INSTITUTE AND FACULTY OF ACTUARIES

EXAMINERS' REPORT

September 2011 examinations

Subject CT2 — Finance and Financial Reporting Core Technical

Purpose of Examiners' Reports

The Examiners' Report is written by the Principal Examiner with the aim of helping candidates, both those who are sitting the examination for the first time and who are using past papers as a revision aid, and also those who have previously failed the subject. The Examiners are charged by Council with examining the published syllabus. Although Examiners have access to the Core Reading, which is designed to interpret the syllabus, the Examiners are not required to examine the content of Core Reading. Notwithstanding that, the questions set, and the following comments, will generally be based on Core Reading.

For numerical questions the Examiners' preferred approach to the solution is reproduced in this report. Other valid approaches are always given appropriate credit; where there is a commonly used alternative approach, this is also noted in the report. For essay-style questions, and particularly the open-ended questions in the later subjects, this report contains all the points for which the Examiners awarded marks. This is much more than a model solution – it would be impossible to write down all the points in the report in the time allowed for the question.

T J Birse
Chairman of the Board of Examiners

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General comments on Subject CT2

This paper examines basic finance including raising funds by a variety of methods, taxation, net present value and project appraisal and other topics, it has both calculations and essay type questions on these topics. The paper also examines financial reporting including preparation of the main financial statements and interpretation of financial statements it also considers the basis of the preparation of statements and the information needs of a variety of end users of financial statements.

Different numerical answers may be obtained to those shown in these solutions depending on whether figures obtained from tables or from calculators are used in the calculations but candidates are not penalised for this. However, candidates may be penalised where excessive rounding has been used or where insufficient working is shown.

Comments on the September 2011 paper

The general performance was slightly better than in April 2011 well-prepared candidates scored well across the whole paper. As in previous diets, overseas candidates did not perform quite so well as UK candidates. The comments that follow the questions concentrate on areas where candidates could have improved their performance. Candidates approaching the subject for the first time are advised to concentrate their revision in these areas.

1 D
2 C
3 C
4 B
5 D
6 D
7 A
8 C
9 C
10 D

Workings for question 2:
A – one on every five shares cancelled
B – 4m shares issued at £5 + 3 = £8 each
C – theoretical ex rights price for 6 shares = (£5 × 5) + £3 = £28 = £4.67/share ✓
D – market capitalisation = £100m, less 4m shares issued at £3 = £88m

Workings for question 8:
A – 700 – (500 + 20)
B – 700 – 500
C – 700 – (500 – 20) ✓
D - 700

The multiple choice questions were done very well by most candidates. No question caused any more problem than another.

11 Trade credit is advanced by suppliers, who permit payment to take place sometime after the delivery of the goods . This is a relatively simple arrangement that is easy to obtain if the customer has a reasonable credit history . There is no interest as such, although the purchase price will include something for the cost of credit. If excessive time is taken to pay for goods then the credit facility may be withdrawn .
Debt factoring is effectively a means of borrowing against the company's trade receivables. The factor may assume the risk of bad debt. There is an explicit interest charge for this finance.

This question was answered well by most candidates.

12 There will be the usual issuing costs if the quotation takes the form of an offer for sale. There will also be costs in terms of accountability, with the need to meet the stock exchange's disclosure requirements.

Being quoted will make it easier to issue new shares because the shares will be more readily marketable. The existing shareholders will benefit from the ability to liquidate their investment. The quotation will also enable the shareholders to value their stakes very easily because there will be a recognisable market price.

This question was answered very well by most candidates.

13 Interest on debt can be claimed as an expense for tax purposes. That will make the cost of debt much cheaper than equity. The tax saving will only materialise if the company is making taxable profits. Profit should be forecast into the foreseeable future to establish whether the anticipated profits will be large enough to enable the tax savings to be utilised. If there will be insufficient profit then the cost of interest should be evaluated gross. There will always be a risk associated with borrowing and so the decision should not be based on cost alone, regardless of the tax savings.

This question was done poorly by some candidates. The main point which was not discussed was the tax effect on the cost of debt.

