
Answers

1 (a) Consolidated balance sheet of Plateau as at 30 September 2007

	\$'000	\$'000
Assets		
Non-current assets:		
Property, plant and equipment (18,400 + 10,400 – 400 (w (i)))		28,400
Goodwill (w (ii))		3,600
Investments – associate (w (iii))		10,500
– other available for sale		<u>9,000</u>
		51,500
Current assets		
Inventory (6,900 + 6,200 – 300 URP (w (iv)))	12,800	
Trade receivables (3,200 + 1,500)	<u>4,700</u>	<u>17,500</u>
Total assets		<u>69,000</u>
Equity and liabilities		
Equity shares (w (v))		19,000
Reserves:		
Retained earnings (w (vi))		<u>28,650</u>
		<u>47,650</u>
Minority interest (w (vii))		<u>3,150</u>
Total equity		<u>50,800</u>
Non-current liabilities		
7% Loan notes (5,000 + 1,000)		6,000
Current liabilities (8,000 + 4,200)		<u>12,200</u>
Total equity and liabilities		<u>69,000</u>

Workings (figures in brackets are in \$'000)

(i) Property, plant and equipment

The transfer of the plant creates an initial unrealised profit (URP) of \$500,000. This is reduced by \$100,000 for each year (straight-line depreciation over five years) of depreciation in the post-acquisition period. Thus at 30 September 2007 the net unrealised profit is \$400,000. This should be eliminated from Plateau's retained profits and from the carrying amount of the plant. The fall in the fair value of the land has already been taken into account in Savannah's balance sheet.

(ii) Goodwill in Savannah:

	\$'000	\$'000
Investment at cost:		
Shares issued (3,000/2 x \$6)		9,000
Cash (3,000 x \$1)		<u>3,000</u>
		12,000
Less – equity shares of Savannah	(3,000)	
– pre-acquisition reserves (6,000 x 75% (see below))	<u>(4,500)</u>	<u>(7,500)</u>
Goodwill on consolidation		<u>4,500</u>

Goodwill is impaired by \$900,000 thus has a carrying amount at 30 September 2007 of \$3.6 million.

Savannah's pre-acquisition reserves of \$6.5 million require an adjustment for a write down of \$500,000 in respect of the fair value of its land being below its carrying amount. Thus the adjusted pre-acquisition reserves of Savannah are \$6 million. A consequent effect is that the post-acquisition reserves which are reported as \$2.4 million in Savannah's balance sheet will become \$2.9 million. This is because the fall in the value of the land has effectively been treated by Savannah as a post-acquisition loss.

(iii) Carrying amount of Axle at 30 September 2007

	\$'000
Cost (4,000 x 30% x \$7.50)	9,000
Share post-acquisition profit (5,000 x 30%)	<u>1,500</u>
	<u>10,500</u>

(iv) The unrealised profit (URP) in inventory is calculated as:

Intra-group sales are \$2.7 million on which Savannah made a profit of \$900,000 (2,700 x 50/150). One third of these are still in inventory of Plateau, thus there is an unrealised profit of \$300,000.

(v) The 1.5 million shares issued by Plateau in the share exchange at a value of \$6 each would be recorded as an increase in share capital of \$9 million.

(vi) Consolidated retained earnings:	\$'000
Plateau's retained earnings	24,000
Savannah's post-acquisition ((2,900 – 300 URP) x 75%)	1,950
Axle's post-acquisition profits (5,000 x 30%)	1,500
URP in plant (see (i))	(400)
Gain on available-for-sale investment (9,000 – 6,500) see below	2,500
Impairment of goodwill	(900)
	<u>28,650</u>

The gain on available-for-sale investments must be recognised directly in equity.

