Faculty of Actuaries Institute of Actuaries

REPORT OF THE BOARD OF EXAMINERS ON THE EXAMINATIONS HELD IN

April 2002

Subject 108 — Finance and Financial Reporting

Introduction

The attached subject report has been written by the Principal Examiner with the aim of helping candidates. The questions and comments are based around Core Reading as the interpretation of the syllabus to which the examiners are working. They have however given credit for any alternative approach or interpretation which they consider to be reasonable.

K Forman
Chairman of the Board of Examiners

11 June 2002

1 C

2 B

3 D

4 B

5 B

6 C

7 D

8 A

9 D

10 A

Generally questions 1-10 were well answered, most candidates scored well. There was no particular question which was badly done.

11 If the company does not have sufficient cash to pay a dividend or if it does not have sufficient retained profits to fund one then the directors would be both irresponsible and in breach of company law if they were to pay one. Paying a dividend under such circumstances could also damage the company's cash flows at a sensitive time and might actually reduce the value of the shareholder's investment by far more than the amount of dividend received.

The directors might also decide to suspend or reduce a dividend in order to provide funds for investment. Doing so will often avoid the issue costs associated with selling shares and the transaction costs associated with borrowing. If the markets anticipate that this expansion will be successful then the share price will increase by at least the amount of the dividend foregone. In that case, the shareholder's wealth will actually have improved because of the company's decision to reduce dividends. If the shareholder was relying on cash from the dividends then he or she could sell some shares in order to realise part of the capital gain.

Unexpected variations in dividend policy could worry the market and so it would be undesirable for the directors to have reduced the payments without prior warning.

This question was answered well by most candidates. It was designed to test knowledge of the issues associated with the dividend decision. Most candidates demonstrated good understanding.

12 A life insurance company's activities are split into various different funds according to the type of policy. The two most important funds are:

(1) the pensions business fund
(2) the life business and general annuity business fund

The two funds are taxed in a different way. Income, capital gains and expenses are attributed to each class of business separately. Expenses in one class of business are not allowed to offset tax in another class.

Pensions business is taxed on a profits basis. Profits are calculated as:

Premiums received
\+ investment income
\+ capital gains
– payments made to policyholders
– pension fund expenses
– increase in reserves needed to meet future payments to policyholders
= taxable profits

The life business and general annuity business is taxed on a different basis:

Investment income
\+ realised capital gains
– life business expenses
– general annuity business expenses
– income element of general annuity payments to policyholders
= taxable profits

This question was well done by many candidates, there were however a number of candidates who scored very poor marks. Some candidates appeared to be familiar with the material in the core reading on this topic while others were not.

13 The first step is to identify the subsidiary companies. These are essentially the companies over which the holding company can exercise control.

The holding company should ensure that the accounting policies used throughout the group are consistent.

Any transactions and balances between group members must be identified so that they can be excluded from the consolidation.

The figures in the financial statements are combined to give the group totals for turnover, expenses, assets and so on. However, any inter company elements are excluded from the consolidation so that sales would include only sales to third parties outside of the group and so on.

The process of cancelling internal balances extends to the holding company's investment in the subsidiaries. These will be cancelled against the related obligations from the subsidiaries to the holding company as represented by the equity as at the date of acquisition. Any balancing figure arising because of differences between the cost of the investment and related equity is called goodwill and is written off against retained profit.

Any equity in subsidiaries held by third parties should be shown on the consolidated balance sheet as a minority interest.

This question tested awareness of the important accounting topic of preparation of group financial statements. Most candidates appeared comfortable with this material.

14 The price of the units is calculated by the managers to be:

$$\frac{\text{Market value of assets}}{\text{Number of units}}$$

Unit trust managers must use this formula, but they have some discretion over the calculation of the "market value of assets". They can use the cost of buying new assets ("offer pricing") or the cost of destroying units ("bid pricing").

The managers can change from offer to bid pricing, depending on circumstances. Offer pricing is used when the unit trust is expanding and bid pricing is used when it is contracting.

This question required awareness of the broader issues associated with the valuation of units. Candidates were generally well prepared for this.

15 Trade credit is the short term finance offered by vendors. Much trade is done on the basis that all goods will be supplied on credit and paid for at an agreed time, often 30 days after receipt. It is necessary to establish a credit facility with each vendor, although this is usually a relatively simple process. The vendor will usually request a credit reference and may carry out background checks with a credit agency.

Trade credit is usually a fairly flexible form of finance, although the cost is not always immediately obvious. The purchase prices will include an element for finance. Many vendors will impose additional interest penalties in case of overdue amounts and this may also lead to a report being passed to a credit agency, thereby reducing the company's score.

Debt factoring is also a source of short term finance. It is essentially a loan secured on the company's debtors' balances. Once the company has reached an agreement with the factor, it will send copies of invoices on despatch of goods. The factor will then pay an agreed proportion of the invoice by return. The debtor will normally make payment to the factor and this will lead to the factor making a second payment of the balance from the invoice, less interest.

