INSTITUTE AND FACULTY OF ACTUARIES

EXAMINATION

11 April 2016 (pm)

Subject SA5 – Finance
Specialist Applications

Time allowed: Three hours

INSTRUCTIONS TO THE CANDIDATE

1. *Enter all the candidate and examination details as requested on the front of your answer booklet.*

2. *You have 15 minutes at the start of the examination in which to read the questions. You are strongly encouraged to use this time for reading only, but notes may be made. You then have three hours to complete the paper.*

3. *You must not start writing your answers in the booklet until instructed to do so by the supervisor.*

4. *Mark allocations are shown in brackets.*

5. *Attempt all three questions, beginning your answer to each question on a new page.*

6. *Candidates should show calculations where this is appropriate.*

AT THE END OF THE EXAMINATION

Hand in BOTH your answer booklet, with any additional sheets firmly attached, and this question paper.

In addition to this paper you should have available the 2002 edition of the Formulae and Tables and your own electronic calculator from the approved list.

1 A medium-sized UK company manufactures cars and trucks. The company wishes to make its products more attractive by offering customers a long-term warranty that will cover the cost of repairing their vehicles if they break down. The trucks are frequently used in demanding environments. The cars are robust but ordinary products.

The finance director of the company is considering how best to ensure that the warranty payments can be met when claims are made. The company is listed on the stock exchange and also has some outstanding bonds.

(i) Define pre-loss financing and post-loss financing. [2]

(ii) Propose three forms of pre-loss financing that the company could use to provide for future warranty payments. [3]

The company is not subject to insurance regulation. However, the finance director believes that the principles of a risk-based capital framework could be used to better determine the nature and size of any reserve required to cover the warranties.

(iii) Explain what is meant by risk-based capital. [2]

(iv) State the key strengths and weaknesses of risk-based capital. [3]

Capital is often classified into three tiers.

(v) (a) Outline the likely components of each tier for this company.

(b) Suggest how the company could match each tier with different levels or types of possible future warranty claims.

[3]

(vi) Describe how the company could determine the risk-based capital that it should hold for future warranty claims. [7]

(vii) Suggest practical limitations the company may face when trying to determine this capital amount. [3]

A wealthy individual has approached the board of directors of the company, complaining that they are not doing enough to enhance shareholder value. He has proposed that the company should:

- reduce its cash holdings by returning it to shareholders as a cash dividend; and
- increase its leverage by taking on more debt.

(viii) Discuss this proposal, including further investigations that the company should undertake when assessing the proposal. [8]

The company is bought by the wealthy individual, who has been attracted almost entirely by what he considers to be excessive capital being held within the business. The finance director is concerned about potential financial distress that may result from actions taken by the new owner.

(ix) Suggest, with reasons, three actions that the company might take under the new owner that could cause financial distress, other than those mentioned in the individual’s original proposal. [3]

[Total 34]

2 (i) Define a callable bond. [1]

(ii) (a) Suggest an example of a type of callable bond arrangement commonly entered into by individuals.

(b) Outline the circumstances under which these individuals are likely to make use of the call feature.

[2]

(iii) Explain, with examples, why a company might want to issue a callable bond rather than a non-callable bond. [4]

(iv) Determine the likely impact on a company's weighted average cost of capital (WACC) of issuing callable bonds instead of non-callable bonds. [2]

A company is considering its debt issuance programme. One of the company's bonds was issued at par some time ago and still has several years left to maturity. The terms allow the company to redeem the bond at par at any time before maturity, on giving notice to bondholders. The general level of interest rates has fallen since the bond was first issued, and the bond's credit rating has changed from Ba to Baa on the Moody's scale.

(v) State, with reasons, how the current market price of the bond is likely to compare to its issue price. [2]

(vi) (a) Suggest, with reasons, two actions involving the bond that the company could take in order to improve its financial position.

(b) Outline factors that the company would take into account when deciding whether to proceed with either of these actions.

[4]

An investor owns a tranche of this bond. The investor does not wish to sell the bond but would prefer it without the early redemption feature. The bond is very illiquid.

(vii) (a) Explain how the investor could alter his portfolio to offset the effects of the early redemption feature.

(b) Suggest reasons why the investor may not be successful in this attempt.

[5]

(viii) Assess whether your answer to part (vii) is consistent with Modigliani and Miller's proposition. [2]

[Total 22]

3 Company ABC is a UK-based asset management firm. It has been approached by Company XYZ, a large global asset management firm, with an offer to merge businesses. The chief executive officers of ABC and XYZ have met to discuss the proposed merger.

(i) Suggest possible reasons why a merger could make sense. [6]

(ii) Outline the regulatory and legislative considerations that may impact on the proposed merger. [8]

A director of XYZ has proposed that, rather than announcing a merger, XYZ should gain control through purchasing the equity shares of ABC behind the scenes, as these are listed on the stock exchange.

(iii) Outline the potential problems with the director's proposal. [4]

(iv) Outline possible defence tactics that ABC could adopt against a potential hostile takeover by XYZ. [7]

A hedge fund manager is considering a merger arbitrage trade to profit from the announcement of a merger between the two companies. A merger arbitrage profit normally results where one company offers to buy another company and the target company's share price immediately after the offer is announced differs from the offer price.

(v) Suggest reasons why a merger arbitrage profit may exist. [3]

(vi) Suggest reasons why a merger transaction may not be successfully completed. [4]

The target company's shareholders could be offered cash or new shares in the acquiring company in exchange for their holdings of target company shares.

(vii) Explain the likely ways in which the hedge fund manager could construct a trade that would generate profits if the merger completes successfully, considering both the cash and new shares alternatives. The trades that you propose should not expose the hedge fund to material market risk. [4]

(viii) Identify six possible drivers of return or sources of cost for this merger arbitrage trade. [3]

(ix) Describe two key risks to the hedge fund's profit from this merger arbitrage trade. [2]

The boards of both ABC and XYZ have noted that there is a risk of a large increase in the ABC share price caused by short-term speculation.

(x) Explain why both boards may be concerned about this risk. [1]

(xi) Suggest two ways in which these concerns could be addressed. [2]
[Total 44]

END OF PAPER