INSTITUTE AND FACULTY OF ACTUARIES

EXAMINERS' REPORT

September 2019

Subject CB1 - Business Finance: Core Principles

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.

Mike Hammer
Chair of the Board of Examiners
December 2019

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

1. The aim of CB1 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 business finance including raising funds by a variety of methods, taxation, net present value and project appraisal and other topics, There is also a section on management accounting including budgeting, 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 lose marks where excessive rounding has been used or where insufficient working is shown.

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

1. Candidates performed reasonably well in this exam. Question 19 which was on three areas of accounting was answered reasonably well but not as well as Q19 in April. Question 20 was on risk and geared and ungeared betas and other finance issues was done reasonably well and much better than in April.
2. As usual there were some excellent candidates at the top who scored very high marks.
   In general, the multiple choice questions were well done as were many of the short questions.
3. There were a few areas of this exam where candidates did not perform as well as expected. These were in the areas of integrated reporting, relevance v reliability, zero based budgeting and finance.
4. Candidates were good at questions which mainly tested knowledge but were a little weak on application of knowledge to scenarios
5. Having said that the results were reasonable but the pass mark was lower than in recent diets of this subject.

C. Pass Mark

The Pass Mark for this exam was 55.

Solutions for Subject CB1 - September 2019

1	B	[2]
2	D	[2]
3	B	[2]
4	B	[2]
5	A	[2]

The residual NPVs are the same, + or -, so the approximate IRR is roughly half way from 11% to 16% (i.e. 13.5%).
Graphing NPV at various points shows a curve, so IRR will not be exactly 13.5%.

6	A	[2]
7	C	[2]

A - 8.1 - 5.0 - 1.5 = 1.6
B - 8.1 - 5.0 = 3.1
C - Correct answer - 8.1 - (5.0 - 1.5) = 4.6
D - 8.1 - 1.5 = 6.6

8	B	[2]

Receivables before change = $1,200,000 x 50/365 = $164,384
Receivables after change = $1,200,000 x 40/365 = $131,507
Decrease = cash inflow = $32,877
The effects of the change will be felt within the first 40-day cycle.

9	D	[2]
10	B	[2]

[Total 20]

Questions 1-10 were answered well by many candidates.

11 The directors can negotiate and sign contracts on the company's behalf without seeking the shareholders' permission. [1]
That could enable the directors to abuse their powers by granting one another excessive salaries and other benefits. [1]
Allegations of greed have undermined shareholder confidence in the directors in the past, with concerns that board members are paying themselves excessive and unjustified amounts. [1]
Formal policies set out the basis on which remuneration packages are decided and so there is, at least, a mechanism for setting remuneration. [1]
The shareholders will also be keen to understand how board remuneration motivates the directors. [1]
For example, a basic salary may not offer an incentive to excel because the rewards will be the same regardless of performance. [1]
Performance related rewards can also raise problems if they encourage dysfunctional behaviour. [1]
For example, directors' share options can create an incentive to manipulate share prices so that options are in the money when they are exercised. [1]
The need for disclosure is required in order to comply with the requirements of codified rules relating to corporate governance. [1]
Transparency will also help to reduce agency conflicts. [1]
[10, Max 5]

This question was answered well. Many candidates scored a high mark for this question.

12 Arguably, all negative NPV projects should be rejected on the basis that they are expected to reduce the partners' wealth. [1]
The NPV criterion is, however, restricted to the cash flows that have been identified and predicted by the decision makers. [1]
It could be argued that moving to a larger office will create scope for expansion that might be complicated if the partnership does not take the new office. [1]
The additional space will enable the firm to employ additional consulting staff without undue concern about accommodating them. [1]
A more prestigious office may also help to attract new clients, who may regard the building as evidence that the firm is professional and successful. [1]
It would be reckless to take such potential revenues into account in a formal NPV calculation because they cannot be predicted with any certainty. [1]
The new premises create a potential for upside risk that may be lost if the partners do not proceed. [1]
The justification will depend on the NPV. If it is proportionate to the possible upside then it could be viewed as an investment in future scope for adding new business. [1]
The five-year timescale may be too short a period to reflect the full potential for such a long-term project. [1]
[9, Max 5]

This question was answered well by most candidates.

