



Institute  
and Faculty  
of Actuaries

# EXAMINERS' REPORT

CB1 - Business Finance

Core Principles

September 2022

## **Introduction**

The Examiners' Report is written by the Chief 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.

Sarah Hutchinson  
Chair of the Board of Examiners  
December 2022

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

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. The subject also includes a basic knowledge of Corporate Governance. Some of the topics will involve subjective judgement when answering questions this is taken into account by the marking team.

This paper examines basic finance including raising funds by a variety of methods, taxation, basic management accounting, 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 lose marks where insufficient working is shown.

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

Many candidates performed very well in this exam. Performance was reasonable for many candidates. The MCQs questions were answered very well with high marks being achieved by many candidates. Some of the short questions were answered well, but some candidates did not answer what was asked, most notably in Question 20 parts (i), (ii) and (iii) and questions 16.

Candidates were good at questions which mainly tested knowledge but were a little weak on application of knowledge to scenarios.

### **C. Pass Mark**

The Pass Mark for this exam was 57  
921 presented themselves and 554 passed.

**Solutions for Subject CB1 - September 2022**

<b>Q1</b>	D	[2]
<b>Q2</b>	D	[2]
<b>Q3</b>	A	[2]
<b>Q4</b>	A	[2]
<b>Q5</b>	B	[2]

Original market cap	1100
Cash injected	270
NPV	<u>140</u>
	<u>1510</u>
Shares	
In issue	100
new shares = (270/9)	30
	130
New share price = (1510/130)	<u>11.62</u>

<b>Q6</b>	B	[2]
<b>Q7</b>	B	[2]
<b>Q8</b>	D	[2]
<b>Q9</b>	A	[2]
<b>Q10</b>	A	[2]

*Questions 1-10 were well answered by most candidates; however, the performance was lower at questions 5, 9 and 10.*

*In Question 5 a common mistake was to say A was correct. The correct answer adjusted the original market capitalisation to allow for the cash injected through the rights issue and the net present value of the proposed investment, making B correct.*

**Q11**

The most immediate advantage of performance-related remuneration is that it gives the directors an incentive to work harder and to seek to enhance shareholder wealth.	[1]
That will reassure the shareholders, who may otherwise be reluctant to trust the directors to do discharge their duties correctly	[1]
For example, the directors may become less risk averse because they have a monetary incentive to seek better performance even if there is a risk associated with doing so.	[1]
Performance related remuneration could tend to create an unhealthy focus on the factors that determine “performance”	[1]

For example, there could be an undesirable focus on short-term profitability if the board receives a profit-related bonus, which could be suboptimal for the company in the longer term [1]

There could also be a temptation to mislead the shareholders through, say, creative accounting in order to overstate the board's entitlement to rewards. [1]

[Marks available 6, maximum 5]

*This question received mixed answers. Many candidates stated that performance related pay was good for the company and shareholders but failed to note that there are issues that arise which mean it is not always good. Candidates who looked at both positive and negative views on performance related pay scored very well.*

### Q12

Losses will mean that there is no taxable profit against which to offset the cost of interest [1]

Tax relief on the cost of servicing loans is a significant part of the cost of debt and so that cost will increase [1]

Lenders will not have a direct interest in the question of whether the company is making profits or losses, provided the company is generating sufficient cash to service the loan [1]

In the long term, cash flows will fall into line with profits and so the lender might seek a higher interest rate [1]

Continuing losses could lead to the business being wound up, which could result in assets being sold for less than their true worth [1]

That could create the possibility of a loss for the lenders, which could be reflected in an increased cost of debt [1]

[Marks available 6, maximum 5]

*This question was not answered well and was missed out by some candidates. Candidates did not generally describe the factors that would increase the cost of debt.*

### Q13

A personal guarantee will give the bank some protection in the event that the company fails and defaults on its loan [1]

Legally, the loan is due from the company and the three owners could leave the bank with part or even all of the loan unpaid [1]

The fact that the engineers are investing heavily with their own personal assets suggests that they will be unlikely to have a great deal left to pay the bank in the event of a collapse [1]

The bank will, however, benefit from the fact that the engineers have a clear disincentive to permit the company to fail and to leave the bank unpaid [1]

The guarantee means that the owners have an incentive to wind the company up if it is at risk of failure so that there are some funds and assets that can be realised to repay the bank as much as possible [1]

