EXAMINATION

14 April 2008 (pm)

Subject SA6RSA—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

An investment portfolio backing immediate annuities payable in SA rand invests exclusively in fixed interest securities and related derivatives.

(i) Discuss the investments available to the portfolio manager in order to enhance the return on the assets over government bonds. [16]

(ii) Explain how the credit risk in the portfolio might be managed. [5]

A major bank has approached the portfolio manager with an instrument called a Credit Default Note. This is a 5-year instrument, issued by the bank and linked to a reference entity, which is a specified industrial company. At the end of the term the instrument returns the capital and interest accumulated at an annual rate 190 basis points above that of government bonds provided that the reference entity has not experienced a credit event (defined as bankruptcy or default on any debt). Otherwise it pays zero.

(iii) State what considerations the portfolio manager would take into account in deciding if this is an appropriate asset for the portfolio. [11]

The same bank is also suggesting that the portfolio manager includes Credit Replicating Notes in the investment portfolio. These are 6-month notes issued by the bank and linked to a basket of ten Top 40 shares. At the end of the term the notes pay capital plus interest at a rate 400 basis points above JIBAR provided none of the share prices has fallen below 50% of its value at the start at any time during the period. For every share that breaches this limit the payout is reduced by 10% and hence if all 10 shares breach the limit the payout is zero.

(iv) (a) Discuss the features of this instrument and its suitability for the portfolio. [12]

(b) Comment on how your answer would differ if the yield were 200 basis points above JIBAR and the share prices had to fall 70% to trigger capital losses? [2]

(v) Suggest reasons why the bank would be a seller of the instruments described in (iii) and (iv) above. [4]

[Total 50]

Question 2

You work for the asset management division of a listed medium sized life company which has a sizeable exposure to a book of individual life policies invested exclusively in a fund that passes on investment returns by declaring yearly smoothed bonuses (Smooth Bonus Fund). This fund is backed by a mix of local equities, fixed interest and unlisted property, as well as some foreign bonds, cash and equities. The foreign assets are exclusively exposed to developed countries. The fund currently has a healthy surplus of assets over liabilities. At a recent meeting of the Investment Committee of the Board its chairman expressed his concern at the current high level of the local equity market and suggested that steps be taken to at least maintain the existing value of the assets. He suggested selling equities and investing the proceeds in the other asset classes the fund is currently exposed to, with the objective of reducing the downside risk of the fund whilst giving up as little as possible of the upside potential. You have been requested to write a report setting out the issues that should be considered regarding the chairman's suggestion as well as the implications on the risk return profile of the fund of investing the proceeds of the equity sales in each of the other asset classes.

(i) Set out the main points you would include in your report. [16]

(ii) Discuss alternative approaches to achieving the chairman's objective without selling the fund's equities. [7]

After some discussion it is decided to hedge the local equity exposure of the fund using a so-called zero cost derivative strategy, using European options.

(iii) (a) Describe what is involved with such a strategy. [2]

(b) Explain how the terms of the strategy would depend on the investor's view of potential returns on the equity market. [3]

(c) Explain any issues that arise in relation to the time period chosen for options and in relation to the surplus of the fund.. [3]

With three months to run to the maturity date of the zero cost structure, the market is approaching the level of the written call. The Board is now concerned about the potential impact of this on returns and consequently the ability to declare competitive bonus rates.

(iv) Suggest ways of reducing the potential impact of the cap on returns, commenting on the relative merits of each approach. [12]

You have also made a presentation to the Investment Committee on the outlook for the different asset classes held by the fund. A member of the committee noted from your presentation the low dollar return expected on US equities. He therefore wants to know why you do not sell these investments, repatriate the funds and invest in higher yielding assets.

(v) Set out the points you would make in your response to the committee member. [7]

[Total 50]

END OF PAPER