shortly meet to conduct the initial vetting of a commercial loan application made by TYD, an unlisted entity. As permitted by national accounting law in its country of registration, TYD does not comply in all respects with International Financial Reporting Standards. The committee has asked you to interview TYDôs finance director to determine areas of non-compliance. As a result of the interview, you have identified two significant areas for examination in respect of TYDôs financial statements for the year ended 30 September 20X6.

1 Revenue for the period includes a sale of inventories at cost to HPS, a banking institution, for $85,000, which took place on 30 September 20X6. HPS has an option under the contract of sale to require TYD to repurchase the inventories on 30 September 20X8, for $95,000. TYD has derecognised the inventories at their cost of $85,000, with a charge to cost of sales of this mount. The inventories concerned in this transaction, are, however, stored on TYDôs premises, and TYD bears the cost of insuring them.

2 me categories of TYDôs inventories are sold on a sale or return basis. The entityôs accounting policy in this respect is to recognise the sale at the point of despatch of goods. The standard margin on sales of this type is 20%. During the year ended 30 September 20X6, $100,000 (in sales value) has been despatched in this way. The finance director estimates that approximately 60% of this value represents sales that have been accepted by customers; the remainder is potentially subject to return.

The financial statements of TYD for the year ended 30 September 20X6 are as presented below. (Note: at this stage of the analysis only one yearôs figures are considered).

TYD: Income statement for the year ended 30 September 20X6

	$000
Revenue	600
Cost of sales	450
Gross profit	150
Expenses	63
Finance costs	17
Profit before tax	70
Income tax expense	25
Profit for the period	45

TYD: Statement of changes in equity for the year ended 30 September 20X6

	Share capital *$000*	*Retained earnings* *$000*	*Total* *$000*
Balances at 1 October 2005	100	200	300
Profit for the period		45	45
Balances at 30 September 2006	100	245	345

TYD: Statement of financial position at 30 September 20X6

	$000	*$000*
ASSETS		
Non-current assets:		
Property, plant and equipment		527
Current assets:		
Inventories	95	
Trade receivables	72	
Cash	6	
		173
		700
EQUITY AND LIABILITIES		
Equity:		
Called up share capital	100	
Retained earnings	245	
		345
Non-current liabilities:		
Long-term borrowings		180
Current liabilities:		
Trade and other payables	95	
Bank overdraft	80	
		175
		700

Required:
Prepare a report to the committee of lending officers that

(i) Discusses the accounting treatment of the two significant areas identified in the interview with the FD, with reference to the requirements of International Financial Reporting Standards (IFRS) and to fundamental accounting principles. (8 marks)

(ii) Calculates any adjustments to the financial statements that are required in order to bring them into compliance with IFRS (ignore tax). (5 marks)

(iii) Analyses and interprets the financial statements, calculating the key ratios before and after adjustments, and making a recommendation to the lending committee on whether or not to grant TYDôs application for a commercial loan. (12 marks)

18.5 Presentation of analysis

Financial analysis can be presented in various forms. A report can be written detailing the analysis. In the exam the question will make it clear the format that is required. It is important that the report is in the correct format. The ratios can be given as appendices.

Report format

ôUse of sub-headings, short paragraphs and clear spacing between each issue, within your solution, will make your document easier to follow and more professional.ô

Label it óREPORTô

To:
From:
Subject:
Date:

- Introduction explaining purpose
- Main body with use of clear headings
- Conclusion and recommendations
- Signed: MA
- Appendix for tables and charts

Report

To
From
Date
Re

Brief introduction (1.0)

Headings for main body
- **2.0, 2.1, 2.2 etc**
- **3.0, 3.1, 3.2 etc**
- **4.0, 4.1, 4.2 etc**

Conclusion and recommendations

Signed

Memorandum Format

Memorandum/Internal Memorandum

Fao: **From**
Date

Brief introduction (1.0)

Headings for main body
- **2.0, 2.1, 2.2 etc**
- **3.0, 3.1, 3.2 etc**
- **4.0, 4.1, 4.2 etc**

Conclusion and recommendations

Not signed (unlike a report)

Figures can also be presented in horizontal and vertical format. Common size statements can also be given.

