



Examiner's report

F9 Financial Management

March 2018

General comments

The F9 Financial Management exam is offered in both computer-based exam (CBE) and paper-based exam (PBE) formats. The structure is the same in both formats, but the CBE delivery model means that candidates do not all receive the same set of questions. In this report, the examining team share observations from the marking process, highlight strengths and weaknesses in candidates' performance, and offer constructive advice for future candidates.

- Section A objective test questions – we focus on two specific questions that caused difficulty in this sitting of the exam.
- Section B case-based objective test questions – here we look at the key challenge areas for this section in the exam.
- Section C constructed response questions - here we provide commentary around some of the main themes that have affected candidates' performance in this section of the exam, identifying common knowledge gaps and offering guidance on where exam technique could be improved, including using CBE functionality in answering these questions.

Performance in the March 2018 examination diet was fairly good and there were some good individual performances. Congratulations to those candidates who were successful in this examination diet. If you were not successful, we hope that you will study the content of this report carefully as part of your preparation for your next attempt.

Unfortunately, there were again some candidates who were clearly underprepared for an examination in Financial Management at this level. It is worth emphasising once again that candidates sitting this examination must study the whole of the syllabus to prepare themselves adequately for this assessment of Financial Management skills.

Overall, candidates were well-prepared in some areas of the syllabus, particularly those that have featured regularly such as calculating WACC or NPV, but less well prepared in others. In addition, while candidates continued to be well prepared in techniques requiring calculation, they were less well-prepared in the requirements found in Section C for discussing knowledge and explaining terms and concepts.

Section A

The objective test questions in Section A aim for a broad coverage of the F9 syllabus, hence all areas of the syllabus must be studied. Candidates preparing for the F9 examination are therefore advised to work through as many practice objective test questions as possible, reviewing carefully how correct answers were derived in any areas where they have uncertainty.

The following 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 reading the question carefully and understanding the difference between an asset beta and an equity beta.

Example 2 is a question testing understanding of business valuations.

Example 1

Leah Co is an all equity financed company which wishes to appraise a project in a new area of activity. Its existing equity beta is 1.2. The industry average equity beta for the new business area is 2.0, with an average debt / debt + equity ratio of 25%. The risk-free rate of return is 5% and the market risk premium is 4%.

Ignoring tax and using the capital asset pricing model, calculate a suitable risk-adjusted cost of equity for the new project.

In this case, candidates should ignore the existing equity beta of 1.2 and use the industry average equity beta of 2.0. This proxy beta needs to be ungeared.

$$\beta_a = 2 \times (75/100) = 1.5$$

The asset beta does not need to be regarded.

Using CAPM, $k_e = 5 + 1.5 \times 4 = 8.96\% = 11\%$.

Example 2

Alpha Co and Beta Co are two companies in different industries who are both evaluating the acquisition of the same target company called Gamma Co.

Gamma Co is in the same industry as Alpha Co.

Alpha Co has valued Gamma Co at \$100m but Beta Co has only valued Gamma Co at \$90m.

Which of following statements would explain why Alpha Co's value of Gamma Co is higher?

- A Alpha Co has used more prudent growth estimates
- B Beta Co could achieve more synergy
- C Beta Co is a better negotiator than Alpha Co
- D Gamma Co is a direct competitor of Alpha Co

The correct response is D.

If Alpha Co used more prudent growth estimates, this would reduce the value of Gamma Co.

If Beta Co could achieve more synergy, this would increase the value that Beta Co has placed on the company.

Negotiation skills will determine the final price paid for Gamma Co, not the initial valuation.

By eliminating a competitor, there is synergy potential for Alpha meaning they would be prepared to pay more for Gamma than Beta would, therefore statement D is correct.

Section B

Similarly to Section A, questions can come from any area of the syllabus.

General comments

Candidates should read the question carefully and follow the instructions on how to answer the question, for example if a question asks the candidate to select two correct statements, then marks can only be awarded if two statements have been selected. There is no partial marking, so an answer which only selects one statement will be awarded no marks. A candidate who selects three statements will also receive no marks.

In addition, when answering a number entry question, candidates must ensure they are entering their answer in the correct format as stated in the requirement.

Issues that were noted under specific syllabus areas are as set out below.

Investment appraisal

There continue to be some common themes for errors made by some candidates on numerical investment appraisal questions. For example, some candidates do not identify correctly relevant cash flows for an investment project, or make mistakes with respect to the timing of future cash flows.

