

Examiner's report

F9 Financial Management

June 2016

The ACCA logo consists of the letters 'ACCA' in a bold, white, sans-serif font, centered within a solid black square.

Introduction

The overall performance at the June 2016 diet was fairly good and there were some excellent individual performances.

General Comments

The examination consisted of two sections. Section A contained twenty objective test questions for a total of 40 marks and Section B contained three questions of 10 marks each, and two questions of 15 marks each (total 60 marks).

Candidates must study the entire syllabus and will not be successful in the examination if they seek to 'question spot' in a few selected syllabus areas.

Candidates must take great care when presenting answers to numerical questions in Section B. It is good examination technique to show all workings, as marks can be gained for applying a correct method even when numerical errors have been made. All workings must, of course, be labelled. All numerical values should be clearly annotated, for example using "m" for millions and "\$" for currency. It is also good examination technique to make sure the question requirement is being addressed. For example, if the question requirement is for a discussion, very few marks are likely to be awarded for a brief list. Similarly, if the question requirement is to calculate, very few marks are likely to be given to a discussion, or an explanation of how to carry out the required calculation.

Section A

It was good to see that almost all candidates attempted all of the questions. Candidates preparing for the F9 examination are advised to work through the specimen exam, past exam papers and questions available from recommended study texts, and to carefully review how correct answers are derived and presented. Section A questions aim to provide a broad coverage of the syllabus and as already mentioned, candidates must therefore study and revise all areas of the F9 syllabus. The following two questions are reviewed with the aim of giving future candidates an indication of the types of questions asked and guidance on dealing with such exam questions.

Example 1 is numerical and illustrates the importance of understanding important techniques in the F9 syllabus. Example 2 is a question requiring knowledge of the causes of interest rate fluctuations and illustrates how all parts of the F9 syllabus can be examined.

Example 1

A company has calculated the NPV of a new project as follows:

	Present value (\$000)
Sales revenue	4,000
Variable costs	(2,000)
Fixed costs	(500)
Corporation tax at 20%	(300)
Initial outlay	<u>(1,000)</u>
NPV	<u>200</u>

What is the sensitivity of the project decision to a change in sales volume?

- A** 12.5%
- B** 6.3%
- C** 10.0%
- D** 5.0%

This question, which addresses part D3b of the F9 Syllabus and Study Guide, has been chosen because performance on this question was unsatisfactory. Sensitivity analysis is an important technique in the Syllabus and candidates must master it. The correct response is as follows:

A Sensitivity = $100 \times 200,000 / ((4,000,000 - 2,000,000) \times 0.8) = 12.5\%$

The project decision will depend upon the NPV of the new project, so we need to calculate the sensitivity of the NPV to a change in sales volume. A change in sales volume affects sales revenue and variable costs, but not fixed costs. The sensitivity of the NPV to a change in contribution must therefore be calculated. However, a change in contribution will cause a change in the corporation tax liability, so it is essential that the after-tax contribution be considered.

Contribution = $4,000,000 - 2,000,000 = \$2,000,000$

After-tax contribution = $2,000,000 \times 0.8 = \$1,600,000$

Sensitivity = $100 \times \text{NPV} / \text{PV of project variable} = 100 \times 200,000 / 1,600,000 = 12.5\%$

- B** Incorrectly using sales revenue after tax
Sensitivity = $100 \times 200,000 / (4,000,000 \times 0.8) = 6.3\%$
- C** Incorrectly using contribution before tax
Sensitivity = $100 \times 200,000 / 2,000,000 = 10.0\%$
- D** Incorrectly using sales revenue and ignoring corporation tax
Sensitivity = $100 \times 200,000 / 4,000,000 = 5.0\%$

Future candidates must appreciate the importance of corporation tax in the context of investment appraisal. A common error in this question was that candidates ignored the tax implications of the project variables they were using.

Example 2

Which of the following statements concerning the causes of interest rate fluctuations is correct?

