

# Examiner's report

## F9 Financial Management

### June 2011



#### General Comments

Congratulations to candidates who passed Paper F9 in June 2011! The examination paper looked at many areas of the syllabus and a consideration of performance on a question by question basis is given below. Successful candidates answered all four compulsory questions and had prepared well for the examination. Candidates who were not successful tended to have omitted answers to some parts of the questions, and showed in their answers that there were some parts of the Paper F9 syllabus that they needed to study further. Since many areas of the syllabus are covered in each examination paper, concentrating on one or two parts of the syllabus and not giving much attention to other parts will decrease the likelihood of success.

#### Specific Comments

##### Question One

In general, candidates tended to gain good marks in part (a), while doing less well in parts (b) and (c).

Part (a) asked candidates to calculate the net present value (NPV) of a new confectionary line using a nominal terms approach, allowing for inflation and taxation.

Some candidates said that, because the same rate of inflation was applied to selling price, variable cost and fixed cost, inflation could be ignored and their answers used a real terms approach. This ignores the stated requirement to use a nominal terms approach and is also not correct in this case, as profit tax was payable in arrears. A nominal terms approach discounts nominal (inflated) cash flows with a nominal cost of capital, which was given in the question. Some answers made the mistake of either inflating or deflating the provided nominal cost of capital.

Some answers did not defer the tax liabilities, or the tax benefits on the capital allowances available on the cost of equipment, or both, although the question required this. A small number of candidates calculated capital allowances and tax benefits on the initial investment in working capital, instead of on the initial investment in machinery, but working capital investment does not attract capital allowances. Although the question said that a balancing allowance would be claimed in the fourth year of production, some candidates did not calculate this.

When including working capital effects in investment appraisal, there are three key elements to consider: initial investment; incremental investment; and recovery of investment. Most answers included the initial investment, although a small number of answers incorrectly chose to inflate this by one year, or to locate it incorrectly in year 1 rather than in year 0. Many answers included incremental investment, although in some cases this was not incremental, but cumulative, or calculated incorrectly. The recovery of the investment was sometimes omitted, or included but not inflated, even though incremental investment had been included prior to recovery.

Almost all answers correctly located the discount factors from the tables provided in the examination paper, although as mentioned earlier a few answers used a discount rate that was different from the one provided in the question. In a very small number of answers, annuity factors were used instead of discount factors

Almost all answers calculated a net present value. Although the question required that the candidate advise on the financial acceptability of the proposed investment, some answers did not do this, or made a casual comment that did not gain full marks.

Part (b) asked candidates to comment on the proposed use of a four-year time horizon, and to discuss a value that could be placed on cash flows arising after this period, using a perpetuity approach.



The question stated that the new confectionery line would be popular for many years, that sales would continue after the fourth year and that a four-year time-horizon was proposed because cash flows after the fourth year were too uncertain. Candidates were expected to comment that limiting the NPV analysis to four years meant that cash flows after the fourth year had not been included in the analysis, so the NPV would be understated. Candidates were also expected to comment that including in the NPV analysis cash flows expected to occur after the fourth year, such as the balancing allowance and working capital recovery, would overstate the NPV. Using a limited time-horizon could therefore lead to sub-optimal investment decisions if these decisions were based on the calculated NPV.

Many answers showed a lack of awareness of these points. While it is true that cash flows after the fourth year were uncertain, an estimate of their value could still have been included using a perpetuity approach, which is what candidates were asked to consider. Previous examiner reports have commented that many candidates struggle to use a perpetuity approach correctly and answers to this question showed that this continues to be true. Please study the suggested answer for a fuller discussion of the value that could be placed on the cash flows after the fourth year.

In part (c), candidates were required to discuss three ways of incorporating risk into the investment appraisal process.

Many candidates lost marks by not reading the question correctly and discussing the nature of different kinds of risk, rather than how risk could be incorporated in the investment appraisal process. Better answers discussed ways of incorporating risk into investment appraisal that were covered in the syllabus, such as sensitivity analysis, probability analysis, and the capital asset pricing model.

## **Question 2**

In general, as with question 1, candidates tended to gain good marks in part (a), while doing less well in parts (b) and (c).

Part (a) asked for the calculation of the market value after-tax weighted average cost of capital (WACC) before and after a new issue of bonds.

Many candidates gained full marks for the two WACC calculations and most students were able to gain some credit by some of the subsidiary calculations. Some students ignored the market value of existing bonds given in the question and calculated a market value based on the present value of future interest payments and redemption at par (nominal value). This was not actually possible, since the question provided neither the interest rate nor the maturity of the existing bonds. Some answers ignored the after-tax cost of debt given in the question and calculated a new (incorrect) after-tax cost of debt. For example, some answers treated existing bonds as irredeemable and used the after-tax cost of debt provided as a before-tax interest rate. This implies learning a WACC calculation method without understanding the underlying principles, leading to an attempt to make the information provided fit the calculation method learned.