The guarantee also put the engineers under greater pressure to manage risk because at present they will only be subject to the loss of 60% of their investment, but the guarantee will increase that to 100% [1]  
[Marks available 6, maximum 5]

*This question received mixed answers, many candidates scored well. Generally, if candidates understood limited liability they scored well. Some candidates confused limited companies with partnerships.*

#### Q14

The motives of the bidder's directors are potentially unclear because this acquisition could be motivated by a desire to grow and to obtain synergies that will boost the shareholders' wealth [1]  
Unfortunately, the directors could just as easily be keen to make their company grow in order to boost their remuneration and also to have the management of a larger company on their CVs [1]  
The bid will also create agency issues with respect to the target company's board because that company's directors may be reluctant to support the takeover [1]  
Bidders usually offer to overpay for the target in order to encourage a good uptake, but the target company's directors are often keen to keep their jobs and seniority [1]  
There is also an agency issue associated with the target company's shareholders and the actions of the bidding company's directors because this is a share for share exchange. [1]  
The target company's shareholders must consider whether they wish to exchange their present investment for a share in a larger group that will be managed by a board of directors with whom they have not had any prior dealings [1]  
[Marks available 6, maximum 5]

*This question was not answered well by candidates. Candidates found it difficult to think of examples of agency issues in the context of the question. Those that did, scored good marks.*

#### Q15

Arguably, the most important question for shareholders is whether their company is making a profit, but profit can be misleading in certain situations. In particular a growing company can run into cash flow problems very quickly [1]  
The cash flow statement highlights issues such as the company's ability to generate cash from operations, in addition to making a profit [1]  
The statement will also highlight the outflows associated with investing in any non-current assets required to support that investment [1]  
Arguably, the shareholders could work out a lot of the information associated with cash for themselves, using the statement of profit or loss and the statement of financial position [1]

For example, an increase in trade receivables will reflect an outflow of cash  
Similarly, the details in the non-current asset note will give an insight into the investment being made in property, plant and equipment [1]

The cash flow statement will make it quicker and easier to develop an understanding of cash management [1]

[Marks available 6, maximum 5]

*This question was answered reasonably well by most candidates. Candidates knew that the cash flow is vital to any business and knowing how money is spent is very important. Most candidates understood that this information was not readily available in the statement of profit or loss or the statement of financial position.*

### Q16

This argument appears to be based on the fallacy that the price / earning ratio will remain fixed and that inflating the earnings figure will have the effect of increasing the share price [1]

In the short term that may be true. The publication of an annual report with an encouraging increase in the earnings per share figure might boost the share price [1]

That increase is, however, unlikely to be sustained in the event that an accounting technique has been used to justify the publication of a misleading profit figure [1]

The capital markets set the share price on the basis of expected future cash flows and so a distorted accounting policy would be regarded as irrelevant [1]

The share price would possibly increase while analysts take the time required to study the financial statements in detail, including the notes to the accounts [1]

Manipulating profit will simply undermine the market's confidence in the integrity of the board [1]

[Marks available 6, maximum 5]

*Candidates did not answer this question very well, with many having misconceptions about the P/E ratio. This topic is often an area that is problematic for candidates.*

*The difficulty candidates have is the belief that the ratio will stay fixed so an increase in earnings will therefore increase the share price, which is untrue.*

### Q17

The problem with this discount is that the company will be paying 2% to speed up cash flows by 35 days [1]

That is equivalent to  $365/35 = 10.4$  cycles per year or  $1.02^{10.4} = 23\%$  interest, which is a significant rate [1]

It would almost certainly be cheaper to pay for a factoring arrangement to achieve the same improvement in cash flows, or better [1]

The other big problem with this recommendation is that many customers will pay after the 30 day limit, but will take the 2% discount even though they are not entitled to it [1]

They will be aware that the consultancy might automatically apply the discount because it will be built into its system. [1]

The firm will also be reluctant to risk the loss of client goodwill over a 2% withheld payment [1]

In any case, the consultancy will be giving the discount to clients who would have paid on time anyway [1]

[Marks available 7, maximum 5]

*This question was answered well by most candidates. Candidates had a good understanding of this topic and understood the effects of offering a discount. It was good to see candidates noted the positive and negative sides of offering the discount.*