14 The IASB develops IFRSs . These standards form the starting point when reviewing the accounting policies applied by a company. If a company does not comply with IFRS then the auditor is likely to qualify the audit report. Shareholders and other stakeholders will also expect the statements to be prepared in accordance with IFRS.

IFRS have been instrumental in reducing differences between companies and in making financial statements more comparable. That has been a significant improvement in terms of establishing the credibility of the regulation of accounting.

This question was answered well by many candidates. Most candidates knew that the financial statements had to be prepared using rules in the standards. Few candidates mentioned the auditor

15 An associate is subject to significant influence from the holding company. Influence is normally obtained when the holding company has a significant stake, but not sufficient to grant control. Owning 20% or more, but less that 50%, will normally create this relationship.

The fact that the holding company can merely exert influence means that it would not be appropriate to include the value of its assets in the consolidated financial statements. Instead, the holding company's share of the associate's results are included in the consolidated income statement — regardless of whether it actually receives these by way of dividend. The consolidated statement of financial position

includes the holding company's share of the associate's assets and liabilities, but as a single line item in the accounts.

This question was not done particularly well. Some candidates made a very poor attempt at this. It just had to be learned from the manual so it was surprisingly badly done.

16 The need for diluted EPS arises because the basic EPS calculation ignores the impact of "potential" shares. Companies can issue warrants, options, convertible securities and so on, all of which give their holders the right to obtain shares on preferential terms. If those rights are exercised, the EPS enjoyed by the existing shareholders will be diluted because the equity introduced will not be sufficient to compensate for the larger number of shares ranking for a dividend.

The EPS ratio is an important ratio used to measure and discuss the company's profitability. It is the basis for the Price/Earnings ratio which is used to determine the company's strength. Any distortion of the EPS ratio will confuse the discussion of P/E.

There were some excellent answers to this question which was very heartening.

17 The least expensive form of finance is likely to be the one that offers the lowest risk to the provider. Risk cannot be eliminated, but it can be passed from one party to another and the less risk taken by the provider the greater the risk being taken by the borrower. For example, bank loans are likely to give the lender significant rights in the event of default. That protects the lender, but means that the borrower faces closure in the event that a vital asset has to be surrendered in the event that the lender exercises those rights.

The fact that equity passes the risk to the investor explains why it is more expensive than debt. The company need not pay shareholders a dividend unless it can afford to.

This question was not done very well at all. Few candidates could say why debt was cheaper than equity and most did not relate this to risk. Risk is an important consideration when considering the financing decision and this plays a major part in the cost of debt and equity.

18 The members of the group have to be identified. The holding company has to ensure that all entities that are controlled are included in the group accounts as subsidiaries.

Consolidation involves cancelling all internal balances between group members. Any such balances will have to be identified so that they can be eliminated against one another. One effect of that is that goodwill on consolidation will have to be recognised and accounted for in order to ensure that the statement of financial position still balances after eliminating investments against the corresponding equity .

The balance invested by the non-controlling interest will have to be determined and accounted for too.

This question was done well by most candidates.

19 (i)

Most likely demand			
Without furnace			
Year 0 cash flows = (2,000,000)			NPV = (2,000,000)
Year 1 cash flows =	Sales	10,000,000	NPV = 5,200,000 × 0.917 = 4,768,400
	Material	(4,000,000)	
	Labour	(800,000)	
	Total	5,200,000	
Years 2–5 cash flows =	Sales	30,000,000	NPV = 17,200,000 × (3.889 – 0.917) = 51,118,400
	Material	(12,000,000)	
	Labour	(800,000)	
	Total	17,200,000	
Total			53,886,800

With furnace – incremental cash flows			
Year 0 cash flows =		(1,200,000)	NPV = (1,200,000)
Year 1 cash flows =	Material	2,500,000	NPV = 2,500,000 × 0.917 = 2,292,500
Years 2–5 cash flows =	Material	7,500,000	NPV = 7,500,000 × (3.889 – 0.917) = 22,290,000
Year 5 cash flow =		(1,500,000)	NPV = (1,500,000) × 0.650 = (975,000)
Incremental saving			22,407,500
Total			76,294,300