There are two types of factoring. Non-recourse factoring is where the supplier takes over all responsibility for credit analysis of new accounts, payments collection, and credit losses. Recourse factoring only provides early payment of invoices, with credit risk remaining with the original supplier.

This question tested the candidates' knowledge of different form of medium term finance. The candidates answered this question very well, with many achieving excellent marks.

16 **The cost concept** — requires that assets appear in the balance sheet at their original cost, less any depreciation to date. Effectively, it is assumed that the purchasing power of money will remain unchanged. While this is clearly invalid, it simplifies the task of maintaining bookkeeping records. The disadvantage is that accounting statements frequently report totals which are made up of inconsistent units.

The money measurement concept — accounting statements restrict themselves to matters which can be measured objectively in money terms. Again, this simplifies accounting enormously. It also means that a balance sheet will rarely give even a rough approximation of the value of the business because it will exclude such items as the values of the company's customer base, its work force and its brand names.

The going concern concept — it is usually assumed that a business will continue indefinitely in its present form. This concept acts as a justification for the limitations imposed by the cost concept because there is little harm in reporting irrelevant figures for value if the assets concerned are unlikely to be sold in the immediate future.

The business entity concept — the affairs of the business are kept separate from those of the owners. This is perfectly valid in the case of a limited company, which has its own legal identity. It would, however, also apply to sole traders and partnerships where the business does not exist except as part of the owners' estate.

The realisation concept — states that income is recognised as and when it is "earned". It is not, therefore, necessary to wait until the customer settles his or her bill. This avoids the fluctuations in reported income which might arise if everything was accounted for on a cash basis. It can also create the impression that the business is performing well when, in fact, it is in danger of running out of cash. A business which is expanding might report income long before the related cash inflows.

The accruals concept — expenses are recognised as and when they are incurred, regardless of whether or not the amount has been paid. Again, this avoids the random allocation of costs to periods depending on whether the bill happens to have been paid or not.

Prudence — the preparers of the financial statements should avoid presenting an unduly optimistic set of results. Thus, the lowest reasonable figure should be stated for profit or for any of the assets. The highest reasonable figure should be stated for any liabilities. This means that there is very little danger of the figures lulling anybody into a false sense of security by overstating the company's strengths.

Consistency — the figures published by the company should be comparable from one year to the next. Accounting policies should not, therefore, be changed from one year to the next unless there is a very good reason for doing so. Any changes should be highlighted and their impact explained.

Materiality — there is little point in providing information which is so detailed as to be unintelligible. The statements can, therefore, be made clearer by showing totals such as "administrative expenses" instead of listing every item which makes up this heading. Similarly, there is very little point in making minute adjustments which have no real effect on the picture portrayed by the financial statements. Thus accountants might report rough approximations for certain costs rather than waste time calculating more precise figures.

Candidates were good at identifying the concepts but were weaker when it came to discussing how the concepts might affect the financial statements. This resulted in poor marks for this question. This demonstrates the need to think carefully about accounting issues - candidates with good understanding of the concepts scored highly.

17 The first step would be to develop some model that can be used to estimate turnover under various conditions. The company could try to identify the factors that appear to affect the turnover in its existing branches. These could include factors such as the distance to the nearest competitor, the number of people passing the branch at certain times of day, proximity to any major concentrations of customers (e.g. a major railway station) and so on. The company could then combine these factors in an attempt to model turnover for the existing shops for comparison with historical data.

The models could then be applied to potential franchise locations. These should be modelled many times using variations of the underlying assumptions in order to establish whether the forecasts appear to be robust. This could be done by determining probability distributions for factors such as passing trade and the likelihood of fresh competition.

This question was not answered by a number of candidates, and there were many weak answers from the candidates who did attempt the question. The question required some application of the issues covered in the core reading although this did not require an inordinate level of understanding. The best way to tackle such a question would be to imagine dealing with the problem in the real world.

18 (i) The ratio of turnover to fixed assets measures the company's ability to generate sales from its fixed asset base. Y plc cannot match the productivity of its competitor and is, therefore, bringing in a smaller return from its investment in fixed assets.

Capital tied up in current assets generates little or no direct return. Y's competitor has less invested in these unproductive assets. This means that Y has either had to divert capital from more productive activities or that the company has borrowed more in order to finance working capital.

The gross profit percentage is a measure of the company's ability to generate profits from any given sale. Given the nature of the market, Y's competitor appears to be selling similar products at similar prices, but generating a higher profit on every sale. Even if the companies were equally efficient in their use of assets, this would enable the competitor to enjoy a higher ROCE. The fact that the competitor also manages to generate more sales from every £ of its asset base means that it has a double advantage over Y.

(ii) The company should review its utilisation of fixed assets. It may be that there is scope for reorganising the company so that it can improve its output. Given the "benchmark" provided by the competitor, it looks as if there is scope for making greater use of them. The reasons for not doing so should be identified. It may be possible to accomplish a great deal from a simple reorganisation. Y may have to make some further investment if the investigation reveals that there is a bottleneck which constrains the use of the existing assets. Alternatively, the review may indicate that the company has spare capacity, in which case it should consider either diversifying into another area in order to make use of the slack or it should sell any surplus assets.