Horizontal analysis	**20X5**	**20X4**	**20X3**	**20X1**
Turnover ($ôm)	280	300	150	100
% change from prior year	(6.7)%	100%	50%	-

Vertical Analysis	**20X5**	**20X4**	**% change**
Turnover ($ôm)	150	135	11.1%
Gross profit ($ôm)	50	60	(16.7)%

With common size statements each balance sheet item is expressed as a percentage of the balance sheet total. Each profit and loss account item is expressed as a percentage of sales (or earnings)

Common size analysis

$'m	**20X5**	**%**	**20X4**	**%**
Non current assets	150	75%`	120	60%
Current assets	50	25%	80	40%
	200	**100%**	**200**	**100%**

18.6 IFRS 8 operating segments

The IASB issued IFRS 8 operating segments in November 2006 (which replaced IAS 14). This continues the IASBôs work in its joint short-term convergence project with the US Financial Accounting Standards Board (FASB) to reduce differences between IFRSs and US generally accepted accounting principles (GAAP). IFRS 8 is now aligned with the US standard SFAS 131 disclosures about segments of an enterprise and related information.

Many organisations now do business in lots of different geographical areas and carry on with different classes of business. These different sections will have different levels of profitability, growth and risk. Analysing the different business ñsegmentsò will give users of accounts more information for their decision-making purposes.

Segmented accounts give the users information relating to the different areas of business or location for the enterprise.

IFRS 8 requires an organisation to adopt the **management approach** to reporting on the financial performance of its operating segments. The general idea is that:

- Information that would be reported would be what **management uses internally for decision** making of the segments (management accounts).
- This therefore means that information may be **different** from what is used to prepare the income statement and statement of financial position.
- The IFRS therefore requires **explanations** of the basis on which the segment information is prepared and **reconciliations** to the amounts recognised in the income statement and statement of financial position.
- Management approach to segmental reporting will allow users of financial statements to **review the operations from the management's point of view** and see how the organisation is controlled by the senior decision makers.
- As this information is produced internally by the management it will **incur few costs**.
- This will also allow **interim reporting of the segment information**, as internally this is produced anyway for management accounts purposes.

Scope of IFRS 8

IFRS 8 applies to organisations who:

- Debt or equity instruments are traded in a public market (stock market); or
- Is in the process of obtaining a stock market listing.

With group accounts the segmented information needs to be presented in the consolidated financial statements and not in the individual parent companyôs financial statements.

Operating segments

An operating segment is a component of an organisation

- That engages in business activities from which it may **earn revenues and incur expenses** (this also includes inter-company trading).
- Whose operating results are r**eviewed regularly** by the management who then assign resources accordingly whilst reviewing the performance of the operating segment
- For which **discrete financial information is available**. This means separate data is kept for each operating segment.

Reportable segments

Reportable segments are operating segments or aggregations of operating segments that meet specified criteria (core principle):

- The segments revenue (internal and external) is **10% or more** than the combined internal and external revenue of all operating segments or
- The segments profit is 10% or more than the combined operating segments profit. The segments loss is 10% or more than the combined operating segments losses or
- The segments assets are 10% or more than the combined assets of all operating segments.

If the total external revenue reported by operating segments is less than 75 per cent of the organisationôs entire revenue, additional operating segments must be identified as reportable segments (even if they do not meet the 10% criteria above) until at least 75 per cent of the organisationôs revenue is included in reportable segments. IFRS 8 requires an entity to report financial and descriptive information about its reportable segments.

Disclosure requirements

- General information about how the **operating segments were identified** and the types of products and services from which each operating segment derives its revenues;
- Information about the reported segment profit or loss, segment assets and segment liabilities and the basis of measurement.
- **Reconciliations** of the totals of segment revenues, segments profit or loss, segment assets, segment liabilities and other material items to corresponding items in the organisationôs financial statements. Remember the segmented information is derived from the management accounts which may differ from financial statements, hence reconciliation is required.
- Information about each product and service or groups of products and services.
- Analyses of revenues and certain non-current assets by geographical area.
- Foreign country disclosures of revenues and assets (if material), regardless of whether there is an operating segment identified.
- Details about transactions with major customers.
- Issuing considerable segment information at interim reporting dates.

Remaining differences with US GAAP

- IFRS 8 includes intangible assets as part of the non-current assets. SFAS 131 only refers to tangible assets.
- IFRS 8 requires the method of calculating the segmentôs liabilities. This is not required by SFAS 131.
- SFAS 131 uses a matrix form to establish operating segments. IFRS 8 uses the 10% core principle criteria.

