IB Business Management HL

YOUR NOTES

3.6 Efficiency Ratio Analysis

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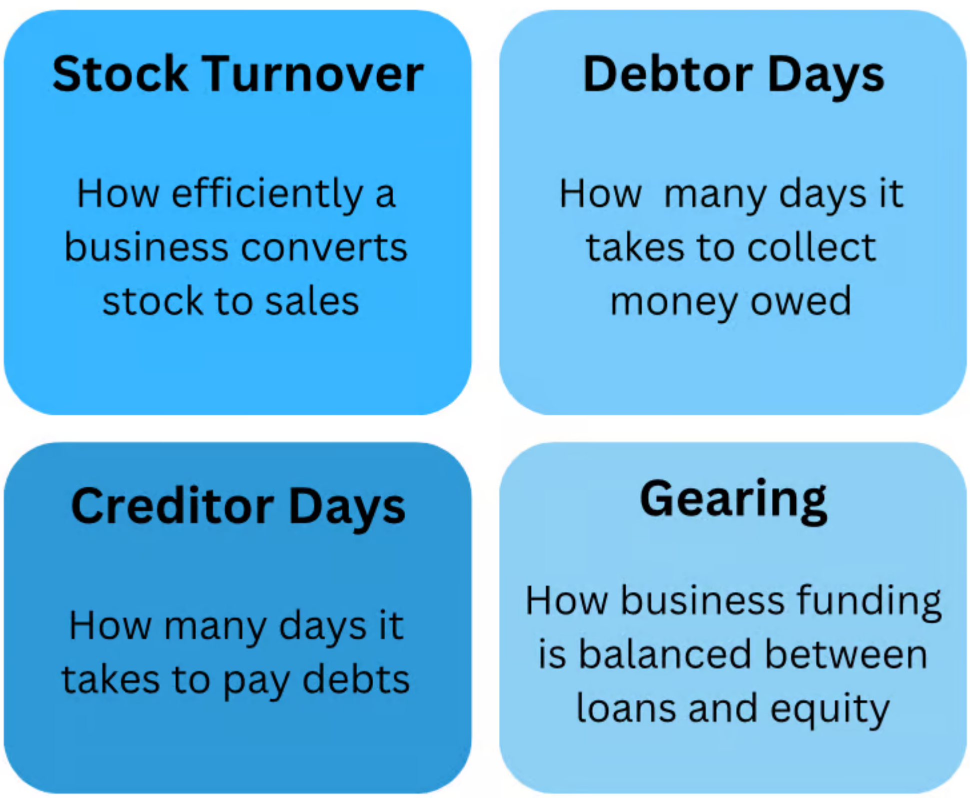
An Introduction to Efficiency Ratios

- Efficiency ratios show how well a business **utilises its assets and liabilities to generate sales and maximise profits**
- They can provide insights into the **operational efficiency** of a business including
  - How well **stocks** are being managed
  - The time taken for a business to **settle debts** with its creditors
  - How well **credit** offered to customers is being controlled
  - The **balance of business funding** between loans and equity capital

- **Stakeholders** such as investors can use the ratios to assess how well a company **manages its resources**
- **Management can use ratios to set targets for key staff**

The four main Efficiency Ratios



Efficiency Ratios Provide Insights into the Operational Efficiency of a Business

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Stock Turnover

- The stock turnover ratio shows how well a business **converts its stock into sales**
- Before calculating stock turnover it is first necessary to calculate the **average value of stock** held by a business in a given period
  - It is calculated using the formula

$$\text{Average stock} = \frac{\text{Opening stock} + \text{Closing stock}}{2}$$

Calculating the Stock Turnover Ratio

- Stock turnover can then be calculated in **two ways**

1. Number of times a business sells all of its stock during a period (usually a year)

$$\frac{\text{Cost of sales}}{\text{Average Value of Stock}}$$

  - Businesses aim for a **high** or **increasing ratio**
    - More stock sold means that it is generating profit more efficiently
    - Perishable goods are less likely to be wasted

2. Number of days taken to sell all of its stock

$$\frac{\text{Average Value of Stock}}{\text{Cost of Sales}} \times 365$$

  - Businesses aim for a **low or falling ratio**
  - Selling stock quickly means profit is achieved swiftly
  - Less likely to hold obsolete stock that may need to be sold at a loss

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Worked Example

YakPur Fashions is a manufacturer and exporter of high quality fashion outerwear

A selection of *YakPur Fashions'* financial performance indicators are shown in the table

