

## Solution 15.1

### *True or False*

An increase in debtors increases the cash position of the business.	<b>FALSE</b>
A decrease in stock increases the cash position of the business.	<b>TRUE</b>
Depreciation reduces the cash position of the business.	<b>FALSE</b>
Net profit is the difference between cash received and cash paid.	<b>FALSE</b>
Operating net cash flow is the operating profit less any payments for fixed assets.	<b>FALSE</b>
An increase in creditors increases the cash position of the business.	<b>TRUE</b>
If accruals goes up then cash goes down.	<b>FALSE</b>

## Solution 15.2

### *Net debt and net funds*

Net debt is as per the definitions in FRS 1 "the borrowings of the entity less cash and liquid resources". If cash and liquid resources exceed debt then the term used becomes Net Funds.

### *Operating net profit and operating net cash flow*

Cash flows from operating activities are the cash effects of transactions relating to the operating or trading activities of the business (the normal trading activities of the business, not capital activities). Operating cash flows will be concerned with:

- cash collected from customers
- cash paid to trade creditors for purchases
- cash paid to staff /PAYE/PRSI
- cash paid for services (overheads)

Operating profit is the profit before interest and tax achieved by a business from its main trading activities. It is the sales of a business less all the operating expenses including cost of sales, administration, selling, distribution and depreciation expenses.

The main reasons for differences between operating cash flow and operating profit are that operating profit is the difference between revenues earned and expenses charged whereas operating cash flow is the difference between revenues received and expenses paid. Also operating profit includes non cash items such as depreciation in its calculation.

### *The direct and indirect method of calculating operating net cash flow*

#### **1. The Direct Method.**

Under this method we gather the information from a detailed cashbook, collections from customers, and cash paid to suppliers, staff, and overheads.

#### *Calculation of operating cash flow - The Direct method*

	€	€
Cash collected from customers		162,100
Less payments to suppliers	88,790	
payments to staff /paye/prsi	26,150	
payments of other operating expenses	<u>15,100</u>	<u>130,040</u>
Net cash generated from operating activities		<u>32,060</u>

The direct method highlights the operating cash figure, which is the cash figure generated from normal activities before interest and other non-trading cash movements.

#### **2. The Indirect Method**

In this format we are adjusting the operating profit figure (net profit before interest and tax) back to an operating cash figure. This is calculated as follows.

1. Adjusting operating profit for items in the profit and loss account that do not appear in the cash book. These items would include the following:
  - Depreciation
  - Provision for bad debts
  - Profits or losses on the sale of fixed asset

- These items are all categorised as 'non-cash'. In other words they do not give rise to a cash transaction/movement and would not appear in the cash/bank account. If these items have reduced the operating profit (if they were expenses) then to adjust for them we need to add them back to operating profit. If they had the effect of increasing profit then we deduct them from operating profit.
2. Adjust the operating profit for changes in stocks, debtors, prepayments, accruals and creditors. Changes in the above working capital items causes differences between figures in the profit and loss account and figures in the cash/bank account. For example a business generated sales of €10,000 during the year. If debtors at the

**Calculation of Operating cash flow - Indirect method**

	€	€
Net operating profit (before interest and tax)		5,800
<i>Adjust for non cash items in profit and loss</i>		
+Depreciation	10,000	
+ Increase in provision for bad debts	3,000	
+Loss on sale of fixed assets	<u>2,200</u>	<u>15,200</u>
		21,000
<i>Adjust for movements in working capital</i>		
Increase in stocks	(2,000)	
Increase in prepayments	(500)	
Decrease in trade debtors	12,100	
Increase in trade creditors	1,210	
Increase in accruals	<u>250</u>	<u>11,060</u>
Net cash flow from operating activities		<u>32,060</u>

The operating cash flow is €32,060 whether we use the direct or indirect method. Ultimately the indirect method outlines for us some of the main reasons for differences between the net profit figure and the net cash flow figure and must be shown as a note to the cash flow statement

**Operating net cash flow and the overall net cash flow**

Operating profit is the profit before interest and tax achieved by a business from its main trading activities. It is the sales of a business less all the operating expenses including cost of sales, administration, selling, distribution and depreciation expenses. Overall cash flow is the movement in cash for the business as a whole over a defined period. It includes operating cash flow as well as other cash movements such as financing, receipts or expenditure on fixed assets, corporation tax payments, dividend payments, other investment returns, servicing of debt costs, cash from the investment or disposal of liquid assets and the acquisition or disposal of other business entities.

## Solution 15.3

### *Liquid resources*

Under the definitions section in FRS 1, liquid resources are those that can be realised (turned into cash) without disruption to the business of the entity or which can be traded in an active market. Examples are commercial paper, IOU's and short-term investments readily convertible into cash at their carrying value or close to it.

