

Examiner's report

F9 Financial Management

December 2014



General Comments

The F9 examination paper consisted of two sections. Section A contained 20 multiple-choice questions worth two marks each. Section B contained three questions worth 10 marks each and two questions worth 15 marks each, and tested the understanding of candidates in more depth. Both sections addressed all areas of the syllabus and all questions in the examination paper were compulsory. This was the first examination under this new format.

This report now considers each section in turn and focuses on key learning points.

Specific Comments

Section A

It was pleasing to see that almost all candidates answered all questions in this section of the examination paper.

As the questions in Section A draw on the whole syllabus of F9, no area of the syllabus can be neglected when studying and preparing for this examination. Two questions from this section of the examination paper are now reviewed here, with the objective of helping future F9 candidates to understand the kinds of questions that can be asked, as well as looking at the relevant areas of the F9 syllabus. These two questions have been selected because many candidates were unable to determine the correct answer to them.

Question 10

Which of the following statements concerning working capital are correct?

- 1 Working capital should increase as sales increase
 - 2 An increase in the cash operating cycle will decrease profitability
 - 3 Overtrading is also known as under-capitalisation
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- A 1 and 2 only
 - B 1 and 3 only
 - C 2 and 3 only
 - D 1, 2 and 3

The correct answer is D, that all three statements are correct. Many candidates chose answers B or C rather than answer D.

An increase in the cash operating cycle leads to an increase in the period for which finance needs to be used to support business operations, and hence, all things being equal, an increase in finance charges and a decrease in profitability. Statement two is therefore correct.

Statement three is true by definition, since overtrading means that a company or organisation has insufficient capital to support its level of business activity, i.e. it is under-capitalised.

This leads to the idea that there is a relationship between the level of working capital and the level of business activity, so that as the level of business activity (sales) increases, the amount of working capital should increase as well, if overtrading is to be avoided. Statement 1 is therefore correct.



Question 17

The following are extracts from the financial position statement of a company:

	\$000	\$000
Equity		
Ordinary shares	8,000	
Reserves	<u>20,000</u>	
		28,000
Non-current liabilities		
Bonds	4,000	
Bank loans	6,200	
Preference shares	<u>2,000</u>	
		12,200
Current liabilities		
Overdraft	1,000	
Trade payables	<u>1,500</u>	
		<u>2,500</u>
		<u>42,700</u>

The ordinary shares have a nominal value of 50 cents per share and are trading at \$5.00 per share. The preference shares have a nominal value of \$1.00 per share and are trading at 80 cents per share. The bonds have a nominal value of \$100 and are trading at \$105 per bond.

What is the market value based gearing of the company, defined as prior charge capital/equity?

- A 15.0%
- B 13.0%
- C 11.8%
- D 7.3%

The correct answer is A, that gearing is 15%. Many candidates chose answers B, C or D rather than answer A.

In order to calculate the correct answer to this question, the definition of gearing given in the question must be used, market values must be calculated (where possible), and the concept of prior charge capital must be understood. In this case, the prior charge capital consists of bonds, the long-term bank loan and preference shares. Preference shares are included with prior charge capital, even though they pay a dividend rather than paying interest.

The correct answer A is calculated as follows:

Market value of equity = \$8m x (\$5.00/\$0.5) = \$80 million

Market value of bonds = \$4m x (\$105/\$100) = \$4.2 million

Market value of preference shares = \$2m x (\$0.80/\$1.00) = \$1.6 million



Prior charge capital = \$4.2m + \$6.2m + \$1.6m = \$12 million

Market value based gearing = $100 \times (\$12\text{m}/\$80\text{m}) = 15.0\%$

If the definition of gearing given in the question is not used, but instead a candidate defines gearing as prior charge capital/(equity plus prior charge capital), sometimes called capital gearing, then incorrect answer B is obtained:

Gearing = $100 \times 12.0\text{m}/(\$80\text{m} + \$12\text{m}) = 13.0\%$

If the market value of equity wrongly includes reserves and the market value of preference shares, then incorrect answer C is obtained:

Gearing = $100 \times 12.0\text{m}/(\$80\text{m} + \$20.0\text{m} + \$1.6\text{m}) = 11.8\%$

If the bank loan is wrongly omitted from the calculation of prior charge capital, incorrect answer D is obtained:

Gearing = $100 \times (\$4.2\text{m} + \$1.6\text{m})/\$80\text{m} = 7.3\%$

Section B

Candidates in general performed well on questions 1a, 2a, 3a, 3b, 4a, 4b and 5a, which were essentially calculation-based questions. Candidates in general did not perform as well on discussion questions, for example questions 1c, 2b, 3c and 5b. Almost all candidates made a reasonable attempt at all five questions.