(vii) Minority interest
Adjusted equity at 30 September 2007: (12,900 – 300 URP) = 12,600 x 25% 3,150

(b) FRS 103 *Business Combinations* requires the purchase consideration for an acquired entity to be allocated to the fair value of the assets, liabilities and contingent liabilities acquired (henceforth referred to as net assets and ignoring contingent liabilities) with any residue being allocated to goodwill. This also means that those net assets will be recorded at fair value in the consolidated balance sheet. This is entirely consistent with the way other net assets are recorded when first transacted (i.e. the initial cost of an asset is normally its fair value). The purpose of this process is that it ensures that individual assets and liabilities are correctly classified (and valued) in the consolidated balance sheet. Whilst this may sound obvious, consider what would happen if say a property had a carrying amount of \$5 million, but a fair value of \$7 million at the date it was acquired. If the carrying amount rather than the fair value was used in the consolidation it would mean that tangible assets (property, plant and equipment) would be understated by \$2 million and intangible assets (goodwill) would be overstated by the same amount (note: in the consolidated balance sheet of Plateau the opposite effect would occur as the fair value of Savannah's land is below its carrying amount at the date of acquisition). There could also be a 'knock on' effect with incorrect depreciation charges in the years following an acquisition and incorrect calculation of any goodwill impairment. Thus the use of carrying amounts rather than fair values would not give a 'faithful representation' as required by the Framework.

The assistant's comment regarding the inconsistency of value models in the consolidated balance sheet is a fair point, but it is really a deficiency of the historical cost concept rather than a flawed consolidation technique. Indeed the fair values of the subsidiary's net assets are the historical costs to the parent. To overcome much of the inconsistency, there would be nothing to prevent the parent company from applying the revaluation model to its property, plant and equipment.

2 (a) Llama – Income statement – Year ended 30 September 2007

	\$'000	\$'000
Revenue		180,400
Cost of sales (w (i))		<u>(81,700)</u>
Gross profit		98,700
Distribution costs (11,000 + 1,000 depreciation)	(12,000)	
Administrative expenses (12,500 + 1,000 depreciation)	<u>(13,500)</u>	(25,500)
Investment income	2,200	
Gain on fair value of investments (27,100 – 26,500)	<u>600</u>	2,800
Finance costs (w (ii))		<u>(2,400)</u>
Profit before tax		73,600
Income tax expense (18,700 – 400 – (11,200 – 10,000) deferred tax)		<u>(17,100)</u>
Profit for the period		<u>56,500</u>

(b) Llama – Balance sheet as at 30 September 2007

	\$'000	\$'000
Assets		
Non-current assets		
Property, plant and equipment (w (iv))		228,500
Current assets		
Inventory	37,900	
Trade receivables	35,100	
Investments at fair value through profit and loss	27,100	100,100
Total assets		<u>328,600</u>
Equity and liabilities		
Equity		
Equity shares		84,000
Revaluation reserve (14,000 – 3,000 (w (iv)))	11,000	
Retained earnings (56,500 + 25,500)	82,000	93,000
		<u>177,000</u>
Non-current liabilities		
2% loan note (80,000 + 1,600 (w (ii)))	81,600	
Deferred tax (40,000 x 25%)	10,000	91,600
Current liabilities		
Trade payables	34,700	
Bank overdraft	6,600	
Current tax payable	18,700	60,000
Total equity and liabilities		<u>328,600</u>

Workings (monetary figures in brackets are in \$'000)

(i) Cost of sales:	\$'000
Per question	89,200
Plant capitalised (w (iv))	(24,000)
Depreciation (w (iv)) – buildings	3,000
– plant	13,500
	<u>81,700</u>

(ii) The loan has been in issue for six months. The total finance charge should be based on the effective interest rate of 6%. This gives a charge of \$2.4 million ($80,000 \times 6\% \times 6/12$). As the actual interest paid is \$800,000 an accrual (added to the carrying amount of the loan) of \$1.6 million is required.

(iii) The rights issue was 30 million shares (120 million shares at 1 for 4) at a price of 80 cents. This would increase share capital by \$24 million (30 million x 80 cents).

(iv) Non-current assets/depreciation:

Land and buildings:

On 1 October 2006 the value of the buildings was \$100 million (130,000 – 30,000 land). The remaining life at this date was 20 years, thus the annual depreciation charge will be \$5 million (3,000 to cost of sales and 1,000 each to distribution and administration). Prior to the revaluation at 30 September 2007 the carrying amount of the building was \$95 million (100,000 – 5,000). With a revalued amount of \$92 million, this gives a revaluation deficit of \$3 million which should be debited to the revaluation reserve. The carrying amount of land and buildings at 30 September 2007 will be \$122 million (92,000 buildings + 30,000 land (unchanged)).