Differences between IAS 14 and IFRS 8:

- IFRS 8 requires **identification of operating segments based on internal reports** that are regularly reviewed by the management for decision making purposes in order to allocate resources to the segment and assess its performance.
- IFRS 8 requires **reconciliations** of total reportable segment revenues, total profit or loss, total assets and other amounts disclosed for reportable segments to the external financial statements.
- IFRS 8 requires an **explanation** of how segment profit or loss and segment assets are measured.
- IFRS 8 requires information about the **revenues** derived from its products or services (or groups of similar products and services), about the countries in which it earns revenues and holds assets, and about major customers, regardless of whether there is an operating segment identified.
- IFRS 8 requires detailed information about the way that the operating segments were determined, the products and services provided by the segments.
- Under IFRS 8, there is **no primary and secondary format preference** (either business or geographical). Geographical disclosures are required on a country by country basis if material.
- IFRS 8 requires **disclosures** of finance income, finance cost and tax, if these items are reviewed by the management for segments.

IAS 14 had a **risk and return approach** to identifying segments. The risk and return approach identifies segments on the basis of different risk and returns arising from different lines of business and geographical areas.

IFRS 8 adopts the **managerial approach**. This approach identifies the segments based on the information used internally for the decision making, so therefore is based on the internal organisation structure.

IFRS 8 “managerial approach”

Advantages

- ✓ Cost effective as information is produced for management accounts.
- ✓ Segments are less subjective if based on internal management structure.
- ✓ Allows users to view internal management's approach and highlights what's important from management's point of view.
- ✓ It's a consistent method as segments are reported in the same manner as the management discusses them in other parts of financial reporting.

Disadvantages

- X Information may be sensitive.
- X Less comparable with other organisations, as every entity has a different way of running their business.
- X Reconciliations may be time consuming.

IAS 14 “risk and return approach”

Advantages

- ✓ Reconciliation to financial statements is very easy.
- ✓ Information is more comparable with other entities.
- ✓ Highlights the profitability, risk and returns of each segment.

Disadvantages

- X Difficulty in defining segments, which makes it subjective and therefore less comparable.
- X Segments may include operations with different risk and returns.

Suggest approach for segmented reporting

	Segment A	Segment B	Inter - segments	Total
Revenue				
External sales				
Inter-segment sales				
Total revenue				
Interest income				
Interest expense				
Depreciation and amortisation				
Other material items				
Share of associates profit				
Share of joint ventures				
Unallocated items				
Profit for the year				
Other information				
Segment assets				
Unallocated corporate assets				
Total assets				
Segment liabilities				
Unallocated corporate liabilities				
Total liabilities				

In the exam normally segmented accounts will be provided and you will have to analyse them by performing ratio analysis.

Key summary of chapter "financial analysis"

Financial analysis

The objective of financial statements is to provide information to all the users of these accounts to help them in their decision-making. Note that most users will only have access to published financial statements.

Interpretation and analysis of financial statements involves identifying the users of the accounts, examining the information, analysing and reporting in a format which will give information for economic decision making.

Ratios can be grouped into 3 main areas:

1	Performance	-	how well the business has done (profitability)
2	Position	-	short term standing of the business (liquidity)
3	Potential	-	what the future holds for the business

Exam technique for analysing performance

The following steps should be adopted when answering an exam question on analysing performance:

Step 1 Review figures as they are and comment on them.
Step 2 Calculate relevant ratios according to performance, position and potential (if possible)

1 Performance (profitability) – how well has the business done

Return on capital employed (ROCE)	Profit before interest & tax (PBIT) / Capital employed (CE) X 100%
Operating profit margin	PBIT / Turnover X 100%
Asset turnover	Turnover / Total assets (number of times)
(Operating profit margin x asset turnover = ROCE)	
Return on equity (ROE)	Profit after tax / Shareholder funds (capital + reserves) x 100%

2 Position (liquidity)– short term standing of the business	
Current ratio	Current assets (number of times) Current liabilities
Quick ratio	Current assets ï inventory (number of times) Current liabilities
Gearing - equity	Debt capital X 100% Equity (shareholders funds)
Gearing – total	Debt capital X 100% Debt + equity (total capital)
Interest cover	Profit before interest & tax (PBIT (number of times) Interest paid
Trade payable days	Trade payables x 365 days Cost of sales (or purchases)
Inventory days	Inventory x 365 days Cost of sales
Trade receivable days	Trade receivable x 365 days Sales
Working capital cycle	Trade receivable days + inventory days ï trade payable days
3 Potential (investor) – what investors are looking at	
Earnings per share (EPS)	Profit after tax Number of shares
P/E ratio	Share price Earnings per share
Dividend yield	Dividend per share X 100% Share price
Dividend cover	Earnings per share Dividend per share

Step 3 Add value to the ratios by:

Interacting with other ratios and giving reasons

a) State the **significant fact or change** (i.e. increase or decrease)

b) **Explain the change** or how it may have occurred by looking at the business activities and other information.

c) Explain the significance of the ratio in terms of **implications for the future** and how it fits in with the userôs needs.

d) **Limitations** of the ratio analysis. Look at the 2 figures used to compute the ratio and criticise them. Also look at other factors which may distort the information (creative accounting, seasonal fluctuations etc.)

