

Actuarial Society of South Africa

EXAMINATION

22 October 2018

Subject F204 - Pensions and Other Benefits Specialist Applications

Time allowed: Three Hours

INSTRUCTIONS TO THE CANDIDATE

- 1. Follow log in and saving instructions issued to you at the exam venue.*
- 2. Save your work throughout the exam.*
- 3. You are required to submit your answers in Word format only using the template provided. You MAY NOT use any other computer program (e.g. Excel) during the examination.*
- 4. You have 15 minutes at the start of the exam 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.*
- 5. You must not start typing your answers until instructed to do so by the invigilator/supervisor.*
- 6. Mark allocations are shown in brackets.*
- 7. Attempt all questions, beginning your answer to each question on a new page.*
- 8. You should show calculations where this is appropriate. If necessary, an answer book may be used for this purpose.*

Note: The Actuarial Society of South Africa will not be held responsible for loss of data where candidates have not followed instructions as set out above.

AT THE END OF THE EXAMINATION

**Check that you have saved your work as per instructions given to you.
Hand in your question paper with any additional sheets firmly attached.**

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| 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. |
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QUESTION 1

A South African Company has a scheme that subsidises part of the cost of post-retirement medical aid contributions of current and former employees.

A few years ago, the scheme was amended to no longer provide an increase in the subsidy payment by the Company. The scheme was also closed to new employees a few years ago.

The Company also sponsors a pension fund (the “Fund”), which is a hybrid arrangement that pays in-fund pensions. The Fund targets pension increase in line with inflation.

The Fund currently has a surplus in the Pensions Account that is more than three times the reported obligation towards the post-retirement medical subsidies. The Company has noted that all eligible former employees are pensioners of the Fund and has proposed that the medical subsidy payment could be added to their current pension benefits, incurring no additional administration costs for the Fund.

- i. Set out the issues arising from this proposal that need to be considered by each of the stakeholders. [11]

The Company’s Financial Director has asked the Fund’s Trustees to agree to this proposal. He would like the proposal to be implemented effective as at the Company’s next year end. The medical subsidy and current pension benefits would be consolidated into a single pension and will be subject to the normal rules and policies of the Fund.

The Financial Director has asked you to project the IAS19 liability for the medical subsidy scheme to the next year end date so that he can discuss the position with the Fund’s Trustees.

The table below sets out select details relating to this obligation as reported in the Company’s financial statements as at the last financial year end, 31 December 2017.

| | |
|---|------------------|
| Liability / Asset Recognised in Statement of Financial Position | 31 December 2017 |
| Defined Benefit Obligation: | R336.5m |
| Continuation Members | R287.1m |
| In-service Members | R49.4m |
| Assets at Fair Value | - |
| Asset / (Liability) Recognised | (R336.5m) |
| Assumptions: | |
| Discount Rate | 8.9% |
| Inflation | 6.0% |
| Projected Components of the Defined Benefit Cost for period ending: | 31 December 2018 |
| Projected Service Cost | R4.6m |
| Estimated medical subsidy payments to continuation members | R47.0m |

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Based on the change in bond yields to date the Financial Director has agreed that you should assume that government bond yields would reduce by 60 bps by year end while implied inflation is likely to remain unchanged.

- ii. Using the information set out above, and stating any other assumptions made, project the expected results of the IAS19 liability for the medical subsidy scheme to the next financial year end of 31 December 2018, before the impact of the restructuring.

[9]

The Financial Director intends to provide the results to the Fund which show that the cost of taking over the liability can be comfortably met from the current surplus in the Pensions Account.

- iii. Explain to the Financial Director how the above restructuring is likely to affect the Fund's valuation results.

[6]

Pensioners have complained about the proposal and have suggested that instead the Company should make monies available to the individual pensioners in the form of a buy-out such that they can make their own choices as to how they will use the capital value of the medical subsidy benefit.

- iv. Comment on the viability of such an option. Consider the products available and the risks faced by all parties.

