

INSTITUTE AND FACULTY OF ACTUARIES

EXAMINATION

29 September 2020 (am)

Subject SP4 – Pensions and Other Benefits Specialist Principles

Time allowed: Three hours and fifteen minutes

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.

If you encounter any issues during the examination please contact the Examination Team on T. 0044 (0) 1865 268 873.

1 A company sponsors a defined benefit pension scheme.

(i) State four distinct reasons why the scheme may be discontinued. [2]

The scheme is closed to future accrual of benefits. The company is considering the following two options for discharging the liabilities of the scheme:

- gradual removal of the liabilities by continuing to run as a closed scheme
- immediate removal of the liabilities by transferring them to an insurance company.

(ii) Discuss the factors that the company should consider when deciding between the two options. [10]

The company decides to discharge the liabilities by transferring them to an insurer. However, the company's Finance Director has suggested running an incentive exercise in which the non-pensioner members of the scheme are given the option to take a transfer value increased by a level determined by the company. The company would directly pay the cost of any enhancement above the standard transfer value amount.

(iii) Explain how such an exercise could impact the overall cost of discharging the liabilities. [4]

(iv) Describe the advantages and disadvantages to a member of accepting an increased transfer value. [5]

The company has asked an advisor for practical suggestions on how to ensure members are treated fairly during the incentive exercise.

(v) Set out the points the advisor might make in their response. [3]

[Total 24]

- 2** (i) Describe, in your own words, how the market for defined benefit pension provision might be regulated to ensure the security of members' benefits. [6]

The government of a country with an established defined benefit pension market operates a central discontinuance fund (the CDF). The CDF is partly funded by a levy payable by all eligible pension schemes. The levy is based on the risk of the CDF needing to take on the liabilities of a scheme following the insolvency of its sponsoring employer, and the estimated cost to the CDF of taking on the liabilities following such an insolvency event.

- (ii) Explain how the CDF could assess the insolvency risk of the eligible sponsoring employers. [3]

All defined benefit pension schemes are required to carry out a funding valuation every 3 years to establish whether there are sufficient assets to meet benefit payments as they fall due. The results of the funding valuation are submitted to the government's pension regulator, which uses the results to estimate the cost to the CDF of taking on a scheme's liabilities for the purpose of setting the levy.

- (iii) Suggest possible disadvantages of using the scheme's funding valuation results in this way. [3]

[Total 12]

- 3** A final salary defined benefit pension scheme closed to new members 10 years ago but remains open to future accrual of benefits for existing members. The scheme has just completed an actuarial valuation using the Projected Unit Method with a control period of 3 years.

- (i) Define, in your own words, the Actuarial Liability and Standard Contribution Rate under this method. [2]

For active members of the scheme the average age is 60 and the average past service accrued at the valuation date is 25 years.

- (ii) Explain what would happen to the Actuarial Liability and Standard Contribution Rate in each of the following situations:

- A lower discount rate is used instead.
- A control period of 1 year is used instead.
- The Current Unit Method is used instead.
- The scheme is closed to future accrual of benefits.

[9]

[Total 11]

4 A company's employee benefits manager is reviewing the benefits package offered by the company in response to concerns that money is being spent on benefits that are not valued by employees.

(i) Outline how a flexible benefits scheme might address these concerns. [3]

The company is proposing to establish a defined contribution pension scheme for its employees and the manager wishes to ensure that the scheme provides members with choice and flexibility.

(ii) Describe the flexibilities that may be made available to scheme members in the design of the defined contribution pension scheme. [6]

(iii) Discuss the implications associated with adopting the flexibilities identified in part (ii). [8]

[Total 17]

5 A large defined benefit pension scheme offers members the opportunity to convert up to 25% of their pension into a cash lump sum on retirement.

(i) List six other member options that could be included in a defined benefit pension scheme. [3]

The previous funding valuation for the scheme assumed that all members converted the maximum possible amount of pension into a cash lump sum at retirement. The scheme managers have asked the actuary to undertake an experience analysis to test the appropriateness of that assumption.

(ii) Describe how the actuary might carry out such an analysis. [5]

The analysis shows that 85% of members retiring in the last 6 years took the maximum possible cash lump sum at retirement, with the remaining 15% of members taking no cash lump sum at retirement.

(iii) Describe the points the actuary should consider in deciding if it is appropriate to amend the assumptions for the funding valuation based on this analysis. [6]

It has been suggested that members should be required to obtain the consent of the scheme managers before exercising the option to convert pension to cash at retirement.

(iv) Discuss the advantages and disadvantages of this suggestion. [5]

[Total 19]

6 A company operates a defined benefit pension scheme and has adopted a terminal funding arrangement.

(i) Explain the risks of a terminal funding strategy. [6]

The scheme is mature and pensions in payment are linked to inflation. The scheme funds are invested 25% in equities, 50% in government bonds, 20% in corporate bonds and 5% in cash. The funds are managed by a professional custodian.

(ii) Describe the key investment risks for the scheme. Your answer should consider the risks in relation to:

- the assets held
- the payment of benefits
- the governance of the funds
- any other relevant risks.

[11]

[Total 17]

END OF PAPER