

Actuarial Society of South Africa

EXAMINATION

20 October 2022

Subject F204 – Retirement and Related Benefits

Time allowed: Three hours and twenty minutes (which includes five minutes for downloading and uploading your answer document)

Total marks: 100

INSTRUCTIONS TO THE CANDIDATE

1. Ensure that you are logged in and authenticated through Examiity before you attempt the examination.
2. The question paper is only available in the ASSA Exam Platform as a PDF download and may not be printed. Copy/paste of questions or parts thereof is allowed from the question paper to your Word answer document only.
3. You will be provided with a Word template within the ASSA Exam Platform to download and use to complete your questions. Submit your answers in Word format **ONLY** using the answer template provided. No uploads of answers (handwritten or otherwise) will be accepted.
4. Ensure that your candidate number appears in the Header of your Word template. [Double-click on the header, input your candidate number only, then press “Esc” to close the header.] Do not use your name or member number anywhere in your answer document nor as file name.
5. You may not access any file from your computer, use any other computer program (e.g. Email or Excel), or open any other browser during the examination.
6. You may not use any other material (e.g. a Formulae and Tables book) during the examination. Any such information that may be required will be provided to you within the examination.
7. You are strongly encouraged to use the first 15 minutes as reading time only, however, you may start answering the paper whenever you are ready.
8. Mark allocations are shown in brackets.
9. Attempt all questions.
10. Show calculations where appropriate. You may use blank paper to carry out rough work calculations. You may use a calculator from the approved list only.
11. Upload your Word answer document only into the ASSA Exam Platform. Once you have uploaded your file, you must click on **Finish Attempt** to save your document. You will still be allowed to go back and make changes (**Review Attempt**) if you have time.
12. Once you are satisfied with your uploaded document, click **Finish attempt** and **Finish all and Submit**. Once you have submitted you will not be able to make any changes.
13. **You must submit your Word answer document BEFORE the end of the allotted examination time.** Take this into account when planning your review and submission. There will be no time announcements.

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.

END OF INSTRUCTIONS

QUESTION 1

The Board of Trustees of a South African defined contribution provident fund has called a workshop to develop solutions for the continued escalation of the cost of their death and disability benefits. As consultant to the provident fund, you are invited to the workshop. The increasing costs require a greater portion of fund contributions to be allocated towards risk benefits at the expense of the allocation of contributions towards retirement savings.

As an introduction to the workshop, the Chairman of the Board has questioned the purpose of providing any benefits other than retirement benefits.

- i. Outline the purpose of death in service benefits offered by employers and the structures available to deliver the benefits as well as the design considerations.

[14]

The workshop generated robust discussions with several trustees sharing ideas about how to manage the increasing costs.

One trustee suggested that a fixed percentage of the contributions should be set aside towards the cost of death benefits and that this allocation should be capped.

- ii. Discuss this suggestion and comment on the influence this would have on the design of the death in service benefit.

[8]

One of the member-elected trustees suggested that the employer should carry the additional cost as the costs of the death and disability benefits increase.

- iii. Outline your response to this suggestion.

[7]

Another trustee has proposed that to avoid cross-subsidy and manage costs all members should pay a fixed Rand amount towards the cost of their death in service lump sum benefits.

- iv. Describe the issue of cross-subsidisation in defined contribution funds and explain to the trustee why this suggestion may or may not be appropriate.

[5]

[Total 34]

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QUESTION 2

Fund Y is a defined contribution fund that provides retiring members with the option of electing to receive a living annuity from the Fund. A living annuitant in the fund may elect to transfer out of the fund to another pension / annuity provider at any time after retirement.

There is currently only one investment portfolio available to living annuitants, a typical balanced fund portfolio with a strategic asset allocation of 70% growth assets (equities, property) and 30% interest bearing assets (cash and bonds). The total living annuity account balances are about R400 million.

- i. Describe the structure of a living annuity within a retirement fund and the benefits provided.

[6]

The trustees have received a request from a living annuitant to make a lower risk portfolio (made up largely of bonds) as an investment option to living annuitants. The trustees have asked you, as the valuator to Fund Y, for your view.

- ii. Discuss the points you would make to the trustees.

[7]

One of the trustees has stated that by investing the first 3 years of a retiring member's annuity payments in a low-risk portfolio, and the balance of the living annuity account in the balanced fund portfolio, the risk inherent in the living annuity is significantly reduced.

- iii. Discuss the advantages and disadvantages of the ideas set out by the trustee.

[8]

The fund's administrator has pointed out that to have two investment portfolios underlying each living annuity account will result in additional administration fees. The administrator has proposed that a single investment portfolio be retained for the living annuitants consisting of a growth section and a stable section and that the annuity payments be met from the stable section.

- iv. Assess the administrator's proposal and explain the further issues that would need to be considered for the proposal to be implemented and how these might be resolved.