Selected Financial Performance Data 2022 ***YakPur Fashions***	
	€
Stock held on 1st January 2022	47,600
Credit Sales Revenue	241,200
Cost of Sales	112,400
Stock held on 31st December 2022	26,000
Debtors on 31st December 2022	31,200
Creditors on 31st December 2022	28,500

(a) Calculate *YakPur Fashions'* stock turnover ratio for 2022

(i) in terms of the number of times stock was sold during the year

(ii) in terms of the number of days taken to sell all stock

(4 marks)

Step 1: Calculate the average value of stock

$$\frac{\text{Opening stock} + \text{Closing stock}}{2}$$

$$= \frac{€\,47,600 + €\,26,000}{2}$$ **(1)**

$$= €\,36,800$$

Step 2: Calculate the number of times stock sold during the year

$$\frac{\text{Cost of sales}}{\text{Average stock}}$$

$$= \frac{€\,112,400}{€\,36,800}$$ **(1)**

$$= 3.05 \text{ times}$$

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Step 3: Calculate the number of days taken to sell stock

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

$$= \frac{€\,36,800}{€\,112,400} \times 365 \quad \textbf{(2)}$$

$$= 119.50 \text{ days}$$

Ways to Improve the Stock Turnover Ratio

- The stock turnover ratio can be improved by **holding less stock** or **reducing cost of sales**

Improving the Stock Turnover Ratio

Hold less stock	Reduce the cost of sales
• Reorder from suppliers more regularly • Implement a just-in-time stock management approach • Dispose of obsolete stock • Reduce the product range	• Seek lower-cost suppliers • Purchase in bulk to achieve purchasing economies of scale • Reduce storage costs such as security

Stock Turnover Variations

- There is **no ideal ratio** for stock turnover
  - Some businesses will have a **very low stock turnover ratio** as they **sell few products - usually at a high price**
    - Examples include
      - Jewellers
      - Luxury vehicles
      - Specialist equipment or services
  - Other businesses have a **very high stock turnover ratio**
    - Their business model often requires this - for example, they may sell perishable goods
      - Examples include
        - Supermarkets
        - Florists
        - Takeaway food businesses

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Gearing Ratio

- The gearing ratio illustrates the **long-term financial structure** of the business
    - It shows the balance of non-current liabilities (e.g. long-term loans) to **shareholder capital** used to fund a business
    - The outcome is expressed as a **percentage and is calculated with the following formula**

$$\text{Gearing Ratio} = \frac{\text{Non Current Liabilities}}{\text{Capital Employed}} \text{ x } 100$$

    - **Capital employed** can be calculated by adding non-current (long term) liabilities to the equity

Interpreting the results

- If the outcome is **less than 50%** the business is **low-geared**
    - The business is **largely funded by shareholder capital**

- If the outcome is **more than 50%** the business is **highly-geared**
    - The business is **largely funded by loan capital**

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Worked Example

The table shows an extract from the company accounts of *Keals Cosmetics*.

	$
Current Assets	6.2 million
Current Liabilities	3.4 million
Non-current Liabilities	9.6 million
Capital Employed	43.3 million

Calculate *Keals Cosmetics'* gearing ratio

(2 marks)

Step 1: Identify the data required to calculate the gearing ratio

Non-current liabilities = $9.6 million

Capital employed = $43.3 million

Step 2: Divide non-current liabilities by capital employed

$43.3 million ÷ $9.6 million = 0.22 **(1)**

Step 3: Multiple the outcome by 100 and express the result as a percentage

0.22 x 100 = 22% **(1)**

22% of Keals Cosmetics capital structure is made up of long-term loans

It is a low-geared business

Problems Associated with High Gearing

- The **higher the gearing** ratio the more **dependent** a business is on **long-term borrowing**
- **High gearing** can be problematic for several reasons

Risks Associated with High Gearing

Financial Risk	Cash Flow & Investment Constraints

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• **Rising interest rates are problematic** ◦ If interest rates rise the cost of repaying loans rises ◦ May put strain on the businesses finances • **High gearing reduces profitability** ◦ Large portion of revenue goes towards repaying debt ◦ May be better to reinvest /pay shareholder dividends	• **High gearing strains cash flow** ◦ During an economic downturn the business may struggle to generate enough cash to pay debts • **High gearing limits funds for investments** ◦ Research and development, new projects or other growth opportunities may be unaffordable
Investor Perception	**Credit Rating Impact**
• **High gearing is associated with financial risk** ◦ Could make it difficult to attract investors ◦ May lead to a lower share price	• **High gearing can impact credit rating** ◦ May mean higher interest rates on future borrowings ◦ Difficult to access additional funds

