

# Actuarial Society of South Africa

## EXAMINATION

13 May 2020

### Subject N211 — Communications

*Time allowed: Three hours and fifteen minutes*

#### ***INSTRUCTIONS TO THE CANDIDATE***

1. *Ensure that you have your candidate number handy to input as part of the exam.*
2. *Questions are only available in Moodle and may not be printed.*
3. *You will be provided with a Word and a PowerPoint template to access and use to complete your questions.*
4. *An Excel template will be available to use if necessary, but will not be uploaded and used for the marking process.*
5. *Ensure that your Candidate number appears in the Header (Word template) and Footer (PowerPoint template). [Select "Insert", then "Header"/"Footer", input your candidate number on blank header/footer template and select "Close Header"/"Close Footer"]. DO NOT USE YOUR NAME ON YOUR ANSWER SCRIPT.*
6. *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.*
7. *Mark allocations are shown in brackets.*
8. *Attempt all questions. Save your work continuously during the exam.*
9. *You are required to submit your answers in this Moodle learning platform only.*
10. *At the end of the exam, if you have time left, you may return to your attempt to review and make any changes to your answers. Once you are happy with your answers you need to **Finish all and Submit** your work after which you will NOT be able to make further changes. Take this into account when finishing early - once you have submitted you will not be able to make any more changes to your answers.*
11. *It is the student's responsibility to ensure that all work is submitted BEFORE the end of the exam time. Take this into account when planning your review and submission.*
12. *You should use your scrap paper to work on any calculations where this is appropriate.*

**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

TrustUs is a large insurance company with staff ranging in educational levels from those responsible for basic administration to board members (actuaries, CAs, etc.). It is compulsory for all employees to be active members of the TrustUs Umbrella Fund (TUF). The Fund has a fixed contribution rate and offers investment choices to its members. TUF's normal retirement age is specified as 63.

TrustUs conducts regular, industry-wide retirement investigations. The latest has once again revealed that retirement fund members are, in general, oblivious to where they have invested their retirement savings. In fact, most members only pay attention to their retirement investment choices at one time, when they join their company. Many are unaware of the impact of fees on an investment's accumulation over time.

TUF pays for a workplace retirement advisor, Ilse Patterson, who is available to provide free, professional retirement advice. Unfortunately, she is not well utilised.

Recent investigations revealed that the life expectancy of TUF members is increasing and is expected to approach 90 years of age when the average active member reaches age 63. Most TUF members have retirement fund savings that are worth more than their house or car.

TrustUs's CEO, Albert Nzo, has decided to draft a friendly memo to employees to encourage them to review their investment choices. He wishes to remind employees that different investment portfolios offer different risk-reward trade-offs. As a secondary goal, Albert wishes to nudge employees towards choosing internal, TrustUs-managed investment portfolios as they have historically received a good net return compared to their competitors. This will also improve TrustUs's profitability.

Draft an appropriate memo of between 550 and 650 words to TrustUs employees. Include a brief explanation of the role investment fees play in a portfolio's net return and a high-level overview of the risk-reward trade-off faced by all investors. There is no need to consider this trade-off at the level of the individual portfolios offered to TUF members. Do not address the possibility of members retiring at an age other than TUF's normal retirement age.

Additional information:

- Like many umbrella funds, TUF offers both a pension and provident option that achieve returns based on their individual cash flows.
- TUF members may invest in the following portfolios: TrustUs Aggressive, TrustUs Moderate, Competitor1 Balanced, Competitor2 Conservative and Competitor2 Moderate.
- An app is available for download that enables members to review their investment choice.
- Albert is invested in TrustUs Aggressive and TrustUs Moderate Funds. He recently consulted Ilse and is relieved to hear that he looks to be on track for a comfortable retirement in six years' time.

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As at December 2019:	Gross annualised returns								Total Expense Ratio Per Annum	
	1 Year		3 Years		5 Years		10 Years		Pension Fund	Provident Fund
	Pension Fund	Provident Fund	Pension Fund	Provident Fund	Pension Fund	Provident Fund	Pension Fund	Provident Fund		
TrustUs Aggressive	15,27%	15,27%	7,85%	7,85%	7,43%	7,44%	11,03%	11,40%	0,50%	0,50%
TrustUs Moderate	11,12%	11,13%	6,63%	6,64%	6,58%	6,58%	11,39%	11,04%	0,41%	0,41%
TrustUs Cash Fund	8,57%	8,59%	8,27%	8,31%	7,88%	7,92%	6,95%	6,97%	0,15%	0,15%
Competitor1 Global Balanced	7,78%	7,79%	5,16%	5,18%	6,75%	6,77%	10,16%	10,21%	0,84%	0,84%
Competitor1 Managed	13,37%	13,37%	5,62%	5,61%	5,56%	5,54%	11,15%	11,12%	0,80%	0,80%
Competitor1 Stable Bonus Portfolio	6,71%	6,71%	7,29%	7,29%	8,39%	8,39%	10,90%	10,89%	1,33%	1,33%
Competitor1 Balanced Sharia'h	9,31%	9,38%	5,52%	5,59%	4,51%	4,52%	n/a	n/a	1,10%	1,10%
Competitor2 Monthly Bonus Fund	6,00%	6,00%	6,62%	6,62%	7,78%	7,78%	9,88%	9,88%	2,07%	2,07%
Competitor2 Moderate Fund	11,10%	11,09%	7,84%	7,84%	8,11%	8,12%	9,89%	9,93%	0,48%	0,48%
Competitor3 Lifestage Portfolio	12,51%	12,51%	6,34%	6,31%	5,31%	5,28%	n/a	n/a	0,81%	0,82%