- A** Liquidity preference theory suggests that investors want more compensation for short-term lending than for long-term lending
- B** According to expectations theory, the shape of the yield curve gives information on how inflation rates are expected to influence interest rates in the future
- C** An inverted yield curve can arise if government policy is to keep short-term interest rates high in order to bring down inflation
- D** Market segmentation theory suggests long-term interest rates depend on how easily investors can switch between market segments of different maturity

This question, which addresses part G2c of the Syllabus and Study Guide, has been chosen because many candidates selected an incorrect response. The correct response is as follows:

- C** An inverted yield curve can arise if government policy is to keep short-term interest rates high in order to bring down inflation

The term structure of interest rates suggests that the yield curve normally slopes upwards, so that debt with a longer term to maturity has a higher yield than short-term debt. Occasionally, the yield curve can be inverted, indicating that the yield on short-term debt is higher than the yield on longer-term debt. One of the reasons why this can happen is because government policy has increased short-term interest rates with the objective of reducing inflation, an action which falls in the area of monetary policy.

The incorrect responses are now considered.

- A** Liquidity preference theory suggests that investors want more compensation for short-term lending than for long-term lending

Liquidity preference theory seeks to explain the shape of the yield curve. It suggests that investors prefer to have cash now, rather than lending cash to borrowers, and that they prefer to have their cash returned to them sooner rather than later. The compensation that investors require for lending their cash increases therefore with the maturity of the debt finance provided. Liquidity preference theory does not therefore suggest that investors want more compensation for short-term lending than for long-term lending, in fact the opposite.

- B** According to expectations theory, the shape of the yield curve gives information on how inflation rates are expected to influence interest rates in the future

Expectations theory suggests that the shape of the yield curve depends upon the expectations of investors regarding future interest rates. An upward-sloping yield curve indicates an expectation that interest rates will rise in the future, while a downward-sloping yield curve indicates that interest rates are expected to fall in the future. Expectations theory does not therefore provide information on how inflation rates are expected to influence interest rates in the future.

- D** Market segmentation theory suggests long-term interest rates depend on how easily investors can switch between market segments of different maturity

Market segmentation theory suggests that the borrowing market can be divided into segments, for example the short-term end and the long-term end of the market. Investors in each segment remain in that segment and do not switch segments because of changes in factors influencing particular segments. The shape of the yield curve relating to each segment depends on the balance between the forces of supply and demand in that segment. Market segmentation theory does not therefore suggest that long-term interest rates depend on how easily investors can switch between market segments, since it states that investors do not switch between segments.

Future candidates must appreciate that questions can draw upon any part of the syllabus. This example illustrates the importance of understanding the factors influencing interest rates.

Section B

Question One

This question was from the working capital management part of the syllabus and many candidates gained reasonable or good marks on it. The requirement was to evaluate whether a company was overtrading and to discuss how overtrading might be overcome.

The question provided financial information for the company for each of two years and average values from similar companies for several accounting ratios. Up to 4 marks were available for calculations and many candidates picked up straightforward marks by calculating these accounting ratios for the company for each of the two years. These calculated ratios allowed candidates to review how they had changed for the company from one year to the next and also to compare them with the average values from similar companies. Weaker answers only calculated accounting ratios for one year, while some candidates wrongly assumed that the average values from similar companies were accounting ratios for the company.

A good approach to answering this question was to identify the signs of overtrading, also known as undercapitalisation, and then look for them with respect to the company under consideration. For example, overtrading is characterised by a rapid growth in sales income and an increase reliance on short-term funding, and these two features could easily be identified from the financial information provided, and from calculated accounting ratios and growth rates. Adopting this approach gave candidates' answers a clear structure and helped them to remain focused on the question requirement.

Some answers did not focus on the question requirement regarding overtrading and instead went through the calculated accounting ratios one by one, stating simply if they had gone up or down, or if they were different from the average values provided. At this stage in their studies, candidates need to have moved on from being able to calculate accounting ratios to being able to interpret what accounting ratios are saying, both individually and collectively.

