

Actuarial Society of South Africa

EXAMINATION

20 October 2022

Subject F205 - Investment

Fellowship Applications

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 Examity 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

Listed company XCo owns a significant stake in listed company YCo. After a strategic review, XCo decides to distribute all of its shares in YCo to its shareholders. For every 100 XCo shares owned, XCo shareholders will receive 4.47 YCo shares.

You are an authorised financial advisor. One of your clients phones you in a panic about their personal share trading portfolio. Their stock watch app shows that XCo's share price has fallen by 24% today.

Yesterday's closing share prices were as follows:

XCo: R31.50

YCo: R181.50

XCo was trading at R23.94 at the time your client phoned you today.

- i.
 - a. Comment on the reason for the fall in XCo's share price. [3]
 - b. Outline the key points that your client should consider in making a buy, sell or hold decision based on this corporate action. [3]

Based on this experience, your client would like to explore switching their full share portfolio into unit trusts and asks for your advice in choosing between the following two unit trusts.

	Unit Trust A			Unit Trust B		
Sector	SA Equity General			SA Equity General		
Benchmark	FTSE/JSE SWIX			Market-value-weighted average return of funds in SA Equity General category		
Management company details	AUM = R410 billion Owned by a life insurance company			AUM = R3 billion Owned by two individuals who founded the business – one is the CEO and one is the portfolio manager.		
Fund size	R81 billion			R2.5 billion		
Portfolio management decision-making	Investment committee			Portfolio manager		
Top 10 holdings (as a percentage of fund)	45%			62%		
Fees	TER	1.10%		TER	1.59%	
	Performance fee	N/A		Performance fee	0.59%	
	Transaction costs	0.29%		Transaction costs	0.56%	
	TIC	1.39%		TIC	2.15%	
Returns (net of fees)		<u>Fund</u>	<u>B/M*</u>		<u>Fund</u>	<u>B/M*</u>
	1 year	2.8%	3.0%	1 year	6.1%	6.2%
	3 years p.a.	5.6%	5.6%	3 years	14.7%	7.4%
	5 years p.a.	6.2%	5.9%	5 years	12.8%	6.6%
	10 years p.a.	9.1%	9.3%	10 years	-	-
Risk statistics (based on past 5 year returns)	Tracking error	1.7%		Tracking error	5.9%	
	Maximum drawdown	-24.0%		Maximum drawdown	-26.2%	
	Annualised volatility	15.5%		Annualised volatility	21.1%	

*B/M means benchmark

- ii. Outline the key features of the two unit trusts that you would highlight to your client in your evaluation and recommendation. [12]
- iii. List, with reasons, the additional information you would request from the two unit trust managers in order to complete your evaluation and provide a recommendation. [8]
- iv. Outline the other considerations that your client should consider prior to making the decision to switch from a share portfolio to a unit trust. [4]

[Total 30]

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QUESTION 2

A recent amendment to Regulation 28 of the Pension Funds Act raised the offshore investment exposure limit for pension funds from 30% plus 10% for the rest of Africa to 45% (with no sub-limit for the rest of Africa).

You are a portfolio manager at an asset management firm, responsible for managing a Regulation 28-compliant, balanced portfolio used as a default investment portfolio by South African defined contribution funds. The portfolio's current offshore exposure is 29%. A number of your clients (pension fund trustees) have requested details of the changes you intend making to the portfolio's asset allocation, given the offshore regulatory limit changes.

- i. Outline the reasons why the previous 10% limit for the rest of Africa was seldom fully utilised in portfolios. [4]
- ii. Discuss the investment considerations required in making changes to the portfolio's asset allocation in response to the offshore limit changes. [12]
- iii. Discuss the potential impacts that the offshore limit changes might have on the business of the asset management firm. [4]

[Total 20]

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QUESTION 3

You are an independent financial advisor advising on and implementing investment strategies for middle to high-income South African individuals. A friend has suggested that you create an online, automated advice tool to expand your financial advice business. Automated investment advice tools typically involve a website or smartphone application that asks users a number of questions in order to determine (through an algorithm) the investment portfolio best suited to their needs.

- i. List the relevant information that you might seek from an online investor in order to assess their financial needs and provide them with investment advice. [3]
- ii. Discuss the factors that need to be considered when constructing the algorithm that determines the investment portfolio best suited to the client's needs, highlighting how the information collected in part i. could be used in this regard. [6]
- iii. Describe the advantages and disadvantages inherent in the automated advice process compared with traditional face-to-face financial advice. [7]
- iv. You have been approached by a well-known, independent financial advisor named Brad. Brad's financial advisory practice only offers investment advice and related products (no risk or home/car insurance products are offered). As he will be turning 60 next year, Brad is considering retiring and would like to sell his practice. He has invited you to make him an offer for his practice. Explain how you would go about determining a value for Brad's practice, outlining the information you would request and the factors you would need to consider. [11]

[Total 27]

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QUESTION 4

You are an independent investment actuary consulting to the AwesomeAnnuities Assurance Company, which only sells guaranteed life annuity contracts with fixed percentage increases.

- i. Describe the likely investment strategy for the assets backing the annuity liabilities. [3]
- ii. Define what is meant by the “illiquidity premium” and discuss alternatives for enhancing the investment returns by taking advantage of this illiquidity premium. [3]

The Managing Director of AwesomeAnnuities has requested you to outline how a portfolio could be constructed to meet the liquidity requirements of the guaranteed life annuity contracts as well as maximise the contribution to investment returns provided by the illiquidity premium.

You have decided to build an asset liability model to assist in this exercise.

- iii. Discuss and detail the objectives of the modelling. [3]
- iv. Compare the deterministic and stochastic methods of asset liability modelling and discuss their suitability for this exercise. [9]
- v. Discuss the details of the liabilities as well as the composition of asset portfolios to be used as inputs for the asset liability modelling. [5]

[Total 23]

[Grand Total 100]

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END OF EXAMINATION