



INVESTMENT

EXAM SEMESTER 2 2023

A handwritten signature in black ink, consisting of a stylized 'J' followed by a loop and a tail.



Subject Title: Investment

Date: Friday, 20 October 2023

Time: 15 minutes
(Planning Time)
3 hours
(Examination)

Instructions:

You will have 3 hours and 15 minutes to complete your examination with an additional 10 minutes for submission.

You may commence typing during the planning time and remember to save your work regularly.

Type your answers using Microsoft Word and ensure that there are no links to spreadsheets.

Candidates are required to answer all questions.

Include your member ID in the header and footer on each page of the Microsoft Word document.

Question	Marks
1	20
2	20
3	20
4	20
Total	80

This paper has seven (7) pages (including the title page).



QUESTION 1

(20 marks)

You are an investment consultant advising the board of a shareholder-owned health insurance company, which provides benefits to its policyholders in the form of:

- annually renewable policies covering medical and hospital costs;
- long-term contracts covering future aged care costs.

The board has asked you to advise on setting the objectives for the asset portfolios that support the shareholders' funds and policy liabilities, considering issues relating to inflation, asset returns and risks that should be considered.

- a) Describe the characteristics of the shareholders' funds and the liabilities that are being provided for by the asset portfolios that will influence setting investment objectives having regard to shareholders' expectations, policyholder expectations and inflation.

(6 marks)

- b) List four characteristics that investment objectives for a portfolio of assets should have.

(2 marks)

- c) Propose, with reasons, investment objectives for each of the asset portfolios that support the shareholders' funds and policy liabilities.

(12 marks)

END OF QUESTION 1



QUESTION 2

(20 marks)

You are an investment advisor to the Board of an Australian-domiciled charity which has a multi-asset class investment portfolio. You have been asked to explain some aspects to a newly appointed member of the Board, as set out in the questions below. You can use information from the following table which has been provided to the Board, in your explanations.

Asset class total returns for periods to 31 May 2023	Cash	Australian government bonds	Australian equities	International equities (in AUD terms)	Property securities
Benchmark index for asset class	RBA Bank Bill 90-days index	Bloomberg AusBond Composite all maturities TR index	S&P/ASX 200 TR index	MSCI World ex Australia TR index	S&P/ASX 300 AREITs TR index
Returns % p.a.					
5 years	1.2	1.0	7.5	11.3	4.4
10 years	1.7	2.5	8.1	13.1	7.9
30 years	4.2	5.6	9.2	7.4	7.4
Standard deviation of returns %					
5 years	0.3	5.2	15.4	12.4	24.7
10 years	0.3	4.1	13.9	11.3	19.3
30 years	0.6	3.9	13.4	12.1	16.5
1-year returns % p.a. in last 30 years					
Minimum	0.0	-11.5	-40.0	-24.9	-58.2
Median	3.7	4.5	11.1	8.9	12.7
Maximum	7.5	15.2	44.7	48.0	45.4
Percentage of 1-year returns that were negative	0.0	10.8	23.3	25.0	25.0
Largest historical drawdown					
Drawdown	0.0	-13.0	-47.2	-48.7	-70.6
Duration (months)	Na	22	15	27	16
Months to recover	na	Not yet	55	139	89

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Explain:

- (a) the returns of the various asset classes and how they have changed over time and factors influencing returns; **(10 marks)**
- (b) the use of the standard deviation of returns as an indicator of risk and any advantages and disadvantages of using this indicator; **(3 marks)**
- (c) the use of the probability of negative returns over 1 year periods as an indicator of risk and any advantages and disadvantages of using this indicator; **(3 marks)**
- (d) other statistical information that you would like to have seen in order to consider both return and risk. **(4 marks)**

END OF QUESTION 2

QUESTION 3

(20 marks)

Explain:

- (a) why the equity risk premium exists; **(5 marks)**
- (b) the size of the equity risk premium during various periods of time; **(5 marks)**
- (c) the equity risk premium puzzle; **(5 marks)**
- (d) other factors which may, in practice, influence the size of the observed equity risk premium. **(5 marks)**

END OF QUESTION 3



QUESTION 4

(20 marks)

You are an investment consultant advising the Board of Trustees of a defined contribution superannuation fund (the Fund). The Fund offers members two investment options which have multi-asset class portfolios:

1. a growth-oriented option for most working-age members; and
2. a more defensive option for members in retirement and drawing a pension from their account or near retirement.

Each of these portfolios has significant asset allocations to unlisted assets, which are held via open-ended funds managed by external investment managers. The Board believes that it should seek to add value for members by employing active investment managers who can demonstrate a capacity to persistently achieve excess returns above appropriate asset class benchmarks. The current asset allocation of the investment options is set out in the table below:

Investment option:	Asset allocation as of 30 June 2023 (% of total)	
	Defensive	Growth
Listed equities	15	30
Private Equity	5	10
Unlisted real estate and infrastructure		
Office properties	15	20
Retail properties	5	10
Other real estate	5	10
Infrastructure	10	10
Liquid fixed interest	40	7
Cash	5	3
Total	100	100



The investment options have daily unit prices reflecting the valuation of the assets and members are permitted to add to their accounts or withdraw from them on any business day. The Board has asked you to provide a report on:

- A. Valuation of unlisted assets and how it affects unit pricing of the investment options;
- B. Performance review of the external investment managers of the unlisted assets; and
- C. Questions to be asked of the external investment managers in relation to:
 - i. Their valuation policies; and
 - ii. Where they are underperforming their benchmarks, factors that they have identified that may be contributing to underperformance.
- D. Any recommendations for matters that should be included in the Board's Investment Policy Statement.

The questions that you need to address are:

- (a) Discuss the GIPS provisions that should be applied to the valuation of unlisted real estate assets held by the Fund, having regard to the unit pricing needs of the Fund; **(6 marks)**
- (b) Propose a process for assessing the performance of external investment managers who are managing unlisted infrastructure assets for the Fund; **(10 marks)**
- (c) Suggest two areas for review in the Investment Policy Statement of the Fund to ensure that issues for unlisted assets arising from current economic and market conditions are being attended to in the interests of all members of the Fund. **(4 marks)**

END OF QUESTION 4

END OF EXAMINATION