13 The most suitable response would be to reduce uncertainty as far as possible by studying the present political climate and taking advice from reliable sources as to the risk. [1]
The entity will have to establish that any managers and staff who are asked to live and work in the new host country will not be at risk because of violence or corruption. [1]
It may be possible to seek advice from the home government, assuming that it has an embassy or consulate in the country. [1]
The risk may be avoided to some extent by engaging local staff to fill as many posts as possible. [1]
That will reduce the number of home country nationals who will be put at risk. [1]
It will also ensure that the locally hired staff will be available to brief their counterparts and will be able to offer informed advice. [1]
The company could arrange for practical support, such as arranging accommodation and transportation between home and office. [1]
That would ensure that staff are based in safe locations and that they are protected during their commute. [1]
The company might organise suitable insurance cover for all staff. [1]
Insurance would not, of course, mitigate the risk itself, but it would protect the company from the financial costs. [1]
[10, Max 5]

> Candidates generally scored high marks in this question.

14 Valuations can be far more relevant than cost less depreciation. [1]
The shareholders will be informed of the value of the resources for which the directors should be accountable. [1]
Lenders will have a much clearer understanding of the value of any assets that have been offered or pledged as security. [1]
The main disadvantage of reporting values is that they may be difficult to determine with any reliability. [1]
There are very few assets that have an open and observable market value. For example, property values may be affected by the precise location of the property and issues affecting local markets. [1]
Furthermore, values might fluctuate over time, with increases and decreases introducing volatility into reported results. Such volatility will be distracting if the entity has no intention of selling the assets concerned. [1]
A credible valuation, using independent experts, would be relatively expensive to carry out. [1]
Recognising any increase in value will result in a higher depreciation charge, which will reduce profit. [1]
[8, Max 5]

> Answers to this question were mixed some very good and some quite poor.
> Candidates quite often came up with points on valuations being subjective and expensive, which was good.

15 Integrated reporting is intended to give stakeholders a clearer understanding of the entity and its management. [1]
The company publishes significant amounts of supplementary information on factors such as strategy, stakeholder relationships and other factors. [1]
The overall effect is to give users of the integrated report a much clearer understanding of the entity's direction, so that they can better understand risks and rewards. [1]
To an extent, many stakeholders would have conducted research into the issues disclosed in the integrated report for themselves and so some of the information offered may be a little redundant. [1]
The difference is that the integrated report communicates the directors' understanding, which may help stakeholders better understand the company's direction. [1]
Independent research may still yield benefits, but the board's understanding of the company's position and environment may be difficult to determine without a detailed report. [1]
Integrated reporting frequently gives a clear insight into the sustainability of the company's operations. [1]
Company's often use the integrated report to highlight their impact on the environment. [1]
[8, Max 5]

> This question was answered badly with most candidates being unsure what integrated reporting is. Many candidates thought it was something to do with consolidations. This is a new topic and is covered in the core reading but answers were disappointing.

16 Relevant information tends to be more subjective, partly because it is frequently future oriented. [1]
For example, shareholders in a small company that makes expensive sports cars may be keen to know the market value of inventory rather than its cost because that will give a better idea of the value that has been created during the year. [1]
Predicting the market value will be a subjective process because it will have to take account of the possibility of disruptions such as the launch of new models by competitors. [1]
Reliable information is generally backward looking and so it can be validated and audited. [1]
That does not necessarily mean that it lacks relevance. For example, costs are historical, but the cost of an asset that has recently been acquired can be relevant to certain decisions. For example, selling prices should cover the costs of replacing inventory. [1]
Even subjective estimates can often be verified to some extent, so that users can be reassured that the information is sufficiently reliable for their purposes. [1]
[6, Max 5]

> This was answered very badly with few candidates demonstrating knowledge of the topic.

