

Chapter 16

Solution 16.1

True or False

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

Solution 16.2

Net debt and net funds

Net debt is defined as “*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 profit and cash generated from operations

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 cash flow from operations and operating profit are:

1. Operating profit is the difference between revenues earned and expenses charged whereas cash flow from operations is the difference between revenues received and expenses paid.
2. Operating profit includes non cash items such as depreciation in its calculation.

The direct and indirect method of calculating net cash generated from operating activities

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 operations		32,060
Less payments for loan interest	7,000	
Corporation tax	<u>8,000</u>	<u>15,000</u>
Net cash generated from operating activities		<u>17,060</u>

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>
Cash generated from operations		32,060
Less payments made for Loan Interest	7,000	
Corporation tax	<u>8,000</u>	<u>(15,000)</u>
Net cash generated from operating activities		<u>17,060</u>

The cash flow from operations is €17,060 whether we use the direct or indirect method. Ultimately the indirect method outlines for us some of the main reasons for differences between the profit figure and the net cash generated from operating activities.

Cash flow from investing activities and cash flow from financing

The cash flow from investing activities includes the following cash receipts and payments that arise from the following:

- Sale of tangible, intangible and financial long-term assets.
- Purchases of tangible intangible and financial long-term assets.
- Acquisitions or disposals of subsidiaries associated or joint venture companies.

- Loan interest received and dividends received from investments.

The cash flow from financing includes the cash receipts and payments, which arise from the following;

- Issue of shares, debentures/bonds or just simply getting a bank loan.
- Repayments of the capital elements of loans/ debentures.
- Any related expenses (stamp duty or broker fees on the issue of shares/debentures bonds) or commissions regarding the above.
- Dividend payments made during the year to shareholders

Solution 16.3

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.

Cash generated from operations

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 16.4

Solution

Statement reconciling operating profit to operating cash

Operating profit		1,000,000	
Adjust for non cash items in the profit statement			
Depreciation	245,000		
loss on sale of fixed assets	14,000		
Increase in provision for bad debts	<u>17,000</u>	276,000	
Adjust for movements in working capital			
Decrease in inventory	3,200		
Increase in accounts receivable	-2,000		
Decrease in prepayments	1,000		
Increase in accounts payable	4,000		
Decrease in accruals	<u>-2,000</u>	<u>4,200</u>	
Cash generated from operations		1,280,200	
Less Loan interest	70,000		
Corporation tax	<u>213,000</u>	<u>(283,000)</u>	
Net cash generated from operating activities		<u>997,200</u>	

Solution 16.5

Note: The dividends figure on the income statement for 2013 should read €1,100 (not €800)

Overall cash flow	O/Bal	C/Bal	NCF
	€'000	€'000	€'000
Bank	220	0	(220)
Short-term investments	75	50	(25)
bank loans and overdrafts	<u>(10)</u>	<u>(110)</u>	<u>(100)</u>
	<u>285</u>	<u>(60)</u>	<u>(345)</u>

Statement of Cash Flow

CASH FLOWS FROM OPERATING ACTIVITIES	€('000)	€('000)	€(000)
Operating profit		3,654	
Add:			
Depreciation for year	890		
Loss on sale of fixed assets	120		
Increase in provisions	0	1,010	
<i>Changes in Working Capital</i>			
Add: Decrease in current assets – receivable	20		
Less: Increase in current assets – inventories	(2)		
<i>Increase in current liabilities- accruals</i>	95		
Increase in current assets - prepayments	(2)		
Increase in current liabilities – payables	120	231	
Cash generated from operations		4,895	
<i>Finance Interest Paid</i>	(560)		
<i>Taxation Paid</i>	(490)	(1,050)	
Net cash generated by operating activities		3,845	3,845
CASH FLOWS FROM INVESTING ACTIVITIES			
Proceeds on disposal of fixed assets		200	
Payments to acquire fixed assets		(3,183)	
Net cash generated from investing activities		(2,983)	(2,983)
CASH FLOWS FROM FINANCING ACTIVITIES (NOTE 5)			
Proceeds from borrowings		0	
Repayment of borrowings		(1,173)	
Proceeds from issue of equity shares		1,066	
<i>Dividends Paid</i>		(1,100)	
Net cash generated from financing activities		(1,207)	(1,207)
OVERALL CASHFLOW			(345)

The following points should be made

Overall a negative cash flow of €345,000. The business started the year with a positive cash balance of €285,000 and ended the year with a negative balance of €60,000.