Additionally in a capital rationing questions, a number of candidates appear to have not considered the cash outflows in selecting their investment projects, instead only considering the cash inflows.

Future candidates must read the question carefully to identify the correct timing of all project cash flows.

When calculating the sensitivity of a NPV appraisal to sales volume, all relevant cash flows affecting by a change in sales volume need to be considered by candidates.

One other area which caused difficulty for some candidates was selecting the appropriate discount rate to be used in a lease versus buy evaluation.

Business valuation

One common error was not excluding internally generated goodwill from an assets-based valuation of a company.

Another error was from candidates who did not seem to know how to calculate a conversion premium.

Price earnings ratio questions caused difficulties for some candidates, one particular issue being the need to deduct preference dividends before applying a price earnings multiple.

A question which caused particular difficulty was one which required understanding of the Gordon growth model and the dividend growth model and the inputs, showing that a number of students may be happy to calculate using the formulae, but they do not have a full understanding of these models.

Risk management

It was common for candidates to make errors through lacking understanding of the features of risk management derivatives. This was from both a foreign exchange and an interest rate perspective, but particularly noticeable for questions on interest rate derivatives and especially interest rate options. This is a common area of difficulty noted across a number of recent sessions, so future candidates are encouraged to pay particular attention to this part of the syllabus.

In questions on foreign exchange hedging it remains common to see errors occurring from candidates selecting the incorrect exchange rate and not time apportioning interest rates in a money market hedge calculation.

Candidates also struggled with a question requiring understanding of the causes of interest fluctuations and the underlying theories. Future candidates should be aware that they can be tested on these theories listed in the study guide.

There was one further area relating to interest rates which candidates struggled with which was understanding of gap exposure and the significance of the types of gap for the company.

Financial management environment

A lack of understanding how a company could introduce measures to reduce stakeholder conflict and also what a company should do to maximise shareholder wealth led to errors for this part of the syllabus.

Section C

The main issue arising from candidates' responses to Section C questions is that, in general, candidates perform much better on calculation-based questions than they do on discursive (discussion-based) questions.

It is in section C of the examination that candidates have the opportunity to display deeper knowledge of topics. While there were many good or reasonable answers to most parts of questions, there were too many answers to discursive questions that displayed little or no knowledge of Financial Management. Discursive questions can be worth up to 10 marks and it is particularly concerning that some candidates simply did not attempt them.

It is essential that question requirements are read carefully and that candidates directly address these requirements. Previous examiner's reports have emphasised the need for candidates to

address the requirements in front of them and to avoid answering the question they would have preferred to have been asked. Candidates should regularly check back to the requirement before them to ensure their answer continues to address it.

For example, if the requirement is to calculate and comment, then candidates must make a comment based on the calculations they have made. A comment need be no more than a few words, but it should be justified or explained. If calculations show a positive NPV, simply writing 'accept' will not gain a mark, while writing 'accept the investment project because it has a positive NPV' will be rewarded. Furthermore, if the requirement is to comment, writing more than a few words is likely to be wasting valuable time. Making no comment at all will, naturally, not gain any marks.

If the requirement is to discuss, then candidates must do more than simply list a few key words or phrases. In addition, a topic might need to be discussed from more than one perspective, or arguments for and against might need to be offered.

Candidates must exercise good time management in the examination, which at this level can be a challenge to complete in the time allowed. In particular, candidates must allow enough time to attempt the discursive parts of questions in section C.

One important point is that candidates must use the information given in a question. If a question specifies that the tax liability is settled in the year in which it arises, then it is incorrect to delay tax liabilities by one year or to delay tax-allowable depreciation (TAD) benefits by one year. Note also that tax liabilities and TAD benefits must also have the same timing treatment, that is the timing treatment should not be inconsistent. Similarly, if a question specifies TAD on a straight-line basis, it is incorrect to use a 25 per cent reducing balance basis instead. These are examples of avoidable errors, which might be the difference between passing and failing the examination.

In this examination diet candidates were presented with Section C questions drawn mainly from the areas of:

- Investment appraisal techniques
- Allowing for inflation and taxation in DCF (discounted cash flow)
- Adjusting for risk and uncertainty in investment appraisal
- Specific investment decisions
- Sources of and raising business finance
- Estimating the cost of capital
- Sources of finance and their relative costs
- Capital structure theories and practical considerations

Investment appraisal techniques

Candidates continue, in general, to do well on investment appraisal questions requiring NPV calculations. Many candidates score good marks here and sometimes full marks.

