SOLUTIONS TO END-OF-CHAPTER QUESTIONS CHAPTER 9

DEVELOP YOUR UNDERSTANDING

Question 9.1

(a) Ratios for Samoco plc

	2019		2018	
	Calculation	Ratio	Calculation	Ratio
Current ratio	652/1,590	0.41:1	639/1,476	0.43:1
Quick ratio	(652 – 485)/1,590	0.11:1	(639 – 500)/1,476	0.09:1
Inventory days	(485/12,570) × 365	14.08 days	(500/11,330) × 365	16.11 days
Payables days	(830/12,570) × 365	24.10 days	(790/11,330) × 365	25.45 days
Cash conversion cycle	14.08 + 0 – 24.10	–10.02 days	16.11 + 0 – 25.45	–9.34 days
Gearing %	(240 + 2,230)/2,116 × 100%	116.73%	(216 + 2,024)/1,765 × 100%	126.91%
Debt ratio	4,576/6,692	0.68:1	4,024/5,789	0.70:1
Interest cover	732/104	7.04 times	586/84	6.98 times

As Samoco plc has no trade receivables, receivables days are zero.

(b) Evaluation of the liquidity, working capital and long-term solvency of Samoco plc at 31 May 2019:

- Current and quick ratios are very low.
- However, this is not a problem as Samoco plc sells its goods for cash while trading on credit with suppliers.
- Therefore, goods have been sold well in advance of when they have to be paid for.
- The quick ratio is irrelevant for Samoco plc as inventory is a highly liquid asset, with inventory turning over every 14 days in the 2018/2019 trading year.
- Trade payables are paid after 24 days, so the company is holding on to the cash from sales of inventory for an additional 10 days before this cash is used to pay off liabilities.

- The cash conversion cycle results in a negative figure. This means that the trade creditors are financing Samoco plc's working capital requirements.
- The company is paying dividends to the shareholders: this is not something that companies will do if they are short of cash. If Samoco plc were short of cash, the company would be conserving its money and not paying a dividend.
- The borrowings are repayable by equal instalments over the next 10 years, so the business has plenty of time in which to save up the money to repay these borrowings as they come up for payment.
- The company trades in essential goods (food), so demand for its products will never fall away.
- This will mean that sales, profits and cash flows will be generated from which to repay the long-term borrowings as they fall due.
- Gearing might look high at 116.73%, but the interest cover ratio shows that the cost of servicing the interest on the borrowings is easily affordable from the operating profits.

Question 9.2

Amounts due for repayment the day after the year end:

		1 June 2019	1 June 2018
	Calculation	£m	£m
Borrowings	240/12: 216/12	(20)	(18)
Trade payables	830/24.10: 790/25.45	(34)	(31)
Other payables	150 × 20%: 140 × 20%	(30)	(28)
Dividends	Not payable until August 2019/2018	(—)	(—)
Current tax	First payment three months after year end	(—)	(—)
	Total liabilities due for payment on 1 June	(84)	(77)
	Cash and cash equivalents at year end	122	99
	Add: one day's sales on 1 June: 13,663/360: 12,249/360	38	34
	Estimated cash balance at end of 1 June	76	56

Samoco thus has more than enough cash in hand to cover any liabilities due on 1 June in both years.

Problems with relying solely on the current and quick ratios

- Current and quick ratios make the unrealistic assumption that all liabilities will be called in on the day after the statement of financial position date.
- In reality, unless the entity is in liquidation, payment of current liabilities occurs over 12 months not all at once: individuals do not have to consider paying all their debts due over the next 12 months on the first day of the year, so why is this assumption made about business entities?
- Samoco plc is a very large company, so suppliers can be kept waiting for payment until the cash is readily available.

- Contracts govern bank loans, so, unless the company has breached the contractual terms of the loans, lenders cannot demand all their cash back until repayments are overdue.
- Other payables have been assumed to require a 20% payment of the total amount immediately: this is probably a serious overestimate of what is due on the day after the year end, so more cash than estimated is probably available at the end of the first day of the new financial year.
- Similarly, the current portion of long-term borrowings is more likely to be payable at the end of June not at the beginning of the month, so cash outflows on 1 June are, again, probably overestimated.
- Suppliers are happy to trade with such a large organisation and will not want to jeopardise their future trading relationships by demanding immediate payments of amounts due. They know they will be paid eventually and are willing to sacrifice cash now for the longer-term certainty of continuing trade with their very large customer.
- When assessing short-term liquidity, timing of payments is everything and liabilities are paid, not immediately, but from cash left over at the end of the previous year and from subsequent cash inflows from daily trading.
- Current and quick ratios are a static measure of liquidity: in reality, the cash keeps flowing in each and every day while amounts due are paid each and every day as current trading pays off past liabilities.

