



Examiners' report

F9 Financial Management

December 2007

Congratulations to those candidates who were successful in passing Paper F9 in December 2007! This was the first sitting of this paper and also the first time that candidates had fifteen minutes of reading and planning time before starting to write out their answers. I think that many candidates benefited from their reading and planning time, since there was little evidence of any time pressure and some candidates scored very high marks. Failure to pass the examination appeared generally to be associated with a lack of preparation and revision, with some candidates producing very short answers, or answers with some calculations but with very little discussion. It was good to see many candidates providing clearly labelled workings and well-laid out calculations in their answers.

The marking team thought that the paper was a well-balanced mixture of calculation and discussion covering most of the syllabus.

Question 1

In part (a), candidates were asked to calculate the value of a company using the price/earnings ratio method and the dividend growth model, and to discuss the significance of calculated values, in comparison to the current market value of the company, to a potential buyer. Answers to this part of question 1 often failed to gain many marks, mainly because candidates did not calculate company values.

The prices/earnings ratio method calculates the value of a company by multiplying an earnings per share figure by a price/earnings ratio, and then multiplying by the number of issued shares. Alternatively, total earnings can be multiplied by a price/earnings ratio. Although the question provided an average sector price/earnings ratio to use in this context, many candidates simply calculated the current price/earnings ratio of the company and compared this with the sector value. Calculating a price/earnings ratio is not the same as calculating the value of a company. Candidates should also note that the price/earnings ratio is a multiple and neither a percentage nor a monetary amount.

The dividend growth model (DGM) formula is given in the formulae sheet in the examination paper. Many candidates rearranged the DGM formula in order to calculate a cost of equity, even though what was needed was to calculate a share price by inserting values for the current dividend, the cost of equity and the dividend growth rate into the DGM formula provided. The cost of equity could be calculated from the capital asset pricing model, using the formula given in the formulae sheet. The current dividend could be calculated using the dividend payout ratio and the current earnings per share value provided in the question. The future dividend growth rate could be calculated on an historical average basis, although there were many errors in its calculation. A number of candidates were unable to distinguish between some of the variables given in the question, for example confusing dividend per share with earnings per share, return on the market with cost of equity, and equity beta with retention ratio.

Even though the current market value of the company (number of shares multiplied by share price) was needed, a number of candidates failed to calculate it. The level of discussion was often limited, although some candidates demonstrated that they were aware of the weaknesses of the valuation models used.

Part (b) asked candidates to calculate the market value, floor value and conversion value of a \$100 convertible bond. Many candidates either failed to answer this part of question 1, or showed in their answers that they did not understand how to calculate the present value of a stream of future cash flows (which is what the market value of a bond is equivalent to).

Candidates needed to calculate the present value of future interest payments plus the present value of the future conversion value (the market value, since conversion was financially preferable to redemption), and the present value of future interest payments plus the present value of the future redemption at par value (the floor value,

since this stream of future cash flows is guaranteed). Some candidates were able to calculate the floor value, but called it the market value. Some candidates were able to calculate the current conversion value, but were not aware that this was used in calculating the conversion premium.

A number of candidates were not aware of the difference between interest rate, cost of debt and share price growth rate and used their values interchangeably. Some candidates introduced an assumed tax rate, when the question made no reference to taxation at all. There were indications of candidates learning a computation method, without acquiring an understanding of the concepts underlying it. Candidates must understand the importance, in financial management, of discounting future values in order to obtain present values, since this is used in investment appraisal, bond valuation, share valuation and company valuation.

Part (c) required candidates to distinguish between weak form, semi-strong form and strong form stock market efficiency, and to discuss the significance to a listed company of its shares being traded on a semi-strong form efficient stock market.

A number of candidates did not understand and could not discuss market efficiency, and very few correctly discussed the significance of semi-strong market efficiency to a company. Some candidates simply picked up on the terms weak, semi-strong and strong and discussed a range of stock market trading conditions, including bull and bear markets and depressed markets. Some candidates were aware of the link between market efficiency and information, but in a very tenuous way, for example saying that only past information was available, rather than saying that share prices fully and fairly reflected past information (weak form efficiency), or saying that investors were aware of current information, rather than saying that share prices fully and fairly reflected all past and public information (semi-strong-form efficiency).