### Q18

An adverse opinion means that the external auditor is warning readers that the financial statements are so misleading that they should not be relied upon for any purpose [1]

The auditor's role is to add credibility to the financial statements through the expression of an opinion on whether the statements present fairly, but in this case the auditor is quite deliberately refraining from adding credibility [1]

The shareholders will be able to read the audit report in its entirety and so decide whether they can adjust the financial statements to correct for the misstatement that is concerning the auditor, but they may lack confidence in the resulting adjusted figures [1]

The directors' credibility will be at risk because adverse opinions are very rare and so the shareholders will be concerned that the accounts have been deliberately manipulated [1]

The fact that the directors are believed to have done so will send a very worrying signal that the company is in difficulty or that the board lacks confidence in its management of the business [1]

The directors will also face challenges in dealing with other stakeholders who rely on accounting information, such as banks and other lenders [1]

[Marks available 6, maximum 5]

*This question was also answered well by many candidates. Most candidates were aware of the effects of an adverse opinion and managed to produce a good answer.*

### Q19

(i)

**Q**

**Statement of Profit or Loss  
for the year ended 30 June 2022**

	\$000	
Revenue	45,628	[½]
Cost of Sales	<u>(9,320)</u>	
Gross profit	36,308	
Distribution Costs	(12,378)	
Administrative Expenses	<u>(6,900)</u>	
Operating profit	17,030	
Finance costs	<u>(120)</u>	[½]
Profit before tax	16,910	
Income Tax Expense	<u>(4,100)</u>	[½]
Profit for the year	<u>12,810</u>	
FORMAT		[1]

**Q**

**Statement of Changes in Equity  
for the year ended 30 June 2022**

	Share capital \$000	Share premium \$000	Retained Earnings \$000	Total \$000	
Opening balance	5,000	2,200	4,950	12,150	[½]
Profit for the year			12,810	12,810	[½]
Dividends			(300)	(300)	[½]
Closing balance	<u>5,000</u>	<u>2,200</u>	<u>17,460</u>	<u>24,660</u>	
FORMAT					[½]

**Q**

**Statement of Financial Position  
as at 30 June 2022**

	Notes	\$000	
<b>Non-current assets</b>			
Property, plant and equipment	[1]	16,086	
Intangible assets	[2]	6,764	
		<u>22,850</u>	
<b>Current Assets</b>			
Inventory		1,890	[½]
Trade receivables		5,200	[½]
Bank		450	[½]
		<u>7,540</u>	
<b>Total assets</b>		<u>30,390</u>	
<b>EQUITY AND LIABILITIES</b>			
<b>Equity</b>			
Called-up share capital		5,000	
Share premium account		2,200	
Retained earnings		17,460	
<b>Total equity</b>		<u>24,660</u>	
<b>Non-current liabilities</b>			
Borrowings		1,030	[½]
<b>Current liabilities</b>			
Trade payables		600	[½]
Tax		4,100	[½]
		<u>4,700</u>	
<b>Total of equity and liabilities</b>		<u>30,390</u>	
FORMAT			[1]

**Notes****1. Property, plant and equipment**

	\$000	
Cost	21,230	[½]
Depreciation	(5,144)	[½]
	16,086	

**2. Intangible assets**

Cost	7,120	[½]
Amortisation	(356)	[½]
	6,764	

**Workings****Cost of sales**

Cost of goods sold	8,200	[½]
Manufacturing wages	1,120	[½]
	9,320	

**Distribution**

Advertising costs	2,300	[½]
Sales staff salaries	8,300	[½]
Selling expenses	1,778	[½]
	12,378	

**Administrative expenses**

Clerical staff salaries	4,200	[½]
Directors' remuneration	1,700	[½]
	6,900	

(ii)(a)

Even if the board intends to continue to use the patented product to manufacture the product, there may be changes in technology or in the product that make it uneconomic to continue to do so [1]

If the product life is overstated, then the cost of the patent will be written off at the rate of one twentieth of its cost each year. [1]

When it becomes apparent that the lifespan was unrealistic then the company will have to make an adjustment, perhaps writing off the remaining asset balance in a single lump sum [1]

That could be a shock to the shareholders because the understatement of the annual amortisation charge will have overstated their reported profits [1]

(b)

The useful life of the patent right is difficult to estimate because it is potentially unclear how long Q will use this process for [1]

