

INSTITUTE AND FACULTY OF ACTUARIES

EXAMINATION

23 September 2014 (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 The Council of a mid-sized UK town believes that it could boost the local economy by building an airport. The town proposes to use a Private Finance Initiative (PFI) to construct the airport.

- (i) State how a PFI would operate in this situation. [2]
- (ii) Outline the desirable characteristics of a PFI. [2]
- (iii) Suggest reasons why the Council might use a PFI to construct the airport. [4]
- (iv) Explain why the expected benefits of the PFI may not materialise. [4]

A large listed UK construction company has won the contract to build the airport. The company's finance director is considering raising the necessary finance through the issue of index-linked bonds.

- (v) Discuss whether the use of index-linked bonds is appropriate. [10]
- (vi) Discuss the risks the company is taking on by issuing index-linked bonds compared to the alternative of issuing nominal bonds. [5]
- (vii) Outline how the terms of the index-linked bonds could be set. [13]
- (viii) Explain why there is a conflict of interest between shareholders and potential bondholders. [3]

A group of shareholders of the company has expressed concern that the size of the proposed bond issue is very large compared to the value of the company's equity.

- (ix) State with reasons why you believe the shareholders have expressed this concern. [4]
- (x) Suggest how the concern of the shareholders could be reduced without materially worsening the terms of the potential bonds. [3]

[Total 50]

2 (i) Describe the typical role of a central bank. [3]

A newspaper argues that monetary policy is only truly effective if it is carried out by an independent central bank.

- (ii) Suggest reasons why you believe the newspaper has made this assertion. [3]
- (iii) State with reasons whether you believe the European Central Bank is able to independently implement monetary policy. [6]

A number of countries around the world have maintained a policy of keeping interest rates at close to zero levels for several years.

(iv) Explain the process by which the Bank of England's target rate is transmitted to the market to become the benchmark for bank deposits and lending rates. [3]

(v) Describe the likely impact of this policy on:

- inflation.
- the level of bad debts experienced by banks and other credit providers.
- bank balance sheets.

[6]

(vi) Suggest why the policy might **not** result in an increase in the total amount of outstanding loans in an economy. [4]

[Total 25]

3 It has been suggested that credit-default swaps are insurance policies against bond defaults.

(i) Comment on this statement. [6]

Following the subprime mortgage crisis it was observed that the notional amount of outstanding credit-default swaps fell.

(ii) Explain why this may have occurred and the steps that were necessary for it to happen. [6]

A government considers credit derivatives to be undesirable instruments and wishes to regulate and reduce the use of them in their country.

(iii) Outline actions that the government might take. [5]

(iv) Explain why these actions might fail. [3]

A company measures its investment manager's performance by reference to a target return on economic capital.

(v) Discuss this form of performance measure. [5]

[Total 25]

END OF PAPER