Limitations of ratio analysis

A ratio on its own is meaningless. Accounting ratios must always be interpreted in relation to other information.

Ratios based on historic cost accounts do not give a true picture of trends, because of the effects of inflation and different accounting policies. Investorsô ratios particularly have a disadvantage, because investment means looking into the future and the past may not always be indicative of the future.

Comparing the financial statements of similar businesses can be misleading.

Different accounting policies that can be adopted will have an impact on the ratios calculated and therefore make comparisons more difficult. The different accounting policies affect the income statement and the statement of financial position and these impacts on all the major ratios like ROCE and gearing.

Creative accounting (also known as aggressive accounting or earnings management) distorts financial analysis of company accounts. Creative accounting is done by organisations to perhaps enhance the balance sheet or performance by either exploiting loopholes in the accounting standards or deliberately not showing certain items. Listed companies especially have added pressures for the maintenance and increase of share prices; this obviously has an impact on the valuation of the company. As share prices are stipulated by the market, the information fed to the market can be manipulated to ensure this.

Interpretation of financial obligations included in the accounts

Financial obligations reported in the accounts need to be understood properly. These include redeemable debt, contingent liabilities and earn out arrangements.

IFRS 8 operating segments

Segmented accounts give the users information relating to the different areas of business or location for the enterprise.

IFRS 8 requires an organisation to adopt the **management approach** to reporting on the financial performance of its operating segments.

Solution to Lecture Example 18.1

1 ROCE

PBIT / CE	=	(54+4) / (236+80)	x	100%	=	18.4%	20X2
		(46+4) / (238 + 80)	x	100%	=	15.7%	20X1

The return on capital employed has increased over the year from 15.7% to 18.4%. The profit has increased which may have resulted in the increase.

2 Gross profit margin

GP / Sales	=	104 / 418 x 100%	=	24.9%	20X2
		90 / 392 x 100%	=	23.0%	20X1

The gross profit margin has increased from 23.0% to 24.9%, which could mean higher selling prices or lower costs. This also explains the rise in ROCE

3 Asset turnover

T/o / CE	=	418 / 316	=	1.32 times	20X2
		392 / 318	=	1.23 times	20X1

The asset turnover has increased indicating that the company is using its assets more effectively.

4	**Current ratio**	= 148 / 92	=	1.61	for 20X2
		=170 / 130	=	1.31	for 20X1

The current ratio has increased, meaning that the organisation is more liquid. This is due to the fact that inventory and trade receivables have increased (which are non productive assets), and trade payables have been reduced. Although this may be better for the current ratio, it may not necessarily mean that the company is operating more efficiently. Has it increased it inventory piles because it anticipates higher sales and doesnôt want to run out? Is it offering itôs credit customers longer time to pay to increase sales? Why are they paying their suppliers quicker? Surely it would be better to take as long as possible?

5	**Quick ratio**	=(148 ï 84) / 92 =	0.70	for 20X2
		=(170 ï 74) / 130 =	0.74	for 20X1

The quick ratio is slightly better in 20X1, which proves that higher inventory levels are being maintained for 20X2.

6	**Inventory turnover ratio**	=314 / (74 + 84) x 0.5 =	4.0 times	for 20X2
		=302 / (58 + 74) 0.5 =	4.6 times	for 20X1

This ratio shows how quickly the inventory is being sold. In 20X1 it was being sold at a much higher rate than in 20X2. Have the products changed? Has the customer base changed?

Solution to Lecture Example 18.1 cont….

The nature of the business needs to be known to see whether these turnover times are line with the normal industry.

Solution to Lecture Example 18.1 cont….

7 **Inventory days** = (74 + 84) x 0.5 / 314 x 365 days = 92 days for 20X2
= (58 + 74) x 0.5 / 302 x 365 days = 80 days for 20X1

Alternatively this can be arrived at: 20X2 ï 1/ 4 x 365 = 92 days. 20X1 ï 1/ 4.6 x 365 = 80 days

This again highlights the fact that the stock is taking longer to shift into sales. It is spending more time within the warehouse.

