THE INSTITUTE OF COST AND MANAGEMENT ACCOUNTANTS OF BANGLADESH
CMA JUNE, 2017 EXAMINATION
MANAGEMENT LEVEL
SUBJECT: F2. FINANCIAL MANAGEMENT

Model Solution

Solution to Q. No. 5.

(i) Basic earnings per share

Profit after tax (Tk. 1,040,000-Tk.270,000)		Tk.770,000
Weighted average number of shares:		
At 1 January 2009	30,00,000	
Bonus issue	10,00,000	
Full market price issue(2,000,000 × 4/12)	6,66,667	
	46,66,667	
Basic EPS for 2009 Tk.770,000/4,666,667		Tk. 0.165 per share
Basic EPS for 2008 restated Tk. 0.154 x bonus fraction of 3/4		Tk. 0.116 per share

(ii) Fully diluted earnings per share

Reported profit after tax (as in part (a))		Tk.770,000
Plus post-tax savings of finance costs (70% × 7% × Tk.4m		Tk.196,000
Weighted average number of shares:		
As reported in part (a)	46,66,667	
Dilution from potential share issue	2,400.00	
	70,66,667	
Fully diluted eps Tk.966,000/7,066,667		Tk. 0.137 per share

(iii) A bouns issue does not raise any new finance and therfore the profit for the year will have been generated with the same level of resoures throught the year . As the issue result in no adittional resources it is treated as if it is had always been in existence. Comperative figures also need to be restated as if the bouns issue was made at the earliest reported period. The issue at full market price brings additional resources, whice will impact on profit from the date of issue. Therfore a weighted average number of shares is used to calculate eps.

Solution to Q. No. 6.

The income statement is translated using the actual rate on the transaction date.

Statement of comprehensive income

	US$	*Rate*	£
Revenue	500,000	Actual	200,000
Costs	(200,000)	Actual	(80,000)
Profit	300,000	--	120,000
Other comprehensive income:			
Exchange gain on retranslation			37,500
Total comprehensive income			157,500

The net assets of the subsidiary are translated using the closing rate and the initial share capital using the opening rate. The statement of financial position is shown below.

Statement of financial position

	US$	*Rate*	*£*
Initial share capital	55,000	Opening	20,000
Retained earnings (as above)	300,000	Actual	120,000
Exchange differences			37,500
Equity = net assets	355,000	Closing	177,500

The exchange gain arising on consolidation has two components:

a. An exchange gain arising on retranslating the opening net assets from the opening rate to the closing rate

	Rate	£
Opening net assets = initial share capital (US$ 55,000)	Closing	27,500
	Opening	20,000
		7,500

b. A further exchange gain arising from retranslating profits from the actual to the closing rate.

	Rate	£
Retained earnings (US$ 300,000)	Closing rate	150,000
	Actual rate	(120,000)
		30,000
Total exchange differences		37,500

Solution to Q. No. 7.

Deficits/surpluses

Pension obligations

	Tk.'000
At 31 December 2016	5,000
Current service cost	510
Interest cost	600
Benefits paid	(265)
Actuarial gain (bal fig)	(345)
At 31 December 2017	5,500

Pension assets

	Tk.'000
At 31 December 2016	5,000
Contributions	540
Benefits paid	(265)
Return on assets	500
Actuarial loss (bal fig)	(525)
At 31 December 2017	5,250

The corridor limit does not apply to actuarial gains and losses in the current period. Thus, the net actuarial loss of Tk.180,000 would be disclosed but would be unrealised in the year to 31 December 2017. The actuarial gains/losses in the period do not therefore affect the charge to profit or loss.

Statement of financial position

	Tk.'000
PV of defined benefit obligation	5,500
FV of plan assets	(5,250)
	250
Unrecognised actuarial loss	(180)
	70

Statement of comprehensive income (in profit or loss)

	Tk.'000
Current service cost	510
Interest cost	600
Return on assets	(500)
Charge for year	610
Movement in net obligation	
Opening net liability (5,000 – 5,000)	nil
Expense	610
Contributions	(540)
Net actuarial loss (525 – 345)	180
Closing net liability (5,500 – 5,250)	250

Solution to Q. No. 8.