Situations Where High Gearing is Less Problematic

- **When interest rates are low** - and expected to remain low
    - Interest rates in **Europe** have been historically low for more than a decade
    - Many businesses have taken advantage of borrowing cheaply to fund investment

- **Large and profitable businesses** are capable of meeting debt obligations
    - Multinational car manufacturers such as **Toyota** and **Volkswagen** are highly geared
    - High levels of borrowing have funded research into new generations of electric vehicles

Ways to Improve Gearing

- Improving gearing usually means **lowering** it
- This can be achieved by **reducing long-term borrowing** or **raising more equity capital**

Ways to Improve Gearing

Reduce Long-term Borrowing	Raise Equity Capital

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• Repay existing debt to reduce the overall debt burden • Pay off high-interest debt first to minimise interest costs • Negotiate with creditors to restructure existing debt	• Raise share capital by issuing new shares or consider a rights issue • Retain profits instead of distributing profits as dividends

Exam Tip

High gearing should always be **balanced with the need to grow**

Without external finance many businesses would struggle to make crucial capital investments that could increase output, improve productivity or increase efficiency

Businesses need to carefully weigh up **how much debt it can manage** before it outweighs the benefits of growth

Efficiency Ratios: Debtor & Creditor Days

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Debtor Days

- Debtor days measures the average **number of days** it takes for a business to **collect money from its** debtors

- Businesses often provide a period of trade credit to customers
    - In the UK 30 to 60 days is typical
    - The growth of promotional **'buy now, pay later' deals** has increased the level of debtors for some businesses

- It is calculated using the formula

$$\text{Debtor days} = \frac{\text{Debtors}}{\text{Total credit sales revenue}} \times 365$$

- Businesses aim for a **low or reducing ratio**
    - This indicates **efficiency in collecting outstanding debts** from credit customers
    - Collecting debts promptly can **improve cash flow**

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(a) Calculate YakPur Fashion's Debtor Days ratio for 2022

(2 marks)

Step 1: Divide debtors by credit sales revenue

$$\frac{€\,31,200}{€\,241,200}$$ **(1)**

$$= 0.1294$$

Step 2: Multiply the outcome by 365

$$0.1294 \times 365$$ **(1)**

$$= 47.23 \text{ days}$$

- **It takes YakPur Fashions an average of 47.23 days to collect money owing from debtors**

Ways to Reduce the Debtor Days Ratio

- Maintaining **open communication** with customers helps to address any issues promptly

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Ways to Reduce the Debtor Days Ratio

Method	Explanation
Streamline invoicing and credit control processes	• **Send out invoices promptly** • Clearly outline **payment terms** and **due dates on invoices** • Send **reminders** before and after the due date to prompt timely payments • Have a systematic **approach for handling overdue accounts** including follow-up procedures
Establish and monitor creditworthiness of customers	• Conduct **credit checks** on customers - especially before extending trade credit • Set appropriate **credit limits** based on the customer's financial health • Keep a close eye on customer **payment patterns** • Periodically review and **adjust trade credit terms** • Implement an effective system for **tracking and managing debtors**
Improve payment systems	• Make it easy for customers to pay by offering **various payment methods** • Use **accounting software** or **automation** tools to streamline invoicing and payment processes
Provide incentives for early payment	• Encourage customers to **pay before an invoice's due date** by providing **discounts** or other incentives such as free delivery

- If these methods **fail to persuade customers to pay their invoices** on time a business has a **range of further options.** These methods should be pursued with caution as **relationships with customers may be damaged**

Further Ways to Reduce the Debtor Days Ratio

Method	Explanation
Refuse to provide further goods unless outstanding debts are paid	• Suspend the despatch of an order until an **outstanding payment** is received • Refuse to accept further orders
Threaten to take legal action	• In the UK small businesses can make use of the **Small Claims Court** to recover modest debts from customers

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Creditor Days

- Creditor days measures the average **number of days** a business takes to **pay its** creditors

- It is calculated using the formula

$$\text{Creditor days} = \frac{\text{Creditors}}{\text{Cost of sales}} \times 365$$

- Businesses generally aim for a **high or increasing ratio**
  - This indicates **skills of negotiation** in arranging **extended credit terms with suppliers**
  - Delaying payments to suppliers can **improve** cash flow

- However, **taking longer than agreed to pay** outstanding invoices may have **negative consequences**
  - **Relationships** with important suppliers may worsen
    - They are less likely to extend further trade credit
    - Penalties may be issued for late payment
    - Orders may be delayed until payment is received
  - **Creditworthiness** may worsen
    - A business may fail credit checks
    - Unable to place orders with other suppliers
    - Less chance of obtaining trade credit elsewhere
    - Could impact applications for borrowing e.g. loans