The following errors were made by some candidates:

- Incorrectly placing initial investment at year 1 rather than year 0.
- Incorrectly including sunk costs as relevant cash flows.
- Placing the residual value in the incorrect year.
- Inflating relevant cash flows incorrectly, for example by applying only one year's inflation to unit prices or unit costs which are more than one year in the future.
- Placing tax-related cash flows in an incorrect time-period.
- Omitting final-year tax-related cash flows which are payable one year in arrears.
- Omitting initial working capital investment, or calculating incremental working capital investment incorrectly, or failing to correctly recover working capital investment.
- Incorrectly treating TAD as a cash flow benefit, or failing to add back TAD when it was used to calculate a taxable profit figure.
- Not justifying financial acceptability comments, for example by not referring to relevant decision rules (see earlier comment).

Improvement is needed in relation to aspects of investment appraisal needing discussion. For example, in this examination diet one part-question required candidates to discuss the superiority of DCF versus non-DCF investment appraisal methods. Candidates lost marks by discussing NPV versus IRR, or by not discussing non-DCF methods, or by simply not offering enough discussed points to collect the marks available.

Allowing for inflation and taxation in DCF

The ability to apply and discuss real-terms and nominal-terms approaches to investment appraisal was tested at this diet. Studying previous questions on this topic such as Pelta Co from September/December 2017 can aid understanding of the calculations needed by these investment appraisal techniques.

There is confusion amongst some candidates as to the difference between the two approaches and how to apply them. Even where candidates knew there was a difference, it was often incorrectly stated that a real-terms approach ignores inflation. Candidates must understand that in a nominal-terms approach, nominal cash flows are discounted by a nominal cost of capital, while in a real-terms approach, real cash flows are discounted by a real cost of capital. Real cash flows are either nominal cash flows deflated by the general rate of inflation, or cash flows that have not been inflated because a general rate of inflation applies to all project cash flows and specific inflation is not present.

Adjusting for risk and uncertainty in investment appraisal

Candidates must be able to apply probability analysis to investment projects. They should be able to prepare a joint probability table and use it to calculate an expected net present value (ENPV). Joint probabilities are multiplied together, while related cash flows or their present values are added together. In this examination diet, faced by a requirement to use a joint probability table, many candidates chose instead to calculate ENPV from average annual cash flows. As a result,

they had great difficulty in meeting the requirements to calculate the probability of a negative NPV and the NPV of the most likely outcome. Some candidates mistakenly thought that the probability of a negative NPV was the same as the sensitivity of the NPV to a change in the year one cash flows. It was a cause for concern that some candidates, while labelling the sum of the cash flows as an ENPV, only applied probabilities and did not discount the project cash flows.

This area of the syllabus also requires candidates to be able to discuss the usefulness of probability analysis in assisting investment decisions. Simply stating 'the ENPV is positive so accept the project' is not an appropriate comment for a one-off investment project because ENPV is a mean or average value arising from many repetitions of the project. Using probability analysis, the investment decision should consider not only the ENPV, but also the risks highlighted by the analysis.

The need for good examination technique was highlighted in this examination diet by a question that required candidates to discuss TWO out of three methods of adjusting for risk and uncertainty in investment appraisal (simulation, adjusted payback and risk-adjusted discount rates). Some candidates lost valuable time in the examination by discussing all three methods. By contrast, some answers were very brief and did not offer enough discussed points to collect the marks that were available.

Specific investment decisions

Candidates should be able to evaluate leasing and borrowing to buy using the before- and after-tax costs of debt and questions in this examination diet addressed this topic area. Some candidates inserted invested income figures to create a positive NPV, or invented a discount rate rather than use the provided cost of borrowing, or stated that both options should be rejected because they generated negative NPVs: these actions suggest a need to study this part of the syllabus in greater detail.

One error that occurred was treating interest payments as a relevant cash flow in the borrowing to buy evaluation. Candidates must remember that interest is never included in an NPV evaluation and that the cost of financing is included in the discount rate, in this case the cost of borrowing.

Sources of and raising business finance

This part of the syllabus requires candidates to be able to identify and discuss methods of raising long-term Islamic finance. One part-question in this examination diet required candidates to discuss TWO Islamic finance sources as alternatives to a rights issue or a loan note issue. Many candidates gained marks from general comments relating to the forbidding of riba, or the forbidding of business in proscribed areas, or the need to share profit and loss. Some candidates were unsure of the names of Islamic finance sources, while making reasonable attempts to outline the natures of Mudaraba, Sukuk, Musharaka and Ijara as potential sources.

