Examiners' report

P4 Advanced Financial Management
December 2007

This was the first examination of this subject under the new syllabus. Although covering some of the technical elements of the old paper 3.7, Strategic Financial Management, this paper introduces new themes to the practicing financial manager in the areas of valuation, project and firm finance, the management of risk, acquisitions and disinvestment. In addition to the technical aspects of financial management, this paper also invites candidates to explore the ethical and managerial dimensions of the subject and to demonstrate reasonable professional skill in the presentation of their answers.

This examination followed the published format for this paper. The examination consisted of two compulsory questions (question 1 and 2 for 30 marks each) and three further questions of 20 marks each from which candidates are expected to answer two. The two compulsory questions address multiple themes across the syllabus and gave candidates the opportunity to gain marks through the application of professional skills in argumentation and presentation. The optional questions consisted of two technically focused questions and one wholly discursive question. As well as question 4, each question also has a substantial discursive component where candidates were given the opportunity to interpret the analytical element required and demonstrate a range of higher order professional skills.

All but a small minority of candidates attempted four questions. A few misread the rubric and attempted five.

There were a number of candidates who presented excellent answers and demonstrated a high level of technical and professional skill. These candidates also exhibited high levels of efficiency in the way that they addressed the technical elements of each question, were able to focus on the principal points at issue and enhanced their analysis with clear explanation of the processes they had followed, the limitations of the methods employed and any assumptions they had made.

The predominant explanation of poor performance by many candidates was lack of preparation. This was revealed by a weak and partial understanding of the issues concerned and a low level of competency in dealing with technical problems.

Overall the majority of candidates performed well exhibiting a good standard of written English and demonstrating a good breadth of understanding across a challenging but important syllabus.

Question 1 (compulsory)

This 30-mark question examined a range of financial skills: the extraction of a cash flow forecast from a forecasted income statement and balance sheet, the assessment of the maximum dividend capacity of the firm from its uncommitted cash flow, and an assessment of the potential performance of the business using EVA™ and any other metrics the candidate considered appropriate. Many candidates appreciated that this was a firm with substantial cash reserves, a low level of gearing and a relatively weak profit performance. The technical skills required by this question were largely drawn from earlier levels of study, reflecting the broad levels of competency required of the financial manager.

All but a small proportion of candidates knew how to extract a cash flow forecast but a substantial number made incorrect adjustments leading to cash changes which bore no resemblance to the movement in the balance sheet. Most candidates understood the concept of free cash flow to equity although only a small minority were able to make reasonable adjustments for net reinvestment.

The estimation of the weighted average cost of capital for the EVA™ calculation was generally well done although a number of candidates incorrectly applied the tax adjustment for debt. Relatively few candidates were able to complete the EVA™ calculations and only a minority were able to explain the significance of this metric for investors and management.

Most candidates produced a wide range of other ratios in their assessment of the firm's performance although few focused on those that targeted performance as opposed to efficiency, risk or liquidity which candidates were not required to comment upon. Many candidates miscalculated the performance ratios even though they were able to specify each ratio correctly.

Question 2 (compulsory)
This question focused on the evaluation and implications of an acquisition involving two businesses which have different exposures to financial and market risk. The first part of the question required the calculation of the weighted average cost of capital for both companies and the valuation of both businesses taking into account a share option scheme and pension fund deficit.

Common errors were:

- Not recognising that the equity risk premium is the difference between the rate of return on the market and the risk free rate.
- Incorrect adjustment of the cost of debt with many candidates not making the correct adjustment for the default risk premium.
- Ignoring the tax shield of 30% on debt, or applying the tax correction to the value of debt in the market gearing calculation as opposed to adjusting the cost of debt capital.
- Using the cost of equity capital rather than the weighted average cost of capital in the valuation of each firm as a whole.
- Adding, rather than deducting, the value of the share options to the value of the firm.

Notwithstanding these points many candidates were able to demonstrate a reasonable level of competence in handling this type of valuation question.

The second part to the question required candidates to produce a briefing paper containing advice for management on the validity of the valuation, the most appropriate method of deriving a bid price and the implications of the acquisition for the acquirer's gearing and cost of capital. Two professional marks were available for high quality presentation, discussion of the answer and for the clarity and support for the advice given. Candidates should note the importance of focusing on the requirements of the question and not presenting irrelevant material such as the defence tactics that might be used by the target company.