A surprising number of candidates could not calculate the dividend growth rate, whether on a geometric or an arithmetic basis. Both methods were acceptable. There were also a significant number of errors in calculating the cost of equity using the dividend growth model. Alarm bells should sound if the calculated cost of equity is less than the cost of debt, or if the calculated cost of equity is quite large. A glance through past examination papers will show that a realistic approach has been used, with the cost of equity lying between say 5% and 15%. Alarm bells should also sound if the calculated WACC is greater than the highest cost of capital being averaged, or less than the lowest cost of capital being averaged, since logically an average value must lie between the highest and lowest values being averaged.



The cost of debt of the new bond issue could be found through linear interpolation. The correct way to treat taxation here is to use the after-tax interest payment in the interpolation calculation, with the redemption value being unaffected by profit tax. Many candidates were able to use linear interpolation correctly.

Following the calculation of the revised WACC, some comment was required on findings. If the calculations had been similar to those in the suggested answer, a decrease in WACC had been found. Better answers noted that this decrease rested on assumptions such as that the cost of equity had not increased, despite the rise in financial risk, and that the share price had not changed.

In part (b), candidates were asked to identify and discuss briefly the factors that influence the market price of bonds.

Some of these factors are the interest rate, how often interest is paid, the number of years to redemption, the redemption value and the cost of debt. These factors are all considered by the bond valuation model, which was used earlier to find the after-tax cost of debt by linear interpolation. Once again, as with the WACC calculation method mentioned above, many candidates showed that they did not understand the principles underlying a calculation method, in this case the bond valuation model, and did not discuss these factors. Instead, candidates discussed factors relating to the risk of the issuing company (which would affect the cost of debt), such as level of financial risk, profitability and credit rating, and general market factors (which would affect the cost of debt), such as liquidity, economic outlook and market efficiency. Answers could also gain credit by looking at factors such as convertibility and theories relating to the term structure of interest rates. Given that marks could have been gained in so many different ways, it was surprising that some candidates chose not answer this question at all.

Part (c) asked for a discussion of the suggestion that issuing bonds will decrease WACC and increase the market value of a company.

Better answers to this question looked at capital structure theory, including the traditional view, the views of Miller and Modigliani, the market imperfections view and pecking order theory. Other answers gained credit by using a practical perspective, noting that issuing debt without having an investment purpose was poor financial management and that the shareholder response to increased financial risk could not be ignored. Weaker answers struggled to discuss the relationship between WACC, company market value, the cost of equity, the cost of debt and taxation, perhaps discussing instead the different ways of valuing a company, which was not required by the question.

### **Question 3**

In general, as with question 1, candidates tended to gain good marks in part (a), while doing less well in parts (b) and (c).

Part (a) required candidates to analyse and discuss the recent financial performance and current financial position of a company, to comment on the achievement of the objective of maximising shareholder wealth, on proposals to pay or not to pay a dividend, and on a proposal to raise debt finance. The order of these requirements gave a structure to the expected answer that was adopted by almost all answers.

The first part of the requirement refers to analysis and better answers started from this point, analysing the financial information provided and calculating a range of appropriate accounting ratios. The recent financial performance and current financial position were certainly poor, and many answers gained credit for showing this, for example by making comparisons with the average sector information provided.

Appropriate accounting ratios for looking at shareholder wealth maximisation would be dividend yield and total share holder return. Although shareholder wealth had decreased demonstrably in the period under consideration,



it was not clear whether there had been a failure to meet the objective of maximising shareholder wealth. It was possible that the managers had done an excellent job in difficult conditions.

Many answers discussed shareholder expectations as a way of choosing whether to pay the same dividend as in the previous year or to pay no dividend at all. Very few answers recognised that, given the current share price and provided cost of equity, shareholders appeared to be expecting the same dividend as in the previous year. Better answers recognised the decrease in retained earnings that would arise if the same dividend were paid, with potential liquidity and financing problems as a result. Some candidates brought dividend theory into their discussion, commenting on the dividend relevance and irrelevance perspectives, and gained some credit for this.

Some candidates failed to see the statement that the company wanted to raise \$50m in order to support existing business, as they suggested that the cash had to be invested in a new project to increase profitability and shareholder wealth. The fact that the company wanted to raise an amount of cash equal to twice the current profit before interest and tax was recognised by better answers, which looked at gearing, interest cover, and the increasing overdraft of the company in order to conclude that raising debt finance was unlikely to be possible.

In part (b) candidates were asked to discuss equity, and sale and leaseback as ways to meet the funding requirement of a company.

