INSTITUTE AND FACULTY OF ACTUARIES

EXAMINERS' REPORT

September 2015

Subject CT2 – Finance and Financial Reporting
Core Technical

Introduction

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 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. The Examiners have access to the Core Reading, which is designed to interpret the syllabus, and will generally base questions around it but are not required to examine the content of Core Reading specifically or exclusively.

For numerical questions the Examiners' preferred approach to the solution is reproduced in this report; other valid approaches are given appropriate credit. For essay-style questions, particularly the open-ended questions in the later subjects, the report may contain more points than the Examiners will expect from a solution that scores full marks.

The report is written based on the legislative and regulatory context pertaining to the date that the examination was set. Candidates should take into account the possibility that circumstances may have changed if using these reports for revision.

F Layton
Chairman of the Board of Examiners
December 2015

A. General comments on the *aims of this subject and how it is marked*

1. The aim of the Finance and Financial Reporting subject is to provide a basic understanding of corporate finance including a knowledge of the instruments used by companies to raise finance and manage financial risk and to provide the ability to interpret the accounts and financial statements of companies and financial institutions.

2. 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.

3. 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.

B. General comments on *student performance in this diet of the examination*

The general performance was similar to results in the past, 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. The main problem was Q19, however many candidates scored high marks in all questions.

C. Comparative pass rates for the past 3 years for this diet of examination

Year	*%*
September 2015	64
April 2015	61
September 2014	60
April 2014	54
September 2013	57
April 2013	66

Reasons for any significant change in pass rates in current diet to those in the past:

The pass rate for this examination diet is slightly higher than the April 2015 rate, but not materially different. Variation in the pass rate between sessions is expected as different cohorts of students sit the examination.

Solutions

Q1 C
Q 2 C
Q 3 C
Q 4 D
Q 5 C
Q 6 A
Q 7 A
Q 8 C or D was accepted
Q 9 D
Q 10 C

Workings:

Q3 Net profit discounted at 8% = $11,000 × 3.993 – 40,000 = $3,923
Cash flow discounted at 8% = $19,000 × 3.993 – 40,000 = $35,867 (Correct)
Net profit discounted at 6% = $11,000 × 4.212 – 40,000 = $6,332
Cash flow discounted at 6% = $19,000 × 4.212 – 40,000 = $40,028

> Questions 1–10 were done well by most candidates. No particular question caused a problem for candidates.

Q11 Principals are often forced to appoint agents to make decisions on their behalf. The agents' economic interests may be in conflict with those of the principal. Principals may be exposed to losses because their delegation of authority and control may mean that they fear that the agents will also control the information at their disposal to monitor them. The agents could, for example, overstate performance in order to retain their jobs or increase their bonuses. The fear of manipulation may lead to costly and restrictive monitoring activities. Agency costs could also reduce market prices.

> This question was answered well by many candidates.

Q12 Personal gearing can enable the shareholders to obtain the effect of a lower cost of Capital from borrowing and they can invest the proceeds in equity shares to get the additional return. This will not be a perfect substitute. The shareholders are unlikely to obtain the same low rate that could be obtained by the company. Furthermore, corporate gearing permits the shareholders to enjoy limited liability. Personal gearing would leave the shareholders personally liable. They may also wish to leave their personal borrowing capacity free for personal purposes. Tax is also an issue. The company can claim interest as an expense for tax purposes, whereas the shareholders cannot.

> This question was done very badly by candidates who did not understand what personal gearing was and had difficulty coming up with any sensible solution to the question.

Q13 Finance leases may be attractive to lenders because they automatically provide a degree of security. The lessor retains ownership of the asset and so it will be relatively easy to take possession of it in the event that the lessee runs into financial difficulty. The lessor's security may result in a lower finance charge than would be the case with a standard term loan. The lessee can structure the lease in a manner that fits with its requirements and can cease to be responsible for the asset from the conclusion of the lease. Having said that, the lease arrangement may prove inflexible. If, say, the lessee wishes to replace the asset then it may be more difficult to do so. The lessor would be entitled to insist on the lease commitment being honoured, whereas an asset that has been purchased outright can be sold and the proceeds used to offset the outstanding loan. The lessee benefits from the fact that the lessor is protected and can charge a lower rate.

