

# DP IB Business Management: HL



## 3.7 Cash Flow

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## Cash Flow & Working Capital

### The Difference Between Profit & Cash Flow

- **Profit and cash** are different financial terminologies
  - Profit is calculated at a specific point in time
  - While a company may be in profit, they **may lack cash** as some customers may not actually have paid them yet
- Profit is **the difference between revenue generated and total business costs** during a specific period of time
  - Profit can be an important indicator of a company's financial health and long-term sustainability as it helps to assess **the effectiveness of a company's operations**
- Cash is measured by taking into account the full range of **money flowing in and out of a business**
  - This includes **revenue from sales**, operating expenses, investments, loans, and any other cash-related transactions
- A profitable business is likely to fail if it **does not have sufficient cash**
  - Cash-poor businesses will struggle to pay suppliers
    - E.g. Lifestyle retailer Joules announced plans to **liquidate** in December 2022 as a result of cash flow difficulties despite making a profit of £2.6 million during the previous year

### Working Capital

- Working capital is the money that a business has available to **fund its day to day activities**
- It is sometimes included as **net current assets** on the Statement of Financial Position
- Working capital is calculated using the formula

$$\text{Working capital} = \text{Current assets} - \text{Current liabilities}$$



#### Worked Example

*Rondat Components* is a heating components business based in Malmö. It has been struggling to control its level of stock. Its customers are Scandinavia's leading gas boiler manufacturers. They require *Rondat Components* to supply products 'just in time' and as a result they must hold large



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amounts of varied stock to ensure that their customer's needs can be met. *Rondat Components* offers its customers 90-days credit terms.

#### Financial Information for Rondat Components

	2022	2021
	£m	£m
Stock	8.1	7.2
Debtors	2.2	3.1
Cash	0.9	1.2
Short-term loan	6.4	4.4
Creditors	5.1	5.9

Calculate *Rondat Components*' working capital in 2021 and 2022 [3]

Answer:

#### Step 1: Identify and calculate current assets and current liabilities for 2022 and 2021

$$\begin{aligned} \text{Current assets } 2022 &= \text{£}8.1\text{m} + \text{£}2.2\text{m} + \text{£}0.9\text{m} = \text{£}11.2\text{m} \\ \text{Current assets } 2021 &= \text{£}7.2\text{m} + \text{£}3.1\text{m} + \text{£}1.2\text{m} = \text{£}11.5\text{m} \end{aligned} \quad [1 \text{ mark}]$$

$$\begin{aligned} \text{Current liabilities } 2022 &= \text{£}6.4\text{m} + \text{£}5.1\text{m} = \text{£}11.5\text{m} \\ \text{Current liabilities } 2021 &= \text{£}4.4\text{m} + \text{£}5.9\text{m} = \text{£}10.3\text{m} \end{aligned} \quad [1 \text{ mark}]$$

#### Step 2: Subtract current liabilities from current assets for 2022 and 2021

$$\begin{aligned} 2022 &= \text{£}11.2\text{m} - \text{£}11.5\text{m} = (\text{£}0.3\text{m}) \\ 2021 &= \text{£}11.5\text{m} - \text{£}10.3\text{m} = \text{£}1.2\text{m} \end{aligned} \quad [1 \text{ mark}]$$

## Managing working capital

- Working capital is described as the **lifeblood of a business** because a lack of working capital often leads to **business failure** if the business **cannot meet its immediate financial obligations**
  - Cash is the most liquid** of a business's current assets and can be used to settle **debts** immediately
- Effective management of working capital involves careful cash management
  - Debtors and stock are **less liquid**
  - Businesses that are struggling with a lack of working capital may look to **convert these current assets into cash as quickly as possible** (e.g. by selling the stock at lower prices or by more



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purposefully chasing payment from customers)

- Requesting an extension of **payment terms** from suppliers can increase working capital in the short term as cash remains in the business for longer
- Making use of **short-term borrowing options** such as **overdrafts** can improve a business's working capital situation as it **can access more cash** than it has in its current account
- A business can have **too much working capital**
  - If a business is **holding large amounts of cash** it is likely to be **missing out** on the benefits of investing it in fixed assets or investments
  - This may represent a significant **opportunity cost** especially when interest rates are high
  - If a business is **holding large amounts of stock** it may incur **extra storage costs** (e.g. security and handling costs) and could use the cash 'tied up' in this stock for other purposes



### Examiner Tips and Tricks

A common exam error is the confusion between working capital and cash. Whilst working capital includes cash, it also includes less liquid current assets (e.g. debtors and stock). These less liquid assets cannot be used to pay bills and so, whilst a business may have a positive working capital figure, it may still fail because it cannot meet its immediate financial commitments.