In any examination, it is essential to read the question requirement carefully and to understand clearly what you are being asked to do. Some candidates did not do this and as a result included irrelevant material (which scored few marks) in their answers. It is also important to manage your time carefully in the examination and to plan your answers to discussion questions if you can, so candidates should avoid writing too much for the marks offered.

Question 1(a)

Candidates were required to calculate the cash balance at the end of each month in a three-month period. Most candidates did well on this question. Some answers made timing errors, while others overlooked that each unit produced required two units (not one unit) of raw material. Some answers lost marks because they wrongly believed that net cash flow was the same as cash balance, or because they located the January opening cash balance in December.

Question 1(b)

Candidates were asked to calculate the forecast current ratio at the end of the three-month period, which could be calculated here as:

$$\frac{(\text{Inventory} + \text{Trade Receivables} + \text{Cash})}{\text{Trade Payables}}$$

Surprisingly, most answers did not gain full marks. One reason for this was that many answers, without explanation, omitted one or more of the elements indicated above. While the question stated that no raw materials inventory was held, finished goods inventory had to be calculated, as production of finished goods took



place one month before sales. Another reason why most answers did not gain full marks was including elements that were not current assets or current liabilities, such as a newly-purchased machine or a new long-term loan.

Some answers did not explain the figures that were being used to calculate the current ratio, giving markers no guidance as to the working capital elements that the candidate believed were being used.

Question 1(c)

Candidates were asked here to assume that the company expected to have a short-term cash surplus in the three-month period, and to discuss whether this short-term cash surplus should be invested in shares listed on a large stock market.

Some answers discussed, occasionally at length, how the company could decide if it had a cash surplus, even though they were told to assume this. Such answers might for example discuss one or more reasons for holding cash (transaction, precautionary and speculative), or recommend using the Miller-Orr model to clarify the size of the cash surplus.

Other answers discussed, occasionally at length, working capital financing policy, and said that the investment decision depended on whether this policy was conservative, matching or aggressive. Financing policy is not relevant to an investment decision.

The key learning point here is that a short-term cash surplus must be invested with no risk of capital loss, as the cash will be needed again. Shares on a stock market, even a large stock market, can fall in value very quickly and so are not a suitable way of investing a short-term cash surplus.

Satisfactory answers recognised this key point, in some cases suggesting appropriate ways of investing the short-term cash surplus.

Question 2(a)

Here, candidates were asked to calculate the market price of convertible loan notes and comment on whether conversion was likely.

To calculate the market value of the loan notes, the future cash flows arising from holding the loan notes had to be determined. In addition to future interest payments, loan note holders would be entitled to a capital cash flow arising from redemption or conversion.

The loan notes were convertible or redeemable in seven years' time and so whether conversion was likely had to be assessed. The future share price after seven years had to be calculated and multiplied by the conversion ratio to give the conversion value, which could then be compared with the redemption value. A key point is that this comparison takes place in seven years' time, so candidates had to differentiate between future values and current or present values. It is not correct to compare the current conversion value (8 shares x \$10.90 = \$87.00) with the future redemption value (\$100), although this error was a common one.

If we assume that the past is a guide to the future, an historical share price growth rate could be calculated and used to estimate the future share price. A 6% growth rate, giving a future share price of \$16.39 and a conversion value of \$131.12, looked reasonable and on this basis conversion was likely.

The future cash flows arising from a loan note could then be discounted to give its market value.

Question 2(b)

Candidates were asked to calculate a company's share price using the price/earnings ratio (PER) method and to discuss the problems in using this valuation method.

The requirement to calculate the share price could be met by multiplying the earnings per share (EPS) of the company by the sector-average PER. Some answers did not use the PER valuation method, and calculated instead the company's PER.

No marks were on offer for calculating the market capitalisation of the company, as only the share price was required.

In general, discussion of the problems in using the PER valuation method was limited. Many answers said that using historical information was a problem, but using forecast annual maintainable earnings would help to overcome this. Better answers said that using an average PER of similar companies was a problem, pointing to the difference between the calculated share price and the actual share price as being suggestive of differences in business risk or financial risk.

Question 3(a)

Candidates were asked here to calculate the loss or gain arising from taking out a forward exchange contract (FEC) on a future euro receipt, and to explain why taking out an FEC might be preferred by a company to not hedging the future receipt.

Exchange rates were given on a bid and offer basis, and bid rates had to be used for the €1.2 million receipt. A number of candidates incorrectly used offer rates or mid-rates.

Although the question asked for the loss or gain compared to the current dollar value of the euro receipt of taking out an FEC, some answers calculated a loss or gain compared to the future value offered by the FEC.

Some candidates wasted time by needlessly calculating the dollar value arising from using a 12-month FEC, even though the future €1.2 million receipt was due to be paid in six months' time.