TAKE IT FURTHER

Question 9.3

Ratio calculations Ted Baker plc

Ted Baker plc	Calculation	Ratio
Current ratio	269.4/176.8	1.52:1
Quick ratio	(269.4 – 187.2)/176.8	0.46:1
Inventory days	187.2/230.9 × 365	295.92 days
Receivables days	42.7/591.7 × 365	26.34 days
Payables days	36.3/230.9 × 365	57.38 days
Cash conversion cycle	+ 295.92 + 26.34 – 57.38	+ 264.88 days
Gearing %	128.5/224.1 × 100%	57.34%
Debt ratio	225.1/449.2	0.50:1
Interest cover	70.7/3.3	21.42 times

Ratio calculations Nichols plc

Nichols plc	Calculation	Ratio
Current ratio	75.6/23.6	3.20:1
Quick ratio	(75.6 – 4.8)/23.6	3.00:1
Inventory days	4.8/72.2 × 365	24.27 days
Receivables days	31.3/132.8 × 365	86.03 days
Payables days	6.8/72.2 × 365	34.38 days
Cash conversion cycle	+ 24.27 + 86.03 – 34.38	+ 75.92 days
Gearing %	0.0/99.3 × 100%	0.00%
Debt ratio	28.1/127.4	0.22:1
Interest cover	N/A: zero borrowings and zero finance expense	

Ratio calculations Weir Group plc

Weir Group plc	Calculation	Ratio
Current ratio	1,543.5/1,113.7	1.39:1
Quick ratio	(1,543.5 – 586.8)/1,113.7	0.86:1
Inventory days	586.8/1,619.2 × 365	132.28 days
Receivables days	492.9/2.355.9 × 365	76.37 days
Payables days	341.7/1,619.2 × 365	77.03 days
Cash conversion cycle	+ 132.28 + 76.37 – 77.03	+ 131.62 days
Gearing %	1,127.8/1,471.1 × 100%	76.66%
Debt ratio	2,122.4/3,593.5	0.59:1
Interest cover	223.1/38.2	5.84 times

Ratio calculations National Express plc

National Express plc	Calculation	Ratio
Current ratio	712.4/926.7	0.77:1
Quick ratio	(712.4 – 24.9)/926.7	0.74:1
Inventory days	24.9/1,405.1 × 365	6.47 days
Receivables days	238.8/2,321.2 × 365	37.55 days
Payables days	258.5/1,405.1 × 365	67.15 days
Cash conversion cycle	+ 6,47 + 37.55 – 67.15	– 23.13 days
Gearing %	1,225.4/1,166.4 × 100%	105.06%
Debt ratio	2,285.1/3,451.5	0.66:1
Interest cover	197.9/44.6	4.44 times

» Question 9.4

Assessment of the cash generating ability, liquidity and solvency of each company.

Ted Baker plc

- The current ratio is very high because of the high levels of inventory maintained by the business.
- High inventories are needed in retail as no stock means no sale.
- With a financial year end at the end of January, new spring and summer season fashions will have just been delivered from suppliers, so high inventories would be expected at this time of year.
- The quick ratio is low because of the high level of inventories at the year end.
- However, this is not a cause for concern. Inventories will be sold in the stores and other outlets each day, so cash will be received on a regular basis with which to pay liabilities and other expenses as they fall due. Remember that inventory in the statement of financial position is shown at cost whereas the goods will sell for a much higher price than this cost (Ted Baker has a gross profit percentage of 60.98 in the 52 weeks to 27 January 2018) thereby boosting cash inflows on each and every trading day.
- Branded fashion and lifestyle goods have a shelf life of around six months, so inventories will not become obsolete and worthless within a few days of the year end.
- The cash conversion cycle is positive because of the high level of inventories.
- Receivables days are lower than payables days, but most sales will be made for cash in the retail outlets rather than being made on credit.
- Payables days are high as suppliers are willing to allow high levels of credit to the business in order to retain their custom and to develop the business relationship further.
- Gearing is reasonably low at 57.34% and a debt ratio of 0.50:1 indicates that the assets significantly outweigh the liabilities.
- Interest cover of 21.42 times indicates that borrowings are easily affordable.
- Borrowings are in the form of both overdraft and loans, so lenders clearly see Ted Baker as a very solid business with a very high credit rating. The possibility of the bank asking for the overdraft to be repaid immediately is very remote.
- Lenders would not be worried as Ted Baker is a very valuable global brand. This brand does not appear on the statement of financial position, so the breakup value of the group would far exceed the net assets figure as shown in the financial statements.