The main sources of cash were

Operating activities – The cash generated from operations was €4895 compared to the operating profit figure of €3,654. Thus the operating cash to operating profit ratio amounts to 134% mainly due to depreciation charges in the income

statement. This needs to be compared to previous years to assess the trend.
 Net cash generated from operating activities accounted for 75% of the total cash generated

- 2 Sale of Non-current assets
- 3 bank overdraft

Identify main uses of cash

- 1 Dividend payments
- 2 Taxation
- 3 Investment in non-current assets. This amounted to €3183 and accounted for a 9% increase in non-current assets.
- 4 Some debentures and bank loans were redeemed with an overall reduction in Long-term debt of 15.6%

Overall 75% of the company's cash requirement was financed through operating activities. The main item of expenditure was the investment in non-current assets which has partly financed through a share issue as well as cash generated from operating activities.

Solution 16.6

Note: The dividends figure on the income statement for 2013 should read €900 (not €600)

Overall cash flow	O/Bal	C/Bal	NCF
	€'000	€'000	€'000
Bank	220	10	(210)
Short-term investments	75	50	(25)
bank loans and overdrafts	<u>(10)</u>	<u>(110)</u>	<u>(100)</u>
	<u>285</u>	<u>(50)</u>	<u>(335)</u>

Statement of Cash Flow

CASH FLOWS FROM OPERATING ACTIVITIES	€('000)	€('000)	€(000)
Operating profit		2,635	
Add:			
Depreciation for year	780		
Loss on sale of fixed assets	185		
Increase in provisions	<u>0</u>	965	

<i>Changes in Working Capital</i>			
Add:	Decrease in current assets – receivable	25	
	Decrease in current assets - inventories	25	
	Decrease in current liabilities - accruals	(5)	
	Increase in current assets - prepayments	(2)	
	Increase in current liabilities – payables	280	323
	Cash generated from operations		3,923
	<i>Finance Interest Paid</i>	(600)	
	<i>Taxation Paid</i>	(490)	(1,090)
	Net cash generated by operating activities		2,833
CASH FLOWS FROM INVESTING ACTIVITIES			
	Proceeds on disposal of fixed assets	135	
	Payments to acquire fixed assets	(5,363)	
	Net cash generated from investing activities	(5,228)	(5,228)
CASH FLOWS FROM FINANCING ACTIVITIES			
(NOTE 5)			
	Proceeds from borrowings	1,020	
	Proceeds from issue of equity shares	1,940	
	<i>Dividends Paid</i>	(900)	
	Net cash generated from financing activities	2,60	2,060
	OVERALL CASHFLOW		(335)

The following points should be made

Overall there was negative cash flow of €335,000 for the year. The company started the year with a positive cash balance of €285,000 and at the year end the company was in a net overdraft of €50,000

Identify main sources of cash

1. Operating activities – The cash generated from operations was €3923 compared to the operating profit figure of €2,635. Thus the operating cash to operating profit ratio amounts to 149% mainly due to depreciation charges in the income statement. This needs to be compared to previous years to assess the trend.
2. Net cash generated from operating activities accounted for 48% (2833/5928) of the total cash generated
3. Sale of fixed assets yielding €135,000
4. Issue of debentures. – long term debt increased by 16%
5. Issue of shares
5. bank overdraft

Identify main uses of cash

- 1 Dividend payments

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

Overall 48% 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 the cash generated from operating activities.

Solution 16.7

Overall cash flow	O/Bal	C/Bal	NCF
Bank	120	0	(120)
Short-term investments	12	25	13
bank loans and overdrafts	<u>0</u>	<u>(100)</u>	<u>(100)</u>
	<u>132</u>	<u>(75)</u>	<u>(207)</u>