Y plc should review its activity ratios: stock, debtor and creditor turnover. If stocks or debtors are turning over too slowly then the reasons for this should be established. It may be that the company will have to invest in better systems which enable it to exert a greater control over working capital. It may be that staff simply need to be better trained or motivated in order to avoid wasteful investments in stock or sales ledger accounts. The company might also be able to pass some of the burden for financing working capital on to suppliers. If the creditors turnover is too rapid then it may be able to delay payments, thereby releasing some cash with which to finance expansion or to reduce capital employed. The company should also review its cash balances. While it is prudent to hold some cash, the company needs to make sure that it is not tying too much up in low yielding bank accounts.

Given that Y plc's selling prices cannot be increased without the loss of sales, the problem appears to be that it is paying too much for its product. This may be because the company has not been aggressive enough in negotiating with its suppliers. It may be that there are less expensive suppliers or that the company could switch to a smaller number of suppliers so that it can obtain the benefit of bulk discounts. The company may also be incurring unnecessary overheads (e.g. depreciation on unproductive assets) and these could be eating into the profit margins too.

(iii) The figures in the financial statements are highly subjective. The statements produced by the competitor could have been affected by greater optimism or pessimism on the part of the accountants who prepared them. This attitude could have been due to a genuine difference of opinion or it could have been due to the company being under some pressure to distort its figures in one direction or another.

The figures might not be comparable for other reasons. For example, the assets of both companies could be shown at historical cost. The asset bases of both businesses might be identical, but the company with the older assets will have the lower book value because of the effects of rising prices and depreciation. This could have the effect of reducing return on capital.

The figures could have been affected by transactions occurring close to the year end. For example, the purchase of new assets just before the year end will increase capital employed, but the company will have had no opportunity to generate a return from this.

This question tested candidates understanding of accounting ratios. Many candidates produced good answers demonstrating understanding of the topic.

19 (i) One of the main choices is between equity and debt. Debt is generally more tax efficient from the company's point of view because interest is tax deductible whereas dividends on equity is not.

Different forms of borrowing will have different cash flows and tax implications. For example, the purchase of an asset using borrowed money will attract tax relief on the interest and the company will also be able to claim capital allowances on the price of the asset itself. The purchase of an asset using a finance lease will attract tax relief on the whole of the lease payments, but the borrower will not be able to claim capital allowances.

The company should also consider the tax implications for the providers of finance. Their tax position will affect the cost of capital because they will be concerned with their returns after tax. Shareholders might prefer equity because they can manage their exposure to tax by selecting the point at which they realise capital gains. Interest received from loans is, however, taxed as it is received and so there is less scope for management of tax.

(ii) It would be short-sighted to rely exclusively on the cheapest form of finance for every decision. This is partly because issuing fresh debt can affect the overall risk characteristics of the company's existing debt and equity. The risk of the company becoming forced into default increases as gearing rises. Issuing fresh debt might undermine confidence in the company as a whole and that could lead to a disproportionate increase in the cost of capital.

The benefits of the tax allowances associated with debt are dependent on the company having sufficient profit to offset the interest against. The gross cost of the debt might become more relevant if the company issues fresh debt when it is breaking even or making a loss.

There can be substantial issue costs for some forms of finance. The fixed costs associated with issuing shares can be so great that the company should not consider raising finance in this way unless an economic amount is being raised.

(iii) The main advantage is that shares will be far more attractive to the capital markets. Anyone buying shares will be able to sell them at any time and at a readily observable market price.

Existing shareholders will also enjoy the opportunity to sell some of their shares and realise some of the gains earned during their period of ownership. They will also benefit from the fact that they will have a market price which is acceptable as a valuation basis for tax purposes.

The main disadvantage of a listing is one of cost. There are substantial professional fees and other expenses associated with obtaining a listing.

The stock exchange will also impose additional reporting and other regulatory requirements on the company.

Having a quotation will make it easier for outsiders to mount a takeover bid. This could prove a distraction for management, especially when the company is vulnerable during difficult times.

(iv) The fact that the company is owned and managed by the same individuals avoids a host of problems associated with accountability and agency. Shareholders normally require some assurance that the directors are not pursuing their own interests.

There is no conflict between the interests of the owners and the managers and so there is less risk of dysfunctional behaviour on the part of the directors. For example, the directors will be under much less pressure to pursue short term profits at the expense of longer term wealth.

The narrow shareholding makes it more difficult to raise fresh equity from the existing shareholders. This will make it more expensive to raise additional equity whenever the need arises.

The narrow shareholding will also make it more difficult to obtain a stock market quotation because of the regulations designed to ensure a free and open market.

The candidates answered part 1 very well as they could explain the differences between funding by debt or equity.

Most candidates were aware of the advantages and disadvantages of Stock Exchange listing but were not so good at part 4 which asked about tight and narrow shareholdings, this required application of the core reading and some candidates found this difficult. Again thinking of a practical example could be helpful.