Faculty of Actuaries **Institute of Actuaries**

EXAMINATION

11 September 2006 (am)

Subject SA6 — Investment Specialist Applications

Time allowed: Three hours

INSTRUCTIONS TO THE CANDIDATE

1. *Enter all the candidate and examination details as requested on the front of your answer booklet.*
2. *You have 15 minutes at the start of the examination in which to read the questions. You are strongly encouraged to use this time for reading only, but notes may be made. You then have three hours to complete the paper.*
3. *You must not start writing your answers in the booklet until instructed to do so by the supervisor.*
4. *Mark allocations are shown in brackets.*
5. *Attempt both questions, beginning your answer to each question on a separate sheet.*
6. *Candidates should show calculations where this is appropriate.*

AT THE END OF THE EXAMINATION

Hand in BOTH your answer booklet, with any additional sheets firmly attached, and this question paper.

In addition to this paper you should have available the 2002 edition of the Formulae and Tables and your own electronic calculator.

1 You are the investment consultant to a board of pension fund trustees who have fiduciary responsibilities for a retirement benefit fund.

You have been hired to advise the board in relation to all aspects of the selection of investment managers.

You have been asked to advise on two bond fund managers who have provided the following information:

	Manager A	*Manager B*
Ownership	large retail bank	private partnership
No. staff	400	80
Process	fundamental research	model driven
Decision making	chairperson	committee
Manager discretion	limited	none
Execution of trades	by each manager	central dealing desk
Remuneration	salary plus annual bonus	salary plus share of profits
Assets managed	£100bn	£10bn
No. Clients	40	140
Outperformance	+100bps	+50bps
Tracking error	+100bps	+50bps
Fees	15bps	10bps
Back Office	Outsourced	In house

(i) List the principal factors you would recommend the trustees should consider in deciding which manager to select. [4]

(ii) Assess each manager against these factors and state what further investigations you would make before you would be able to make a recommendation to the trustees. [23]

(iii) Briefly describe the behavioural issues which may affect the trustees when selecting or terminating an investment manager. In each case give an example specific to the situation. [18]

(iv) Describe four possible outcomes of regret aversion. [6]

(v) (a) Describe the concept of a utility function in the context of the trustees making their manager selection decision.

(b) Discuss why financially sub optimal manager selection decisions may occur or be allowed to persist. [7]

[Total 58]

2 You are the Director of Investments for a pension fund with assets valued at £10bn. The fund is sponsored by a multi-national organisation and manages its assets using both internal and external investment managers. Historically the fund has always followed an active management approach for all asset classes.

Following an actuarial valuation of the fund and an asset and liability modelling study, you have been set a strategic asset allocation of 60% in global equities with the balance of the fund to be invested in global bonds and property.

You are required to make a quarterly report to the Investment Committee responsible for governance of the fund. At the last meeting the Chairman of the Investment Committee asked for your assistance in determining appropriate benchmarks against which to monitor the performance of the fund's investments.

(i) List the questions that should be addressed as part of the monitoring and performance appraisal process. [7]

(ii) State the key qualities of an appropriate benchmark. [6]

(iii) In choosing an investment performance benchmark for the global equity portfolio, describe the main advantages and disadvantages of using a market capitalisation based total return index from a single provider such as MSCI as compared with using a blend of quoted indices such as Dow Jones 30, FTSE100 and TOPIX? [18]

The Investment Committee believes the fund should be invested in smaller companies and emerging market equities as well as larger companies.

(iv) Describe the main benefits of having separate fixed benchmark allocations and rebalancing limits for smaller companies and emerging markets. [6]

(v) Discuss briefly the other issues the Investment Committee would need to consider in selecting an appropriate benchmark for these sectors. [5]

[Total 42]

END OF PAPER