Examiner's report
F9 Financial Management
December 2013

General Comments
There were four compulsory questions in the examination, each worth 25 marks. Almost all candidates attempted all four questions and there was little evidence of time pressure.

Many candidates performed particularly well on questions 1a, 1b, 2a, 2c, 2e, 3a and 3b. These questions are all largely numerical in nature, apart from question 2e. The questions candidates found most challenging were questions 1c, 2d, 3d, 4a and 4d. These questions were all largely discursive in nature, apart from questions 2d and 4a. These questions were perhaps challenging because some candidates lacked an understanding of particular syllabus areas.

A number of common issues relating to candidate's answers can be highlighted:

- Some candidates did not read the question requirement clearly and therefore gave irrelevant answers which scored few (if any) marks.
- Poor time management between questions: for example, some candidates wrote too much for the marks on offer.
- Making mistakes identified in previous F9 examiner reports and hence not learning to avoid mistakes already discussed.
- Illegible handwriting and poor formatting of answers.

Specific Comments

Question One(a)
This question required candidates to calculate the net present value (NPV) of an investment project in nominal terms and comment on its financial acceptability. Most candidates did well on this part of question 1.

Most candidates used a pro-forma NPV calculation, with operating cash flows at the start and other cash flows (tax and capital elements) later. This approach helps to avoid errors in the tax treatment of cash flows. However, some candidates wrongly classified incremental working capital as a tax-allowable deduction, resulting in tax calculation errors.

The question required a nominal terms approach and so sales revenue and costs needed to be inflated by the general inflation rate of 4.7% per year. Some candidates incorrectly multiplied each year's figures by 1.047, rather than by 1.047 (year 1), 1.047^2 (year 2), and so on. Some candidates did not know that nominal cash flows included the effects of inflation and used the uninflated cash flows provided in the question as nominal cash flows.

Most candidates correctly put the tax liability one year in arrears. Tax-allowable depreciation (capital allowances) was available on a 25% reducing balance basis and many candidates correctly calculated tax-allowable depreciation and its associated tax benefits. Calculating the tax liability using the alternative approach of subtracting tax-allowable depreciation from net cash flow to give taxable profit, then adding back the tax-allowable depreciation as a non-cash item, received full credit. Some answers were not able to calculate the balancing allowance correctly.

A significant number of candidates were able to calculate correctly both initial and incremental working capital investment, which was based on sales income, and this topic was examined recently, which should have helped. However, errors in calculating working capital investment were the most common error found in candidates' answers. These errors included omitting the first year's investment: calculating working capital investment on a

real terms basis while evaluating nominal terms cash flows; using total rather than incremental working capital investment; failing to reduce working capital investment when sales fell, but rather including the reduction in working capital (cash inflow) as an investment (cash outflow); failing to recover working capital at the end of the investment project, which was said to have an expected life of four years; putting total working capital as an initial investment, and incremental working capital investment as cash income in each year.

Most candidates correctly omitted the market research cost from their NPV calculation. This was a non-relevant cost as it would be incurred regardless of the outcome of the NPV calculation.

The nominal discount rate of 12% was correctly used by most candidates to discount their calculated nominal cash flows.

A comment on the financial acceptability of the investment project was required, and most candidates correctly referred to positive NPV as the reason for approval, sometimes relating this to increasing shareholder wealth. Some candidates lost marks by not referring to NPV or by not making any comment at all on financial acceptability.

Question One(b)

Here, candidates had to calculate the net present value (NPV) of an investment project in real terms and comment on its financial acceptability. Answers tended to be of a slightly lower standard than answers for part (a).

Most candidates knew that a real discount rate was needed and correctly calculated that this was 7% (1.12/1.047) using the Fisher formula from the formulae sheet. Some answers incorrectly inflated the nominal discount rate and used 17% (1.12 x 1.047).

The correct approach was to discount real cash flows with the real cost of capital, so the cash flows given in the question were to be used, as only a general rate of inflation was provided. Some candidates incorrectly discounted the project cash flows they had calculated in part (a) with their calculated real cost of capital, which is incorrect as nominal cash flows must not be discounted with a real cost of capital.

Some candidates correctly used real terms sales revenue and costs, but then wrongly brought forward nominal working capital figures from part (a).

A small number of candidates deflated the nominal after-tax project cash flows from part (a) with the general rate of inflation to give real cash flows. While this approach was given credit, it was not quite correct, since cash flows that had not been inflated were thereby deflated (tax benefits of tax-allowable depreciation), and cash flows that had been inflated with one year's inflation were thereby deflated with a different year's inflation (tax liability in arrears, working capital invested at the start of the year).

Question One(c)

Candidates were asked here to explain ways in which a company's directors could be encouraged to achieve the objective of shareholder wealth. Answers were of variable quality, with some answers not addressing the question that was asked. The question directly addressed section A3e in the F9 Study Guide, which refers to ways to encourage the achievement of stakeholder objectives.