The final part of the requirement was to discuss how overtrading could be overcome. Better answers addressed the twin issues of the level of business activity and the need for long-term finance, suggesting for example that growth be restrained to allow working capital and sales to

come back into balance, and that long-term finance be sought to urgently reduce reliance on short-term finance. Marks were also awarded to suggestions that working capital management could be improved.

Although the question said to assume that there were 360 days in one year, some candidates used 365 days, emphasising once again the need to read the question carefully.

Question Two

This question was from the business valuations part of the syllabus.

Question 2a asked candidates to calculate the value of a company using the dividend growth model (DGM), the price/earnings ratio method (PER method) and the net assets method. Answers to this question were often fairly good.

A common error was converting values to a per share basis, calculating the value of a share and then multiplying the calculated share price by the number of shares to give the value of the company. This meant that candidates were dividing by the number of shares and then multiplying by the number of shares, which wasted time. It was an error because the question did not provide the nominal value of the ordinary shares and therefore the number of ordinary shares could not be calculated. Answering the question did not need this information. Future candidates should ensure they can perform valuation calculations both on a per share basis and on a whole company basis, as required by the context of the examination question. Time in the examination is precious and should not be wasted.

Most students were able to provide a reasonable valuation using the DGM, although some students had difficulty in calculating the geometric average dividend growth rate. This is a calculation that can easily be practiced in preparing for the examination. Some answers incorrectly used the 20X2 dividend in the DGM rather than the 20X6 dividend.

Some candidates incorrectly used dividends rather than profit after tax (earnings) in the PER method calculation. Some candidates made the mistake of subtracting preference dividends from the earnings before applying the PER method. This is a mistake because it implies that a part of earnings will never grow. Answers that used forecast earnings rather than current earnings received full credit.

Many candidates included goodwill in their net assets valuation, but this should be excluded.

Question 2b required candidates to explain the efficient market hypothesis (EMH) and discuss its implications for the directors of a company listed on a semi-strong form efficient stock market. Answers to this question were variable in quality. Many candidates struggled to provide a clear explanation of the EMH, which states that share prices fully and fairly reflect all relevant and available information.

If share prices on a stock market fully and fairly reflect all past information, so that it is not possible to make abnormal gains from trading shares by studying past information, the stock market is described as weak form efficient. This does not mean, as some candidates claimed, that only past information is available on the stock market, or that the stock market is slow at processing information.

If share prices on a stock market fully and fairly reflect all past and public information, so that it is not possible to make abnormal gains by studying such information, the stock market is described as semi-strong form efficient. If share prices on a stock market fully and fairly reflect all information, so that it is not possible to make abnormal gains from trading shares using any information, whether public or private, the stock market is described as strong form efficient.

As for the implications of the EMH for the directors of a company listed on a semi-strong form efficient stock market, an important thing to remember is that share prices are fair prices. Ignoring insider information, there are no bargains on the stock market because all shares are fairly priced. There are therefore no undervalued companies on the stock market that might be a target for a takeover bid.

Question Three

This question was from the risk management part of the syllabus. Answers to 3a were often fairly good, while answers to 3b tended to be variable in quality.

Question 3a required candidates to use information provided to advise a company on the best way to hedge two future transactions. These transactions were a receipt and a payment in the same foreign currency on the same future date, but many candidates did not net them to leave one smaller amount to hedge. Netting is an internal foreign currency risk hedging technique that should be used before turning to more costly external hedging techniques.

The information provided in the question could be used to evaluate a forward exchange contract, a money market hedge and a lead payment. Many candidates did not recognise that a lead payment was a possible hedging technique. Most candidates were able to make good progress in evaluating a forward hedge and a money market hedge.

The most common mistake made by candidates was selecting the wrong exchange rates to use in their hedging evaluation. It is essential that candidates understand the difference between bid and offer exchange rates and how they can be recognised.

Credit was also given to suggestions that the foreign currency risk faced by the company might be hedged using derivatives such as currency futures or currency options.

