

Actuarial Society of South Africa

EXAMINATION

20 October 2020

Subject F205 - Investment

Fellowship Applications

Time allowed: Three hours and fifteen minutes

Total marks: 100

INSTRUCTIONS TO THE CANDIDATE

1. *Ensure that you are logged into your ProctorU account before attempting the examination.*
2. *Questions are only available in this ASSA Examination platform and may not be printed.*
3. *You are required to submit all of your answers in the ASSA Examination platform only. No uploads of answers (handwritten or otherwise) to the ASSA Examination platform will be accepted.*
4. *You may not use any other computer program (e.g. Email, MS Word or Excel), files or open any other browsers during the examination.*
5. *You are strongly encouraged to use the first 15 minutes as reading time only, however, you may commence answering the paper whenever you are ready.*
6. *Mark allocations are shown in brackets.*
7. *Attempt all questions.*
8. *Show calculations where this is appropriate. You may use blank paper to carry out rough work calculations. You may use a calculator from the approved list only.*
9. *You may return to your answers to review and amend during the allotted examination time. Once you are happy with your answers you need to **Finish all and Submit** your work. Once you have submitted you will not be able to make any more changes to your answers.*
10. *It is the candidate's responsibility to ensure that all work is submitted 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: Answers will be saved automatically during the examination. However, 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

- i. Describe the current shape of the South African nominal Government bond yield curve and explain how it has changed over the year ending 31 August 2020, providing reasons for the changes. [6]
- ii. Describe the possible effects that the above change in the shape of the South African yield curve may have on the following companies: [9]
- a. A South African life insurance company writing predominantly immediate fixed life annuity business.
 - b. A South African bank's retail operations.
 - c. A South African pension fund.

The chairman of a large South African defined contribution pension fund has approached you as the fund's consultant. The fund's trustees are responsible for the investment strategy of the fund. The fund has a significant holding in cash and money market instruments, which it holds separate from other active members and in respect of members closer to retirement. The chairman is concerned at the low rates of interest being earned on these assets. He has asked you how the fund could go about achieving a better return on this money market portion of the fund's assets should it remain invested in a money market portfolio. The fund's assets are held directly by the fund.

- iii. Discuss the options available to the pension fund, highlighting the considerations that the trustees should take into account before making any changes. [6]

A significant rise in the price of gold has caught the attention of the chairman of the pension fund. He is concerned because the pension fund has no exposure to the precious metal and he has asked for your advice.

- iv. Provide possible reasons for the rise in the price of gold over the last two years. [4]
- v. Comment on the suitability of gold (the metal) as an investment for the pension fund. [5]

A trustee of the pension fund has suggested the fund buy shares in gold mining companies instead of buying physical gold in order to gain exposure to the metal.

- vi. Comment on this suggestion, highlighting the advantages and disadvantages of such an approach. [5]

[Total 35]

REMEMBER TO SAVE

QUESTION 2

A South African retirement fund has approached you as investment advisor to assist it in incorporating environmental, social and governance (ESG) considerations into its investment activities.

- i. Describe the various regulations around ESG for a South African pension fund. [4]
- ii. List at least 20 ESG factors which could potentially be taken into account in making investment decisions. [5]

A trustee of the fund has said that, in the South African context, the Social factors in ESG are more important than Environmental and Governance. Another trustee argues that, for South Africa, climate-related issues are the most important, whilst a third believes that good governance is crucial in South Africa, and this is where the focus should be.

- iii. Outline the domestic considerations which could mean why each of the three trustees may be correct. [13]
- iv. Explain, with examples, how the fund's listed equity managers could incorporate ESG considerations into their investment processes. [13]

The retirement fund appointed an active listed equity manager motivated *inter alia* by the manager's ESG integration processes. The manager has now been managing the fund's equities for a year.

- v. Explain what information you would seek, or questions you would pose, to the investment manager to assess the actual level of ESG integration into their investment process over the last year. [5]

[Total 40]

REMEMBER TO SAVE

QUESTION 3

- i. Outline the prevailing regulatory environment of a South African life insurance company. [5]

A small funeral insurance company has its free reserves invested in a listed equity portfolio. The portfolio is managed by two external active equity managers. The company appointed these managers three years' ago. You are the actuary in charge of the company's investments. The CEO has noted that the equity portfolio has underperformed over the last three years and has asked you to perform some analysis in this regard.

- ii. List the information you would require in order to conduct a full analysis of the equity portfolio. [6]
- iii. Outline the factors that the analysis should consider. [5]

The Board of Directors has expressed some concern around the adopted investment strategy of 100% equities. You have proposed that they consider the following options in respect of protecting the value of the free assets from a fall in equity markets:

- Investing in a money market portfolio
 - Investing in a portfolio of short to medium dated government fixed rate bonds
 - Investing in an Absolute return fund
 - Protecting the existing equity portfolio using futures.
- iv. Briefly discuss the relative merits of each option. [9]

[Total 25]

[Grand Total 100]

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END OF EXAMINATION