Nichols plc

- Current and quick ratios are very high at 3.20:1 and 3.00:1 indicating that this is a very solid company indeed.
- As a manufacturer of soft drinks, the company trades on credit with customers, hence the receivable days of 86.03.
- Payables are paid within 34 days.
- However, the very high cash balance of £36.1 million means that the company has plenty of spare money with which to finance its working capital.

- With total cash of £36.1 million and total liabilities of £28.1 million, Nichols could pay off all its liabilities at the year end and still have £8 million left over, so this is a company that has no financial problems.
- Soft drinks are a regular purchase for most households, so there is no danger that the business will lose its market.
- The company has no borrowings and is pretty much risk free from a financial viewpoint.

Weir Group plc

- A manufacturer of technical equipment that is sold to other companies for use in their processes.
- Therefore, the company will trade on credit with their customers and allow these customers a suitably long period of time in which to pay.
- The manufacturing cycle for technical equipment is lengthy and the inventory days indicate that this is well over four months.
- With receivables days of around two and a half months, this suggests that the group has to allow around 208 days (132 inventory days + 76 receivables days) from the start of an order to the receipt of the cash.
- Therefore, given the long working capital cycle, current and quick ratios are higher as this working capital has to be financed by the group.
- The cash conversion cycle is positive, indicating that suppliers have to be paid before inventories are turned into finished goods and before cash is received from customers.
- Customers are paying in around 76 days, while suppliers are paid after 77 days.
- While there might be a risk of obsolete stock, the expectation would be that finished goods would be produced for the most part to order for specific customers.
- Gearing is manageable at 76.66%, a debt ratio of 0.59:1 is reasonable and interest cover of 5.84 times indicates that all borrowings are affordable.

National Express plc

- As National Express is a transport operator, cash flows in daily as customers pay for their journeys as they are taken.
- This accounts for the very low current and quick ratios as the company has money flowing in up front from which to pay liabilities and the costs of running the business as they become due.
- The biggest costs in the transport sector are fuel and the wages of employees: fuel is bought on credit from suppliers (though failure to meet the payment terms might result in further supplies of fuel being cut off, bringing operations to a halt) while staff work for a month before they are paid, so the cash is received well in advance of payments being made to suppliers and employees.
- Inventory days are very low as the only inventory at the end of the year will be a few days of fuel in the vehicles and in the bus and train depots and some spares in the vehicle workshops: as long as fuel supplies are guaranteed, this is the only inventory that is required for trading in the transport sector.

- Receivables days at 37.55 days might seem high, but these trade receivables will represent money due from local and national governments for grants that are paid as subsidies to operators of bus and train services.
- These receivables are thus guaranteed and there is no risk of irrecoverable debts arising.
- The cash conversion cycle is negative, so suppliers are financing the working capital requirements of the group rather than reliance being placed on short-term bank borrowings.
- Gearing at 105.06% might seem high, but the transport sector finances the purchase of buses and trains it cannot lease by borrowings. Transport is a capital intensive sector that pays for long-term assets (buses and trains) with long-term borrowings. The costs of these borrowings (interest and loan repayments) are met from day-to-day cash inflows from customers, so the assets are financed by daily income from passengers.
- Interest cover at over 4.44 times indicates that borrowings are affordable.
- Transport is an essential sector and one that is likely to grow in importance as governments seek to reduce congestion in city centres and as the need to reduce reliance on other forms of transport to reduce greenhouse gases and global warming increases, so large mass transit operators should be safe companies in which to invest and with which to trade for the foreseeable future.