> Some candidates discussed tax issues and creative accounting issues which was excellent, these points are not covered in core reading but candidates were awarded marks for these points. This question was answered well.

Q14 The fact that the shares are unquoted means that the outcome of the offer may be difficult to predict. The underwriter has to ensure that the risks of bearing significant losses from any failure in the offering are adequately priced. The risks could arise from unexpected quarters, such as economic news that depresses markets generally. Fresh information could also emerge from the due diligence associated with the floatation. The underwriter must ensure that a realistic fee is charged, bearing in mind that there is a market and that overpricing could result in the loss of the business.

> This question had a mixed response with some very good answers and some poor ones.

Q15 Banks generally have a specific advantage with respect to raising variable rate finance (if bank deposits are viewed as loans) . Banks often attract significant amounts of variable rate debt and would often prefer to convert some of that to fixed rate. A portfolio of fixed and variable rate will leave the bank less exposed to movements in interest rates. Furthermore, many of the bank's financial assets will take the form of fixed-interest loans to customers and so there could be a mismatch between assets and liabilities. Swaps enable them to make best use of their specific advantage and to convert some of that to fixed rate to the mutual benefit of the bank and the counterparty.

> This question was answered badly with many candidates showing no knowledge of swaps.

Q16 Tax relief on contributions makes it cheaper for individuals to save for retirement through pensions. There may also be a less onerous rate of tax on the pension income after retirement. Taxpayers on higher rates will often find these tax benefits to be of particular value because the tax subsidy should be proportionately greater for them.

Companies might also receive tax relief on the payments they make towards providing for pensions.

The pension scheme may not be taxed on its investment income in the same way that another investor would.

Pensioners may be permitted to take out tax-free lump sums.

> This question was not answered well with many candidates ignoring many of the taxation implications.

Q17 The key to creative accounting is that the rules appear to have been complied with even though the figures are potentially misleading. One approach that may be taken could be the aggressive manipulation of estimates. For example, the depreciation charge requires an estimate of the lives of property, plant and equipment. The company could appear to charge the correct amount of depreciation by overstating expectations, while remaining within the limits of credibility. The directors could argue that any subsequent correction arising from the disposal of the assets was due to a misunderstanding.

> Any form of creative accounting was awarded marks, many candidates answered this question very well.

Q18 Return on capital employed determines whether the profit justifies the funding tied up in the business. If the ROCE is acceptable then the shareholders should be satisfied that the company is earning sufficient profit to enhance their wealth. The other profitability ratios can be viewed as secondary, in the sense that they provide insight into the ROCE. The fact that ROCE is acceptable does not mean that the shareholders and managers would be willing to forego any potential improvement. For example, the gross profit percentage could indicate that the company could change its trading strategy in order to further increase gross profit and so enhance ROCE. Ratio analysis is a complicated undertaking and so it would be very short-sighted to rely on a single ratio.

> This question was answered very well.

Q19 (i) The share price is effectively the net present value of anticipated cash flows. A fresh investment should create the expectation of further cash flows and so the share price should increase.

In practice, though, the markets may anticipate investment in capital projects. Sophisticated investors may have taken the possibility of a degree of investment in new projects into account when making the buy/sell decisions that determine the share price. This new project could simply confirm an expectation that had already been built into the share price.

It is also possible that the market may not agree with the directors' optimism. Commercial sensitivity may mean that the shareholders are not given full disclosure of expected returns and future cash flows. That would mean that the shareholders would be unlikely to have the same confidence as the directors. The shareholders may feel that the risks are greater than the director's claim because the directors will benefit in the short term from appearing to have made an astute investment.

(ii) An asset's beta coefficient reflects the systematic risks of that asset. Specific risks are diversified away, leaving the volatility of returns in the asset relative to the volatility of returns on the market rate as a whole.