### *Operating cash flow*

Cash flows from operating activities are the cash effects of transactions relating to the operating or trading activities of the business (the normal trading activities of the business, not capital activities). Operating cash flows will be concerned with:

- cash collected from customers
- cash paid to trade creditors for purchases
- cash paid to staff /PAYE/PRSI
- cash paid for services (overheads)

### *Non-cash item*

Non cash items are accounting transactions that do not give rise to cash movements and thus would not appear in the cash or bank account of a business. These items would include the following:

- Depreciation
- Provision for bad debts
- Profits or losses on the sale of fixed asset

These items would however appear in the profit and loss account of a business and hence will cause differences between operating profit and operating cash flow.

### *Operating activities*

These are the normal trading activities of a business and include any transactions involving sales and the costs that are matched to those sales. Operating activities do not include any transactions involving financing, corporation tax, investment income, and capital investments.

## **Solution 15.4**

### ***Main categories of cash inflow and outflow***

1. Operating activities
2. Return on investment/serving of debt
3. Taxation
4. Capital expenditure
5. Acquisitions and disposals
6. Equity dividends paid
7. Management of liquid resources
8. Financing

### ***Objectives of preparing cash flow statements***

To show the cash inflows and outflows for the financial year and the consequent increase or decrease in cash. The cash flows are reported in various categories to enable the reader to identify key developments.

To convert the operating profit or loss into the equivalent amount of cash released or consumed in the day to day running of the business. Put simply, profit is not cash and thus the cash flow statement shows the operating net profit reconciled to the operating net cash flow.

To show how the increase or decrease in cash for the reporting period links the net funds (where cash and bank balances are greater than loans/debt) or net debt (where loans/ debt are greater than bank cash balances) at the start and end of the reporting period.

## Solution 15.5

### Cash flow statement

	€'000	€'000
Operating cash flow		<b>1,724</b>
Net cash flow return on investment /servicing of debt		
Interest paid		<b>(416)</b>
Net cash flow taxation		
Tax paid		<b>(470)</b>
Net cash flow capital expenditure		
Sale of fixed assets	350	
Purchase of fixed assets	<u>(2,493)</u>	<b>(2,143)</b>
Dividends		<b>(500)</b>
management of liquid resources		
Short-term investments		<b>(13)</b>
Financing		
Issue of debentures	119	
Redemption of bank loans	-200	
Issue of shares	<u>1,679</u>	<b><u>1,598</u></b>
		<b><u>(220)</u></b>

<b>Overall cash flow</b>	<b>2002</b>	<b>2003</b>	<b>NCF</b>
Bank	120	0	(120)
bank loans and overdrafts	<u>0</u>	<u>100</u>	<u>(100)</u>
	120	(100)	(220)

<b>Calculation of net debt</b>	<b>2002</b>	<b>2003</b>	
Cash	120	(100)	(220)
Debt	<u>(5,281)</u>	<u>(5,200)</u>	<u>81</u>
	(5,161)	(5,300)	(139)

<b>Reconciliation of Net debt to net cash flow</b>	€'000
Movement in cash	(220)
Movement in net debt	<u>81</u>
	(139)
Net debt at beginning of the year	<u>(5,162)</u>
net debt at the year end	<u>(5,300)</u>

### The following points should be made

Overall negative cash flow of €220,000 with the company going from having a surplus of cash at the beginning of the year to a deficit of €100,000.

Identify main sources of cash

- 1 Operating activities - students should identify main reasons for differences between net operating profit and operating cash flow  
the operating cash flow to operating profit % = 169%  
Operating cash as a % of total cash inflow = 47%
- 2 Sale of fixed assets
- 3 issue of debentures
- 4 bank overdraft

Identify main uses of cash

- 1 Dividend payments
- 2 Taxation
- 3 Investment in fixed assets: Assets increased by 8.6%
- 4 Redemption of loans
- 5 Purchase of s/t investments.

Overall 47% of the company's cash requirement was financed through operating activities. The main item of expenditure was the investment in fixed assets which has partly financed through a share issue and cash generated from operating activities. The net debt position has increased by 2.7%.

## Solution 15.6

### Cash flow statement

	€'000	€'000
Net cash flow from Operating activities		3,623
net cash flow return on investment /servicing of debt		
Interest paid		(600)
Net Cash flow taxation		
Tax paid		(490)
Net cash flow capital expenditure		
Sale of fixed assets	135	
Purchase of fixed assets	(5,363)	(5,228)
Dividends		(600)
management of Liquid resources		
Short-term investments		25
Financing		
Issue of debentures	1,000	
Redemption of bank loans	20	
Issue of shares	1,940	<u>2,960</u>
		<u>(310)</u>

Overall cash flow	2003	2004	NCF
	€'000	€'000	€'000
Bank	220	10	(210)
bank loans and overdrafts	<u>(10)</u>	<u>110</u>	<u>(100)</u>
	210	(100)	(310)