Few candidates recognised a critical valuation issue in that the pre-existing cost of capital is unlikely to remain unchanged as a result of the bid. Combining two companies of significantly different exposure to market risk will lead to a combination of intermediate beta and it is the cost of capital of the combination that needs to be established before an overall value of the post acquisition company can be determined. In addition the mode of financing is likely to have a significant impact upon the firm's gearing. Few candidates recognised that the impact upon the market gearing, as opposed to the book gearing of the business, will depend upon the distribution of shareholder value between investors in each firm.

Question 3 (optional)
This question focused on the valuation of the real option to delay construction of a housing project until the Government's intentions with respect to a transport connection was known. The availability of the option to delay would eliminate the downside risk attaching to the net present value of the investment. The majority of candidates attempted this question and were able to specify all but one of the inputs to the Black and Scholes option pricing model. Nearly all were able to identify the exercise 'price' of the project – the capital investment – at $24 million, the volatility of the cash flows, the risk free rate and the time to exercise. Only a few candidates identified the present value of the project (net present value plus outlay) of $28 million as the value of the underlying investment asset.

This question required care in the calculation of d_1 and d_2 for the model, particularly in the use of the natural logarithm and exponential functions. It was clear from the way that many answers were presented that candidates had to breakdown the components of the calculation rather than using the 'chaining' ability of their calculators to solve the problem quickly. The majority of candidates were able to estimate the area under the normal distribution using the tables supplied although some deducted rather than added 0.5, to derive the area below d_1 and d_2.

Part (b) of the question was missed by many candidates who failed to recognise that all that was required was to add the option value derived in (a) to the net present value of the project given in the question and to provide a rationale for this approach.

Part (c) of the question was designed to allow candidates to gain marks for stating the basic assumptions of the Black and Scholes model and in particular that the model is only perfectly valid for European-style options. However, it can be used for a call option such as that described in the question as there is always positive time value in delaying the exercise of an option to the latest possible date. Numerical methods such as the binomial model can be used to value American style options and providing sufficient time steps are used can achieve the degree of accuracy found with the Black and Scholes model. Candidates could have achieved much higher marks by a careful enumeration of the assumptions of the model, by questioning the logic of using a model such as Black and Scholes in this context and discussing the problems of estimating the necessary data inputs.

Question 4 (optional)
This wholly discursive question gives candidates a wide degree of latitude in identifying the strategic, financial and ethical issues faced by the company concerned. A wide variety of answers were provided by candidates in what was a very popular question.

In answering this question many candidates demonstrated skills in planning and layout. However, relatively few candidates focused on the perspective of a chief financial officer which was the case role that they were asked to assume. The selection of issues and the enumeration of alternative courses of action that the company might follow were generally limited and sometimes inconsistent. Candidates should also pay attention to the simple points. This company, for example, has surplus cash and the overriding question is whether there is any prospect that the cash could be used effectively through new value-adding investment. If that is not the case then the company has an ethical duty to return that cash to investors.

Candidates should also note that points should not be repeated unless it is relevant to the development of new line of arguments or mentioned in the conclusion.

Question 5 (optional)
This question examined candidates' knowledge and understanding of debt and the debt market. Those candidates with an understanding of the principles behind the question gained high marks.

Part (a) focused on the new four year debt where investors will require a return of risk free at 5.1% plus 0.9% spread or 6% overall. Very few candidates appreciated that this would be the coupon rate on a new issue to ensure that it is fully subscribed at par.

In part (b) very few candidates managed to navigate a relatively simple set of calculations. The current gearing ratio and the market capitalisation of equity leads directly to an estimate of the current market value of debt and, given that the market yield is the current coupon, its par value. The alteration in the company's credit rating leads to a revised market value for this equity and at this point candidates had sufficient information to estimate the average cost of debt capital.

In part (c), given that the company had in mind the acquisition of aircraft, then their high resale value was going to favour the use of debt finance. Few candidates appeared to have any understanding of the ways in which large amounts of debt can be raised through a bond issue (domestic or euro), leasing, syndicated borrowing or single source finance.