17 Non-controlling interest arises in group accounts to recognise the fact that some or all of the group's subsidiaries are not wholly owned. [1]
By definition, the parent has control over each subsidiary, but any non-controlling shareholders who remain have a claim to their portion of the subsidiary's equity. [1]
The value of that equity reflects the non-controlling shareholders' claim to the retained earnings arising since the subsidiary joined the group. [1]
The total reported for non-controlling interest enables the parent company shareholders to see the extent to which the equity in the group's subsidiaries is funded by external shareholders. [1]
The non-controlling shareholders have no specific rights to the group itself or the parent company and so care has to be taken in interpreting the non-controlling interest. [1]
It acts as a reminder that one or more subsidiaries have external shareholders who may have rights that could constrain decisions that might benefit the group at the subsidiaries' expense. [1]
[6, Max 5]

This question was answered reasonably well by many candidates. Although many answers lacked detail and were a little vague many achieved a passing score.

18 If costs seem excessive then zero based budgeting would force the directors to review them in turn, with a view to establishing whether they might be dispensed with. [1]
Traditional budgets are often incremental, with little questioning of the need to eliminate costs that may no longer be required. [1]
Working through each cost in turn, perhaps by starting with a list of the administrative staff posts and discussing whether it remains necessary, will give the directors an opportunity to eliminate costs. [1]
Zero based budgeting can be difficult to implement in a meaningful way because certain costs would be difficult to eliminate. For example, eliminating or reducing the costs of heating the offices may be impractical and it would be a waste of time to discuss it. [1]
Also, staff may be discouraged by such severe cost cutting, particularly if they fear that their jobs are at threat. [1]
A full zero based budgeting exercise would be time consuming and expensive in itself and those costs may not be justified. [1]
[6, Max 5]

This is a reasonably new topic for CB1 and it was not answered very well. Many candidates said it started with a blank sheet but after that had little to say. Some candidates did not address what was asked but gave a general answer on zero based budgeting and did not mention admin costs, heat and light or any other expenses.

19 (i) The first ratio reflects the likelihood that the lender's principal will be repaid in the event that the company goes into liquidation. [1]
The numerator shows the assets that will be available for sale in the event that the company fails and the denominator shows the total that will have to be repaid in order for the lender to be repaid in full. [1]
If Roundspar fails then $12 million will have to be repaid to other creditors before the lender receives anything. Overall, that means that Roundspar's assets cover the lender's position 2.1 times. [1]
The alternative ratio is a variation of the gearing ratio. Rather than focussing on the specific protection for the lender, it indicates whether Roundspar is likely to get into difficulty. [1]
If Roundspar is highly geared then it will have calls on its cash flow, which could increase the risk of it running into difficulty. [1]
The lender will not be particularly concerned about the company's ability to repay the whole $44m that it owes, but it will be inconvenient and possibly expensive if Roundspar defaults. [1]

(ii) The most immediate advantage of disregarding intangibles is that they may have little value in the event that the company fails. [1]
For example, intangibles could include the cost of acquiring the rights to the trading name "Rounsdspar". [1]
That trading name will probably lose most of its value in the event that the company is wound up. [1]
A further advantage of excluding the intangibles is that their values are likely to be highly subjective and so it is unclear how much of the $11m will be realised in the event of a failure. [1]
The disadvantage of excluding intangibles is that it could lead to unduly pessimistic loan evaluations, which could cost the lender the opportunity to make a profitable loan. [1]
The intangible assets have a value to the shareholders, which will give them an incentive to support the company in order to maintain their value. [1]
They are also a source of revenue (if they have any value at all), which will reduce the risk of corporate failure to some extent. [1]
Some intangibles, including licences and patents, can be sold on the open market and can have considerable value. [1]