Plant

The existing plant will be depreciated by \$12 million ($(128,000 - 32,000) \times 12\frac{1}{2}\%$) and have a carrying amount of \$84 million at 30 September 2007.

The plant manufactured for internal use should be capitalised at \$24 million (6,000 + 4,000 + 8,000 + 6,000).

Depreciation on this will be \$1.5 million ($24,000 \times 12\frac{1}{2}\% \times 6/12$). This will give a carrying amount of \$22.5 million at 30 September 2007. Thus total depreciation for plant is \$13.5 million with a carrying amount of \$106.5 million (84,000 + 22,500)

Summarising the carrying amounts:

	\$'000
Land and buildings	122,000
Plant	106,500
Property, plant and equipment	<u>228,500</u>

(c) Earnings per share (eps) for the year ended 30 September 2007

Theoretical ex rights value			\$
Holding (say)	100	at \$1	100
Issue (1 for 4)	25	at 80 cents	20
New holding	<u>125</u>	ex rights price is 96 cents	<u>120</u>
Weighted average number of shares			
120,000,000	x 9/12	x 100/96	93,750,000
150,000,000 (120 x 5/4)	x 3/12		<u>37,500,000</u>
			<u>131,250,000</u>

Earnings per share (\$56,500,000/131,250,000) 43 cents

3 (a) Note: figures in the calculations of the ratios are in \$million

	2007	workings	2006	2007 re Fatima (b)
Return on year end capital employed	11.2 %	$24/(114 + 100) \times 100$	7.1%	18.9%
Net asset turnover	1.2 times	250/214	1.6	0.6
Gross profit margin (given in question)	20%		16.7%	42.9%
Net profit (before tax) margin	6.4%	16/250	4.4%	31.4%
Current ratio	0.9:1	38/44	2.5	
Closing inventory holding period	46 days	$25/200 \times 365$	37	
Trade receivables' collection period	19 days	$13/250 \times 365$	16	
Trade payables' payment period	42 days	$23/200 \times 365$	32	
Gearing	46.7%	$100/214 \times 100$	nil	

The gross profit margins and relevant ratios for 2006 are given in the question, and some additional ratios for Fatima are included above to enable a clearer analysis in answering part (b) and references to Fatima should be taken to mean Fatima's net assets.

(b) Analysis of the comparative financial performance and position of Harbin for the year ended 30 September 2007. Note: references to 2007 and 2006 should be taken as the years ended 30 September 2007 and 2006.

Introduction

The figures relating to the comparative performance of Harbin 'highlighted' in the Chief Executive's report may be factually correct, but they take a rather biased and one dimensional view. They focus entirely on the performance as reflected in the income statement without reference to other measures of performance (notably the ROCE); nor is there any reference to the purchase of Fatima at the beginning of the year which has had a favourable effect on profit for 2007. Due to this purchase, it is not consistent to compare Harbin's income statement results in 2007 directly with those of 2006 because it does not match like with like. Immediately before the \$100 million purchase of Fatima, the carrying amount of the net assets of Harbin was \$112 million. Thus the investment represented an increase of nearly 90% of Harbin's existing capital employed. The following analysis of performance will consider the position as shown in the reported financial statements (based on the ratios required by part (a) of the question) and then go on to consider the impact the purchase has had on this analysis.

Profitability

The ROCE is often considered to be the primary measure of operating performance, because it relates the profit made by an entity (return) to the capital (or net assets) invested in generating those profits. On this basis the ROCE in 2007 of 11.2% represents a 58% improvement (i.e. 4.1% on 7.1%) on the ROCE of 7.1% in 2006. Given there were no disposals of non-current assets, the ROCE on Fatima's net assets is 18.9% ($22m/100m + 16.5m$). Note: the net assets of Fatima at the year end would have increased by profit after tax of \$16.5 million (i.e. $22m \times 75%$ (at a tax rate of 25%)). Put another way, without the contribution of \$22 million to profit before tax, Harbin's 'underlying' profit would have been a **loss** of \$6 million which would give a negative ROCE. The principal reasons for the beneficial impact of Fatima's purchase is that its profit margins at 42.9% gross and 31.4% net (before tax) are far superior to the profit margins of the combined business at 20% and 6.4% respectively. It should be observed that the other contributing factor to the ROCE is the net asset turnover and in this respect Fatima's is actually inferior at 0.6 times ($70m/116.5m$) to that of the combined business of 1.2 times.