Discussions of equity finance were often quite sketchy, with little understanding being shown of the different ways in which \$50m of equity could be raised. Some answers mistakenly said that the \$50m of equity finance could be taken from the \$88.5m of retained earnings, but this suggestion fails to recognise that retained earnings are not cash. Better answers referred to rights issue, public offer or placing, noting that the company's recent financial performance and current financial position suggested that it was unlikely that equity finance would be available.

Answers that discussed sale and leaseback as a source of finance were often limited to explaining that this involved the sale of a non-current asset (usually a building) to a third party, coupled with leasing the asset back for a long period of time. Better answers were able to indicate some of the significant drawbacks that might arise from using this source of finance, such as the loss of non-current assets to offer as security for debt finance and commitment to a long-term lease with regular reviews of lease payments.

Part (c) required an explanation of the nature of a scrip (share) dividend, and its advantages and disadvantages to a company.

Many candidates gained few marks on this question because they did not understand the nature of a scrip dividend. Most study texts explain that it is a share dividend that is offered as an alternative to a cash dividend. This means that shareholders choose whether to accept the offered shares or take a cash dividend. Many answers were based on the incorrect belief that if a scrip dividend were offered, a cash dividend was not available. Many answers were also based on the incorrect belief that a scrip dividend was the same as a bonus issue. Another reason why many answers gained few marks on this question was that they discussed advantages and disadvantages of a scrip dividend to the shareholder, whereas the question asked for advantages and disadvantages to the company.

#### **Question 4**

Many candidates gained full marks in answering part (a)(ii), reasonable marks on parts (b)(i) and (ii), but in many cases gave weak answers to part (a)(i).

Part (a)(i) asked for a brief explanation of the relationship between exchange rates and interest rates, and between exchange rates and inflation rates.

If a candidate was not aware of interest rate parity (IRP) and purchasing power parity (PPP), the answer offered was often very general in nature, discussing exchange rates, interest rates and exchange rates from a macroeconomic perspective. Some answers lost valuable time by explaining what an exchange rate was, what an interest rate was and what an inflation rate was, but this was not required. Better answers showed familiarity with the IRP and PPP formulae in the formula sheet and discussed correctly how the forward rate could be in equilibrium with the spot rate (IRP), and how the expected future spot rate could be in equilibrium with the current spot rate (PPP).

A number of candidates offered numerical examples to illustrate their discussion, but these used up valuable time and were not required by the question.

Part (a)(ii) required candidates to evaluate a forward market hedge compared to a money market hedge.

Many answers gained full marks here, providing the calculations required by the question that are given in the suggested answer. Where mistakes were made, they usually related to selecting the wrong forward rate, or to using incorrect interest rates in the money market hedge because of mistakenly hedging an expected future cost (the peso interest payment) with a dollar deposit. The peso cost needed hedging with a peso deposit in order to remove exchange rate risk. A small number of answers incorrectly treated the 5m peso interest payment as a capital amount and calculated an interest payment using one of the borrowing rates provided in the question.

In part (b)(i), candidates were asked to discuss the factors that influence the formation of working capital policy.

The answers to this question offered a wide range in terms of quality and in terms of relating the answer to the question asked. Some candidates, in response to the word 'policy', spent a long time describing working capital financing policy, the nature of permanent and fluctuating current assets, the relative costs of short-and long-term financing and so on, while failing to discuss working capital investment policy. Other candidates focused on the phrase 'working capital' and explained the meaning of inventory, receivables and payables, without explaining how these elements of the working capital cycle influenced working capital policy. Better answers discussed factors such as the nature of the business, the constraint imposed by the terms of trade of competitors, the attitude to risk of the managers of the company, and so on.

Part (b)(ii) required candidates to calculate the financial acceptability of an early settlement discount and a bulk purchase discount.

A number of students lost valuable time here with economic order quantity calculations, which were not required by the question and which were completely unnecessary. The two offered discounts needed to be compared with the current costs of the company.

Better answers compared the benefit of the early settlement discount with the cost of paying sixty days earlier. These two values could be calculated directly from the information provided. Alternatively, the early settlement discount equivalent annual interest rate could be calculated and shown to be less than the company's cost of short-term borrowing. Weaker answers tried to evaluate the benefit and cost on a monthly basis, or on an order basis, and became confused as a result of trying to change annual data provided to the alternative basis being used. That said, some candidates did successfully use an order basis of evaluation. Some answers made the mistake of basing the cost of the early settlement discount on the revised level of trade payables, rather than on the difference between the current and revised levels of trade receivables, i.e. the cost related to paying 60 days earlier than currently.

One way to evaluate the financial benefit of the bulk purchase discount was to calculate the cost of the current ordering policy and compare it with the cost of the revised ordering policy, an approach used by the suggested answer and by many candidates attempting this question. An alternative approach that was equally effective was



to calculate and net off the increase in holding cost, the saving in ordering cost and the saving in material cost. One error made by some candidates was to calculate the annual holding cost from annual demand, rather than from average inventory.