## Liquidity Position

- The Statement of Financial Position contains the financial information required to draw conclusions about the **liquidity of the business**
  - Liquidity is the ability of a business to **meet its short term commitments** (e.g. payments to creditors) with its available assets
  - A business that cannot pay its bills will usually **fail very quickly**, even if they are profitable
  - Managing liquidity is a key way to **manage risk** in a business - and helps a business to prepare for the unexpected



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## Cash Flow Forecasts

### Cash Flow Forecasts

- A cash flow forecast is a prediction of the anticipated **cash inflows** and **cash outflows**, typically for a six to twelve month period
- A detailed business plan should include a **cash flow forecast** that allows the business owners to identify its financial needs

### Key terminology and an example

- The **net cash flow** is calculated by subtracting total outflows from total inflows
- The **opening balance** is the previous month's closing balance carried forward
- The **closing balance** is calculated by adding the net cash flow to the opening balance

An Example of a Start-up Six-month Cash Flow Forecast (£s)

	Jan	Feb	Mar	Apr	May	Jun
<b>Inflows</b>						
Cash received from sales	2,600	2,800	3,100	4,600	4,800	5,200
Capital introduced	6,000	0	0	0	0	0
<b>Total inflows</b>	<b>8,600</b>	<b>2,800</b>	<b>3,100</b>	<b>4,600</b>	<b>4,800</b>	<b>5,200</b>
<b>Outflows</b>						
Inventory	1,500	850	950	1,300	1,350	1,400
Wages	2,200	2,200	2,200	2,200	2,200	2,200
Utilities	840	840	840	882	882	882
Loan repayments	0	284	284	284	284	284



<b>Miscellaneous</b>	230	240	250	410	260	260
<b>Total outflows</b>	4,770	4,414	4,524	5,076	4,976	5,026
<b>Net cash flow</b>	3,830	(1,614)	(1,424)	(476)	(176)	174
<b>Opening balance</b>	500	4,330	2,716	1,292	816	640
<b>Closing balance</b>	4,330	2,716	1,292	816	640	814

## Analysis of the cash flow forecast example

### Executive Summary

- Overall, this cash flow forecast **supports an application for the business to borrow £6,000** in January to cover the initial low inflows, significant outflows and **negative net cash flow**
- As sales increase from June, **inflows are greater than outflows** and the business **has a positive cash flow**
- Should a loan be approved, the business will require any short-term sources of finance, such as overdraft facilities

### January

- The cash flow forecast assumes that the bank approves a £6,000 loan in January (capital introduced)
- The opening balance of £500 has been introduced by the owner
- The business is expected to achieve sales of £2,600
- Total inflows are therefore expected to be £8,600 (£2,600 + £6,000)
- Total outflows are expected to be £4,770
- The **Net Cash Flow** is expected to be £3,830 (£8,600 - £4,770)
- January's closing balance is expected to be £4,330 (£3,830 + £500)

### February

- The closing balance from January becomes the opening balance for February
- Sales of £2,800 as expected to be the business total inflows
- Total outflows are expected to be £4,414



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- The Net Cash Flow is expected to be  $-\text{£}1,614$  ( $\text{£}2,800 - \text{£}4,414$ )
- The closing balance is expected to be  $\text{£}2,716$  ( $-\text{£}1,614 + \text{£}4,430$ )

### March

- The closing balance from February becomes the opening balance for March
- The business expects to achieve sales of  $\text{£}3,100$  as its total inflows
- Total outflows are expected to be  $\text{£}4,524$
- The Net Cash Flow is expected to be  $-\text{£}1,424$  ( $\text{£}3,100 - \text{£}4,524$ )
- The closing balance is expected to be  $\text{£}1,292$  ( $-\text{£}1,424 + \text{£}2,716$ )

### April

- The closing balance from March becomes the opening balance for April
- Sales of  $\text{£}4,600$  are expected as the businesses total inflows
- Total outflows are expected to be  $\text{£}5,076$
- The Net Cash Flow is expected to be  $-\text{£}476$  ( $\text{£}4,600 - \text{£}5,076$ )
- The closing balance is expected to be  $\text{£}816$  ( $-\text{£}476 + \text{£}1,292$ )

### May

- The closing balance from April becomes the opening balance for May
- The business expects to achieve sales of  $\text{£}4,800$  as its total inflows
- Total outflows are expected to be  $\text{£}4,976$
- The Net Cash Flow is expected to be  $-\text{£}176$  ( $\text{£}4,800 - \text{£}4,976$ )
- The closing balance is expected to be  $\text{£}640$  ( $-\text{£}176 + \text{£}816$ )

### June

- The closing balance from May becomes the opening balance for June
- Sales of  $\text{£}5,200$  are the business total inflows
- Total outflows are expected to be  $\text{£}5,026$
- The Net Cash Flow is expected to be  $\text{£}174$  ( $\text{£}5,200 - \text{£}5,026$ )
- The closing balance is expected to be  $\text{£}814$  ( $\text{£}174 + \text{£}640$ )