It could be argued that the finance costs should be allocated against Fatima's results as the proceeds of the loan note appear to be the funding for the purchase of Fatima. Even if this is accepted, Fatima's results still far exceed those of the existing business.

Thus the Chief Executive's report, already criticised for focussing on the income statement alone, is still highly misleading. Without the purchase of Fatima, underlying sales revenue would be flat at \$180 million and the gross margin would be down to 11.1% ($20m/180m$) from 16.7% resulting in a loss before tax of \$6 million. This sales performance is particularly poor given it is likely that there must have been an increase in spending on property plant and equipment beyond that related to the purchase of Fatima's net assets as the increase in property, plant and equipment is \$120 million (after depreciation).

Liquidity

The company's liquidity position as measured by the current ratio has deteriorated dramatically during the period. A relatively healthy 2.5:1 is now only 0.9:1 which is rather less than what one would expect from the quick ratio (which excludes inventory) and is a matter of serious concern. A consideration of the component elements of the current ratio suggests that increases in the inventory holding period and trade payables payment period have largely offset each other. There is a small increase in the collection period for trade receivables (up from 16 days to 19 days) which would actually improve the current ratio. This ratio appears unrealistically low, it is very difficult to collect credit sales so quickly and may be indicative of factoring some of the receivables, or a proportion of the sales are cash sales. Factoring is sometimes seen as a consequence of declining liquidity, although if this assumption is correct it does also appear to have been present in the previous year. The changes in the above three ratios do not explain the dramatic deterioration in the current ratio, the real culprit is the cash position, Harbin has gone from having a bank balance of \$14 million in 2006 to showing short-term bank borrowings of \$17 million in 2007.

A cash flow statement would give a better appreciation of the movement in the bank/short term borrowing position.

It is not possible to assess, in isolation, the impact of the purchase of Fatima on the liquidity of the company.

Dividends

A dividend of 10 cents per share in 2007 amounts to \$10 million (100m x 10 cents), thus the dividend in 2006 would have been \$8 million (the dividend in 2007 is 25% up on 2006). It may be that the increase in the reported profits led the Board to pay a 25% increased dividend, but the dividend cover is only 1.2 times (12m/10m) in 2007 which is very low. In 2006 the cover was only 0.75 times (6m/8m) meaning previous years' reserves were used to facilitate the dividend. The low retained earnings indicate that Harbin has historically paid a high proportion of its profits as dividends, however in times of declining liquidity, it is difficult to justify such high dividends.

Gearing

The company has gone from a position of nil gearing (i.e. no long-term borrowings) in 2006 to a relatively high gearing of 46.7% in 2007. This has been caused by the issue of the \$100 million 8% loan note which would appear to be the source of the funding for the \$100 million purchase of Fatima's net assets. At the time the loan note was issued, Harbin's ROCE was 7.1%, slightly less than the finance cost of the loan note. In 2007 the ROCE has increased to 11.2%, thus the manner of the funding has had a beneficial effect on the returns to the equity holders of Harbin. However, it should be noted that high gearing does not come without risk; any future downturn in the results of Harbin would expose the equity holders to much lower proportionate returns and continued poor liquidity may mean payment of the loan interest could present a problem. Harbin's gearing and liquidity position would have looked far better had some of the acquisition been funded by an issue of equity shares.

Conclusion

There is no doubt that the purchase of Fatima has been a great success and appears to have been a wise move on the part of the management of Harbin. However, it has disguised a serious deterioration of the underlying performance and position of Harbin's existing activities which the Chief Executive's report may be trying to hide. It may be that the acquisition was part of an overall plan to diversify out of what has become existing loss making activities. If such a transition can continue, then the worrying aspects of poor liquidity and high gearing may be overcome.