Statement of Cash Flow

CASH FLOWS FROM OPERATING ACTIVITIES	€('000)	€('000)	€(000)
Operating profit		1,016	
Add:			
Depreciation for year	800		
profit on sale of fixed assets	(50)		
Increase in provisions	<u>0</u>	750	
<i>Changes in Working Capital</i>			
Add: Increase in current assets – receivable	(6)		
Decrease in current assets - inventories	23		
Decrease in current liabilities - payable	(60)		
Increase in current assets - prepayments	(2)		
Increase in current liabilities – accruals	<u>3</u>	<u>(42)</u>	
Cash generated from operations		1,724	
<i>Finance Interest Paid</i>	(416)		
<i>Taxation Paid</i>	<u>(470)</u>	<u>(886)</u>	
Net cash generated by operating activities		<u>838</u>	838
CASH FLOWS FROM INVESTING ACTIVITIES			
Proceeds on disposal of fixed assets		350	
Payments to acquire fixed assets		<u>(2,493)</u>	
Net cash generated from investing activities		<u>(2,143)</u>	(2,143)
CASH FLOWS FROM FINANCING ACTIVITIES (NOTE 5)			
Proceeds from borrowings		119	
Redemption of borrowings		(200)	
Issue of shares		1,679	
<i>Dividends Paid</i>		<u>(500)</u>	
Net cash generated from financing activities		<u>1,098</u>	1,098
OVERALL CASHFLOW			<u>(207)</u>

The following points should be made

Overall negative cash flow of €207,000 with the company going from having a surplus of cash at the beginning of the year to a deficit of €75,000 at the end of the year.

Identify main sources of cash

1. Operating activities – The cash generated from operations was €1,724 compared to the operating profit figure of €1,016. Thus the operating cash to operating profit ratio amounts to 170% mainly due to depreciation charges in the income statement. This needs to be compared to previous years to assess the trend.
2. Net cash generated from operating activities accounted for 28%(838/2986) of the total cash generated
- 3 Sale of non-current assets
- 4 Issue of debentures
- 5 bank overdraft

Identify main uses of cash

- Dividend payments
- Investment in non-current assets: Assets increased by 8.6%(25583/23540-1)
- Redemption of bank loans
- Purchase of s/t investments.

Overall 28% of the company's cash generated 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.

Solution 16.8

Overall cash flow	O/Bal	C/Bal	NCF
Bank	1,300	2,250	950
Short-term investments	<u>700</u>	<u>800</u>	<u>100</u>
	<u>2,000</u>	<u>3,050</u>	<u>1,050</u>

Statement of Cash Flow

CASH FLOWS FROM OPERATING ACTIVITIES	€('000)	€('000)	€(000)
Operating profit		6,600	
Add:			
Depreciation for year	4,500		
loss on sale of fixed assets	3,650		
Increase in provisions	<u>0</u>	8150	

<i>Changes in Working Capital</i>			
Add:	Increase in current assets – receivable	(300)	
	Increase in current assets - inventories	(300)	
	Increase in current liabilities - payable	550	
	Increase in current liabilities – accruals	100	50
		<u>100</u>	<u>50</u>
	Cash generated from operations		14,800
	<i>Finance Interest Paid</i>	(1,100)	
	<i>Taxation Paid</i>	(600)	(1,700)
		<u>(600)</u>	<u>(1,700)</u>
	Net cash generated by operating activities		13,100
			13,100
CASH FLOWS FROM INVESTING ACTIVITIES			
	Proceeds on disposal of fixed assets		18,850
	Payments to acquire fixed assets		(18,000)
			<u>(18,000)</u>
	Net cash generated from investing activities		850
			850
CASH FLOWS FROM FINANCING ACTIVITIES			
(NOTE 5)			
	Redemption of borrowings		(11,900)
	<i>Dividends Paid</i>		(1,000)
			<u>(1,000)</u>
	Net cash generated from financing activities		(12,900)
			(12,900)
	OVERALL CASHFLOW		1,050

The following points should be made

Overall the business generated a positive cash flow of €1,050. The company had a positive cash position of €2,000 at the beginning of the year and €3,050 at the end of the year.

Main sources of cash

The cash generated from operations figure was €14,800 compared to the operating profit figure of €6,600. Thus the operating cash figure is more than double the operating profit due in the main to depreciation charges and a very significant loss on the sale of fixed assets recorded in the income statement. This needs to be compared to previous years to assess the trend. The

net cash generated from operating activities amounted to 41% of the total cash generated by the business. The other 59% related to the sale of fixed assets which procured nearly €19,000 for the business.

The main uses of cash were in the following

The purchase of fixed assets of €18,000.

The redemption of debentures which were redeemed by 40%