Your notes

## Worked Example

Here is a simple three-month cash flow forecast for a small seaside café

	March	April	May
<b>Inflows</b>			
Sales	46,000	54,000	61,000
<b>Outflows</b>			
Inventory	13,000	13,000	13,000
Wages	28,000	28,000	28,000
Miscellaneous	3,500	4,000	4,000
<b>Total Outflows</b>	44,500	45,000	45,000
<b>Net cash flow</b>	1,500	9,000	16,000
<b>Opening balance</b>	4,000	5,500	14,500
<b>Closing balance</b>	5,500	14,500	30,500

The café owner thinks that good weather will increase the volume of customers and decides to appoint another full-time assistant in March. As a result, wages increase to an expected £31,000 per month

Calculate the closing balances in the cash flow forecast resulting from the changes above. [4]

	March	April	May
<b>Inflows</b>			
Sales	46,000	54,000	61,000
<b>Outflows</b>			
Inventory	13,000	13,000	13,000
Wages	31,000	31,000	31,000
Miscellaneous	3,500	4,000	4,000
<b>Total Outflows</b>	47,500	48,000	48,000





<b>Net cash flow</b>	(1,500)	6,000	13,000
<b>Opening balance</b>	4,000	2,500	8,500
<b>Closing balance</b>	2,500	8,500	<b>21,500</b>

Answer:

**Step 1: Insert the value of the new wages into the relevant space for each month**

**Step 2: Calculate the new total outflows for each month and insert them into the relevant space for each month**

- March:  $£13,000 + £31,000 + £3,500 = 47,500$
- April:  $£13,000 + £31,000 + £4,000 = 48,000$  [1 mark]
- May:  $£13,000 + £31,000 + £4,000 = 48,000$

**Step 3: Calculate the new net cash flow for each month and insert it into the relevant space for each month**

- March:  $£46,000 - £47,500 = -£1,500$
- April:  $£54,000 - £48,000 = £6,000$  [1 mark]
- May:  $£61,000 - £48,000 = £13,000$

**Step 4: Calculate and insert the new closing balance for March and carry it forward as the opening balance for April**

- $£4,000 + -£1,500 = £2,500$  [1 mark]

**Step 5: Calculate and insert the new closing balance for April and carry it forward as the opening balance for May**

- $£2,500 + £6,000 = £8,500$  [1 mark]

**Step 6: Calculate and insert the new closing balance for May**

- $£8,500 + £13,000 = £21,500$  [4 marks for the correct answer]

Note that this one change in the anticipated cost of wages impacts **four other variables** 1. Total outflows 2. Net cash flow 3. Opening balance (except March) 4. Closing balance



### Examiner Tips and Tricks

When calculating opening and closing balances, work through each month in turn.

Always double-check your calculations in cash flow forecasts as one mistake will have a knock-on effect elsewhere and, in some cases, lead you to make inaccurate judgements.

## Evaluating Cash Flow Forecasts



Your notes

- Cash flow forecasts provide insights into the **expected inflows and outflows of cash over a specific period**
- By analysing these forecasts over time, businesses can **better plan and allocate their financial resources**
- It is also important to recognise that cash flow forecasts have limitations

#### The Uses & Limitations of Cash Flow Forecasts

Advantages	Disadvantages
<ul style="list-style-type: none"> <li>▪ Cash flow forecasts can <b>support an application</b> for a loan and are an integral part of the business plan</li> <li>▪ They can help identify where the business may experience <b>cash shortfalls or cash surpluses</b> so that plans can be made to manage these periods (e.g. arranging an overdraft)</li> <li>▪ Cash flow forecasts <b>aid planning</b> and help a business avoid costly mistakes</li> </ul>	<ul style="list-style-type: none"> <li>▪ Forecasts are usually based on <b>estimates</b> and in reality inflows and outflows may differ significantly from the estimates</li> <li>▪ Cash flow forecasts <b>require appropriate skills, insight, research and time</b> to prepare and update adequately</li> <li>▪ <b>External factors</b> that can impact inflows and outflows may not be reflected in the cash flow forecast</li> </ul>



#### Examiner Tips and Tricks

Look for clues in the case study about the reliability of the forecast and draw some judgments on the reliability of the forecast presented.

New entrepreneurs find it especially difficult to create accurate forecasts as they have little experience to draw on. They often make use of free advice and guidance (e.g. from banks) or conduct significant research to support their forecasts. In these cases, the cash flow forecast is likely to be an excellent tool for planning. Where the cash flow forecast is constructed without such care it can hinder business progress and can undermine the business plan as a whole.