If directors are not consistently seeking to achieve the objective of maximisation of shareholder wealth, then an agency problem exists and ways to encourage directors to achieve the objective can be looked for. In this context the Study Guide refers to reward schemes (such as performance-related pay and share option schemes) and regulatory requirements (such as corporate governance codes of best practice).

Some candidates did not refer to directors at all and discussed ways in which shareholder wealth could be achieved, such as accepting investments with a positive NPV, decreasing a company's cost of capital, increasing dividends per share and so on. Such answers did not address the question requirements.

Question Two(a)

This question asked candidates to calculate the cost of equity using the dividend growth model (DGM). Many answers gained full marks.

Firstly, candidates had to calculate a dividend growth rate. Possible values were the geometric mean historical dividend growth rate (4.0%) and the arithmetic mean historical dividend growth rate (4.0%) over the three-year period, and the most recent annual historical dividend growth rate (4.9%) for 2013. Some candidates wrongly used a four-year rather than a three-year period.

Secondly, candidates had to use the DGM to calculate the cost of equity. This called for the most current dividend per share, the current ex dividend share price and the forecast dividend growth rate. Many candidates gained full marks here, although some candidates got caught up in re-arranging the DGM and some candidates omitted "+g" from $K_e = [D_0 \times (1 + g)/P_0] + g$.

Question Two(b)

This question called for a discussion of whether the dividend growth model (DGM) or the capital asset pricing model (CAPM) should be used to calculate the cost of equity. Many answers struggled to gain full marks.

It may be helpful to remember that the DGM calculates what the cost of equity appears to be in the capital market, while the CAPM calculates what the cost of equity ought to be, given a company's level of systematic risk. The CAPM has a sound theoretical basis and hence is often recommended for calculating the cost of equity, especially as the DGM relies heavily on an accurate forecast of the future dividend growth rate, which is difficult to achieve. In practice, the return predicted by the CAPM can be very different from the return that shareholders actually receive via dividends and capital gains (total shareholder return). Clearly, both models have strengths and weaknesses.

Some candidates also discussed that, in the context of the question, the CAPM could be used to calculate a project-specific cost of equity, while the DGM could not be used for this purpose. Credit was given for this line of discussion.

Question Two(c)

Candidates were asked here to calculate the weighted average cost of capital (WACC) using a cost of equity of 12%. Many candidates gained full marks here.

Since the cost of equity was provided, it did not need to be calculated, although some candidates wasted time in the examination doing this. The cost of debt of the bonds could be calculated using linear interpolation. Most candidates were able to do this successfully, although some candidates used the market value as the redemption value and vice versa. Some candidates calculated the cost of debt on the assumption that the bonds were irredeemable, but the question said the bonds were redeemable in five years' time.

Almost all candidates calculated the market values of equity and debt correctly. Some candidates multiplied their after-tax cost of debt by (1 – T) when calculating the WACC, mistakenly including the tax effect twice.

Question Two(d)

This part of question 2 required candidates to calculate a project-specific cost of equity for a planned joint venture. Many candidates lost marks here because they were not able to use correctly the asset beta formula provided in the formulae sheet.

Candidates needed to ungear the equity beta of the proxy company to an asset beta using the capital structure of the proxy company, regear the asset beta to an equity beta using the capital structure of the investing company, and use this equity beta in the capital asset pricing model (CAPM) to calculate a project-specific cost of equity.

Errors that were made in this calculation included:

- Ignoring taxation, either when ungearing or when regearing
- Using incorrect weightings of equity and debt when ungearing or regearing
- Regearing instead of ungearing and vice versa
- Using the average equity risk premium as the return on the market

Question Two(e)

Candidates were asked to discuss whether changing a company's capital structure could reduce its cost of capital and hence increase its value.

Better answers recognised that the question was directed at section F5 of the Study Guide, which refers to capital structure theories and practical considerations, and responded with a discussion that considered the theories and concepts found there. These theories were the traditional view, the views of Miller and Modigliani, and the market imperfections view. Pecking order theory was not relevant to the question asked. Relevant concepts included business risk, financial risk, gearing, the problems of high gearing and so on.

Weaker answers focused on the relative risk and return of equity and debt finance, making little or no reference to the theories and concepts mentioned above. Weaker answers also tended to be somewhat brief for the marks on offer.

Question Three(a)

The requirement here was for candidates to calculate the total cost of the current ordering policy, the total cost of an ordering policy using the economic order quantity (EOQ), and the net cost or saving of introducing an ordering policy using the EOQ. Many answers gained good marks here.

To calculate the total cost of the current ordering policy, candidates had to calculate and sum the current ordering cost and the current holding cost. The annual ordering cost was based on 12 orders per year, while the annual holding cost was based on average inventory. Average inventory was the sum of buffer inventory and half of the monthly order quantity. Where candidates made calculation errors, these showed a lack of understanding of the calculation process just described, for example including only half of buffer inventory in average inventory, or using annual demand as average inventory, or omitting holding cost completely.