Estimating the cost of capital

Questions in this examination diet required candidates to calculate a company's weighted average cost of capital (WACC) and many candidates gained good marks. Errors that led to candidates scoring less than full marks included:

- Errors in calculating the cost of equity using the dividend growth model (DGM), such as using the cum div instead of the ex div share price, failing to use the current dividend, subtracting instead of adding the dividend growth rate, and calculating the dividend growth rate incorrectly.
- Errors in calculating the cost of equity using the capital asset pricing model (CAPM), such as using the equity risk premium as the return on the market, and adding the risk-free rate of return to the equity beta before multiplying by the equity risk premium.
- Errors in calculating the after-tax cost of debt of convertible loan notes using linear interpolation, such as using the before-tax interest payment in the IRR calculation, using nominal value instead of market value at year zero, not calculating conversion value, and not stating why conversion might be preferred to redemption.
- Applying an after-tax $(1-t)$ adjustment to an already after-tax cost of debt in the WACC calculation.

Studying previous questions on this topic such as Tufa Co from September/December 2017 will help future candidates avoid these mistakes.

One examination point worth making is that decimal places can be important when dealing with growth rates, share prices and percentage costs of sources of finance.

Sources of finance and their relative costs

One question in this examination diet required candidates to assess the impact of sources of finance on financial position, financial risk and shareholder wealth using appropriate measures including ratios such as gearing and interest cover. Some candidates had difficulty calculating the theoretical ex rights per share, for example by inverting the terms of the rights issue or by miscalculating the rights issue price. Some candidates had difficulty calculating earnings per share (EPS) after a rights issue or a loan note issue, for example using retained earnings from the statement of financial position rather than profit after tax from the statement of profit or loss. Even after calculating EPS correctly, some candidates were not able to use the price/earnings ratio provided in the question to calculate a share price.

While interest cover was usually calculated well, debt/equity ratios were often calculated incorrectly, particularly for the rights issue. Some candidates incorrectly compared their calculated $\text{debt}/(\text{debt} + \text{equity})$ ratios with the average debt/equity ratio in the question.

Evaluations of whether a rights issue or a loan note issue should be used to fund a business expansion were of variable quality and the requirement to 'use calculations to evaluate' was sometimes ignored. As the requirement indicated that evaluation and discussion had to be based on calculations, answers offering only discussion were not appropriate, for example general discussion of the relative risk and cost of equity and debt, or of the creditor hierarchy.

Capital structure theories and practical considerations

One question in this examination diet related to this syllabus area and required candidates to discuss if a change in capital structure following conversion of convertible loan notes would increase or decrease a company's WACC. Recognising that both gearing and financial risk would fall following conversion, this discussion could be approached by considering the insights offered by capital structure theory, such as the traditional view and the views of Miller and Modigliani, linking this discussion to a consideration of the company's gearing position. However, some candidates made no reference to capital structure theory at all, while others did not recognise the connection between capital structure and gearing. A common problem was candidates offering too few points for the marks available.

Spreadsheet and Word Processing Technique

There was a slight improvement in this diet in terms of the way in which candidates presented their CBE answers within spreadsheets. More candidates included workings and labelling of entries in spreadsheets was better. Some candidates simply inserted calculated figures in a spreadsheet, making the marker's task of checking their workings extremely difficult.

Candidates must remember that it is essential for their work to be presented in a way that is easy for the marker to read and understand. The contents of a cell, for example, should be readable without requiring the marker to increase column width, while text in a cell should be readable without the need to scroll across the entire spreadsheet.

Whatever examination format is being taken, it is essential that workings and supporting calculations are shown and clearly labelled. While formulae can be used in cells to perform calculations, care must be taken that formulae are entered correctly. If markers can see the formulae in cells, they can apply the own-figure rule where appropriate. However, if cells contain calculated figures with no supporting calculations, rather than formulae, the own-figure rule cannot be applied.

Candidates must note that word-processed discursive answers, sub headings could be used to give structure and clarity to a discursive answer, with the sub-headings being linked to the question requirement.

Guidance and Learning Support resources to help you succeed in your exam

Preparing for the F9 exam may appear daunting but there are many resources available to help you. There are many technical articles available on the topics in this report. In addition, the past exams referred to, and more, are available for your use. You should refer to these throughout your studies. Please make sure that you visit the ACCA's website and look at everything available to you. There are also plenty of support materials to help you feel confident about taking your exams on CBE.

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