INSTITUTE AND FACULTY OF ACTUARIES

EXAMINATION

24 April 2017 (am)

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

3. *You have 15 minutes of planning and reading time before the start of this examination. You may make separate notes or write on the exam paper but not in your answer booklet. Calculators are not to be used during the reading time. You will then have three hours to complete the paper.*

4. *Mark allocations are shown in brackets.*

5. *Attempt all four 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.

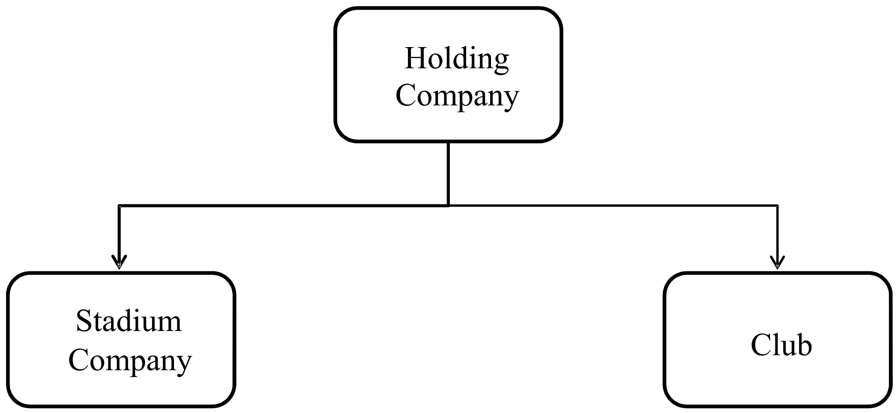
1 (i) Describe what is meant by project finance, including its common features. [4]

One of the biggest football clubs in Europe is proposing to build a large new stadium.

(ii) Outline six key risks of the project which arise after the land has been purchased but before the stadium is completed, other than risks relating to the financing of the project. [3]

(iii) Suggest actions that could be taken to mitigate the risks identified in part (ii). [6]

An investment bank which is arranging the financing of the stadium construction is in the process of approaching potential investors. The investment bank has proposed the following structure for the arrangement:



It has also provided the following information:

- The Holding Company will be the issuer of the debt.
- The Stadium Company will receive all revenues relating directly to the stadium and its use.
- A third party feasibility study has shown that increases in media and sponsorship deals and in the number of season ticket purchases have been witnessed at similar football clubs in Europe after they have built new stadiums.
- Season ticket purchases typically account for 50% of match-day ticket revenue.

(iv) Justify the proposed structure, particularly in relation to how it can reduce the risks involved in the financing deal. [4]

(v) Identify additional risks associated with the financing deal which are not mitigated by the proposed structure. [4]

(vi) Suggest ways in which the risks identified in part (v) could be mitigated. [3]

[Total 24]

2 The UK government is concerned about maintaining the UK's competitive advantage as a location for companies to raise debt capital. An internal government report has highlighted a reduction in reported trading volumes on the UK's main debt capital markets.

(i) Assess the potential implications of reduced UK debt trading volumes for companies' decisions to issue new debt securities in the UK. [4]

(ii) Suggest possible reasons why a company might choose to list its new debt securities in the UK despite falling trading volumes in the UK. You should consider:

- environmental factors.
- factors specific to the company.
- factors specific to the debt being issued.

[6]

The report also indicates that the reduction in trading volumes may be increasing price volatility in debt capital markets and hence increasing risks to the economy.

(iii) Explain the relationship between price volatility in debt capital markets and companies' decisions to proceed with new capital projects. [5]

An adviser to the government has now drawn attention to the existence of "dark pools" for security transactions. "Dark pools" are unofficial marketplaces where buyers and sellers can be anonymously matched, without having to publish their orders as would be the case in a traditional securities market.

(iv) Comment on whether "dark pools" are compatible with the UK government's macroeconomic and regulatory framework. [4]

(v) Suggest, with examples, ways by which the liquidity of UK debt capital markets could be improved, other than by expanding the "dark pools". You should include a brief explanation of how each suggestion is likely to improve market liquidity. [6]

[Total 25]

3 Company X is looking to acquire Company Y and is considering a range of potential approaches by which it could value Company Y.

(i) Propose four different approaches to determine the value of Company Y, giving a brief description of each. [4]

(ii) Identify, with reasons, which of your proposed approaches in part (i) is likely to give the *highest* valuation, and which is likely to give the *lowest* valuation of Company Y. [2]

An investment banker has suggested that Company X should undertake a leveraged buyout (LBO) of Company Y.

(iii) Explain how an LBO works. [3]

(iv) Describe two main ways in which an LBO process aims to generate value. [2]

(v) Suggest features of companies that would make them suitable for acquisition using an LBO. [4]

(vi) (a) Describe the trade-off theory of capital structure in the context of trying to maximise shareholder value, including implications for the optimal capital structure of different companies.

(b) Explain how this could lead to problems in an LBO transaction.

[5]

(vii) Explain what is meant by asymmetric information and the pecking order theory of finance. [4]

(viii) Assess the implications of the concepts in part (vii) for an LBO transaction.

[2]

[Total 26]

4 An insurance company is starting a project to outsource the administration of its policies. This will include transferring the policies onto the outsourcer's administration platform and transferring all administration staff to the outsourcer. The outsourcer's administration system will replace a number of systems that the insurance company currently uses.

(i) Outline the risk review activity that should take place as part of the project cycle. [3]

(ii) Suggest six examples of risks that are likely to be found in the risk register connected with this project. [3]

(iii) Outline how the likelihood and impact of the risks could be recorded in the register. [2]

(iv) List the other fields or columns that would be expected in the risk register. [3]

The insurance company is now considering how it will model the impact of the operational risk arising from this project on the total risk-based capital that it holds against operational risk. It currently uses the advanced measurement approach to model operational risk, using the loss distribution approach.

(v) Explain how this approach is used to model operational risk. [3]

(vi) Describe the steps that would be taken to amend the insurance company's risk-based capital in respect of operational risk, as a result of the outsourcing project. [9]

(vii) Propose a method for calculating the return on risk-based capital provided by the project, including an outline of how it would be applied. [2]

[Total 25]

END OF PAPER