Examiners' report

F9 Financial Management
June 2008

The examination paper was well-received and positive comments included that it had a good balance between discursive and numerical elements, and that the questions were clearly worded. Almost without exception, candidates answered four questions, although occasionally part of a question was omitted.

Where candidates did not reach a pass standard, the main reason was a lack of preparation or a lack of understanding. Lack of understanding may have been due to omitting some areas of study or covering them in a cursory manner. This is not advisable, since all parts of the syllabus are examinable. Some candidates produced answers with very little discussion, hoping to pass primarily on calculations, which is a very unwise examination strategy. Some candidates gave incomplete answers, for example placing numbers in a formula without completing the calculation, and lost marks as a result. Presentation was a problem for some candidates and some scripts were very hard to read or to make sense of. It is good examination practice to present answers clearly as this helps the marker to mark your examination work.

Question 1

In part (a), candidates were asked to calculate the weighted average cost of capital (WACC) of a company which was financed by equity (ordinary shares), a bank loan and convertible bonds. Answers to this part of the question were of variable quality.

The cost of equity had to be calculated using the capital asset pricing model (CAPM) because there was insufficient data in the question to use the dividend growth model. The risk-free rate of return, the equity beta and the equity risk premium were given, and so the cost of equity could be calculated from the CAPM formula (provided in the formulae sheet). A common error was to confuse the equity risk premium with the return on the market, resulting in a cost of equity less than the cost of debt. Such a result is inconsistent with the risk-return hierarchy.

Many candidates ignored the bank loan, or assumed that it was not relevant, and lost credit as a result.

Finding the cost of debt of the convertible bonds proved to be a challenge for many candidates. Some candidates stated simply that they assumed the bonds were to be redeemed rather than converted and lost marks as a result, even if they calculated correctly the cost of debt of the bond with redemption after eight years. The correct approach was to calculate that conversion was likely to occur, and then calculate the cost of debt using the current market value, the after-tax interest rate, the conversion value after six years and linear interpolation. Students gained credit for any parts of this evaluation that were carried out correctly

The costs of the individual sources of finance were then weighted on a market value basis and added to give the WACC. Many candidates were able to calculate market weights correctly, although some chose to ignore the current bond market price and calculate a market price based on the present value of the conversion value. The WACC is, of course, a percentage value and not a monetary amount.

Credit was given where method was correct but calculation errors were made.

Part (b) asked candidates to discuss the circumstances under which WACC can be used in investment appraisal. Some candidates discussed correctly the dependence of the WACC on the current capital structure and business operations, and therefore on the current financial risk and business risk, of the company, linking this with using the WACC as a discount rate in appraisal of investments that did not affect materially the current financial risk and business risk.

Candidates who were not aware of these restrictions on the use of the WACC in investment appraisal tended to discuss how the WACC is calculated, or to suggest that WACC could be used if a company had debt in its capital

structure. Credit could also have been gained here through discussing risk-adjusted discount rates and the link between project-specific discount rates and the WACC.

Part (c) required candidates to discuss whether the CAPM or the dividend growth model (DGM) offered the better estimate of cost of equity. In order to answer this question, candidates had to have an understanding of the assumptions underlying the two models and the extent to which these assumptions could be challenged as being unrealistic or inappropriate. Weaker answers simply outlined the two models and their constituent variables. Better answers compared and contrasted the two models, and argued for the superiority of the CAPM.

Question 2

Part (a) asked candidates to calculate the current ex dividend share price and the current market capitalisation of a company using the dividend growth model (DGM).

The first step was to calculate the current dividend per share, which surprisingly many candidates found difficult. Only one calculation, multiplying the earnings per share of the company by its payout ratio, was needed, but some candidates used half a page of calculations to produce the same answer. This highlights the importance of being familiar with the accounting ratios included in the F9 syllabus.

The formula for the DGM is given in the formula sheet, and the cost of equity and dividend growth rate were given in the question. Calculating the current ex dividend share price by inserting these values in the formula should therefore have posed no problem. Candidates who ignored or rearranged this formula created unnecessary difficulties for themselves and wasted valuable time. For example, some candidates rearranged the DGM formula into a cost of equity calculation and then called the cost of equity the current share price. This emphasises that candidates must be familiar with the formulae provided in the examination paper.

Finally, the current ex div share price had to be multiplied by the number of shares issued by the company to give its market capitalisation, or total value on the capital market. Surprisingly, some candidates did not understand 'market capitalisation' and offered no answer here for what was a straightforward calculation.

In part (b) candidates were asked to calculate the rights issue price per share, the cash raised by the rights issue, the theoretical ex rights price per share and the market capitalisation after the rights issue.

A significant number of candidates showed that they were unfamiliar with this part of the syllabus and gave answers that gained little credit. Some answers ignored the share price they had calculated in part (a) and assumed a different market price prior to the rights issue, frequently the company's ordinary share par value. Candidates should be aware that rights issues will not be made at a discount to par value. Many 'own error' marks were awarded in marking this part of question 2, following on from an assumed share price. In calculating market capitalisation after the rights issue, many answers neglected to subtract the issue costs.

Part (c) required the use of the price/earnings ratio method to calculate a share price and market capitalisation. Answers to this part of question 2 were often incomplete or adopted an incorrect methodology, for example calculating the price/earnings ratio of the target company when the question did not give the information needed for this. The correct approach is to multiply an earnings per share figure (or total earnings) by a suitable price/earnings ratio (in this case that of the acquirer).