8 **Trade receivable days** = 58 / 418 x 365 days = 50.6 days for 20X2
= 46 / 392 x 365 days = 42.8 days for 20X1

There is a worsening debt collection period. Is there a delay in issuing invoices, lack of screening new customers? Are the year end figures representatives of the year? Perhaps there are seasonal fluctuations that need to be considered.

9 **Trade payable days** = 72 / 324 x 365 = 81.1 days for 20X2
= 110 / 318 x 365 = 126.3 days for 20X1

The suppliers are being paid quicker, which is good for relationship with the suppliers, but bad for cash flow purposes. Trade credit is a free source of finance, and the company must try to maximise this.

10 **Gearing equity ratio** = Preference share capital + loans / OSC + reserves
= 50 + 80 / 236 ï 50 = 69.9 % 20X2
= 50 + 80 / 238 ï 50 = 69.1% 20X1

Low geared = less than 100%, highly geared = more than 100% and neutrally geared if ratio is 100%. The gearing remains at similar levels. The company is not highly geared.

11 **Total gearing** = Preference share capital + loan / total long term capital
= 130 / (236 + 80) = 41.1% 20X2
= 130 / (238 +80) = 40.9% 20X1

With total gearing, higher than 50% is high gearing, lower than 50% is lower gearing and 50% is neutral.

12 **Interest cover** = Profit before interest and tax / interest payable
= 54 + 4 / 4 = 14.5 times 20X2
= 46 + 4 / 4 = 12.5 times 20X1

As the company is low geared, the interest cover is high. This means there is less financial risk in investing this company. Company is in a strong position to pay interest.

Solution to Lecture Example 18.1 cont….

13 Dividend cover = Profit after tax and after preference divs / dividend paid

= (34 ï 4) / 12 = 2.5 times 20X2

= (26 ï 4) / 10 = 2.2 times 20X1

The dividend cover is after allowing for preference dividends. There is a reasonably comfortable cover.

Solution to Lecture Example 18.1 cont….

14 EPS = Profit after tax and after preference divs / no of ordinary shares

= (34 ï 4) / 140 = 21.4 pence per share 20X2

= (26 ï 4) / 140 = 15.7 pence per share 20X1

15 PE ratio = Market price / EPS

= 240 / 21.4 = 11.21 times 20X2

The PE ratio is quite high, indicating that the market has confidence in the companyôs future growth. However this needs to be compared with industry or similar companies.

With all the ratios it would be useful to compare against the industry averages.

Solution to lecture example 18.2

a)

31 December 20X4 EPS – No change in capital structure

PAT / No of shares = $3,676,000 / 2,800,000 = 131.3 cents per share

31 December 20X5 EPS – New issue of shares on 1st November 2005

Time apportion shares to find WANS

New shares issued = 300,000
Total shares after new issue = 3,100,000

Date	Proportion	Shares in issue	Bonus element	Weighted average
01/01 ï 31/10	10/12	2,800,000	n/a	2,333,333
01/11 ï 31/12	2/12	3,100,000		516,667
				2,850,000

Basic EPS = Earnings (PAT) / WANS
= $2,460,000 / 2,850,000
= 86.3 cents per share

Solution to lecture example 18.2 cont…..
b)

Report

To: **Investor**
From: **Financial Adviser**
Date: **May 20X6**
Subject: **Financial analysis of BZJ Group**

Introduction

This report will analyse the financial performance and position of BZJ group. The financial statements consisting of the income statement and balance sheet for 20X5 and 20X4 will be used for this analysis. The accounting ratio calculations are in Appendix 1. I shall also discusses the extent to which the chairmanôs comments about the potential for improved future performance are supported by the financial statement information for the year ended 31 December 20X5

1.0 Analysis of the financial statements

From the income statement it can be seen that the performance of BZJ group has declined. Revenue is down by 1% from 20X4. The gross profit has also declined by 9% from 20X4 with profit from operations falling by 18.7%. There is an increase in finance cost of 62% and the profit for the year has reduced to $2,783,000 a fall of 32% from 20X4.

BZJ group has invested in property plant and equipment which came into use only in September 20X5. They have also increased their inventory levels and reduced their trade receivables. Long term borrowings have increased by $10m from 20X4 and short term borrowings of $3.662m in 20X5 has obviously increased the liabilities of BZJ group.

I will now review the accounting ratios calculated in the Appendix 1.

1.1 Performance

One of the most important accounting ratios ï ROCE ï has shown a decline of 40.5% compared with 20X4.

