INSTITUTE OF ACTUARIES OF AUSTRALIA

COURSE 1 INVESTMENTS **MAY 2006 EXAMINATIONS**

Answer all 6 questions.

QUESTION 1 **(12 Marks)**

A notable phenomenon of the last decade has been the rise of emerging markets, especially China and India, in their share of world GDP. As the investment manager to a large multinational organisation, you are concerned with the effects of this emergence on investment strategy.

(a) Identify two defining characteristics of an emerging market. (2 Marks)

(b) Describe possible implications of this emergence for a resource-based economy such as Australia's. (3 marks)

(c) Discuss in broad terms the effect that you would expect of this emergence on both domestic and international investment strategy. (4 marks)

(d) Discuss how currency might affect your answer to (c). (3 marks)

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QUESTION 2 **(16 Marks)**

You are an investment consultant discussing the merits of listed and direct property (i.e. real estate) investment with a property manager. He believes that your modelling of direct property as an asset class is too conservative, and does not reflect its true potential in delivering stable returns.

(a) It is often claimed that property as an asset class has the attributes of both equity and debt. Discuss the reasons why this may be so. (4 marks)

(b) Suggest with reasons a basis at the present time for modelling *listed* property returns in terms of both expected return and volatility, indicating the relevance of current interest rates. (3 marks)

(c) How would your answer to (b) differ for *direct* property? (4 marks)

(d) Describe the benefits and limitations of the various approaches to constructing a benchmark for direct property. (5 marks)

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QUESTION 3 **(18 Marks)**

You work for an investment adviser that specialises in private equity investments. A major government authority has approached you with a view to advising on the selection of investments in private equity.

(a) Describe briefly the major *structural* differences between investing in public equity and private equity. List the benefits and limitations of these asset classes that flow as a result of these differences. (6 marks)

(b) Explain why agency risk is a significant aspect to be considered when investing in private equity, and how that risk could be managed. (5 marks)

(c) Suggest ways in which the performance of private equity investments can be measured and evaluated. (4 marks)

(d) Private equity and hedge funds are often classified under the same 'alternative equity' umbrella. However, they are not substitutes for each other. Discuss the main differences between them. (3 marks)

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QUESTION 4 **(22 Marks)**

You are the asset consultant to a general insurance company that issues policies covering malpractice by medical practitioners. You are working with the actuary who advises the insurer on the assessment of liabilities for outstanding claims. The liabilities are measured as a discounted value of expected claim payments, with the discount rate based on current bond yields.

The management of the insurer have asked you and its actuary to advise jointly on the investment strategy that is most appropriate for the liabilities. The insurer's actuary adopts a stochastic approach to model liabilities and you adopt a similar approach to model assets.

The insurer is particularly interested in the possibility of immunising the liabilities by means of Commonwealth government securities, but other asset classes available are listed equity and property.

(a) Suggest specific investment objectives that might be adopted in relation to claim liabilities. (3 marks)

(b) Outline the framework you would adopt for assessing how well a given investment strategy meets the objectives in (a). You should give particular attention to:

(i) The type of asset model you would adopt
(ii) The inputs needed for your model
(iii) The link between the assets and liabilities (8 marks)

(c) Define immunisation and describe how it may be implemented as an investment strategy by the insurer. (3 marks)

(d) Discuss how immunisation can be treated as a particular form of investment strategy that can be assessed like other strategies in (b). What aspects of your asset model are critical for this assessment? (5 marks)

(e) Discuss how your modelling can assess the benefits and limitations of immunisation as part of an investment strategy. (3 marks)

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QUESTION 5 **(18 Marks)**

You are the investment consultant to a large funds management operation that uses other managers who are specialists in their field. Your expertise is in the appointment of managers in international equity with different styles under a multi-manager framework.

A client, who is expert in merger and acquisition (M&A) activity, has observed to you that equity investment, like M&A, is about the gathering of information on particular stocks. The better the information, then hopefully the better the performance, but the more costly the management fees.

(a) List the differences in investment process between active 'quant' managers and fundamental managers. (5 marks)

(b) Discuss the benefits and limitations of quant managers in relation to fundamental managers. (4 marks)

(c) List the particular aspects you would consider in recommending a quant manager, assuming one is to be chosen. (4 marks)

(d) Compare the basis of the quant style with those of the passive or fundamental styles, and discuss whether you agree with your client's observation. (5 marks)

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QUESTION 6 **(14 Marks)**

You are an investment consultant advising on the implementation of an Australian equity mandate as an individual portfolio for a client, a large charitable trust. Because of its nature, the trust is precluded from investing in some activities, including alcohol, tobacco and gambling. Though your client is attracted to the growth prospects of equity investment, the trust's obligations are unpredictable and liquidity of investments is a key concern.

(a) List the main features of the Investment Management Agreement you would consider *specifically* for the mandate in question. (3 marks)

(b) Explain the role that derivatives can play in the operation of the mandate, the circumstances in which they can be useful, and their limitations. (3 marks)

(c) Describe the concept of tracking error, what is meant by ex-ante and ex-post tracking error, and how they can be determined in practice for the mandate in question. (3 marks)

(d) Describe with reasons the risk controls you would recommend to be included as part of the investment mandate. (3 marks)

(e) Discuss what information you would recommend in order to monitor the operation of the mandate. (2 marks)

END OF PAPER

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