Faculty of Actuaries   Institute of Actuaries

EXAMINATIONS

April 2000

Subject 108 — Finance and Financial Reporting

EXAMINERS' REPORT

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

There were three small errors in questions in order to ensure no student was unfairly penalised for this the paper was marked out of 94 and the three questions were discounted. The remaining questions were answered well.

11 The directors should consider the cost of the different types of finance available to them. Clearly, it is desirable to use the cheapest source unless it has some other disadvantage. Different types of finance involve different levels of risk for the lender and that will tend to result in different rates of interest.

The other major issue is the risks created for the company. A source of finance might leave the company open to serious penalties if it is forced to default for any reason. For example, a secured loan will tend to be relatively cheap but might create serious problems for the company if the lender calls in the security. Furthermore, the company will have a limited borrowing capacity for any given type of finance. Exhausting this might restrict its ability to deal with future problems.

Bank overdrafts do provide a flexible means of dealing with fluctuating requirements. Most loans commit the company to the payment of interest throughout the agreed term of the loan. Early repayment might not be permitted by the agreement or could involve an additional charge. Overdraft facilities can be agreed with the bank and then used and as and when the company requires. The company can borrow up to its overdraft limit for as short a period as it requires the funding. Interest will be charged on a daily basis on the actual amount outstanding.

The rates of interest charged on overdrafts tend to be quite high and so it might prove to be an expensive source of finance if the company is likely to be heavily overdrawn for a large proportion of the time. Term loans might prove cheaper in this situation because of lower rates, even though there might be short periods of cash surplus during which the company does not actually require the funding.

One disadvantage of using the overdraft facility is that the banks are likely to impose a restriction on the maximum amount that they are willing to advance in this manner. Having the capacity to borrow up to the limit at short notice could be useful if the company has an unexpected need for cash. If part of the facility has been used up in the course of normal operations then the company will be more severely constrained.

There may be other sources of finance which would be more suitable for the company's fluctuating needs. For example, debt factoring makes it possible to raise cash immediately after a sale has taken place. This has the advantage of bringing in more cash at busier times when the company's needs might be greater and could offer many of the benefits of overdraft without using up any of the actual overdraft facility.

This question was well answered by most candidates

12 The main advantage of underwriting a share issue is that there is no risk of the company being left with unsold shares. If the rights issue proves unattractive to shareholders then the company may have insufficient funds to finance the project for which the shares were being issued. It may prove difficult and expensive to raise additional long term finance by some other means.

The main disadvantage of underwriting the issue is that the company will have to incur fees which may prove substantial. While this might be a worthwhile investment, it is desirable to minimise such costs wherever possible.

The rights issue is likely to prove successful if the new shares are sold at a reasonable discount. While any discount is likely to make the shares attractive, the volatility of the stock market and of the company itself should be considered. If the share price is likely to move rapidly then the rights price could exceed the market price, thereby making he new shares unattractive.

The extent to which the company can persuade the markets that the new funds will be invested profitably will also have some bearing on the need for an underwriter. If the company has a viable project then the share price could rise in response to that information and that will make the issue even more attractive. The company should discuss the likely market perception of the project with independent experts such as the company's merchant bankers.

This question was reasonably well answered by candidates

13 An associate company is one in which the holding company has an interest which grants it some influence, but not outright control. This is normally implied by an investment which exceeds 20% of share capital, but is less than 50%.

Associate companies are included in the consolidated profit and loss account by including the group's share of their profits, regardless of whether those profits have been distributed by way of dividend. The group share of net assets is included in the consolidated balance sheet.

The first part of this question was well answered however candidates had little idea of how the associate should be treated in the consolidation as a result the marks were low.

14 Many figures in the financial statements are difficult to interpret in isolation. For example, it means very little to know how much profit a business made without having some corresponding idea of the amount of capital that had to be invested in order to generate this income.

Ratios provide a basis for comparing related figures and for identifying issues that ought to be investigated. Management might, for example, monitor liquidity by calculating the current ratio and would deal with any deviation from the optimal relationship – usually 2:1.

Trends in ratios can be particularly revealing. For example, a decreasing current ratio is normally a more worrying sign than a ratio which appears to be low in absolute terms.

Ratios do have a number of drawbacks. For example, they can be distorted by wilful manipulation of the figures (e.g. window dressing or off-balance sheet financing). They can also omit crucial information such as contingent liability information.

This question was well answered

15 If the company purchases the assets then it will receive a writing down allowance on both the industrial buildings and the plant and machinery. This means that the tax benefits of the investment will not be received immediately after the investment takes place. Instead, the company will have to offset the cost against taxable profit in future years.

If the company borrows in order to finance the acquisition of the assets then it will be able to claim tax on the interest payments.

Rental payments on property and lease payments on plant and machinery will attract immediate tax relief, with the taxable profit being reduced by the amounts of the cash flow in each year.

The company's ability to enjoy the tax relief on writing down allowances is related to its ability to earn taxable profits. If the company is making a loss for tax purposes then it will receive no benefit from the additional writing down allowances. A lessor may be in a better position to take advantage of these reliefs and this may well be reflected in the rentals.

This question was quite well answered by the majority of candidates.

16 Merchant banks specialise in corporate finance. Their role is largely advisory. Typically, merchant banks will provide advice on the following types of matter:

1. bid or defence strategies in a takeover
2. financial aspects of a merger
3. investment projects
4. raising capital

They also act as intermediaries in the issue of financial instruments:

1. issuing houses in share issues
2. underwriters of new issues
3. Eurobonds

Merchant banks also provide fund management services:

1. management of unit trusts, investment trusts and pension funds
2. organisation of the Eurobond market

Merchant banks are active in the money markets:

1. as guarantors of bills of exchange
2. as holders of Treasury bills and local authority bills

Occasionally, merchant banks provide finance to companies.