The ROCE measures profitability and shows how well the business is utilising its capital to generate profits. Capital employed is debt and equity. Equity is shareholders funds (s/h funds) and debt is long-term liabilities (LTL). One has to be careful when interpreting the ROCE because consideration needs to be given to the age of the assets, any new investments and the timing of the new investments. Accounting policies will also affect this ratio (e.g. revaluation policies).

For BZJ group the increased investment in the non current assets will reduce the ROCE initially and hopefully in the future this should increase as the revenue from the new venture of storage solutions increases.

Solution to lecture example 18.2 cont…..

The operating profit margin has also reduced to 4.5% in 20X5 a fall of 18.2% from 20X4. The increase in operating expenses may be due to the new venture which is incurring higher costs and has different profit margins to the groupôs core activities which is manufacture and sale of domestic and office furniture. A break down of these costs would be very useful for analysis purposes.

The gross profit margin is at 14.4% in 20X5 showing a decrease of 8.3%. This suggests that BZJ is having problems controlling its costs in relation to its core activities. Perhaps the new venture is incurring large costs which bring the overall results down. Other factors to consider include inventory valuation, overhead allocation, bulk discounts and sales mix. It would be very useful to have the breakdown of BZJ groupôs revenue.

Although there has been a decrease in the operating expenses margin, the increase in finance costs due to higher borrowings in 20X5 has resulted in a decline of the net profit margin of 32.4% to just 2.3% in 20X5.

The decline in profitability and the reduction of dividend payout by BZJ group will put investors off. BZJ has also increased the financial risk to its shareholders by increasing borrowings, which means more profits will be eaten up with obligatory interest payments. However it is important to bear in mind this is short term view to take as with the heavy investment and expansions into new markets, the profitability may increase significantly.

1.2 Position

BZJ has invested heavily in non current assets during 20X5. Increase in property, plant and equipment is just over $19 million which is almost double the value of the non current assets of 20X4. The impact on the ROCE and additional depreciation needs to be considered when assessing the profitability ratios.

The short term liquidity position of the group has declined in 20X5. The current ratio is 1.44 compared to 1.73 of 20X4. Short term borrowings of nearly $4million puts BZJ in difficult position in relation to any further borrowings in the future. Cash flow problems may occur.

The management of working capital seems to have deteriorated suggesting BZJ is not managing itôs working capital effectively. Inventory levels have increased and inventory days is now averaging 132 days, which means BZJ is taking longer to sell its inventory.

Trade receivable days have reduced suggesting either less credit is being offered to customers or customers are paying up early. Perhaps a settlement discount is being offered which may explain the decline in the gross profit margin.

Credit suppliers are being paid quicker than last year with average credit period being taken of 30.5 days. BZJ could negotiate better terms with itôs suppliers to take advantage of this free form of credit.

Overall the working capital cycle has increased by 132% to 146.2 days. This means the average time taken from buy the goods to cash received from customers is 146 days compared to only 63 days in 20X4. This also explains the cash flow problem of BZJ.

Solution to lecture example 18.2 cont…..

The gearing ratio has increased to 81.7% a rise of 30% from 2004. The interest cover is now 3.66 times compared to 7.30 times. This has increased the financial risk for shareholders who will not be too happy about this.

In conclusion the position of BZJ is not good with increased liquidity problems and inefficient management of working capital. The group could face real cash flow problems in the future unless it starts generating more revenues and runs more efficiently.

1.3 Chairman's comments

The Chairman states that BZJ has shown growth which is not entirely true. It can be seen from the balance sheets that BZJ has indeed increased itôs investment and inventories, but this has not materialised into increased revenues and profitability by the end of 2005.

The successful issue of shares during 2005 suggests that the investors are confident in the organisation and believe that good growth prospects are possible. However from the financial statements the income statements shows performance which is declining and the balance sheet shows ineffective management of working capital with high gearing levels. So the group really has to perform in 2006 and 2007 for the Chairmanôs comments to become true.

Conclusion

Usually investments through expansion are a sign that organisations are growing and if the expansion is managed effectively then BZJ should achieve increasing profitability in the future. However the short position needs to addressed urgently. The working capital management and increase gearing may cause investors to go elsewhere unless profitability increases significantly.

Solution to lecture example 18.2 cont…..