4 (a) Faithful representation

The Framework states that in order to be useful, information must be reliable and the two main components of reliability are freedom from material error and faithful representation. The Framework describes faithful representation as where the financial statements (or other information) have the characteristic that they faithfully represent the transactions and other events that have occurred. Thus a balance sheet should faithfully represent transactions that result in assets, liabilities and equity of an entity. Some would refer to this as showing a true and fair view. An essential element of faithful representation is the application of the concept of substance over form. There are many examples where recording the legal form of a transaction does not convey its real substance or commercial reality. For example an entity may sell some inventory to a finance house and later buy it back at a price based on the original selling price plus a finance cost. Such a transaction is really a secured loan attracting interest costs. To portray it as a sale and subsequent repurchase of inventory would not be a faithful representation of the transaction. The 'sale' would probably create a 'profit', there would be no finance cost in the income statement and the balance sheet would not show the asset of inventory or the liability to the finance house – all of which would not be representative of the economic reality. A further example is that an entity may issue loan notes that are (optionally) convertible to equity. In the past management has argued that as they expect the loan note holders to take the equity option, the loan notes should be treated as equity (which of course would flatter the entity's gearing). In some cases transactions similar to the above, particularly off balance sheet finance schemes, have been deliberately entered into to manipulate the balance sheet and income statement (so called creative accounting). Ratios such as return on capital employed (ROCE), asset turnover, interest cover and gearing are often used to assess the performance of an entity. If these ratios were calculated from financial statements that have been manipulated, they would be distorted (usually favourably) from the underlying substance. Clearly users cannot rely on such financial statements or any ratios calculated from them.

- (b) (i) The finance director's comment that the ROCE will improve, based on the agreement being classified as an operating lease is correct (but see below). Over the life of the lease the reported profit is not affected by the lease being designated as an operating or finance lease, but the balance sheet is. This is because the depreciation and finance costs charged on a finance lease would equal (over the full life of the lease) what would be charged as lease rentals if it were classed as an operating lease instead. However, classed as an operating lease, there would not be a leased asset or lease

obligation recorded in the balance sheet; whereas there would be if it were a finance lease. Thus capital employed under an operating lease would be lower leading to a higher (more favourable) ROCE. FRS 17 *Leases* defines a finance lease as one which transfers to the lessee substantially all the risks and rewards incidental to ownership (an application of the principle of substance over form). In this case, as the asset will be used by Fino for four years (its entire useful life) and then be scrapped, it is almost certain to require classification as a finance lease. Thus the finance director's comments are unlikely to be valid.

Fino

(ii) Operating lease	\$
Income statement – cost of sales (machine rental) (100,000 x 6/12)	50,000
Balance sheet	
Current assets	
Prepayment (100,000 x 6/12)	50,000
(iii) Finance lease	
Income statement – cost of sales (depreciation) (350,000/4 x 6/12)	43,750
– finance costs (see working)	12,500
Balance sheet	
Non-current assets	
Leased plant at cost	350,000
Depreciation (from above)	(43,750)
	<u>306,250</u>
Non-current liabilities	
Lease obligation (250,000 – 75,000)	175,000
Current liabilities	
Accrued interest (see working)	12,500
Lease obligation (100,000 – 25,000 see below)	75,000
	<u>87,500</u>
Working:	
Cost	350,000
Deposit	(100,000)
	<u>250,000</u>
Interest to 30 September 2007 (6 months at 10%)	12,500
Total obligation at 30 September 2007	<u>262,500</u>

The payment of \$100,000 on 1 April 2008 will contain \$25,000 of interest (\$250,000 x 10%) and a capital repayment of \$75,000.

- 5 (a)** The Framework defines an asset as a resource controlled by an entity as a result of past transactions or events from which future economic benefits (normally net cash inflows) are expected to flow to the entity. However assets can only be recognised (on the balance sheet) when those expected benefits are probable and can be measured reliably. The Framework recognises that there is a close relationship between incurring expenditure and generating assets, but they do not necessarily coincide. Development expenditure, perhaps more than any other form of expenditure, is a classic example of the relationship between expenditure and creating an asset. Clearly entities commit to expenditure on both research and development in the hope that it will lead to a profitable product, process or service, but at the time that the expenditure is being incurred, entities cannot be certain (or it may not even be probable) that the project will be successful. Relating this to accounting concepts would mean that if there is doubt that a project will be successful the application of prudence would dictate that the expenditure is charged (expensed) to the income statement. At the stage where management becomes confident that the project will be successful, it meets the definition of an asset and the accruals/matching concept would mean that it should be capitalised (treated as an asset) and amortised over the period of the expected benefits. Accounting Standards (FRS 38 *Intangible Assets*) interpret this as writing off all research expenditure and only capitalising development costs from the point in time where they meet strict conditions which effectively mean the expenditure meets the definition of an asset.