[8]

[Total 34]

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QUESTION 2

You are the actuary to the ABS Pension Fund. It is a large defined contribution pension fund, with over 22 000 members and R6bn in assets. The Fund currently provides no investment choice and offers members a life stage investment model, with member's shares of fund invested as follows:

| Age | % invested in the High-risk portfolio | % invested in the Low-risk portfolio | % invested in the Money Market portfolio |
|-----------------|---------------------------------------|--------------------------------------|--|
| Younger than 57 | 100 | 0 | 0 |
| 58 | 80 | 20 | 0 |
| 59 | 60 | 40 | 0 |
| 60 | 40 | 40 | 20 |
| 61 | 20 | 40 | 40 |
| 62 | 0 | 40 | 60 |
| 63 | 0 | 20 | 80 |
| 64 | 0 | 0 | 100 |

The portfolios are constructed as follows:

- The portfolio mandates state that the High-risk portfolio must have an equity component of between 60% and 75%, and the Low-risk portfolio must consist of a maximum of 55% equities. The balance of the portfolios' assets are invested in cash and government bonds. The money market portfolio is 100% a cash-based portfolio.
- The assets of the Fund are invested by three specialist investment managers, one each for equities, cash and government bonds. The Fund has also appointed an investment consultant who makes recommendations as to the asset class allocations between the three asset classes, for the High-risk and Low-risk portfolios.

The Fund has just held trustee elections, and the Board of Trustees has a new chairperson. The chairperson is looking into all the aspects of the Fund to understand the mechanics of how pension funds work. She is particularly interested in the Fund's investment strategy and has asked for your input. She has asked for a report on what the trustees should consider when setting an investment strategy for the Fund, and the reasons why the current investment strategy might have been adopted, and why the Fund's investments are being managed as they are.

- i. Set out what your report to the chairperson would include. [15]

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The chairperson has discovered that 90% of the members of the Fund are purchasing living annuities outside of the Fund at retirement, with the balance buying traditional fixed and inflation linked life annuities, also outside the Fund. She has asked if the current investment strategy is appropriate in the light of this information, and if you would recommend any changes to the strategy.

- ii. Set out the points would you make in response to the chairperson's questions. [8]

The chairperson has also heard a lot of discussion of active versus passive investing and would like to know the difference between these, and whether passive investing is an option for this Fund.

- iii. Set out how you would respond to the chairperson's questions regarding active versus passive investment strategies. [7]

[Total 30]

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QUESTION 3

Slowchange (Pty) Ltd established a defined benefit pension fund in the early 1980's. Following the Pension Funds Second Amendment Act, the Fund offered members the opportunity to convert to a defined contribution fund in 2003.

The conversion offer provided various incentives but there were still a reasonable number of in-service members, as well as the Fund's pensioners, who remained in the defined benefit pension fund.

The Company has decided that given the rapidly diminishing in-service membership and pensioner pool, the time has come to close the Fund. The Company intends to approach the Fund's Trustees and insist that remaining members are forced to transfer out of the Fund and join the defined contribution fund established in 2003 and that pensioners must be outsourced to an insurer.

You have been contracted to provide an independent opinion on various aspects of the proposal.

The main reason given by the Company for embarking on this strategy is to manage escalating contribution costs. The first aspect of the independent opinion requires you to explain contribution rates in the context of a defined benefit fund.

- i. Set out the reasons for funding a pension fund and briefly describe the various ways that contribution rates can be calculated in a defined benefit fund. [4]
- ii. Explain which of the funding methods would most likely be used for the current Fund and why this method would have been chosen over the others. [3]

The Company does not understand how its required contribution rate is determined relative to the contribution rate required by members.

- iii. Explain how the contribution rates are typically determined for members and the employer in a defined benefit fund. [6]

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The Company's proposal for closing the Fund is as follows:

- It will give notice to the Fund's Trustees setting out its intention to cease participating in the Fund.
- It will request a compulsory transfer of all active members to the Company's existing defined contribution fund. The transfer value will be equal to the actuarial reserve value with no further incentives or enhancements.
- iv. You have been requested to provide an opinion to the Company on the viability and appropriateness of the proposal in relation to legislation. Set out the points you would make in such an opinion. [6]
- v. Discuss the question of enhancements on transfer in relation to the Company's proposal. [7]

One of the key issues identified in ensuring appropriate outcomes under a defined contribution fund is member communication.

- vi. Discuss the importance and relevance of personalised communication and financial decision-making tools and the factors that should be considered in their design. [10]

[Total 36]

[Grand Total 100]

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END OF EXAMINATION