Appendix 1 – Ratio calculations

PERFORMANCE				
		20X5	**20X4**	**% Change**
ROCE PBIT x 100% CE	5,377 / (30,428 + 2,270 +,26,700) 6,617 / (24,623 + 1,947 + 16,700)	9.1%	15.3%	-40.5% (9.1 ï 15.3) 15.3
Operating profit margin PBIT / turnover	5,377 / 120,366 6,617 / 121,351	4.5%	5.5%	-18.2% 4.5 ï 5.5 5.5
Asset turnover Turnover / CE	120,366 / (30,428 + 2,270 +,26,700) 121,351 / (24,623 + 1,947 + 16,700)	2.03 times	2.80 times	-27.5% (2.03 ï 2.80 2.80
Gross profit margin GP / Turnover x 100%	17,342 / 120,366 19,065 / 121,351	14.4%	15.7%	-8.3% (14.4 ï 15.7 15.7
Operating expenses (OE) margin OE / Turnover x 100%	11,965 / 120,366 12,448 / 121,351	9.9%	10.3%	-3.9% (9.9 ï 10.3) 10.3
Net profit (NP) margin NP / turnover x 100%	2,783 / 120,366 4,117 / 121,351	2.3%	3.4%	-32.4% (2.3 ï 3.4 3.4
POSITION				
		20X5	**20X4**	**% Change**
Current ratio CA / CL	52,030 / 36,207 44,951 / 26,001	1.44:1	1.73:1	-16.8%
Quick ratio (CA ï inventory) / CL	(52,030 ï 37,108) / 36,207 (44,951 ï 27,260) / 26,001	0.41:1	0.68:1	-39.7%

Solution to lecture example 18.2 cont…..				
Inventory days Inventory / COS x 365 days	37,108 / 103,024 x 365 27,260 / 102,286 x 365	131.5 days	97.3 days	+35.1%
Trade receivables (TR) days TR / sales x 365 days	14,922 / 120,366 x 365 17,521 / 121,351 x 365	45.2 days	52.7 days	-14.2%
Trade payable (TP) days TP / COS x 365 days	31,420 / 103,024 x 365 24,407 / 102,286 x 365	30.5 days	87.1 days	-65.0%
Working capital cycle Inventory days + trade receivable days ï trade payable days	131.5 + 45.2 ï 30.5 97.3 + 52.7 ï 87.1	146.2 days	62.9 days	+132.4%
Interest cover PBIT / Interest	5,377 / 1,469 6,617 / 906	3.66 times	7.30 times	-49.9%
Gearing Debt / Equity	26,700 / (30,428 + 2,270) 16,700 / (24,623 + 1,947)	81.7%	62.9%	+29.9%

Solution to lecture example 18.3

Report

To: Committee of bank lending officers
From: Accounting advisor
Date: May 20X7
Subject: TYDôs financial statement analysis

This report will analyse the financial statement of TYD for year ending 30 September 20X6. The following will be dealt with:

- Discussion of the accounting treatment of the two significant areas identified
- Adjusted financial statements
- Analysis of the financial statements with key ratios

1.1 Discussion of the accounting treatment of the two significant areas identified

Transaction 1 – sale of inventory to HPS

Substance over form requires that transactions must be accounted for in accordance with their economic substance, rather than its true legal form. IAS 1 presentation of financial statements and IAS 8 accounting policies set out the general principles for substance over form. They state the financial statements must be prepared to show transactions which show economic substance and not just the legal form. This statement is also echoed in the framework.

The sale of the inventory to HPS does not represent a true sale TYD has the option of buying back the inventory. Under IAS 18 Revenue recognition, revenue should only be recognised in the financial statements when:

- **Significant risks and rewards** have been passed onto the buyer.
- **Ownership of the goods has been passed to the buyer**, meaning that the business selling the goods has no control over the goods, and therefore no influence over them.
- The revenue can be measured reliably.
- Reasonably certain that the seller will be gaining economic benefit from selling the goods.
- The selling costs can be measured reliably.

The first 2 points have not been met under IAS 18 which means that TYD cannot recognise the revenue of $85,000 as the risk and rewards have not passed to the buyer (TYD is required to purchase the inventory in 2 years time for $95,000 and is also responsible for insuring the goods as they are held at their premises).

The true substance of the transaction is in affect a loan secured on the assets (inventory). Therefore TYD must show a liability in their balance sheet to this affect. The following correcting journal entries are required.

Derecognise the sale	Dr Sales $85,000 Cr Cost of sales $85,000
Recognise the inventory back and recognise the loan	Dr Inventory $85,000 Cr Loan $85,000

Solution to lecture example 18.3 cont…..