Least likely demand			
Without furnace			
Year 0 cash flows =		(2,000,000)	NPV = (2,000,000)
Year 1 cash flows =	Sales	4,000,000	NPV = 1,600,000 × 0.917 = 1,467,200
	Material	(1,600,000)	
	Labour	(800,000)	
	Total	1,600,000	
Years 2–5 cash flows =	Labour	(800,000)	NPV = (800,000) × (3.889 – 0.917) = (2,377,600)
Total			(2,910,400)

With furnace – incremental cash flows			
Year 0 cash flows =		(1,200,000)	NPV = (1,200,000)
Year 1 cash flows =	Material	1,000,000	NPV = (500,000) × 0.917 = (458,500)
	Decommissioning	(1,500,000)	
	Total	(500,000)	
Incremental outflow			(1,658,500)
Total			(4,568,900)

This part was not done well by candidates. Many made careless mistakes and lost some marks.

(ii) The expected value if the furnace is not purchased is
(53,886,800 × 70%) + (– 2,910,400 × 30%) = £36,847,640.

The expected value if it is purchased is
(76,294,300 × 70%) + (-4,568,900 × 30%) = £52,035,340

Candidates did well in this part and their own figure was used in this part so they were not penalised twice for a mistake in part i.

(iii) The expected value information provides very little useful information in this case because it does not reflect the returns that will actually be enjoyed.

In each case, there is a 70% chance of a positive NPV and a 30% chance of a smaller, but still significant, negative NPV. In that context, the value of the potential cash flows may bear little or no real relationship to their weighted average. Risk averse individuals may decide that a 30% chance of losing £2.9m or £4.6m is a good reason to abandon the project, even though there is a corresponding chance of a much higher gain.

Very few candidates could explain expected value or understood what the figures meant. This was disappointing.

(iv) The directors cannot really consult the shareholders over decisions such as this ad so it is difficult to develop a clear understanding of the shareholders' preferences. There will always be some risk associated with an investment and so the directors will find it difficult to avoid risks if they are to generate any meaningful return. Abandoning projects because they have a downside will always lead to a lost opportunity.

The directors face the problem that the company will release only limited information about the project and so the shareholders may not fully appreciate the benefits that it will generate for them. The board could be criticised unfairly for proceeding with a sound decision.

The outcome of the project will be evaluated with the benefit of hindsight. The shareholders may find it difficult to see beyond the fact that the most likely demand did not materialise if the project fails and they lose money as a result. The directors may be deterred from investing in projects that have a significant downside because of that.

This part was done poorly by candidates. The candidates generally do not do so well when asked to demonstrate understanding of the results.

20 (i)

	North	**South**
Profitability		
Return on capital employed	592/(1,400 + 450) = 32%	1,247/(2,515 + 200) = 46%
Gross profit percent	960/1,600 = 60%	1,885/2,900 = 65%
Advertising/revenue	240/1,600 = 15%	522/2,900 = 18%
Liquidity		
Current ratio	160/310 = 0.5:1	455/40 = 11.3:1
Efficiency		
Receivables turnover	160/1,600 × 365= 37 days	455/2,900 × 365 = 57 days

Both companies have strong return on capital employed, but South is much stronger than North. The margins are higher and so North may be concentrating on more lucrative work. It may be that South is getting a better return on its advertising because it is spending more and that might be necessary in order to get a return. South also appears to be more efficient because it is generating a much higher turnover from only a slightly higher asset base.

North has a large overdraft relative to current assets, which is a major worry. If the overdraft is called in then North could be rendered insolvent. South has no such problems

North has a much shorter receivables turnover. That may explain its lack of success in generating new business. If the company presses for prompt payment then customers may be tempted to go elsewhere. It may be that the cash is being chased because of the burden of servicing the large overdraft.

This part was done reasonably well by candidates. Many did the calculations well but did not explain their results very clearly.

(ii) The directors should consider whether the figures are directly comparable. The accounting policies should be the same in both companies, but the underlying assumptions may be different. For example, South may be a little more aggressive when it comes to booking turnover.

The nature of the local markets may also be different. It may be that North is already doing as well as is possible, subject to the local conditions. Changes may actually be harmful.

South is much bigger in terms of turnover and that might create economies of scope that are not available to North**.** For example, South may be able to employ a wider range of consultants.

This part was reasonable.

END OF EXAMINERS' REPORT