Overall, many answers to question 1 were not of a pass standard.

Question 2

Part (a) of this question asked candidates to calculate the net present value (NPV) of buying a new machine and to advise on its acceptability. Many candidates gained very high marks here.

Common errors (where there were errors) included failing to calculate correctly the weighted average cost of capital of the investing company (for example using the before-tax rather than the after-tax cost of debt in the calculation): failing to use incremental demand as the production volume of the new machine; failing to recognise the cap on production in Year 4 compared to demand; failing to lag tax liability by one year; including scrap value or tax benefits of capital allowances with taxable income; incorrect calculation of balancing allowance; treating initial investment as a Year 1 rather than a Year 0 cash flow; and using annuity factors rather than discount factors in calculating NPV.

A number of candidates lost straightforward marks by failing to comment on the calculated NPV, or by simply saying 'accept' without referring to the NPV decision rule. The reason for accepting an investment project must be clearly explained.

In part (b) candidates were asked to calculate the internal rate of return (IRR) of buying the new machine and to advise on its acceptability. Many candidates gained full marks here. Some candidates lost marks through the incorrect application of linear interpolation in calculating IRR (for example adding instead of subtracting values, or multiplying instead of adding). Some candidates said that both a positive NPV and a negative NPV were needed in order to calculate IRR, when in fact two positive values can be used (resulting in extrapolation, but the extrapolation calculation is identical in structure to an interpolation calculation). A number of candidates lost a straightforward mark by not commenting on their calculated IRR.

Some candidates confused IRR with accounting rate of return (ARR) and as a result gained no credit.

Candidates were asked in part (c) to explain the difference between risk and uncertainty in the context of investment appraisal, and to describe how sensitivity analysis and probability analysis could be used to incorporate risk and uncertainty into investment appraisal. Answers here tended to be weaker than answers to parts (a) and (b).

Many candidates were not able to explain the difference between risk and uncertainty in investment appraisal, offering answers that were founded on interpretations of the words 'risk' and 'uncertainty', or which discussed the various kinds of risk to be found in financial management. The key point is to recognise that risk can be quantified (probabilities can be assigned and outcomes can be predicted) while uncertainty cannot be quantified. Answers that offered numerical examples of sensitivity analysis or probability analysis gained credit, although candidates should note that sensitivity analysis is not a method of measuring or predicting risk.

Question 3

Part (a) asked candidates to analyse and discuss a proposal to increase dividend per share. Many candidates calculated correctly the increased dividend per share and then offered very little by way of discussion in order to gain any further marks.

There were a number of points that could have been discussed, including the finance director's view that the dividend per share 'should be increased by 20% in order to make the company more attractive to equity investors'. Increases in dividends usually lag behind increases in earnings and depend on the dividend policy of a company. It is debatable whether increasing the dividend per share makes a company more attractive to investors. It could be argued, for example, that its existing dividend clientele are satisfied by its current dividend policy. It could also be argued that making a dividend decision without also considering investment and financing needs is foolish: paying an increased dividend and then borrowing to meet investment plans is not advisable for a company as highly geared as the one under consideration here. Other points are discussed in the suggested answer to this question.

Part (b) asked for evaluation and discussion of a proposal to make a \$15m bond issue and to invest the funds raised on a short-term basis until a suitable investment opportunity arose.

Candidates were expected to be aware that finance should be raised in order to meet a specific need and that investing long-term funds on a short-term basis would incur an unnecessary net interest cost. In this case, a highly-g geared company would be choosing to increase its gearing and financial risk, without the prospect of investing the funds in a project offering returns greater than the increased financing cost.

The sector average debt/equity ratio (D/E) was provided, but many candidates chose to calculate capital gearing ($D/(D + E)$) in the mistaken belief that this was the debt to equity ratio. Comparison with the sector average gearing was therefore pointless, since the gearing ratios were on a different basis. Some candidates also calculated incorrectly the interest coverage, dividing interest into profit before tax or profit after tax, rather than into profit before interest and tax.

