INSTITUTE AND FACULTY OF ACTUARIES

EXAMINATION

24 April 2014 (am)

Subject ST5 – Finance and Investment
Specialist Technical A

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 eight questions, beginning your answer to each question on a new page.*

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.

1 An investor has an actively managed bond portfolio currently comprising 50% US government bonds and 50% US investment grade corporate bonds.

The portfolio has specified duration targets for each type of bond and there are various other restrictions on the bonds that can be held.

The bond manager is benchmarked against a broad market index comprising all US denominated investment grade bonds (government, supranational, agency, corporate), and is targeted with outperforming this index by 1% p.a. net of fees.

The manager charges a fee of 0.20% p.a. plus a performance fee of 10% of returns in excess of the 1% target.

Describe the implications of this mandate. [8]

2 (i) (a) Define the beta of a portfolio.

(b) State the performance implications of a portfolio with a beta of 2. [2]

An equity portfolio aims to have a beta of 1.5.

(ii) Outline the investigations that could be performed to determine the value added by the fund manager to the portfolio, assuming that full data is available. [3]

(iii) List six reasons why the performance of the portfolio might differ from that of the benchmark index. [3]
[Total 8]

3 (i) List the factors that investors should consider in determining the impact of tax on an investment. [3]

A major economy has decided to simplify its tax system by taxing all income (earned, unearned or gifts) and realised gains and losses at a single rate of 15%. Each citizen will have an annual personal tax-free allowance of $10,000. Interest payments on personal borrowings may be offset against income, but all other allowances will disappear. Activities and investment schemes that previously enjoyed favourable tax treatment will now be taxed at standard rates.

(ii) Describe the potential impacts on the personal investment marketplace. [7]
[Total 10]

4 The following information relates to the performance of two investment trusts and their equivalent benchmark index over a three year period. The annual risk-free rate of return over this period was 4% per annum.

	Trust A	*Trust B*	*Index*
Annual return (% p.a.)	9.0	8.0	7.0
Standard deviation (% p.a.)	13.5	9.5	6.5
Correlation coefficient with index	0.36	0.75	1.00

(i) Calculate four different risk adjusted performance measures for each trust. [8]

(ii) Comment on the results from part (i), stating any limitations that apply to them. [4]
[Total 12]

5 The manager of a global inflation-linked bond fund valued at US$5 billion wishes to alter the country allocation, switching all US$2 billion that is currently invested in the UK market to the US market.

(i) Describe the problems (and the costs) that would be encountered in a switch of this size. [6]

After further analysis, it is the expectation that the allocation will be partially reversed in three to six months' time to reallocate US$1.5 billion to the UK.

(ii) Discuss the advantages and disadvantages of using total return swaps rather than a physical switch for this combined asset allocation change (i.e. the immediate switch and the planned future reallocation). [7]
[Total 13]

6 (i) State the main factors affecting equity prices. [2]

An individual has recently received an inheritance from a family member and has decided to invest in the equity market for the first time. They have approached a financial adviser to provide guidance on the individual equities in which they should invest. The individual wishes to have exposure in their portfolio to companies which:

- are large.
- are risky.
- have a high dividend yield.
- have a well-known brand name.
- operate globally.
- move ahead of the trade cycle.
- have volatile profits.
- have high gearing.

(ii) (a) Identify five equity sectors which would ensure that all of the characteristics above are covered.

(b) State, for each of these sectors, the characteristics from the above list which are satisfied.

(c) State any additional characteristics that the holdings in each sector might have. [11]

[Total 13]

7 (i) State the main aims of financial regulation. [2]

In the middle of a deep recession and with the financial services sector in distress, Bank A acquired Building Society B and performed due diligence on the transaction using its own internal team of financial analysts. The statutory regulator subsequently discovered that Building Society B held a large amount of bad debt on its books which the bank was unaware of. This resulted in the need for a significant capital injection into Bank A in order for it to remain solvent.

(ii) Show how diligent application of the key principles underlying the financial services legislative framework can help to avoid this type of problem. [12]

[Total 14]

8 An intern at an asset management company has been given a project to write an investment report on a fast growing on-line fashion company which was founded less than 12 months ago.

(i) Outline the research that the intern could undertake including:

- the factors on which he should focus.
- the data he would use.

[6]

(ii) Discuss issues that he might face when completing the investment report and any potential solutions to these issues. [10]

(iii) Compare the similarities and differences in the approach if the analysis was for a credit rating agency rather than an asset management company. [6]

[Total 22]

END OF PAPER