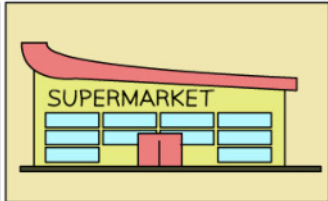
Your notes

## Strategies to Improve Cash Flow

# The Relationship Between Investment, Profit & Cash Flow

- Business investment involves the **purchase of assets that are expected to create value over time**
  - E.g the **purchase of new machinery** will improve productivity or quality which may allow the business to sell more items at a higher price and this **increases sales revenue**
- Financial investment** may include the purchase of shares, bonds or property with the expectation that they will gain value over time
  - For some businesses this is an important **source of income** alongside their core business activities
    - E.g. US supermarket giant *Walmart* owns and leases over 10 thousand residential and commercial properties worldwide which act as an important **added revenue stream** for the brand
- Investment, profit and cash flow differ over the **lifetime of a business**

## Diagram: cash flow and profit over time

	START UP	ESTABLISHED BUSINESS	LARGE BUSINESS
			
INVESTMENT BY OWNER	SIGNIFICANT – TO COVER START-UP COSTS	CONTINUING – TO FUND BUSINESS GROWTH	MINIMAL – AS PROFITS FUND FURTHER GROWTH
PROFIT	LITTLE OR NO PROFIT AS COSTS ARE NOT YET COVERED	SMALL PROFIT AS COSTS ARE COVERED BY GROWING REVENUE	LARGE PROFIT AS REVENUE GREATLY OUTSTRIPS COSTS
CASH FLOW	NEGATIVE CASH FLOW AS OUTFLOWS ARE GREATER THAN INFLOWS	POSITIVE BUT LOW LEVELS OF CASH FLOW UNTIL SALES REVENUE INCREASES	POSITIVE CASH FLOW AS INFLOWS ARE GREATER THAN OUTFLOWS

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*Investment, profit and cash flow over the lifetime of a business*



Your notes

## Strategies to Improve Cash Flow

- The best way to improve cash flow is to **manage the business better**
  - Use **cash flow forecasts** to identify potential cash flow issues before they arise - and take appropriate action
  - **Budget** effectively and consider adopting **zero budgeting** to carefully control spending
  - Set clear **financial objectives** and look for ways to **reduce outflows** and **increase inflows** wherever possible
    - E.g. Global **conglomerate 3M**, maker of *Post-it* Notes announced in early 2023 that it intends to raise prices and cut about 6,000 jobs to improve its profits and cash flow position
- A business can also have **too much cash**
  - If a business is **holding large amounts of cash** it is likely to be **missing out** on the benefits of investing it in fixed assets or investments
  - This may represent a significant **opportunity cost** especially when interest rates are high

### Methods to Improve Cash Flow

Method	Explanation
<b>Reduce the credit period offered to customers</b>	<ul style="list-style-type: none"> <li>▪ Collecting money owed from customers more quickly will <b>increase the level of current assets</b> in the business           <ul style="list-style-type: none"> <li>▪ However, <b>customers may move to competing businesses</b> that offer better <b>credit terms</b></li> </ul> </li> </ul>
<b>Ask suppliers for an extended repayment period e.g an extension from 60 to 90 days</b>	<ul style="list-style-type: none"> <li>▪ Current liabilities <b>will not be reduced</b></li> <li>▪ The business can use cash it would have paid to suppliers for other purposes</li> <li>▪ Suppliers may be <b>unwilling</b> to extend credit terms</li> </ul>
<b>Make use of overdraft facilities or short-term loans</b>	<ul style="list-style-type: none"> <li>▪ <b>Current liabilities will increase</b></li> <li>▪ The business can spend <b>more money than it has in its bank account</b></li> <li>▪ Banks may be reluctant to lend to businesses with cash-flow problems</li> </ul>



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<p><b>Sell off excess stock</b></p>	<ul style="list-style-type: none"> <li>▪ Less <b>liquid</b> current assets will be reduced and <b>converted into more liquid forms of current asset</b> (e.g. cash)</li> <li>▪ Storage and security <b>costs may also be reduced</b></li> <li>▪ Stock may need to be <b>sold at a low price</b> to attract sales</li> </ul>
<p><b>Sell assets and lease fixed assets instead</b> (e.g. sale &amp; leaseback)</p>	<ul style="list-style-type: none"> <li>▪ Both <b>current assets and current liabilities will increase</b></li> <li>▪ The business will continue to <b>have the use of assets</b> but must make regular payments to the leasing company</li> </ul>
<p><b>Introduce new capital and reduce drawings from the business</b></p>	<ul style="list-style-type: none"> <li>▪ Current assets will be <b>increased</b></li> <li>▪ New capital may be <b>introduced by the owner</b> or from <b>additional investors</b></li> <li>▪ This may result in the <b>dilution of control</b> of the business</li> </ul>