Actuarial Society of South Africa

EXAMINATION

2 November 2010 (am)

Subject F205 – 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 from the approved list.

Question 1

You are the newly appointed investment consultant to a large private trust which provides funding for the education of high school students whose families lack the financial means. The trust currently funds the school fees of 1000 students and intends maintaining this number in perpetuity.

You have been asked by the trustees to examine the current investment strategy of the trust and suggest possible improvements.

i. (a) State the information you would need for your analysis.
(b) Discuss the considerations that would influence your choice of strategic asset allocation benchmark.
(c) Propose a benchmark stating any assumptions you make.

[12]

Your investigations reveal that 20% of the trust's assets are invested in the unlisted shares of TNT Textiles Ltd, a local clothing manufacturer formerly owned by the now deceased founder of the trust. You have been given the financial data pertaining to TNT shown below.

	2006	2007	2008	2009
Sales (Rm)	504	510	516	521
Net profit margin	2.5%	2.2%	2.0%	1.8%
Dividend payout ratio	80%	100%	120%	125%
Debt/equity ratio	40%	45%	50%	55%

ii. (a) Discuss the financial condition of TNT.
(b) State what further information you would require to make a more complete analysis of the investment in TNT.

[7]

iii. Describe how the potential risks to the trust posed by the TNT holding might be managed?

[6]

The managers of a private equity fund have approached the shareholders of TNT with a view to purchasing the company. They are proposing a swap of shares for an interest in the private equity fund.

iv. Discuss the key information that you require in order to assess the merits of this proposal from the perspective of the trust.

[10]

The listed equity portion of the trust's assets is managed to a FTSE/JSE ALSI Index benchmark by ABC Asset Management. During your investigation, you have received from the trustees the following statistics relating to the equity portfolio which ABC manages for the trust.

5 year performance: 20% pa (benchmark return: 13%pa)
1 year performance: -5% (benchmark return: +3%)
IT sector exposure: 20% of listed equity portfolio
Historic annualised tracking error: 9%
Average stock P/E ratio: 10
Portfolio turnover: 30% pa

v. (a) Describe the management style of ABC and the other characteristics that you would expect to observe in the portfolio of a manager such as ABC.
(b) Comment on whether this is appropriate for the trust.

[10]

[TOTAL 45]

Question 2

A very large defined benefit pension plan is solely invested in a segregated smoothed bonus fund. In this arrangement, the plan is the sole participant in this smoothed bonus fund underwritten by a large insurer. The fund has the typical features of a smoothed bonus fund with some elements customised to meet the specific needs of the plan and to manage the risks to the insurer.

i. Discuss the benefits and drawbacks of such a segregated investment vehicle for the pension plan rather than participating in a similar fund that is pooled with other retirement plans.

[5]

The portfolio of assets for this smoothed bonus fund is invested 60% in equities and 40% in fixed interest instruments, with 15% of all investments invested offshore. After a severe fall in the value of the equity component, the smoothed bonus fund is left considerably underfunded.

ii. Describe how each of the main stakeholders in this arrangement is affected by this underfunded position.

[10]

iii. Discuss the actions, other than changing benefits or contributions, that could be considered by the pension plan or the insurer in order to:

(a) alleviate this funding shortfall in the short term.

(b) reduce the possibility of such funding shortfalls occurring in the future.

[7]

The statutory actuary proposes that the insurer undertakes an ALM investigation to establish the optimal asset allocation for this product.

iv. Describe the process that such an exercise entails.

[14]

PLEASE TURN OVER

The pension plan also has a considerable liability in respect of pensions in payment, the assets for which are also invested in the smoothed bonus product. The plan rules state that pensioners will receive pensions paid for life. These pensions can never be reduced and will increase annually at the discretion of the trustees, but with a minimum increase equal to that of the consumer price inflation rate.

v. Comment on the appropriateness of the current investment vehicle for this liability.

[8]

The trustees and the sponsoring employer are considering employing a separate, outsourced vehicle for the assets backing the liability in respect of pensions in payment. This vehicle will adopt an investment strategy such that the assets match the liability more closely.

vi. (a) What are the economic and market parameters that should be considered in deciding on the timing of such a shift in investment strategy

(b) How would changes in the levels of these parameters influence the implementation decision?

[11]

[TOTAL 55]

END OF PAPER