The importance of reading the question carefully was emphasised by the number of candidates that read "not hedging" as "hedging". Since taking out an FEC is hedging, taking out an FEC cannot be compared to hedging, as this makes no sense. Some answers following this path compared taking out an FEC with money-market hedging, or with using foreign currency derivatives. Satisfactory answers discussed how using an FEC could hedge against unexpected future exchange rate movements, even though using the FEC locked in a forward exchange rate that was worse than the spot rate.

Question 3(b)

The requirement here was to calculate the annual interest rate in the foreign country implied by spot rate and the forward rate, given the domestic annual interest rate. Many answers were able to correctly apply the interest rate parity formula given in the formulae sheet to arrive at a value of 6.6%.

Question 3(c)

The requirement here was to discuss whether a company should avoid exchange rate risk by invoicing foreign customers in its home currency, the dollar.



The question was not asking if exchange rate risk could be avoided by invoicing in domestic currency, but whether a company should use this method. The focus was therefore on the consequences of using this hedging method for both customers and the selling company. There was no need to explain what exchange rate risk was or to discuss how exchange rate risk might be classified, but rather to discuss what might happen if the company transferred the exchange rate risk onto its customers. Better answers suggested that customers might seek an alternative supplier that invoiced in the relevant foreign currency, leading to a loss of business for the selling company.

Question 4(a)

Candidates were asked here to prepare a revised draft evaluation of an investment proposal and to comment on the financial acceptability of the investment proposal. Essentially candidates were being asked to correct the mistakes made by a junior employee in the investment appraisal. Many answers gained good marks on this question.

The weighted average cost of capital includes the return required by debt holders and so the interest payments included by the junior employee had to be removed.

The junior employee had inflated before-inflation figures by one year only, so the revision needed was for compound inflation to be applied. Some students based their inflated figures on a constant unit selling price or unit variable cost, even though the forecast unit selling prices and unit variable costs given in the question were not constant.

Although tax liabilities were payable one-year in arrears, the junior employee ended his evaluation after four years, which was the project life. The revision needed was for a fifth year to be added to accommodate tax effects.

Tax-allowable depreciation was available on a 25% reducing balance basis, however the junior employee had subtracted straight-line depreciation in calculating taxable profit. In addition, the junior employee had not added the tax-allowable depreciation back to after-tax profit in order to convert it into after-tax cash flow. The revision needed was to allow for tax benefits arising from tax-allowable depreciation, either by making a one-line adjustment for the correctly-calculated tax benefits, or by correctly applying the subtract/add back method the junior employee had only partially used.

Question 4(b)

The requirement here was to explain any two revisions made to the junior employee's draft evaluation. Most answers gained good marks here. Some candidates explained more than two revisions, however there were no additional marks for exceeding the question requirement.

Question 5(a)

This question asked candidates to calculate the market value weighted average cost of capital (WACC) and the book value WACC, and to comment briefly on any difference between the two values. Most answers gained good marks.

Most answers were able to correctly calculate the cost of equity using the capital asset pricing model. One error that arose occasionally was to treat the equity risk premium as though it were the return on the market.

Calculations of the after-tax cost of debt of the loan notes using linear interpolation were often correct. Some answers used extreme estimates of discount rates, such as 1% and 20%, which diminished the accuracy of their estimates of the after-tax cost of debt. Another error that was occasionally made was to substitute the nominal value of the loan notes (\$100) for either the current market value (\$103.50) or the redemption value (\$106), or for both. A more common error was to use the before-tax interest payment (\$6.00) rather than the after-tax interest payment (\$4.50) in the interpolation calculation.

The majority of answers calculated correctly the market values of the equity and debt. A very common error, surprisingly, was using the value of the ordinary share account (\$200m) as the book value of equity, when the correct value was \$850m, which is the sum of the ordinary share account and the reserves.

Comment on the difference between the two WACC values was often limited to stating that there was a difference and this difference was due to a difference in the weights that were used in the WACC calculations. Better answers emphasised the importance of using market value weights in calculating WACC in order to take account of the risks and returns present in the current business environment of a company, and referred to the possibility of making sub-optimal investment decisions if the book value were to be used in investment appraisal.

Question 5(b)

The requirement here was to discuss the factors to be considered by the company in the question (Tinep Co) in choosing to raise funds via a rights issue.

Many answers lacked a focus on the question asked, often discussing equity finance versus debt finance in general terms. For example, some answers suggested that a rights issue could be used to reduce high gearing, failing to recognise the Tinep Co had low gearing. Other answers discussed, sometimes at great length, pecking order theory or the views of Miller and Modigliani on capital structure.

Many answers gave a list of characteristics of a rights issue, rather than factors to discuss.