Question 3b asked candidates to discuss the different kinds of exchange rate risk that might be faced by a company and most candidates correctly identified transaction risk, translation risk and economic risk. However, fewer candidates were able to offer clear descriptions of these risks as the basis for discussion, particularly economic risk. Future candidates should ensure they understand the nature of these risks. Recognising what is at risk is a good place to start an answer.

Question Four

This longer-form question was drawn from the business finance part of the syllabus. Many candidates gained high marks on 4a, while doing less well on 4b.

Question 4a asked candidates to calculate the after-tax weighted average cost of capital (WACC) of a company on a market value basis before and after the issue of new debt. Before the new issue

the company had three sources of finance.

Most candidates were able to calculate correctly the cost of equity using the capital asset pricing model and the equity market value, although some candidates incorrectly included reserves when calculating the equity market value.

Many candidates were able to calculate correctly the after-tax cost of debt of 7% loan notes by using linear interpolation, based on sensible cost of debt estimates such as 4% and 5% (the after-tax interest payment was \$5.25), although some candidates used extreme values such as 1% and 20%. These extreme values give a poor estimate of the cost of debt and should be discouraged. Some candidates had difficulty laying out the interpolation calculation and it should be remembered that it is usual to make the current loan note market value negative, representing a purchase, and the interest payments and redemption value positive, representing future income.

Many candidates correctly used the after-tax interest cost of the bank loan as an approximation for its after-tax cost of debt. As the bank loan was a non-current liability, it could not be ignored in calculating the WACC, although some candidates, without explanation, omitted it.

The question called for a market value basis WACC and many candidates were able to calculate this.

Question 4b required candidates to discuss two ways in which small- and medium-sized entities (SME) could raise finance in order to overcome the funding gap and the maturity gap.

Candidates had to understand the funding gap and the maturity gap in order to answer this question. The funding gap refers to the difficulty in gaining finance between start-up and listing (say), while the maturity gap refers to the difficulty in obtaining medium-term finance when SME assets are primarily longer-term in nature. Better answers therefore focused on medium- and longer-term finance, rather than short-term finance. The F9 syllabus refers to business angel financing, government assistance, supply chain financing and crowdfunding / peer-to-peer funding, although any sensible funding source was given credit.

Question Five

This longer-form question was from the investment appraisal part of the syllabus.

Many candidates did very well on 5a, which required them to calculate the expected net present value (ENPV) of a planned investment over 4 years. They calculated correctly the mean values of selling price per unit and conversion cost per unit, and the expected values of sales income and conversion cost. Some candidates incorrectly treated annual fixed costs as fixed costs per unit.

Investment appraisal calculations must be correct as to the timing of tax-allowable depreciation (TAD) and tax cash flows. The question said corporation tax was payable in the year in which it arose. Some candidates incorrectly had tax liabilities and/ or TAD benefits payable one year in arrears. Timing errors can easily be avoided if the requirements of the question are understood and followed. Although the question required candidates to use straight-line TAD, some answers used 25% reducing balance TAD instead, or straight-line TAD over 4 years instead of the 10 years specified in the question.

Question 5b asked candidates to calculate the effect on the ENPV of continuing production and sales beyond the first four years and to comment on the financial acceptability of the planned investment. Many candidates calculated the present value of additional years of production, some stopping after 10 years because this was end of the period over which the cost of the initial investment was depreciated, while others adopted a perpetuity approach. Having carried out calculations on the effect on the ENPV, some candidates failed to comment on the financial acceptability of the planned investment.

Question 5c asked candidates to critically discuss using probability analysis in incorporating risk into investment appraisal and this question was often not answered well. Some candidates were not clear about the difference between risk and uncertainty in the context of investment appraisal, namely that risk can be quantified whereas uncertainty cannot. It is essential to understand this difference. In a critical discussion of probability analysis, these two terms must be used very carefully. Risk can be quantified by assigning probabilities to project variables and project outcomes. Probability analysis leads to calculating the ENPV of a planned investment, calculating the probability of the worst outcome, calculating the probability of a negative NPV and so on. Probability analysis has a much wider scope than an expected value analysis, such as was carried out in question 5a.