Part (d) asked candidates to calculate and comment on market capitalisation before and after an announcement of expected annual after-tax cost savings, assuming a semi-strong form efficient market. The key thing to remember here is that in such a market, share prices fully and fairly reflect all relevant past and public information. The market capitalisation after the announcement would include the present value of the expected savings, calculated for example by the price/earnings method or by the dividend growth model. Before the announcement, the market capitalisation would not include this information and would be the market

capitalisation immediately after the rights issue had taken place, adjusted for issue costs and the market value of the company acquired. Many candidates did not offer any calculations to support their discussion here, or offered calculations that did not relate to the question asked. Please refer to the suggested answer to this question for more detailed information on appropriate discussion and calculations.

Part (e) asked for a discussion of the factors that should be considered in choosing between equity and debt, with the answer being related to the circumstances of the acquirer and its proposed cash offer. Good answers focused on the circumstances of the company, considered its current capital structure, and discussed such factors as financial risk, current and expected interest rates, security and servicing costs, while weak answers offered a brief list of points with no discussion.

Question 3

Part (a) asked for a discussion of the factors which determine the level of investment in current assets. Although this topic is clearly identified in the F9 Study Guide (C3a), answers often referred incorrectly to working capital funding strategies (C3b). The suggested answer to this question refers to factors mentioned in the F9 Study Guide, such as length of working capital cycle, terms of trade, working capital policy and so on. Answers that discussed these or similar factors gained high marks.

Part (b) asked for a discussion of the ways in which factoring and invoice discounting could help in managing accounts receivable. Many candidates discussed relevant points in relation to factoring and received credit accordingly. Discussions of invoice discounting tended to be variable in quality, with a significant number of students believing incorrectly that invoice discounting meant early settlement discounts.

In part (c), candidates were asked to calculate the size of an overdraft, the net working capital, and the total cost of financing current assets.

The variable quality of the answers indicates a need for candidates to ensure, not only that they are familiar with accounting ratios, but also that they are familiar with the accounting items to which the ratios relate, in this case sales, cost of sales, inventory, trade receivables, trade payables and so on. Many candidates were unable to calculate the inventory turnover period, given the operating cycle, the average collection period and the average payable period. Many candidates were also unable to work backwards from the provided ratios, for example to calculate the level of receivables given the average collection period and the amount of credit sales. Some candidates omitted the overdraft when calculating net working capital, indicating unfamiliarity with the structure of the balance sheet.

Part (d) asked candidates to calculate the total cost of inventory using the economic order quantity model (EOQ) and to evaluate a discount offered by a supplier. Many candidates gained high marks here by offering a comprehensive answer. Candidates who did not gain high marks appeared to be unsure of the meaning of the variables in the EOQ, even though the units of each were clearly specified in the question.

Question 4

Part (a) of this question asked candidates to calculate the net present value (NPV) of a proposed investment. Many answers gained high marks and dealt correctly with most of the issues involved with the calculation, for example inflation of sales and variable costs.

The treatment of working capital investment was a source of regular errors, however. The question specified clearly the timing and the level of working capital investment in relation to sales. Candidates had to calculate the initial and incremental amounts of investment. In the last two years of the investment, declining levels of working capital meant that working capital would be recovered. Many answers put the investment in working capital at the end, rather than at the start, of each year, and included total investment rather than incremental investment.

Another common error was to treat investment in working capital as tax-allowable (and even to call it a fixed cost), when in fact it has no tax effect at all.

Although the question specified straight-line capital allowances, some candidates used 25% reducing balance allowances instead. Some candidates also mistakenly included capital allowances as a cash flow item, rather than (or as well as) capital allowance tax benefits.

In part (b) candidates were asked to calculate the internal rate of return cost (IRR) of the proposed investment. Many answers gained high marks and produced a result consistent with findings in part (a). Markers noted that some candidates made illogical choices of discount rates in their calculations, choosing to work for example with two negative NPV values, rather with one positive and one negative NPV value. While linear interpolation and linear extrapolation use the same mathematical approach, candidates should note that interpolation is more likely to be accurate than extrapolation in calculating IRR.

It was pleasing to note that very few candidates confused IRR with accounting rate of return (return on capital employed).

Part (c) asked for advice on the acceptability of the investment project and discussion of the limitations of the NPV and IRR evaluations performed.

Most answers correctly advised on acceptability in terms that were consistent with their earlier evaluations.

Many answers struggled to discuss the limitations of the evaluations in any depth, tending to offer one or two general criticisms of the NPV and IRR appraisal methods. Better answers discussed the limiting assumptions underlying the values selected for the project variables and the reasons why, for example, fixed costs had been omitted. Since only on investment project was being considered, the advice offered by the two investment appraisal methods was, of course, the same.

In part (d) candidates were asked to discuss how the NPV investment appraisal method contributes towards the objective of maximising shareholder wealth. Few answers were able to explain why accepting positive NPV projects will increase shareholder wealth. The important thing to remember here is that the discount rate used in investment appraisal represents the return required by the company in order to provide satisfactory returns to its sources of finance. Projects with a positive NPV offer a higher return than this and so increase the company's value. Shareholders therefore gain immediately in wealth terms through capital appreciation.

A general discussion of the advantages of the NPV investment appraisal method over other investment appraisal methods was not asked for or required.

Overall Performance

Overall performance in June 2008 showed that a significant number of candidates were inadequately prepared for the examination. Candidates must study the whole syllabus if they wish to be successful in the examination, since all areas of the syllabus can be examined.