Email to client:
(a) Financial performance and position of VEG
Performance:
VEG has managed to achieve a gross profit margin of 35% and the directors are anticipating an increase in the gross profit margin to 39.2%. This could be due to better margins having been negotiated in the contract with the supermarket for the own-brand products, meaning that the production of own-brand smoothies should be pursued with other supermarkets as this is clearly a lucrative deal. Alternatively the improved gross margin could be the result of greater economies of scale in purchasing or indeed greater efficiency in the production process now that the staffs are fully trained and presumably working at full efficiency. The operating profit margin was 8.8% in 2016. However, this was after charging professional fees and training costs, which would not be expected to recur in such significant amounts. It is likely that further marketing may be undertaken (finance permitting), however the directors are still anticipating that the operating profit margin will increase to 20.6% in 2017. The average interest rate for 2016 was 5.1% based upon the overdraft at the year end and is forecast to rise to 6.4% based on utilizing the same level of overdraft. It is possible that during 2016 the overdraft was not used until the end of the year meaning that the interest charge was relatively small, whilst in 2017 the directors are anticipating that the overdraft will be used to its full capacity for the year. This could indicate that the directors are anticipating poor cash flow. In addition, it's possible that the bank has increased the interest rate charged on the overdraft as a result of its own assessment of increased risk.
Position:
The key issues with respect to the financial position of VEG are its lack of cash, high level of gearing and its working capital position. Of particular interest to you is the impact that these issues might have on further expansion plans. At the end of 2016, VEG has an overdraft of Tk. 40,000, although a facility of Tk. 75,000. Given the fact that VEG is still in its start-up phase this level of overdraft should perhaps be expected. A detailed cash forecast would be required if the directors decide to pursue expansion as it is likely that the working capital requirement would increase, certainly in the short term. The overdraft facility is to be reviewed by the bank in April 2017 and there is always the possibility that they recall the debt, which would leave VEG in a very precarious position. As at 31 December 2016, the gearing level for VEG is 73.9% but, on the assumption that the overdraft stays the same and no dividend is paid, is forecast to fall to 57.1% at the end of 2017. This is still a high level of gearing, which coupled with the lack of track record and the fact that VEG is a new entity would mean that it would be unlikely that VEG could raise more debt finance to fund expansion plans even using new property, plant and equipment as security. In the unlikely event that debt finance was available it would be likely to carry a very high interest rate to reflect the risk associated with the already high level of gearing and the fact that it's a new business. This would clearly have a detrimental effect on the future profitability of the business. It is likely therefore that the only option available to the directors of VEG to expand the business at the current time would be to raise more equity finance and therefore as already indicated they might be prepared to negotiate favorable investment terms with you. The forecast inventories levels are not expected to increase despite more than 25% expected growth in revenue. This is probably due to the nature of the items as VEG are likely to hold mainly work-in-progress and low levels of finished goods as these have a limited shelf life. In fact, the inventories days are forecast to reduce from 28 days to just 18 days and could be the result of the investment in training making the production process more efficient. Receivables are forecast to almost double what they are at the end of 2016, with receivables days increasing from 64 to 104 days. This happens despite only a 25% increase in revenue. This could be due to the new contracts with supermarkets that may be able to demand extended credit terms from VEG. This is definitely a concern for a relatively new entity, especially one which will be purchasing fresh goods on a regular basis and which will be under pressure to pay suppliers promptly to avoid having purchase orders delayed or stopped. However, it is possible that if required VEG could consider factoring its receivables which would alleviate some of this pressure, although at a cost.

(b) Further information
The directors are likely to be relatively open to discussion given that they are open to offering shares in return for a capital injection. I would be seeking clarification on how VEG has protected the intellectual property surrounding the technology, especially since this appears to be affording VEG a competitive advantage at present. Detailed information on the supermarket contracts would also be invaluable in assessing how realistic the forecasts are for the coming year, and whether it is a model that could be extended to other supermarkets to increase market share. Given, there is no plan for further capital investment it would be important to confirm what capacity exists for further expansion on the current capital base, as future expansion would require additional finance. It would also be essential that we discuss with the directors of VEG the level of finance being sought and the shareholding they would be looking to offer in return, to allow the negotiations to commence.

(c) Limitations of ratio analysis in this scenario
Please be advised that there are limitations on the conclusions that can be drawn from the ratio analysis performed on the financial information of VEG. The entity is new and therefore limited information is available in order to establish any trends. Using forecast figures has less reliability as the information is based on the assumptions of the directors, and we are unaware of what these assumptions are and so our conclusions are limited. The success of the business in the future could be dependent on how long VEG can utilize the technology exclusively, however information on its protection is not found in the financial information.

