

INSTITUTE AND FACULTY OF ACTUARIES

EXAMINATION

20 September 2022 (am)

Subject SA4 – Pensions and Other Benefits Specialist Advanced

Time allowed: Three hours and twenty minutes

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

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

1 XYZ plc sponsors a medium-sized defined benefit pension scheme that is open to new members. The scheme is very mature with approximately 90% of its liabilities relating to deferred members and pensioners. The average term to retirement for the active members in the scheme is approximately 20 years.

The scheme holds 25% of its assets in growth investments and the balance in a range of gilts, corporate bonds, cash and some liability-driven investments.

The sponsor has a strong covenant in place to support the scheme. However, though XYZ has a strong balance sheet, it does not have ready access to cash.

The trustees are preparing for an actuarial valuation in 3 months' time for the purpose of assessing the funding level of the scheme and determining future contributions.

The scheme actuary has been asked to advise the trustees on the valuation assumptions.

- (i) Set out the points you would expect the actuary to include in their advice on:
 - (a) the discount rates to be used. [5]
 - (b) longevity assumptions. [3]

Just before the valuation date, equity markets suffered a significant fall. Interest rates were also reduced to lower levels than had recently been experienced.

In response to these significant changes in the investment markets, the trustees wish to review their original approach to setting the discount rate assumptions. They have asked the scheme actuary to update their earlier advice on this matter and comment on how XYZ's covenant may impact on any changes required.

- (ii) Discuss the possible changes that the actuary may advise. [7]

XYZ's finance director believes that the recent fall in equity markets has not affected the risk, to the scheme, of holding a significant proportion of its funds in growth assets.

The trustees have asked the scheme actuary to draft a report on whether the original approach to setting the discount rate could still be appropriate, and what further information or action would be needed to support that conclusion.

- (iii) Set out the points the actuary should include in their report. [5]

The trustees and sponsor have decided to retain their original approach to setting the discount rate assumptions, using market conditions at the valuation date. Preliminary valuation results on this basis show a funding level of 85%.

Six months after the valuation date, while valuation negotiations are still ongoing, equity markets have largely recovered to their previous levels. The estimated funding level at this date, based on these current market conditions, would be 98%.

The trustees have asked the actuary for their advice on options to remove the 15% deficit, including whether, and how, to allow for the post-valuation experience.

(iv) Discuss the options the actuary may suggest. [10]

(v) Discuss briefly any other actions the trustees should take. [5]

[Total 35]

2 ABC plc is a new company, established to take on government contracts in a particular country. Initially, ABC will recruit their workforce from former government employees with relevant experience. ABC will be required to establish a pension scheme for its employees in respect of future service only.

(i) Identify the three main types of pension scheme that ABC could establish, giving a brief description for each. [6]

(ii) Describe, with reference to the different scheme types, the roles and interests of each of the key stakeholders involved in setting up the new scheme. [12]

The directors of ABC have engaged actuarial advisers to assist them in the establishment of the pension scheme. They have yet to decide on the type of pension scheme to provide and have asked the advisers to produce a separate report on each of the three scheme types setting out the key items for consideration in the following areas:

- Level of member benefits
- Benefits for dependants
- Level of contributions required
- Split of contributions between members and sponsor
- Other relevant aspects.

(iii) Discuss the points the actuarial advisers may include in each report. [22]

[Total 40]

3 The trustees of a large defined benefit pension scheme wish to introduce more flexibility for scheme members on retirement. They are proposing to allow members to convert their pensions into a lump sum that can be used to change their form of benefits in the scheme in a manner of their choosing, including an income drawdown option.

- (i) Set out the advantages and disadvantages, to scheme members, of the trustees' proposal. [6]

The trustees have recognised that the members will be exposed to additional risks if they take up the new flexibilities being offered, particularly with the income drawdown option.

- (ii) Suggest possible actions the trustees may put in place to mitigate these risks. [4]

The trustees have asked their actuary to advise them on suitable conversion terms to calculate the lump sum available and the form of benefits chosen by the member.

- (iii) Set out the points the actuary may make in their advice. [11]

- (iv) Describe any conditions that the actuary may advise the trustees to impose, in order to prevent member decisions being detrimental to the scheme. [4]

[Total 25]

END OF PAPER