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(a) Calculate YakPur Fashion's Creditor Days ratio for 2022

(2 marks)

Step 1: Divide creditors by cost of sales

$$\frac{€\ 28,500}{€\ 112,400}$$ **(1)**

$$= 0.2536$$

Step 2: Multiply the outcome by 365

$$0.2536 \times 365$$ **(1)**

$$= 92.56 \text{ days}$$

Yakpur takes an average of 92.56 days to settle supplier invoices

Ways to Improve the Creditor Days Ratio

- Larger businesses often employ a credit controller to manage negotiations about payments with their suppliers. This person has a range of methods which they can use to improve the creditor days ratio

Improving the Creditor Days Ratio

Method	Explanation
Develop close relationships with suppliers	• Communicate regularly with named individuals and provide feedback • Avoid confrontation if conflicts arise
Improve the businesses credit rating	• Make payments in full within the trade credit period • Make prompt payments on other forms of credit such as loans or credit cards
Seek suppliers that offer extended trade credit terms	• Approach suppliers and negotiate for extended payment terms • Highlight strong payment history and the value of ongoing business in negotiations

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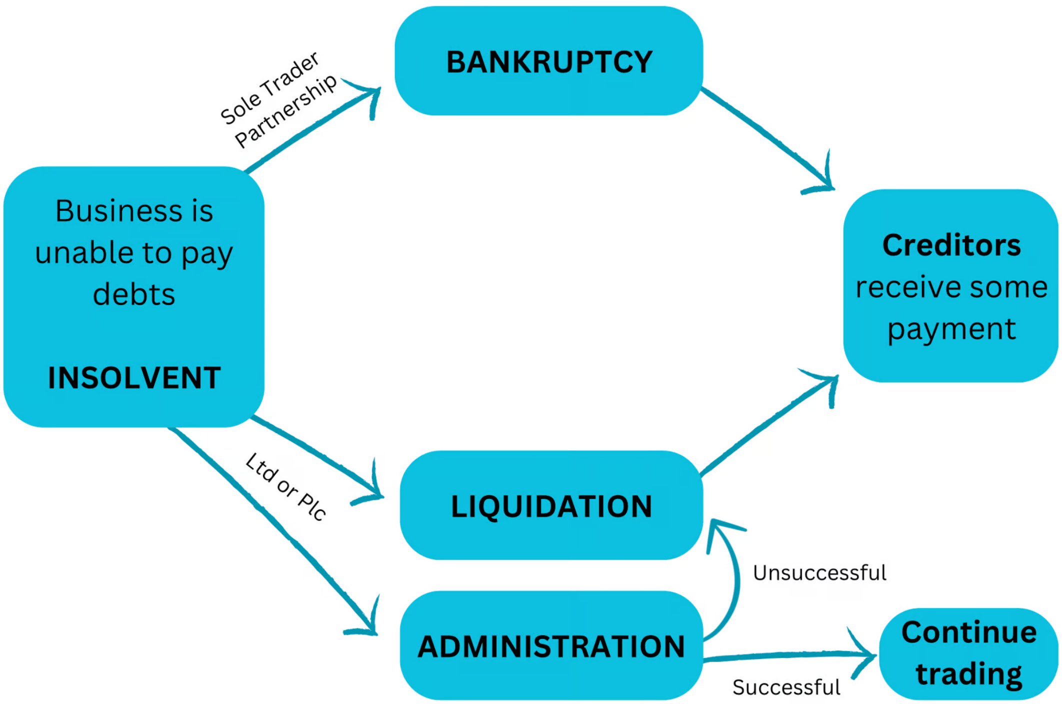
Insolvency Versus Bankruptcy

- **Insolvency** refers to the **inability** of a business to **pay debts** and continue trading
- **Bankruptcy** occurs when a business ceases to trade and the value of its possessions are distributed to its creditors
- The outcome of insolvency depends on the **ownership type** of the business

A Diagram Comparing Bankruptcy and Liquidation



Insolvency can lead to Bankruptcy for Unincorporated Businesses and to Administration or Liquidation for Companies

- **Insolvency for a sole trader or partnership** can lead to a legal declaration of **bankruptcy** by a court of law
  - The **assets of the business and its owners may be sold** to settle outstanding debts
- **Companies may liquidate** or enter into **administration**
  - **Liquidation** involves the selling of business assets to **settle outstanding debts** and **dissolve** a company
  - **Administration** protects businesses from administration whilst it attempts to **settle debts** and **continue trading**
    - If administration fails a company faces **liquidation**