

**Actuarial Society of South Africa**  
**EXAMINATION**

24 October 2016

**Subject F205 - Investment**  
**Fellowship Applications**

Time allowed: Three hours

***INSTRUCTIONS TO THE CANDIDATE***

- 1. Candidates will be issued with instructions to log-in using a password (which you will be provided with at the exam center).*
- 2. Candidates are required to submit their answers in Word format only using the template provided. You MAY NOT use any other computer program (e.g. Excel) during the examination.*
- 3. Save your work continuously throughout the exam, on your computer's hard drive that you have been provided.*
- 4. You have 15 minutes at the start of the examination 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 on exam papers.*
- 7. Attempt all questions, beginning your answer to each question on a new page.*
- 8. Candidates should show 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.**

***AT THE END OF THE EXAMINATION***

**Save your answers on the hard drive.**

**Hand in your question paper with any additional sheets firmly attached.**

<p>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.</p>
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## QUESTION 1

A South African Retirement Fund has a portion of its assets invested in an SA equity portfolio. The portfolio is a high conviction, actively managed portfolio described as following a “deep value” style. The trustees have become increasingly concerned as the portfolio has significantly underperformed relative to the ALSI over the three years to March 2016.

- i) Discuss likely reasons for this underperformance in light of the portfolio’s chosen style. [5]

The trustees have decided to move the assets in the portfolio in question to a passive ALSI index tracker portfolio. Their Investment Policy Statement states that any significant transfer of assets from one manager to another should be undertaken by an independent transition manager.

- ii) Discuss the merits of this practice. [7]  
iii) Outline the factors to consider when appointing a transition manager. [6]

[Total 18]

## QUESTION 2

You are an investment consultant to a large institutional investment fund. There has been a recent trend towards public / private investment partnerships that allow governments to partially realise their capital locked up in their airports. Institutional investors are offered a minority stake in the operations of an airport in exchange for capital.

- i) Discuss the suitability of an airport as an investment for a South African pension fund. [10]

One such deal is from a particular central African country. The Treasury department of this country plans to offer a 49% stake in the airport to a single institutional investor. They have approached the fund as a potential investor, and the trustees have asked you for advice. There are no plans to list the airport on any securities exchange.

- ii) Highlight the issues that the trustees should consider in assessing the offer. [25]

The finance minister of the African country in question has suggested that instead of an outright sale of the airport, the government should issue a 15-year concession for the running of the airport. Under this model the investor would not own the underlying airport asset but rather own a concessionaire company which would have the right to operate the airport for 15 years.

- iii) Discuss the merits of this proposal from the points of view of both the African government and a South African pension fund (as the investor). [9]

[Total 44]

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### QUESTION 3

You are an independent consultant to a South African asset management firm. The chief investment officer (CIO) of the asset management firm has approached you for advice on his SA equity portfolio which is over-weight insurance company and bank shares.

Following the replacement of South Africa's finance minister in Dec 2015, the yield on South African 10-year government bonds spiked and the share prices of South African life insurance companies and South African banks fell sharply. The CIO would like to understand the effect of sharp moves in government bond yields on the value of the insurance company and bank shares in his portfolio.

- i) For the following companies, explain the potential effects of a 200 basis point spike in the 10-year SA government bond yield on the value to shareholders of the company:
  - a) A life insurer selling primarily guaranteed annuities
  - b) An insurer selling mainly pre-retirement smooth bonus funds
  - c) A retail bank selling mainly home loans and vehicle finance [18]

The chief investment officer would like to hedge the equity portfolio against future spikes in interest rates. He is thinking about using a specific exotic derivative traded on the Can-Do platform on the JSE.

- ii) Describe the Can-Do platform and its merits for investors relative to over-the-counter derivatives. [7]

The CIO is concerned that despite the benefits of the Can-Do platform, governance risks relating to their complexity remain.

- iii) Expand on the risk identified by the CIO and recommend mitigating actions that could be taken. [4]

One of his employees has suggested an alternative strategy of buying credit default swaps (CDS) on specific companies that are representative of their overweight position.

- iv) Explain what a CDS is and comment on the effectiveness of the employee's suggestion. [9]

[Total 38]

[Grand Total 100]

END OF EXAMINATION

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