



EXAMINATION

16 October 2024

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

Failure to adhere to any of these instructions could incur examination sanctions.

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. Download the Word answer document template from the ASSA Exam Platform. Save this Word answer document on your desktop using your Candidate Number as filename. Do not use your name and/or member number anywhere on your answer script.
4. You are required to submit your answers in Word format ONLY using this document. No answers in any other format (e.g., handwritten) will be accepted. Save work regularly.
5. Ensure that your Candidate Number appears in the “header” of your Word answer document. [Double-click on the header at the top of the Word document, input your Candidate Number only in the header, then press “Esc” to close the header.] Do not use your name or member number anywhere in your Word answer document.
6. You are allowed to access the material uploaded in advance to your personal open book file storage area on the ASSA Exam Platform. Remote access to materials is not allowed, e.g. any other application (incl. Excel), email, cloud storage, internet, LLMs (Large Language Models)/any AI tools or social media. Copy/paste from your uploaded material to your Word answer document is NOT allowed.
7. The use of Grammarly and Grammarly Premium or similar add-ins are not permitted in examinations. Microsoft Word spellcheck is allowed.
8. 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.
9. Mark allocations are shown in brackets.
10. Attempt all questions.
11. Show calculations where appropriate. You may use blank paper to carry out rough work calculations. You may use a calculator from the ASSA-approved list only.
12. Upload your Word answer document only into the ASSA Exam Platform. Once you have uploaded your document, 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.
13. 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.
14. **You must submit your Word answer document BEFORE the end of the allotted examination time.** You should stop writing and start uploading during the last five minutes. 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.

The onus remains on you to read and implement all examination instructions.

END OF INSTRUCTIONS

QUESTION 1

You are the investment consultant to a large defined contribution pension fund that is considering allocating a portion of its assets to hedge funds in order to broaden its investment strategy. The fund's current investment strategy comprises a global balanced portfolio for all members with no exposure to alternative assets such as hedge funds or unlisted assets. No member investment choice is offered.

- i. Explain why a hedge fund might utilise leverage and outline the ways in which a hedge fund might employ leverage in practice. [3]
- ii. Outline the steps that a hedge fund manager might follow to execute a short position in a share, using an example. [3]

An initial screening exercise has identified three hedge funds of interest. The board of trustees has asked you for a recommendation on which one (or more) of the hedge funds should be considered for inclusion in the pension fund's investment strategy.

The three funds are summarised in the two tables.

	Hedge fund A	Hedge fund B	Hedge fund C
Strategy	Multi strategy	Market neutral	Long short equity
Strategy description	Invests in South African and offshore shares, bonds, property and cash.	Investment universe includes South African listed shares (including derivatives on these) and global listed shares plus cash.	Predominantly South African shares plus an allocation to global emerging markets shares.
Benchmark	STeFI Composite + 5%	Short term fixed interest call deposit index	None
Management company AUM	R21.4 bn	R6.2 bn	R3.5 bn
Fund size	R8.5 bn	R3.1 bn	R3.5 bn
Portfolio valuation	Monthly	Monthly	Monthly
Notice period for redemptions	1 calendar month	1 calendar month	2 calendar months
Fund status	Open	Open	Closed
Gross exposure	160%	105%	169%
Net exposure	72%	40%	104%
Fees (12-month TER)			
Base fees (1)	1.83%	1.71%	0.27%
Performance fees (2)	3.56%	0.69%	1.63%
Transaction costs (3)	0.78%	0.51%	0.36%
TIC (1+2+3)	6.17%	2.91%	2.26%

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Return and risk statistics (based on past 10-years)

	Hedge fund A (net)	Hedge fund B (net)	Hedge fund C (net)	FTSE/JSE Capped SWIX TR	STeFI Composite + 5%
Last 10 years (p.a.)	13.8%	8.3%	13.2%	6.4%	11.4%
Last 5 years (p.a.)	12.6%	7.5%	19.4%	8.5%	11.0%
Last 3 years (p.a.)	12.5%	11.3%	18.2%	7.5%	11.9%
Last 1 year	16.0%	11.4%	10.2%	6.9%	14.6%
Maximum drawdown	-15.1%	-3.4%	-21.6%	-22.1%	0%
% positive months	76%	84%	63%	58%	100%

- iii. Discuss the features and characteristics of the three hedge funds that you would highlight to the board of trustees in your recommendation.