Global's own beta would be relevant if the systematic risks affecting the project are the same as those affecting Global as a whole. It is unlikely that this project would have the same risk characteristics as the company because the two entities operate at different stages in the business cycle. If the price of oil rises then that may be adverse from the point of view of most market participants and so capital markets may decline. Global buys oil and so it may be affected in the same way as the market. The new investment is likely to be more attractive when the price of oil increases because it will enable Global's licensees to extract more oil that is now more valuable. Beta can also be affected by capital structure and so we may have to adjust for Global's gearing ratio.

The oil exploration company's beta may be less than 1.00 because it is more affected by unsystematic risks such as whether it strikes oil. The industry is potentially capital intensive and so interest rates may have a large part to play in the company's exposure to systematic risks. The price of oil could also affect the company's performance and an increase in oil prices would be desirable from the company's point of view. It is difficult to decide how that links the new venture's performance to that of the business. Interest rates are unlikely to affect the new venture, although oil prices will. Using a beta of less than 1.00

also implies a low cost of capital, which may have the effect of making Global's board appear a little reckless.

The product design company may have some aims in common with Global's new venture because both are about making the best use of available resources. Having said that, the product-design company is unlikely to have the same exposure to systematic risk as the new venture. The use of a beta of 1.00 would suggest that the company is as volatile as the market a whole. That may prove to be a defensible argument to use with respect to this new venture.

> Part (i) – Some candidates gave a reasonable answer to this section although may candidates made a poor attempt.
>
> Part (ii) – This part of the question was done very badly as candidates did not understand systematic risk at all. Very few candidates discussed the oil industry in any depth.

Q20 Maxload Ltd
Statement of Profit or Loss for the year ended 31 August 2015

	£000
Revenue	147,800
Cost of sales	(111,540)
Gross profit	36,260
Selling and distribution	(17,770)
Administrative expenses	(12,500)
Operating profit	5,990
Finance charge	(4,000)
Profit before tax	1,990
Tax expense	(5,600)
Loss for the year	(3,610)

Maxload Ltd
Statement of Changes in Equity for the year ended 31 August 2015

	Equity shares £000	*Retained earnings £000*	*Total £000*
Opening balance	75,000	21,180	96,180
Loss for the year		(3,610)	(3,610)
Dividend		(15,000)	(15,000)
Closing balance	75,000	2,570	77,570

Maxload Ltd
Statement of Financial Position as at 31 August 2015

	£000
Non-current assets	112,890
Current assets	
Inventory	3,770
Trade receivables	12,350
Bank	4,580
	20,700
Total assets	133,590
Equity	
Share capital	75,000
Retained earnings	2,570
	77,570
Non-current liabilities	
Loan	45,000
Current liabilities	
Trade payables	2,700
Accruals	2,720
Tax	5,600
	11,020
	133,590

Note

Non-current assets

	Property *£000*	*Plant and equipment* *£000*	*Total* *£000*
Cost	98,000	90,410	188,410
Depreciation			
Opening balance	14,560	48,530	63,090
Charge for year	1,960	10,470	10,470
Closing balance	16,520	59,000	75,520
Net book value	81,480	31,410	112,890

Workings

Cost of sales	
Manufacturing overheads	6,870
Opening inventory	2,640
Production staff wages	10,870
Purchases	82,500
Closing inventory	(3,770)
Property depreciation	1,960
Plant and equipment depreciation	10,470
	111,540
Selling and distribution	
Sales staff commission	5,200
Sales staff salaries	11,850
Accrued commission	720
	17,770
Administrative expenses	
Administrative staff salaries	2,680
Directors' salaries	4,200
External audit fee	3,620
Directors' bonuses	2,000
	12,500
Accruals	
Sales staff commission	720
Directors' bonuses	2,000
	2,720

This question was done very well by many candidates with some scoring full marks. It was excellent to see so many really good attempts.

END OF EXAMINERS' REPORT