Candidates answered the first part of the question well but were unsure of merchant banks influence on the market.

17 The Bank of England acts in a supporting role for the various institutions that are active in the short-term money markets, particularly the discount houses.

The discount houses provide short term finance by borrowing cash surpluses that might be available for as little as a few days and lending for a slightly longer period. This difference in maturity between their assets and liabilities can leave them exposed to the risk of being unable to repay their debts.

The risk of default is avoided because the Bank of England will always provide the discount houses with support whenever they need it. This can take the following forms:

1. The Bank will always be prepared to purchase Treasury or local authority bills or bills of exchange from the discount houses in order to help them through a cash crisis.

2. The Bank will act as a lender of last resort provided the discount houses deposit bills as security.

3. The discount houses can sell a bill of exchange to the Bank and simultaneously agree to repurchase it at a later date.

This support is available because the discount houses are an important element of the Bank's mechanism for controlling short term interest rates. The discount houses agree to buy the Treasury bills that the Bank sells at its weekly Treasury bill auctions.

This question was well answered by most candidates.

18 Tyler plc

Profit and loss account

for the year ended 31 March 2000

	£000	£000
Turnover		
Cost of sales		- 4,100
Gross profit		
Distribution costs	- 1,600	
Administrative expenses	- 800	
		- 2,400
Operating profit		
Interest payable		- 1,680
Taxation		- 1,290
Dividend		- 1,400
Retained profit for the year		
Retained profit brought forward		
Retained profit carried forward		2,510

Tyler plc

Balance sheet as at 31 March 2000

	£000	£000
Tangible fixed assets (note 1)		32,000
Current assets		
Stock	700	
Trade debtors	1,300	
	2,000	
Creditors: amounts due within one year		
Bank overdraft	- 700	
Trade creditors	- 600	
Taxation	- 1,290	
Proposed dividend	- 1,400	
	- 3,990	
Net current liabilities		- 1,990
		30,010
Long term liabilities		- 12,000
		18,010
Share capital		12,000
Revaluation reserve		3,500
Profit and loss		2,510
		18,010

Note 1 Tangible fixed assets

	Factory	Machinery	Total
	£000	£000	£000
Cost at 31 March 1999	23,300	12,300	35,600
Additions	-	2,700	2,700
Adjustment on revaluation	1,700	-	1,700
Cost at 31 March 2000	25,000	15,000	40,000
Depreciation at 31 March 1999	1,340	6,000	7,340
Charge for year	460	2,000	2,460
Adjustment on revaluation	- 1,800	-	- 1,800
Depreciation at 31 March 2000	-	8,000	8,000
Net book value at 31 March 2000	25,000	7,000	32,000
Net book value at 31 March 1999	21,960	6,300	28,260

Cost of sales

Factory running costs	1,200
Manufacturing wages	1,300
Materials consumed	1,600
	4,100

This question was badly answered very few candidates produced a note for fixed assets and the formats were poor. Given that this is not one of the new topics it was surprising how badly the question was answered.

19 (a) Required rate on the research project = 3+(8*.6) = 7.8%

Required rate on expansion = 3+(8*1.3) = 13.4%

(b) The total risk associated with an investment is not particularly important in the context of a diversified portfolio. A significant proportion of the risk in most investments can be diversified away. In other words, factors such as movements in exchange rates will have an adverse effect on some investments and a positive effect on others. The effect of investing in a portfolio is to reduce the overall volatility of the returns.

Risk can be separated into two components: systematic and unsystematic. Systematic risk is inherent in the political and economic environment and is common to all companies. For example, a change in energy prices will affect all companies to some extent. Unsystematic risk is specific to the company. It encompasses a range of risks specific to the company such as changes in market demand for its products, stability of industrial relations, nature and location of its assets, and so on.

Systematic risk cannot be diversified away because it arises from factors which will have an effect on all companies. Thus, an increase in interest rates or oil prices is likely to have an adverse effect on all companies and will depress returns from the market as a whole. Unsystematic risk can be diversified away and, provided the investment is held in a properly diversified portfolio, it can therefore be ignored.

It is possible that a highly speculative investment will not be affected by general market conditions to any great extent. That means that it will not have a high systematic risk. The volatility will, therefore, be due to unsystematic factors that can be diversified away. That, in turn, suggests that the investment may require a very low return.

(c) Company directors are in a rather different position from shareholders. A shareholder can hold a diversified portfolio of investments and can, therefore, reduce the risks associated with a particular investment. A director will probably have only one principal employer and will, therefore, be motivated more by total risk.

This different perspective might be evidenced by a tendency to invest in relatively safe projects. This is because a disaster might be rather catastrophic for the board even though it would have relatively little impact on the shareholders.

Alternatively the board might be inclined to seek diversification for the company even though the shareholders can diversify for themselves. Given that diversification will have the effect of distracting management from the core activities of the business, the overall effect will not be in the shareholders' interests.

(d) One approach is to use the company's own beta coefficient. That is only relevant, however, if the project is subject to the same risks as the company as a whole.

Another approach is to use the beta of a company which is engaged in the same line of business as the project.

A third possibility is to use historical data to estimate the betas of individual divisions or segments of the main company. These betas can then be used as a surrogate for the coefficients of individual projects which fall within their scope.

This question was very badly done by most candidates. Many candidates correctly calculated the answer to part (a) and then demonstrated little understanding of the theory required in the rest of the question. This is an important area of finance and candidates should study the topic more carefully.