(iii) Under normal circumstances, the lenders have very little ability to influence or manage the company's decisions. [1]
The loan agreement might give them certain rights if the company is late in making a loan payment or fails to achieve agreed benchmarks, such as a maximum acceptable gearing ratio. [1]
Provided the company does not breach any of those conditions, it can continue without interference from the lenders. [1]
The interests of the shareholders and lenders could conflict in situations where the shareholders were in danger of losing their investment and were keen for the company to take risks in the hope of resolving the problem. [1]
If the company faced collapse then the shareholders would be keen to pursue a risky strategy that offered the possibility of recovery. If the strategy succeeds then the shareholders will benefit and they will be no worse off if the strategy fail. [1]

The shareholders might also be keen to withhold information from the lenders in the event that the lenders might be entitled to protect themselves by foreclosing. [1]
For example, a loss on revaluation might be suppressed because it would put the company in default of a gearing restriction. [1]

[7, Max 6]

[Total 20]

Part (i) was answered very well.
Part (ii) was answered less well and most answers were brief and lacked detail. A number of candidates seemed unclear what the intangibles were in this case and had difficulty answering the question.
Part (iii) had some weak answers as candidates were unclear what lenders should be aware of and what influence they could have.

20 (i) The Production Director's argument rather misses the point about the purpose of diversification. Holding a diversified portfolio implies that shareholders can look forward to a relatively steady return from the portfolio as a whole, with poor performances from some investments being compensated by stronger returns from others. [1]
Looking forward, diversification will protect Tarvale's shareholders from unsystematic risks. [1]
That would not justify reckless behaviour by the Board because Tarvale's shareholders will be adversely affected by this loss, even if they are diversified [1]
Diversification does not mean that the shareholders are guaranteed an offsetting gain to deal with every loss. [1]
The capital markets will not necessarily perceive the logic underlying the Production Director's arguments. It may appear that the company has been mismanaged and that could cause the share price to fall. [1]
The shareholders may be affected by perceptions that the company is risky, even if the risks are not as serious as generally believed. [1]
The Board had a responsibility to identify significant risks and to take appropriate action in response. [1]
Diversification is really a matter for the shareholders to manage. They have a right to expect that the directors will act responsibly in order to mitigate all risks responsibly. [1]

(ii) The fact that the risk of a volcanic eruption has been evaluated is a partial defence because it demonstrates that the Board was aware of the threat and had considered it. [1]
It could be argued that the Board had determined that the most appropriate response to the risk was to accept it, perhaps on the basis that a more rigorous mitigation strategy would have been too expensive. [1]
The fact that the volcano erupted does not, in itself, show that the response to the risk was inadequate. [1]
It would be more appropriate for the shareholders to consider whether they would have paid more to source timber from a source that was not threatened by the same

volcano, if they had been aware of the threat when the decision to accept the risk was taken. [1]
The evaluation does not, in itself, excuse the Board entirely. Firstly, it could have been argued that the low prices charged by this supplier reflected a high probability of problems. [1]
If the risk was of the order of 5%, as implied by the Production Director, then that is quite a high likelihood of a loss on this scale. [1]
There could also be arguments that the Board had misunderstood the threats and that they had understated the impact that this threat would have. [1]

(iii) The ungeared beta is relevant to the shareholders because it indicates the systematic risks associated with the company's business operations. [1]
The beta should be relevant to, say, evaluate the systematic risks associated with any expansion of the business. [1]
Or it could be helpful as a basis for comparison with a similar company in order to establish whether systematic risks could be managed more effectively. [1]
The geared beta allows for the effects of borrowing. Gearing increases systematic risk and so the geared beta reflects the overall systematic risk associated with investing in the company. [1]
The geared beta will give an idea of the total systematic risk being accepted, both because of the business and its funding. [1]
The difference between geared and ungeared beta will give an idea of the impact that any changes to financing might have to the entity's systematic risk. [1]

[6, Max 5]
[Total 20]
[Paper Total 100]

Part (i) was answered reasonably well although there were some poor answers. This question was about diversified portfolios, some candidates seemed very unsure about how to answer this question.
Part (ii) This was answered well by many candidates and was about risk and directors behaviour.
Part (iii) This was about geared and ungeared betas, this can often be a problem area for candidates but was answered quite well this time.

END OF EXAMINERS' REPORT