

INSTITUTE AND FACULTY OF ACTUARIES

EXAMINATION

23 April 2012 (pm)

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 before 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 all three 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.

<p><i>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.</i></p>
--

- 1** Actuarial is a small country that has been part of a currency union for the past decade. Pension funds in Actuarial have diversified their investments across the other countries within this currency union.

Due to financial and political difficulties within the union, it has recently collapsed and the Government of Actuarial has decided to join another currency union. As actuary to a large pension fund in Actuarial, you have been asked to provide advice in relation to the investment strategy of the pension fund.

- (i) Discuss the problems that might arise from implementing a new investment strategy that is appropriate to these new circumstances. [15]

Another country in the original currency union, Pensionia, has decided to re-establish its own currency, the Pensionma. Pensionia had the worst economic performance in the currency union before its collapse.

- (ii) (a) Discuss the likely performance of the domestic equity and domestic bond markets in Pensionia, in both local currency and foreign currency terms.
- (b) Comment on the likely impact on domestic inflation and domestic earnings inflation. [17]

In response to a major economic and financial crisis, the Government of Actuarial has decided to issue a new type of Government Bond. The coupon payment on the bond and the final redemption payment will be linked to the value of income tax receipts in Actuarial.

- (iii) Explain the factors for the trustees of the pension fund to consider when analysing the appropriateness for the domestic pension fund of investing in such a bond. [24]
- (iv) Discuss the appropriateness of such a bond in meeting the needs of the Government of Actuarial. [8]
- [Total 64]

- 2** The Head of Retail Distribution for NewBank has been asked to identify new revenue opportunities. You have recently joined the bank as Head of Product Development. In your previous role at a competitor bank, the greatest contribution to profits from the private client division came from developing structured products. You have proposed that NewBank launch their own offering of equity linked structured products. The Head of Retail Distribution has asked you to prepare briefing notes for his forthcoming meeting with the Head of Marketing, including the key features of a typical product.

- (i) Outline the components involved in an equity linked structured product. [3]
- (ii) Explain why the issuance of structured products can be highly attractive for a bank that manufactures and then distributes its own products. [7]

- (iii) Outline the differences, from both a bank's and an investor's perspective, between a synthetically constructed Exchange Traded Fund ("ETF") that tracks the S&P500 total return index and a structured product that has a term of three years and that provides a return in line with the increase or decrease in the S&P500 index. [9]

At the meeting, the Head of Marketing highlights a recent article which suggests that there are higher counterparty risks for investors in synthetic ETFs compared with physical ETFs. He is concerned that the bank may be taking on unacceptable exposures. You have been asked to provide counterarguments to this article, citing the benefits of synthetic ETFs.

- (iv) Set out the key points you would make in your response. [7]
[Total 26]

3 You are the Group Risk Manager for a large insurance company with a complex portfolio of investments. You are reviewing possible risk management models to assist in firstly assessing current risks and, secondly, investigating alternative portfolio strategies.

- (i) Set out the desirable characteristics of a risk model for the stress tests published within the insurance company's daily "flash" management information reports. [5]

- (ii) Explain why the insurance company might adopt different models for its purposes. [5]
[Total 10]

END OF PAPER