(b)	30 September 2007		30 September 2006	
	\$'000		\$'000	
Income statement				
Amortisation of development expenditure	335	(w (ii))	135	(w (i))
Balance sheet				
Development expenditure	1,195	(w (iv))	1,130	(w (iii))
Statement of changes in equity				
Prior period adjustment (credit required to restate retained earnings at 1 October 2005) (cumulative carrying amount at 2005 of 300 + 165)			465	

Workings (All figures in \$'000. Note: references to 2004, 2005 etc should be taken as for the year ended 30 September 2004 and 2005 etc.)

Year	2004	2005	2006	cumulative 2006	2007	cumulative 2007
Expenditure	<u>300</u>	<u>240</u>	<u>800</u>	<u>1,340</u>	<u>400</u>	<u>1,740</u>
Amortisation (25%)	nil	(75)	(75)	(150)	(75)	(225)
	nil	nil	(60)	(60)	(60)	(120)
	nil	nil	nil	nil	(200)	(200)
Total amortisation	<u>nil</u>	<u>(75)</u>	(w (i)) <u>(135)</u>	<u>(210)</u>	(w (ii)) <u>(335)</u>	<u>(545)</u>
Carrying amount	<u>300</u>	<u>165</u>	<u>665</u>	(w (iii)) <u>1,130</u>	<u>65</u>	(w (iv)) <u>1,195</u>

This marking scheme is given as a guide in the context of the suggested answers. Scope is given to markers to award marks for alternative approaches to a question, including relevant comment, and where well-reasoned conclusions are provided. This is particularly the case for written answers where there may be more than one acceptable solution.

		<i>Marks</i>
1	(a) Balance sheet:	
	property, plant and equipment	2
	goodwill	4
	investments – associate	2
	– other	1
	current assets	2
	equity shares	2
	retained earnings	4
	minority interest	1
	7% loan notes	1
	current liabilities	1
		20
	(b) 1 mark per relevant point	5
	Total for question	25
2	(a) Income statement	
	revenue	$\frac{1}{2}$
	cost of sales	$3\frac{1}{2}$
	distribution costs and administrative expenses	1
	investment income and gain on investment	$1\frac{1}{2}$
	finance costs	1
	tax	$1\frac{1}{2}$
		9
	(b) Balance sheet	
	property, plant and equipment	3
	investments	1
	current assets	1
	equity shares	2
	revaluation reserve	1
	retained earnings	1
	2% loan notes	$1\frac{1}{2}$
	deferred tax	1
	trade payables and overdraft	1
	income tax provision	$\frac{1}{2}$
		13
	(c) Earnings per share	
	calculation of theoretical ex rights value	1
	weighted average number of shares	1
	earnings and calculation of eps	1
		3
	Total for question	25
3	(a) one mark per required ratio	8
	(b) for consideration of Chief Executive's report	3
	impact of purchase	6
	remaining issues 1 mark per valid point	8
		17
	Total for question	25

		<i>Marks</i>
4	(a) one mark per valid point to	maximum 5
	(b) (i) one mark per valid point to	maximum 4
	(ii) (1) operating lease – income statement charge	1
	– prepayment	1
		2
	(2) finance lease – income statement: depreciation and finance costs	1
	– balance sheet: non-current asset	1
	non-current liabilities	1
	current liabilities interest and capital	1
		4
	Total for question	15
5	(a) one mark per valid point to	maximum 4
	(b) income statement amortisation	1 ¹ / ₂
	cost in balance sheets	1
	accumulated amortisation	1 ¹ / ₂
	prior year adjustment in changes in equity	2
		6
	Total for question	10