There were some lucid discussions of the dangers attached to the proposal to make a bond issue and these gained high marks.

It was surprising to see many candidates attempting to calculate the cost of debt (internal rate of return) of the bond issue. The bonds were to be issued and redeemed at par and so their cost of debt was the same as their interest rate, as these unnecessary calculations confirmed (where they were made correctly).

In part (c), candidates were asked to calculate the theoretical ex rights price per share and the amount of finance to be raised by a proposed rights issue, which was intended to reduce gearing and financial risk.

Many candidates were able to calculate the theoretical ex rights price and the finance raised, and went on to calculate the effect of the rights issue on the gearing of the company. Some candidates mistakenly assumed that the proceeds of the right issue would be used to redeem some of the existing debt, but the question did not specify this and in practice this might not be possible. Very few candidates recognised that, just as with the proposal to make a bond issue, there had been no evaluation of the funding needs of the company. Why raise \$4.6m? Why not \$10m? What were the rights issue funds going to be used for? A more concrete plan than raising cash to reduce gearing was needed if shareholder wealth was going to be maximised.

Part (d) asked candidates to discuss the attractions of operating leasing as a source of finance. Many answers offered an explanation of operating leasing, but very little discussion of its attractions as a source of finance to a company. Common points made included the tax deductibility of lease rental payments (although interest payments on debt are also tax-deductible), the flexibility of operating leases, and the way in which operating leases helped to overcome the obsolescence problem. Many answers did not compare leasing as a source of finance with borrowing to buy.

Question 4

Part (a) of this question asked candidates to identify the objectives of working capital management and to discuss the conflict that might arise between them. There were many good answers here and most candidates gained high marks. However, some answers tended to be somewhat general rather than focussing on the objectives of working capital management and some answers were much too long for the three marks on offer.

In part (b) candidates were asked to calculate the cost of a company's current ordering policy and to determine the saving that could be made by using the economic order quantity (EOQ) model. Many candidates gained high marks for their answers to this part of question 4, calculating correctly the ordering costs of both the current and the EOQ policies, and comparing the total costs of each policy to show the saving arising from adoption of the EOQ policy. Many of these comparisons, however, were based on incorrect calculations of the holding costs of each policy.

Some candidates failed to consider the buffer inventory in calculating holding costs. Others used the re-order inventory level as the buffer level, failing to reduce inventory by consumption during the lead time it took for orders to arrive after being placed. Others added the re-order level to order quantity before dividing by two to calculate average inventory level, when only the order quantity is averaged.

Part (c) required candidates to discuss the ways in which a company could improve the management of domestic accounts receivable and many gained full marks here. Candidates failing to gain high marks tended to offer a limited number of possible methods, for example by focussing at length on factoring to the exclusion of internal accounts receivables management methods. Despite the requirement to discuss domestic accounts receivable, some candidates discussed export factoring and exchange rate hedging.

In part (d) candidates were required to evaluate whether a money market hedge, a forward market hedge or a lead payment should be used to hedge a foreign account payable. Some candidates offered discursive answers, for which they gained little credit since the question asked for an evaluation of hedging methods.

Many candidates were unable to calculate correctly the spot and forward exchange rates from the information provided. Many candidates failed to compare all three hedges from a common time horizon perspective, i.e. either from the current time or from three months hence.

Since it was a foreign currency account payable that was being hedged (a liability), the money market hedge involved creating a foreign currency asset (a deposit). The hedging company therefore needed to borrow euros,

exchange them into dollars and place these dollars on deposit. Some candidates offered the opposite hedge, i.e. borrowing dollars and exchanging them into euros.

Overall Performance

Overall performance in December 2007 showed that a significant number of candidates had not prepared adequately for the examination. Candidates who did not study the whole syllabus were putting themselves at a disadvantage, since most areas of the syllabus were examined.

Presentation

There were some reports of scripts with poor presentation (including use of pencil), confusing presentation, missing workings and poor handwriting. Candidates should use black or blue pen when writing their answers, organise their work in a clear and sensible manner, label all their workings and write legibly. Markers cannot reward what they cannot read and making your written work easy to mark will help your marker to give you the credit that you deserve for all of your efforts in preparing for the examination paper.