To calculate the total cost of an ordering policy using the EOQ, candidates had to calculate the EOQ and the revised number of orders per year, and then repeat the calculation process already described. In addition to the calculation errors already mentioned, some candidates were not able to calculate the EOQ.

Almost all candidates who calculated the two total costs also calculated the net cost or saving of introducing an ordering policy using the EOQ.

Question Three(b)

The requirement here was for candidates to calculate the net value in dollars of accepting an early settlement discount offered by a supplier.

Candidates had to calculate the purchase cost saving if the early settlement discount were accepted and the increase in finance cost due to paying the supplier 30 days earlier. The purchase cost saving was 1% of the

purchase cost of meeting annual demand. The increase in the annual finance cost was 5% of the reduction in trade payables arising from reducing trade payables days from 60 days to 30 days.

Some candidates ran into difficulties because they included total purchase costs in a comparison of current and revised costs, but only incremental costs and benefits are relevant here, so there was no need to include total purchase costs.

Errors that were made included:

- Treating the reduction in trade payables as a benefit
- Comparing annual benefit with monthly cost, and vice versa
- Including only a benefit, or including only a cost
- Calculating an annual percentage cost, when the question asked for net value in dollars.

Some candidates, having calculated net value of the early settlement discount, went on to discuss whether it should be accepted. No credit was given to such a discussion, however, as the question asked only for calculation.

Question Three(c)

This question asked candidates to discuss how invoice discounting and factoring could aid the management of trade receivables.

Invoice discounting is not the same as factoring and better answers did not make the mistake of discussing them as though they were. Answers making this mistake might, for example, wrongly ascribe to invoice discounting some of the benefits of factoring. It is also important to note that as the question asked how these two services could aid in the management of trade receivables, discussion of the problems associated with either service was not required and was not rewarded. Some candidates wasted valuable examination time in such a discussion, perhaps because they had memorised the answer to a previous examination question on this topic.

Better answers briefly defined invoice discounting and factoring, before discussing some of the benefits covered by the suggested answer. Accelerating cash inflow from trade receivables and helping to solve a cash shortage apply to both services. Potential benefits from factoring can include access to expertise in trade receivables management, a reduction in bad debts, a fall in trade receivables, saving or freeing up management time, and protection from irrecoverable debts.

Question Three(d)

Candidates were asked to identify the objectives of working capital management and to discuss the central role of working capital management in financial management. This question related directly to section C1 in the F9 Study Guide.

Better answers identified profitability and liquidity as the main objectives of working capital management, perhaps briefly explaining the conflict between the two, before focusing on a discussion of the central role of working capital management in financial management, referring perhaps to the importance of cash and cash management, the importance of currents assets to a company, the importance of current liabilities as a source of finance, especially for SMEs, the need to have policies relating to the elements of working capital such as trade receivables and inventory, and so on.

Question Four(a)

Here, candidates were asked to evaluate whether a company should use leasing or borrowing as a source of finance, explaining the evaluation method used. Many candidates struggled to score good marks here.

In explaining the evaluation method used, candidates should have said that selecting the least-cost financing choice required comparing the present value of the cost of leasing with the present value of the cost of borrowing to buy. These present values were calculated using the cost of borrowing as the discount rate, on a before-tax basis as the question said that taxation must be ignored. The cost of borrowing was the correct discount rate as the evaluation was comparing borrowing with leasing. Interest payments were not a relevant cash flow to include in the evaluation, as the cost of borrowing was being used as the discount rate.

While this is the evaluation method covered in the F9 Study Texts, a significant number of candidates did not appear to be aware of it. Some candidates, for example, simply added up the cash flows relating to leasing and borrowing over the operating life of the asset, ignoring both the time value of money and the differences between the amount and timing of the cash flows under the two financing methods.

Calculation errors made by candidates included incorrect timing of the lease rental payments, assuming a discount rate other than the cost of borrowing, including six rather than five lease rental payments, including interest payments, and omitting the purchase cost.

Question Four(b)

This question required a discussion of the attractions of leasing as a source of both short-term and long-term finance. Most answers were of a good standard, discussing operating leasing and finance leasing as sources of finance. Please refer to the suggested answer for an indication of the points that could be discussed.

Question Four(c)

Candidates were asked here to explain briefly the concept of riba (interest) and how returns are made by Islamic financial instruments. Many candidates gained good marks.

The important point is that riba is absolutely forbidden in Islamic finance. Instead, Islamic financial instruments require that the provider of finance play an active role, sharing in the risks and rewards of ownership. Returns could therefore be made, for example, by sharing profits.

Question Four(d)

The requirement here was to discuss briefly the reasons why interest rates may differ between loans of different maturity. Many answers gained low marks because they did not focus on the issue of maturity and discussed other influences on interest rates, sometimes to considerable length. For example, some answers discussed the relationship between interest rates and security, which was not relevant to the issue of maturity. Better answers focused on the structure of interest rates and yield curves, discussing liquidity preference theory, expectations theory and market segmentation.