In theory, the patent has a life of 20 years, but an improved process could be developed long before that period has elapsed [1]  
There is also the possibility that the process will fall out of use because the product range changes within that 20-year period [1]

[Marks available 7, maximum 6]  
[Total 20]

*Part (i) was answered very well by most candidates. It was good to see most candidates able to produce a set of financial statements with most items in the correct place.*

*Part (ii) was less well answered but many candidates scored well. Candidates could usually come up with one or two reasons why it was so difficult to decide on the useful life of an intangible asset.*

## Q20

(i)

Unsystematic risk can be reduced or even eliminated through holding a suitably diversified portfolio of investments [1]

Unsystematic risk arises because of specific risks associated with the investment itself, such as geological problems associated with the mine [1]

Systematic risks arise because of factors that affect all businesses, usually linked to the economy or to markets [1]

Systematic risks cannot be completely eliminated, even through diversification, because most if not all investments will be affected by movements in factors such as interest rates [1]

The distinction between the risks is important because the directors should be able to assume that the shareholders' interests are diversified [1]

That suggests that it would be appropriate to evaluate the project on the basis of risk as measured by its beta coefficient [1]

The determination of an appropriate required rate of return will be complicated because it will almost certainly require the directors to identify a suitable proxy measure, such as a mining company that operates in that same geographical region or that mines the same ore [1]

The board might base its decision on total risk for the sake of simplicity, but that could lead to an overstated rate that leads to the project being rejected unnecessarily [1]

[Marks available 8, maximum 7]

(ii)

The biggest agency concern could be the fact that the directors are effectively exposed to the total risk of the project, whereas the shareholders are exposed only to the systematic risks, which are likely to be lower [1]

From an agency point of view, the board may be unwilling to proceed because they could be adversely affected by risks that the shareholders have managed through diversification [1]

For example, the cost of completing the project could be affected by changes in the exchange rate between the currencies of the home and host countries	[1]
Such a currency movement will not matter to the shareholders if they are diversified because they will combine investments that benefit from strengthening home currency with investments that benefit from the currency weakening	[1]
The directors may be concerned that the shareholders will accuse them of recklessness in the event of an investment and that could undermine the board's credibility	[1]
The project clearly has high total risks and there must be a significant risk that it might fail. The board could be accused of gambling with the shareholders' wealth	[1]
From an agency point of view, the board may be concerned that their decision to invest will be evaluated on the basis of the project's outcome	[1]
If the project is a failure, then the shareholders may accuse the board of poor judgement, even if the information that was available at the time of the investment was analysed logically and took account of risk	[1]
	[Marks available 8, maximum 7]

(iii)

The project will have a significant impact on the local environment, with digging on the edge of a wildlife park and the construction of a railway line through the park.	[1]
The mine itself will harm the wildlife park, which could endanger habitats and affect the viability of different animal species	[1]
The approach that is being taken to mining this ore also seems to be very destructive, with the creation of a large and ugly hole in the ground. Initially getting access to the ore will require the excavation of a large quantity of spoil, which will have to be dumped	[1]
The company appears to have no intention of reinstating the site, which could be a problem with regard to any tourist industry that is associated with the wildlife park.	[1]
It could be argued that the responsibility for the management of the environment really lies with the host country's government. If M is fully compliant with the law, then it could be argued that it is behaving ethically	[1]
The investment that is being made will benefit the national economy, potentially creating jobs for miners and paying tax on profits earned locally	[1]
The railway line could also have other benefits, including access to the wildlife park for tourists, who could further support the national economy	[1]
	[Marks available 7, maximum 6]

**[Total 20]**

*Part (i) was answered quite well. Candidates find questions of this type difficult, but it was good to see many candidates demonstrate a good understanding of systematic and unsystematic risk. It was common for candidates to score 4 marks for giving an example of each and saying whether the company could diversify the risk. The other marks were a little harder to come by, but some candidates achieved a high score.*

*Part (ii) was not answered very well. Candidates found it difficult to think of examples of agency problems. Some candidates missed this question out and others gave brief*

*answers. There were many different agency issues that could have arisen from this project where two parties have different views.*

*Part (iii) was much better answered with candidates coming up with many ethical problems. The most common were issues with damaging the ecosystem of the park and labour issues. Many candidates scored well in this section.*

**[Paper Total 100]**

**END OF EXAMINERS' REPORT**



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