Competitor3 Capital Protection	6,60%	6,59%	7,18%	7,17%	n/a	n/a	n/a	n/a	1,43%	1,43%
Competitor3 Living Annuity	10,41%	10,41%	6,13%	6,17%	n/a	n/a	n/a	n/a	0,90%	0,90%
									The total expense ratio is a measure of the total cost associated with managing and operating an investment portfolio.	

[Total 50]

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## QUESTION 2

You are the Appointed Actuary for the Wellbeing Medical Scheme administered by your company, BFG Insurers. BFG's sales staff have already received training about the revisions to the Medical Schemes Act (MSA) that are coming into force from 1 June 2020 in Testland. However, based on MSA-related cafeteria talk amongst sales staff, there is much confusion about the new community rating system. The possible application of Late Joiner Penalties (LJPs) seems to be particularly bewildering.

Previous provisions of the MSA allowed medical schemes to rate clients according to the risk they posed to the scheme. They then charged premiums based on an individual's personal risk profile. Schemes could refuse cover to any individual for any reason.

The government of Testland decided to change this. Under approved revisions to the MSA, medical schemes will be required to base all member premiums on a single community rate. Since no citizen may be refused cover, this rating method has the potential to create a financially unsound scheme, particularly if it attracts mostly high-risk members. To correct for this, and to ensure fairness between members, medical schemes can apply a LJP to any new entrant over the age of 35. The maximum LJP is a function of the number of years since the new entrant last belonged to a registered Testland medical scheme.

The LJPs prescribed by the revised MSA (applied as a % of the community rate) are:

- Existing members and those aged 35 and below: 0%
- New entrants 35 years and older:
  - Minimum penalty: 0%
  - Maximum penalty for those who were last a member of a scheme 1 – 4 years ago: 5%
  - Maximum penalty for those who were last a member of a scheme 5 – 14 years ago: 25%
  - Maximum penalty for those who were last a member of a scheme 15 – 24 years ago: 50%
  - Maximum penalty for those who were last a member of a scheme 25+ years ago: 75%.

You have been considering how to address sales staff confusion and have decided to give another presentation on the coming revisions to the MSA. You have created a case study of a family of three that will form part of the presentation. Each family member's future premium will be impacted differently by the updated MSA.

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### Case study

Ms Nicky Newham has been a member of the Wellbeing Medical Scheme for the past six months. She was diagnosed four months ago with a chronic health condition that requires expensive, compulsory treatment. She currently pays a medical premium of T\$2 569 a month.

Her twin, Jack Spencer, is 63 years' old and has never belonged to a medical scheme. If he joins the Wellbeing Medical Scheme after 1 June 2020, his premium will be T\$2 370, 75% higher than the community rate. He is very likely to suffer from the same illness as his twin in the near future.

Jack's wife, Yurisha, is 40 years old and in excellent health. She was a member of a medical scheme on 1 April 2001, but not since then. If she joins the Wellbeing Medical Scheme after 1 June 2020, her premium will be set at 110% of the community rate.

Draft a presentation of 8-10 slides. The presentation should give a high-level explanation of how medical scheme premiums would be calculated under the original and revised MSA. Recap the reason behind the LJP as well as the way it will be implemented. Lastly, explore the impact of the revised MSA on individuals by means of a case study of the family described above.

### Notes:

- Community rating requires medical scheme providers to base their medical scheme's premium on a single community rate for all persons, regardless of their health status.
- An LJP is the only adjustment that may be made to the community rate when setting premiums.
- Medical schemes are obliged to treat all member illnesses. Minimum treatment levels are set by the MSA.
- Ignore the possibility of any fees, risk reserve, personal savings or profit component in medical scheme premiums.
- Premiums are payable monthly in advance.
- Individuals may leave the Wellbeing Medical Scheme whenever they want; they are forced to leave the scheme if they are two months behind on premiums.
- New entrants do not need to wait before they can claim from the scheme.
- Each medical scheme sets the LJP to apply to new entrants after considering their personal circumstances.
- Sales staff are familiar with the contractions of MSA and LJP for the Medical Scheme Act and Late Joiner Penalty, respectively.

[Total 50]

[Grand Total 100]

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