

# INSTITUTE AND FACULTY OF ACTUARIES

## EXAMINATION

30 September 2020 (am)

### **Subject SA4 – Pensions and Other Benefits Specialist Advanced**

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 medium-sized defined benefit pension scheme is currently open to new entrants. The sponsoring employer is looking to close the scheme and replace it with a defined contribution scheme.

The employees' representatives would like the employer to participate in some form of risk-sharing.

- (i) Discuss the possible approaches for pension schemes where the risk can be shared between the sponsor and the members. [12]

The employer has proposed a Collective Defined Contribution (CDC) Scheme.

- (ii) Describe how a CDC scheme might work, highlighting the differences compared to a traditional defined contribution scheme. [8]

The defined benefit scheme has now closed to future accrual. It has been proposed that active members at the time of closure, who remain in employment, will retain the link to their final salary for their accrued benefits.

- (iii) Outline the risks to the members and sponsor of retaining this link. [3]

The sponsor wants to reduce the remaining risk in the defined benefit scheme.

- (iv) Discuss FIVE possible ways that these risks can be reduced or removed. [10]

An advisor to the sponsor has suggested that the costs of buying out the scheme benefits are currently very attractive, compared to recent history.

- (v) Suggest reasons why buyout costs have become more attractive. [4]

Following the closure to accrual the final salary link was **not** retained. A valuation was carried out as at 1 January 2019. The results on an ongoing basis are as follows:

**Assets:** £210m

**Liabilities:**

Deferreds: £75m

Pensioners: £250m

The sponsoring employer has requested an estimate of the cost of securing all benefits with an insurance company as at 1 January 2020. The following summary data and the assumptions used in the ongoing valuation have been provided:

**Data as at 1 January 2020**

Total pensions paid during 2019: £25m

Average term to retirement of deferred members: 12 years

Asset value at 1 January 2020: £250m

**Assumptions**

Discount rate (pre and post retirement): 3.25% p.a. (determined as the yield on government bonds as at 1 January 2019 plus 1.25% p.a.).

Pension increases (in payment and deferment): 2.25% p.a. (determined as implied inflation as at 1 January 2019).

The assumptions for estimating the cost of securing benefits with an insurance company are as follows:

- Discount rate – pre retirement: based on the yield on government bonds less 0.4% p.a.
- Discount rate – post retirement (for non-pensioners): based on yield on government bonds less 0.4% p.a.
- Discount rate – post retirement (for pensioners): based on yield on government bonds plus 0.4% p.a.
- All other assumptions are to be the same as for the ongoing valuation.

As at 1 January 2020, the yield on gilts was 0.2% p.a. lower and implied inflation was 0.3% p.a. higher than as at 1 January 2019.

- (vi) Estimate the cost to the employer of securing all benefits with an insurance company as at 1 January 2020. State any additional assumptions that you make.

[13]

[Total 50]

**2** The Trustees of a large defined benefit scheme have noticed that the number of transfer value quotations provided has increased significantly over the past year. However, the proportion of these quotations that result in a transfer of benefits has fallen compared to historical levels.

- (i) Suggest reasons for:
- (a) the increase in requests.
  - (b) the fall in the proportion of quotations that have resulted in the transfer of benefits.
- [6]

The initial results of the latest funding valuation have just been produced. The funding level on a scheme funding basis was 90%, and on the Cash Equivalent Transfer Value (CETV) basis was 95%.

- (ii) Suggest the main reasons why the CETV basis produces a higher funding level than the scheme funding basis. [5]

The analysis of the scheme's experience since the previous valuation shows a loss on transfers out. If this experience is shown on a year-by-year basis then the first year shows a small gain, with a small loss in the second year and a larger loss in the third year.

- (iii) Suggest reasons for this pattern of gains and losses. [6]

The sponsor has seen the initial results and suggests that the Trustees should reduce all future transfer values.

- (iv) Outline the considerations the Trustees should make before agreeing to reduce transfer values. [8]

The sponsor has suggested that, given the increase in transfer value quotation requests, and the fact that the basis is weaker than the funding basis, allowance should be made in the funding basis for a proportion of members transferring out.

- (v) Set out the points the Trustees should consider before responding to this proposal. [3]
- [Total 28]

**3** A very large manufacturing company sponsors two final salary defined benefit pension schemes.

- ‘New Scheme’, which is currently open to new members
- ‘Old Scheme’, which is a scheme that has been closed to accrual for many years and provides pensions for senior members of staff.

Both schemes are due a funding valuation with the same effective date.

- (i) Suggest likely differences in the approaches to setting assumptions for the two schemes. [9]

The valuation has been completed for both schemes, with the following results:

	<b>New Scheme</b>	<b>Old Scheme</b>
	<i>£m</i>	<i>£m</i>
Assets	2,700	42
Liabilities	3,000	40
Funding level	90%	105%

The sponsor has proposed to merge the two schemes in order to save costs.

- (ii) Outline the issues that New Scheme trustees, Old Scheme trustees and the sponsor will need to consider. [10]
- (iii) Set out how your answer to part (ii) might change had the valuation shown that the Old Scheme had a 90% funding level and the New Scheme had a 105% funding level. [3]

[Total 22]

**END OF PAPER**