#### Note 1

Net cash flow operating activities			
net profit before interest and tax			2,635
Adjust for non cash items			
Depreciation		780	
Loss on sale of fixed assets		<u>185</u>	<u>965</u>
			3,600
Adjust for increases/ decreases in working capital			
Stock		25	
Debtors		25	
Creditors		(20)	
Prepayments		(2)	
Accruals		<u>(5)</u>	<u>23</u>
			<b>3,623</b>

Calculation of Net Debt	2003	2004	
	€'000	€'000	€'000
Cash	210	(100)	310
Debt	<u>(6,480)</u>	<u>(7,500)</u>	<u>(1,020)</u>
	(6,270)	(7,600)	1,330

Reconciliation of net cash flow to net debt	€
Movement in cash	(310)
Movement in debt	<u>(1020)</u>
	(1330)
Net debt at the beginning of the year	<u>(6270)</u>
net debt at the end of year	<u>(7600)</u>

### The following points should be made

Overall negative cash flow of €310,000. The company started the year with a positive cash balance of €210,000 and at the year end the company was in overdraft to €100,000

Identify main sources of cash

- 1 Operating activities - students should identify main reasons for differences between net operating profit and operating cash flow  
the operating cash flow to operating profit % =137%  
Operating cash as a % of total cash inflow =53.7%
- 2 Sale of fixed assets yielding €135,000
- 3 issue of debentures
- 4 bank overdraft

Identify main uses of cash

- 1 Dividend payments
- 2 Taxation
- 3 Investment in fixed assets which amounted to €5,363 and fixed assets increased by 25%. This investment was financed through a mixture of equity (including operating cash) and debt financing
- 5 Purchase of s/t investments.

Net debt increased by 21%

Overall 53.7%% of the company's cash requirement was financed through operating activities. The main item of expenditure was the investment in fixed assets which has partly financed through a share and debt issue as well as cash generated from operating activities.

**Solution 15.7****Cash flow statement**

	€'000	€'000
Net cash flow operating activities		4594.78
net cash flow return on investment /servicing of debt		
Interest paid		(560)
Net Cash flow taxation		
Tax paid		(490)
Net cash flow capital expenditure		
Sale of fixed assets	£200	
Purchase of fixed assets	(£3,183)	(£2,983)
Dividends		(800)
management of Liquid resources		
Short-term investments		25
Financing		
Issue of debentures	(1,153)	
Redemption of bank loans	(20)	
Issue of shares	1,066	<u>(107)</u>
		<u>(320.22)</u>

**Overall cash flow**

	2002	2003	NCF
	€'000	€'000	€'000
Bank	220	0	(220)
bank loans and overdrafts	<u>(10)</u>	<u>(110)</u>	<u>(100)</u>
	210	(110)	(320)

**Calculation of Net Debt**

	2002	2003	
	€'000	€'000	€'000
Cash	210	(110)	320
Debt	<u>(7,520)</u>	<u>(6,347)</u>	<u>(1,173)</u>
	(7,310)	(6,457)	(853)

	€'000
net profit before interest and tax	3653.78
Adjust for non cash items	
Depreciation	890
Loss on sale of fixed assets	<u>120</u>
	<u>1,010</u>
Adjust for increases/ decreases in working capital	
Stock	(2)
Debtors	20
Creditors	(80)
Prepayments	(2)
Accruals	<u>(5)</u>
Net operating cash flow	<u>4594.78</u>

<b>Reconciliation of net cash flow to net debt</b>	€'000
Movement in cash	320
Movement in net debt	<u>1,173</u>
	853
Net debt at beginning of the year	<u>(7,311)</u>
net debt at the year end	<u>(6,457)</u>

**The following points should be made**

Overall a negative cash flow of €320,000. The business started the year with a positive cash balance of €210,000 and ended the year in overdraft to €110,000

The main sources of cash were

- 1 Operating activities - students should identify main reasons for differences between net operating profit and operating cash flow  
Operating cash to operating profit ratio = 126%. This needs to be compared with previous years to assess the trend.  
Operating cash flow accounted for 74% of the cash requirement
- 2 Sale of fixed assets
- 3 issue of debentures
- 4 bank overdraft

Identify main uses of cash

- 1 Dividend payments
- 2 Taxation
- 3 Investment in fixed assets. The investment in fixed assets amounted to €3183 and accounted for a 9% increase in fixed assets.
- 4 Some debentures and bank loans were redeemed with an overall reduction in net debt of 12%
- 5 Purchase of s/t investments.; The company invested €25,000 in short term investments.

Overall 74% of the company's cash requirement was financed through operating activities.

The main item of expenditure was the investment in fixed assets which has partly financed through a share issue as well as cash generated from operating activities.