[9]

[Total 30]

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QUESTION 3

In an attempt to boost household savings, National Treasury has made further proposals to amend retirement fund legislation to complement the other reforms that have been introduced over recent years. An initial proposal paper titled “Encouraging South Africa households to save more for retirement” has been issued.

The Board of Trustees of the SA Transport Industry Provident Fund has asked for your assistance in understanding the proposed strategy, and in particular the so-called two-pot system.

- i. Outline the proposal that has been made by National Treasury.

[5]

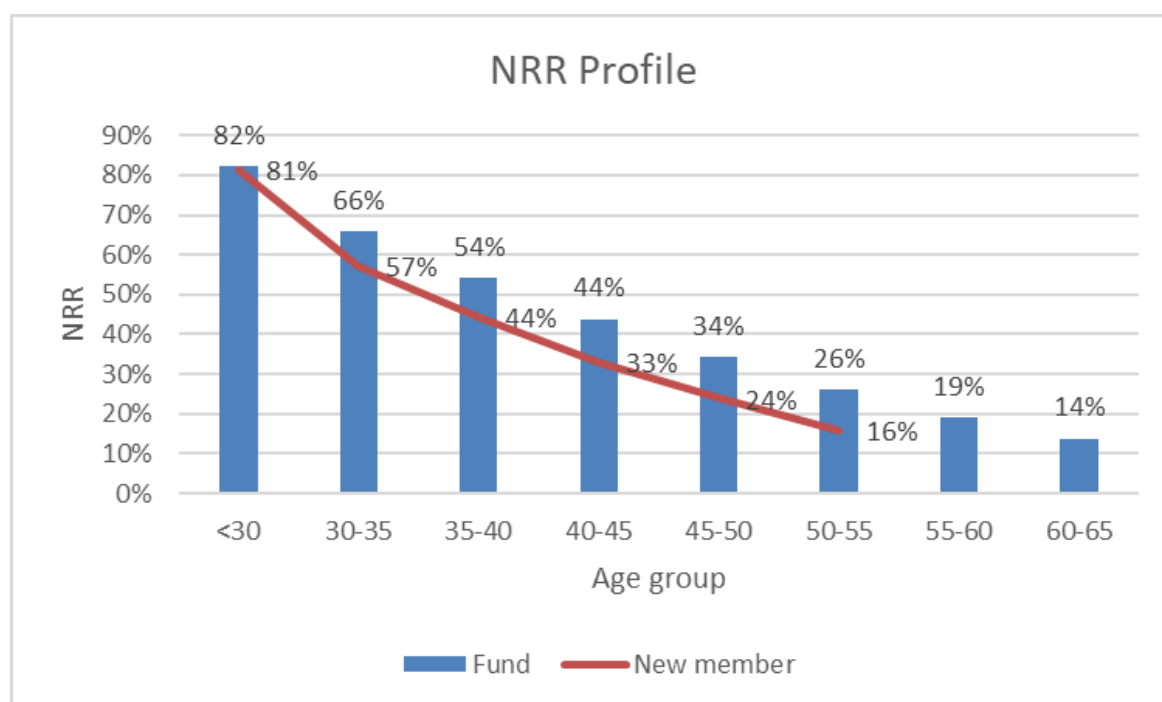
The Board would like to understand the rationale for this initial proposal and why this might be needed given the reforms towards preservation that have already been implemented.

- ii. Explain the challenges within the current environment National Treasury aims to address through the proposal.

[5]

The Board recently expressed concern about the level of retirement benefits members are expected to receive from the fund and had asked you to determine the expected net replacement ratios for all members of the Fund.

The following chart summarises your findings and compares the expected net replacement ratio at retirement across various ages of the current membership to the expected net replacement ratio of a new joiner at the same age.



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You have been asked to explain these findings.

- iii. Briefly summarise the high-level findings and explain the main factors that influence the net replacement ratio. Outline how changes to each of these factors could improve the retirement outcomes for these members.

[14]

A trustee has noted that he does not believe the proposed system will result in an improvement in the retirement outcomes of members in the transport industry. The trustee's argument is that industry members generally move between employers and typically withdraw all their funds multiple times before the age of 45 years but after that age tend to remain in the Fund. He argues that this means that compared to a 30-year-old new entrant the 45-year-old still saves for approximately 2/3rds of his or her working lifetime and as such would expect the same result as someone who saved under the system proposed by National Treasury.

In response to this, you have been asked to demonstrate how the system proposed by National Treasury may or may not improve the targeted outcomes by projecting a sample of net replacement ratios.

You decide to do the projections for the following sample of members:

- a new member aged 30 years who preserves 100% of his or her savings;
- a member aged 45 who has regularly changed employers and preserved none of the savings before the age of 45 years;
- a new member aged 30 under the system proposed by National Treasury.

- iv. Calculate the expected net replacement ratio for these three members. Set out your calculations and clearly state all assumptions that you make.

[10]

- v. Discuss your results from iv) in light of the trustee's argument.

[2]

[Total 36]

[Grand Total 100]

END OF EXAMINATION