

INSTITUTE AND FACULTY OF ACTUARIES



EXAMINATION

29 September 2017 (am)

Subject SA4 – Pensions and other Benefits 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 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 company sponsors a large UK final salary pension scheme. The trustees of the pension scheme are preparing for the forthcoming funding valuation. This will include an assessment of the covenant of the sponsoring employer. The pension scheme is closed to new members and open to benefit accrual. Pensions increase in line with the retail price inflation index subject to a cap of 5% per annum.

- (i) Discuss five methods of determining the strength of the sponsor covenant. [10]
- (ii) Describe how the economic valuation assumptions could be determined, allowing for the scheme's characteristics. [5]
- (iii) Outline how the longevity risk within the scheme could be mitigated with the use of longevity swaps and bonds. [2]

The Trustees have asked the Scheme Actuary, as part of the valuation planning process, to review the scheme's cash commutation factors.

- (iv) Discuss the roles of each stakeholder in setting cash commutation factors. [6]
- (v) Outline the considerations for the Scheme Actuary in the review of the cash commutation factors. [3]
- (vi) Set out the financial and practical issues of reviewing the cash commutation factors. [4]

The sponsoring employer wishes to discontinue the final salary pension scheme.

- (vii) Discuss five methods of discontinuance. [10]
- [Total 40]

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2 A large company with a significant UK operation is looking to introduce a trust-based defined contribution pension scheme to replace its current UK defined benefit pension scheme and satisfy all the requirements of auto-enrolment.

- (i) Set out the key features of auto-enrolment and the National Employment Savings Trust (NEST). [4]
- (ii) Set out the practical issues to consider in the closure of the current UK defined benefit pension scheme. [2]
- (iii) Outline the design considerations for the new defined contribution arrangement. [10]
- (iv) Set out the key risks of the defined contribution pension scheme for the company. [4]
- (v) Discuss the governance procedures that should be put in place to mitigate the risks set out in part (iv). [5]

The scheme's investment advisers have presented a paper which noted that the existing defined benefit scheme holds a portion of its investments in illiquid assets. The paper highlighted the benefits of the defined contribution pension scheme also investing in illiquid assets.

- (vi) Set out the advantages and disadvantages of the defined contribution pension scheme offering its members the option of investing their funds in illiquid assets. [4]

The defined contribution pension scheme has now been in operation for over 10 years and the trustees are reviewing the future defined contribution strategy including the governance structure.

It has been suggested that the defined contribution scheme is moved to a multi-employer occupational scheme governed by an independent trustee board.

- (vii) Outline the advantages and disadvantages of this type of arrangement for the company. [3]

The company has also suggested that the move to a multi-employer occupational scheme governed by an independent trustee board is done without the members' consent.

- (viii) Discuss the issues the company needs to consider before proceeding with the transfer. [4]

[Total 36]

3 A large, well-established defined benefit pension scheme has a significant funding deficit. The scheme's sponsor and trustees have committed to a long-term strategy that will reduce the risks associated with the scheme's assets and liabilities.

- (i) Outline the main covenant, funding and investment risks associated with the scheme. [6]

In order to analyse the risks, an asset liability model (ALM) exercise has been commissioned.

- (ii) Explain how the outputs of an ALM exercise can be used to reduce risk. [3]

An Integrated Risk Management approach, which investigates the relationship between the three key risks in part (i), is to be put in place.

- (iii) Explain the key principles of an Integrated Risk Management approach. [3]

- (iv) Set out the benefits of an Integrated Risk Management approach. [3]

The sponsor has decided it wishes to manage the risk in the defined benefit scheme through a programme of offering additional or enhanced member options on transfer or retirement.

- (v) Describe three possible additional member options that could be used to reduce risk. [3]

- (vi) Set out the practical issues that would need to be considered for each of the options in part (v). [6]

[Total 24]

END OF PAPER

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