The additional $10,000 that is repayable in 2 years time ($95,000) is effectively the interest on the loan and will be spread over the 2 years as finance costs.

Dr Finance cost $5,000 Cr Loan $5,000 for years 2007 and 2008

Transaction 2 – Sale on return basis

The substance of the transaction will also be applied here. The entire sale will not be recognised here. Under IAS 18 Revenue recognition the ownership of the goods must be passed to the buyer, meaning that the business selling the goods has no control over the goods, and therefore no influence over them. If there is an option for the buyer to return the goods, then this part of the criteria is not satisfied. The net sales must be recognised in this case as the past is a reliable estimate.

Out of the $100,000 sales 40% are accepted to be returned. Therefore this needs to be removed from the financial statements. This means $40,000 of the sales removed and ($40,000 x 80%) $32,000 removed from the cost of sales. This means effectively $8,000 will be removed from the profit. The journal entries are as follows:

Derecognise the sale	Dr Sales $40,000 Cr Trade receivables $40,000
Adjust the cost of sales and inventory	Cr Cost of sales $32,000 Dr Inventory $32,000

The retained earnings in the statement of financial position will be reduced by $8,000.

1.2 Adjusted financial statements

Revised TYD income statement for the year ended 30 September 20X6

	Adjustments	After Adjustment $'000	Before adjustment $'000
Revenue	600 ï 85 ï 40	475	600
Cost of sales	450 ï 85 - 32	(333)	(450)
Gross profit		142	150
Expenses		(63)	(63)
Finance costs		(17)	(17)
Profit before tax		62	70
Income tax expense		(25)	(25)
Profit for the period		37	45

Solution to lecture example 18.3 cont…..

Revised TYD balance sheet for year ended 30 September 20X6

	After adjustments		Before adjustments	
	$'000	$'000	$'000	$'000
Assets				
Non current assets				
Property, plant and equipment		527		527
Current assets				
Inventories (95+32+85)	212		95	
Trade receivables (72-40)	32		72	
Cash	6	250	6	173
		777		**700**
Equity and liabilities				
Share capital		100		100
Ret. earnings (245 ï 8)		237		245
		337		345
Non current liabilities				
Long term borrowings (180+85)		265		180
Current liabilities				
Trade and other payables	95		95	
Bank overdraft	80	175	80	175
		777		**700**

1.3 Analysis of the financial statements with key ratios

Key ratios	Before adjustment	After adjustment
Gearing Debt / debt and equity (180 + 80) / (345 + 180 + 80) (265 + 80) / (337 + 265 + 80)	43%	51%
Current ratio CA / CL 173 / 175 250 / 175	0.99 :1	1.43 :1
Quick ratio CAï inventory / CL (173 ï 95) / 175 (250 ï 212) / 175	0.45:1	0.22:1
Profit margin PBT / revenue 70 / 600 62 / 475	12%	13%
Other analysis		
Gross profit margin GP / revenue 150 / 600 142 / 475	25%	30%

Asset turnover Revenue / Capital employed 150 / (345 + 180) 475 / (337 + 265)	0.3 times	0.8 times
Return on capital employed PBIT / capital employed (150 ï 63) / (345 + 180) (142 ï 63) / (337 + 265)	17%	13%
Interest cover PBIT / interest paid (150 ï 63) / 17 (142 ï 63) / 17	5.1 times	4.6 times

After the adjustments for the 2 transactions, TYDôs profit before tax is reduced by $8,000. In the balance sheet after the adjustments the total assets have increased by $77,000 which is mainly due the increases in inventory. However the equity has been reduced by $8,000 and long term borrowings have increased by $80,000.

From the key ratios the gearing ratio worsens to 51% which is above our threshold of 45%. The sale and repurchase agreement is going to last for 2 years which is going to result in higher finance costs and lower profits.

The current ratio improves after the adjustments from 0.99 to 1.43; however this is only as a result of increases in inventory due to the adjustments. The quick ratio shows this as after the adjustments the quick ratio reduces to 0.22 (0.45 before adjustment). This means the short term liquidity is very low for TYD and it may face severe cash flow problems.

The profit margin increases to 13% from 12% but going forward this is likely to reduce due to additional finance charges.

Other analysis work shows an improvement in the profit margin which is good news but a reduction in the return on capital employed. The interest cover is also reduced after the adjustments to 4.6 times (5.1 times before the adjustment). This makes lending money to TYD very risky.

With this in mind, the initial application for a loan must be rejected for TYD due to its high gearing.

Signed

Accounting advisor