



INVESTMENT

EXAM SEMESTER 2 2021



James Banks



Subject Title: Investment

Date: Wednesday, 13 October 2021

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.

There are no accompanying spreadsheets for this exam.

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

Candidates are required to answer all questions.

Include your candidate number in the header and footer on each page of the Microsoft Word document.

Question	Marks
1	17
2	18
3	23
4	13
5	9
Total	80

This paper has **EIGHT** (8) pages (including the title page).



QUESTION 1

(17 Marks)

- a) Explain one factor that may have led to short-term interest rates in the United States, Europe, Japan, and Australia being below the rates of inflation for most of the last 10 years such that real short-term interest rates have been negative. (2 marks)
- b) Describe three factors that you think are currently influencing the level and the shape of the Australian government bond yield curve, which as of 16 August 2021 is shown in the table below:

Term to maturity in years	Yield to maturity % p.a.
2	0.04
5	0.59
10	1.16
15	1.57

(3 marks)

- c) Define the term 'equity risk premium'. (1 mark)
- d) Explain how the historical equity risk premium can be estimated. (2 marks)
- e) Explain any issues in the estimation of the equity risk premium for future periods. (3 marks)
- f) Identify the four components of the discount rate that can be used in the valuation of equities. (2 marks)
- g) Describe how estimates of the future rate of return on long-term risk-free assets and the equity risk premium can be used to derive the discount rate used in valuing equities. (2 marks)
- h) Distinguish which types of cash flow can be appropriately valued using the discount rate derived in (f) and which cannot be valued using that rate. (2 marks)

END OF QUESTION 1



QUESTION 2

(18 Marks)

You are the portfolio manager of a property trust which has the investment objectives of:

- earning an income sufficient to pay distributions at a rate of 5% per annum net of all costs to the investors in the property trust; and
- achieving capital growth of the units in the trust which at least matches the rate of inflation over rolling five-year periods.

The Trust has \$20 million worth of assets in the childcare sector with an average lease term of 20 years and net rental income in excess of 6% p.a. which, under the terms of the leases, is growing at the higher of inflation or 3% p.a. The trust is attracting a steady flow of new investors and it is the intention to invest in new assets with the aim of diversifying across several sectors of the commercial property market. All asset purchases are funded 50% by equity from the trust and 50% by borrowing on a variable rate basis at bank bill plus 3% p.a.

The trust has been offered an asset which is an office property located in a small regional city. The economy of this city has historically grown faster than the national average fuelled by net interstate immigration, as well as growth in both interstate and international tourism.

The following is a summary from the valuation report on the office property which was built in 2020 and valued at the end of 2020. The total net lettable area (NLA) is 4,503 square metres and is rented as follows:

Tenants	% of NLA
Major bank	10.2
Energy company	15.9
Accounting firm	8.9
Bistro (retail)	7.2
Smaller office tenants	19.5
Vacant but subject to rental guarantee for 5 years from the vendor	38.3
Total	100.0

The weighted average lease expiry, including the effect of the rental guarantee, is 6.15 years.

The gross rent received (including the rental guarantee) is considered by the valuer, a major international real estate firm, to be equal to current market rent. The gross rent per annum on the building is \$2.249 million, comprising \$1.729 million of office rent, and \$0.520 million of retail rent. The net rent after outgoings paid by the owner of the building is \$1.959 million p.a.



The valuation using a capitalisation rate method with a capitalisation rate of 6.25% p.a. is stated by the valuer to be \$31 million.

The valuation derived from a discounted cash flow (DCF) method is also stated to be \$31 million. The following assumptions were used in the DCF valuation:

- Gross rents are projected for ten years at a compound annual growth rate (CAGR) of 3.05% p.a. for office rents and 2.43% p.a. for retail rent, while capital expenditure by the owner is expected to grow at a CAGR of 3.0% p.a.
- The discount rate used for the first ten years was 6.25% p.a. Thereafter the net rent projected to year ten was valued as a perpetuity at a discount rate of 6.5% p.a.

Of the total valuation of \$31 million, 41.2 % was derived from the present value of the discounted cash flow in the first ten years while 58.8% was derived from the value of the net cash flows beyond the first ten years.

- a) Explain three significant risk factors associated with buying the office property in the small regional city for the trust that may affect the rate of return on the investment.
(9 marks)
- b) Propose how you would attempt to mitigate three of these risks to the return on the investment for the trust.
(9 marks)

END OF QUESTION 2



QUESTION 3

(23 Marks)

The following questions relate to a multi-asset class portfolio.

- a) Define:
- i. Strategic asset allocation
 - ii. Tactical asset allocation
- (1 mark)**
- b) Distinguish what the two methods of asset allocation are intended to achieve relative to the investment objectives of a portfolio.
- (2 marks)**
- c) Outline the steps involved in strategic asset allocation.
- (3 marks)**
- d) Explain the factors that need to be considered in a tactical asset allocation process.
- (6 marks)**
- e) Interpret any empirical evidence on the relative importance of each of the following in relation to their contribution to portfolio returns:
- i. Strategic asset allocation
 - ii. Tactical asset allocation
 - iii. Security selection
- (3 marks)**
- f) Relate how various types of factors may contribute to the risk of a multi-asset class portfolio which is usually defined in terms of the likelihood of the portfolio not meeting its investment objectives.
- (4 marks)**
- g) Propose two methods that can be used to manage the risk of a multi-asset class portfolio failing to meet its investment objectives.
- (4 marks)**

END OF QUESTION 3



QUESTION 4

(13 Marks)

You are the advisor to an investment committee that wishes to select and appoint an active global equity manager. A candidate manager has already been identified and you have been asked to conduct an analysis of that manager.

- a) Identify four of the statistics or indicators of the performance of the candidate active global equity manager which you would consider in your quantitative analysis.
(2 marks)
- b) Justify which two of these statistics or indicators that you would give more weight to in your recommendation.
(4 marks)
- c) Identify three of the qualitative factors, which may be indicators of the future performance of the candidate active global equity manager, that you would consider in your analysis.
(3 marks)
- d) Justify which two of these qualitative factors that you would give more weight to in your recommendation.
(4 marks)

END OF QUESTION 4



QUESTION 5

(9 Marks)

You are an advisor to an investment committee that is considering the introduction of the consideration of environmental, social, and governance (ESG) issues into its investment process. Initially, the integration of ESG factors into the process will be focused on the equity asset class. You have been asked to assist the committee by carrying out the following work:

- a) Identify one of the ESG issues from each of the E, S, and G categories, which can be considered as part of an ESG investment policy. **(3 marks)**
- b) Explain two of the ways in which ESG issues can be integrated into the asset selection or asset valuation processes. **(6 marks)**

END OF QUESTION 5

END OF EXAMINATION