[16]

The fees applicable to the hedge funds outlined in the two tables above are as follows:

- Hedge fund A: Base fee of 1% p.a. plus performance fee of 20% of return above 0%.
- Hedge fund B: Base fee of 1.5% p.a. plus performance fee of 20% of return above benchmark.
- Hedge fund C: No base fee; performance fee of 15% of return above 0%.

- iv. Compare the three fee bases above with reference to the typical features of fees and costs borne by investors in hedge funds. Outline any additional fee information you would require to assess their overall appropriateness.

[7]

[Total 29]

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QUESTION 2

You are the financial advisor to an individual who is going through the process of getting divorced, which involves a valuation of the couple's assets.

The client and their spouse need to consider whether to value their assets on a gross or net of tax basis for the purpose of dividing their joint estate.

- i. Discuss the advantages and disadvantages of using a gross of tax approach.

[4]

The client receives a monthly income from a compulsory living annuity held with an insurer. It is not possible to surrender the annuity or transfer part of it to their spouse.

- ii. Why is it *not* appropriate to value the living annuity at the market value of the underlying assets on a specific date?

[2]

- iii. Describe how you would value the living annuity, listing the key assumptions you would need to make and the data you would require.

[7]

- iv. Outline the additional considerations to factor into the valuation approach if the annuity were a guaranteed inflation-linked annuity rather than a living annuity.

[2]

Your client is the sole owner of a newly established private equity firm, which is therefore an important asset to be valued as part of the divorce. The firm has just completed raising its first fund of R500m and is in the process of investing in a number of underlying businesses. The expected time horizon of the investments is 10-12 years.

- v. Describe the sources of revenue that are likely to be earned by the private equity firm and how the revenue is expected to emerge over the lifetime of the fund. Highlight the challenges in forecasting this revenue for the purpose of determining a valuation for the firm.

[10]

The client has heard that, under the Two-pot retirement system, divorce orders may allow for a portion of a member's retirement component to be transferred to the ex-spouse. The ex-spouse may then choose to preserve or have the amount paid out as cash, net of applicable tax.

- vi. What risks does this pose to pension funds, in general, and their members?

[6]

[Total 31]

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QUESTION 3

ABCco is a large investment holding company listed on the JSE. ABCco owns stakes in ten South African companies which operate across various industries. One of ABCco's unlisted investments is FibreCo (ABCco owns 100% of FibreCo).

FibreCo is a fibre optic cable network provider and currently owns the second largest fibre optic cable network in South Africa. FibreCo's business model involves laying fibre optic cables in residential areas and leasing the use of these cables to Internet Service Providers (ISPs) who, in turn, offer high speed internet connections to retail customers. Laying cables is capital intensive and FibreCo is in the middle of a significant expansion of its cable network. As a result of the significant capital expenditure currently underway, FibreCo has reached the limit of its debt facilities and requires additional equity financing to continue its expansion. FibreCo has never paid a dividend.

You are the investment consultant to a large South African defined contribution pension fund. The fund has been approached by ABCco and offered the opportunity to purchase a 20% stake in FibreCo.

- i. Discuss the tradeoffs involved in relation to FibreCo's need for equity financing versus the alternative of additional debt financing.

[4]

- ii. Discuss the considerations (other than valuation) and risks that need to be taken into account in assessing the suitability of FibreCo as an investment for the pension fund.

[12]

The following table contains an extract of FibreCo's financial statements for the last 5 years:

	2019	2020	2021	2022	2023
Revenue (R'm)	350	525	893	1,339	1,941
EBITDA (R'm)	182	289	536	763	1,145
EBITDA margin	52%	55%	60%	57%	59%
Net Debt (R'm)	455	866	1,874	3,052	5,268

- iii. Discuss the financial health of FibreCo and describe the method you would use to determine an intrinsic value for FibreCo. Highlight the important assumptions required and areas needing further investigation.

[10]

As part of the proposed investment in FibreCo by the pension fund, ABCco has offered the pension fund an option to convert its 20% stake in FibreCo into ABCco shares in 5 years' time.

- iv. Explain the rationale for such an offer from both ABCco and the pension fund's points of view and outline the considerations for the pension fund in deciding whether to exercise this option.

[6]

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Regulation 28 of the Pension Funds Act was changed in 2022, with the introduction of a limit of 45% on investment in infrastructure assets by pension funds. Since this change, there has been only a limited increase in infrastructure investment by pension funds.

v.

- a. Outline possible reasons why this has been the case.

[5]

- b. Suggest possible developments and other factors that could lead to greater investment in infrastructure by pension funds.

[3]

[Total 40]

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END OF EXAMINATION