Ratios

All workings in Tk. 000	Forecast 2017	Actual 2016
Gross profit margin (GP/Revenue x 100)	400/1,020 x100 = 39.2%	280/800 x 100 = 35%
Operating profit margin (Profit before finance costs /Revenue x 100)	210/1,020 x 100 = 20.6%	70/800 x 100 = 8.8%
Profit margin PBT/Revenue x 100	185/1,020 x 100 = 18.1%	50/800 x 100 = 6.3%
Interest cover PBIT/Finance costs	210/25 = 8.4 times	70/20 = 3.5 times
Inventory days Inventories / Cost of sales x 365	30/620 x 365 = 18 days	40/520 x 365 = 28 days
Receivable days Receivables/Revenue x 365	290/1,020 x 365 = 104 days	140/800 x 365 = 64 days
Average cost of borrowing Finance costs/Interest bearing borrowings	25/(350 + 40) x 100 = 6.4% (on the assumption that the overdraft remains at the 2016 level)	20/(350 + 40) x 100 = 5.1%
Gearing Debt / (Debt + Equity) x 100	390 / (390 +130 + 155) x 100 = 57.8% (on the assumption that the overdraft remains the same and no dividend is paid)	(350 + 40) / (350 + 40+ 130) x 100 = 75.0%

Solution to Q. No. 9.

(a)
(i) The investments that AZ and B hold in B and C respectively have been classified as available for sale as there is no indication that they have been classified as held for trading at initial recognition nor is there any indication that they are being held purely for short term gain. The investments will be subsequently measured at fair value and any gains or losses arising will be recorded in other reserves.
(ii) The consolidated financial statements of AZ will include the fully consolidated figures for both B and C on the basis that AZ controls both entities. Control is the power over an investee and the ability to exercise that power to affect the returns from the investment. AZ therefore controls B and therefore consequently controls C (through its control of B). They are therefore included as subsidiaries in the

group financial statements of AZ. On consolidation the subsidiaries are aggregated on a line by line basis and the investments shown in the parent's accounts are eliminated. The consolidated financial statements will show the assets and liabilities controlled by AZ (SOFP) and the returns generated as a result of that control (SOCI). The non-controlling interest in the SOFP will reflect the net assets owned by third parties and the SOCI will reflect the returns in the year attributable to the non-controlling interest. Any excess of the investment over the fair value of the net assets acquired is recognized as goodwill within consolidated noncurrent assets of the group.

(b) Consolidated statement of financial position as at 31 December 2016 for AZ Group (workings in Tk. millions)

	(Tk. in millions)
ASSETS	
Non-current assets	
Property, plant and equipment (70 + 44 + 55)	169
Goodwill (W1)	13
	182
Current assets (29 + 24 + 14)	67
Total assets	249
EQUITY AND LIABILITIES	
Equity attributable to owners of the parent	
Share capital (Tk. 1.00 equity shares)	50
Share premium	20
Retained earnings (W2)	72
	142
Non-controlling interest (W3)	37
Total equity	179
Non-current liabilities (15 + 8 + 2)	25
Current liabilities (20 + 16 + 9)	45
Total liabilities	70
Total equity and liabilities	249

Workings:

1. Goodwill

	Acquisition of B Tk. in million	Acquisition of C Tk. in million
Consideration transferred for B (Tk. 68m - Tk. 3m);	65	
for C (80% x (Tk. 38m - Tk. 2m))		29
NCI at fair value in B (20% x 40 million shares x Tk.	18	
2.25); in C (40% x 30 million shares x Tk. 1.60)		19
	83	48
Net assets acquired		
Share capital	40	30
Share premium	10	5
Retained earnings	23	8
	73	43
Goodwill at acquisition	10	5
Impairment of 20% for goodwill on acquisition of B	(2)	
Goodwill at 31 December 2016	8	5

Total goodwill at 31 December 2016 is therefore Tk. 13 million.

2. Retained earnings

	Group Tk. in million	B Tk. in million	C Tk. in million
As per SOFP at 31 December 2016	59	30	23
Pre-acquisition reserves		(23)	(8)
Goodwill impairment (W1)		(2)	
		5	15
Group share of B (80% x Tk. 5m)	4		
Group share of C (60% x Tk. 15m)	9		
Consolidated retained earnings	72		

3. Non-controlling interests	Acquisition of B Tk. in million	Acquisition of C Tk. in million
At acquisition (as per W1)	18	19
NCI share of post-acquisition retained earnings of B (20% x Tk. 5m)	1	
NCI share of post-acquisition retained earnings of C (40% x Tk. 15m)		6
Less cost of investment in B (20% x Tk. 36m)	(7)	
NCI at 31 December 2016	12	25

Total NCI at 31 December 2016 is therefore Tk. 37 million.