Institute and Faculty of Actuaries

Subject ST5
Finance and Investment
Specialist Technical A

Syllabus

for the 2018 exams

1 June 2017

Aim

The aim of this Finance and Investment Technical subject is to instill in successful candidates the ability to apply, in simple situations, the principles of actuarial planning and control to the appraisal of investments, and to the selection and management of investments appropriate to the needs of investors.

Links to other subjects

This subject draws on the issues introduced in Subjects CT2 – Finance and Financial Reporting, CT7 – Business Economics and CT8 – Financial Economics.

Subject CA1 – Actuarial Risk Management: covers the general underlying principles affecting all specialisms.

Subjects SA5 – Finance Specialist Applications and SA6 – Investment Specialist Applications: use the principles in this subject to solve complex problems, to produce coherent advice and recommendations within a specifically United Kingdom context.

Objectives

On completion of this subject the candidate will be able to:

(a) State what is meant by a risk-free rate of return, and describe assets that may be assumed to be risk-free in practical work.

(b) Describe the typical ways in which investment returns are taxed and the effect of the taxation basis on investor behaviour.

(c) Demonstrate knowledge of the influences over the commercial and economic environment from:

- central banks
- main investor classes
- government policy

(d) Demonstrate a knowledge of the principles of fundamental analysis of equities and bonds.

(e) Apply appropriate methods for the valuation of individual investments and demonstrate an understanding of their appropriateness in different situations.

- fixed income analytics and valuation (including interest rate swaps and futures)
- arbitrage pricing and the concept of hedging
- empirical characteristics of asset prices
- introduction into fixed income option pricing
- evaluating a securitisation (including CBO's and MBS's)
- evaluation of a credit derivative

(f) Describe methods by which an institution can monitor and control its exposure to the following types of risk:

- asset / liability mismatching risk
- market risk
- credit risk (including counterparty risk)
- operational risk
- liquidity risk
- relative performance risk

and explain in the context of mean-variance portfolio theory what is meant by:

- opportunity set
- efficient frontier
- indifference curves
- the optimum portfolio

(g) (i) Describe the principles and aims of market conduct regulatory regimes.

(ii) Demonstrate a knowledge of the principles underlying the legislative and regulatory framework for investment management and the securities industry.

(iii) Demonstrate how these principles can be applied in the areas of:

- trust law
- corporate governance
- role of the listings authority
- environmental and ethical issues
- competition and fair trading controls
- monopolies regulators
- investment restrictions in investment agreements
- provision of financial services
- institutional investment practices
- EU legislation
- role and responsibilities of directors
- development of international accounting standards

(h) Demonstrate a knowledge and understanding of the theory of finance.

(i) Discuss the relationship between financial management and acting as an entrepreneur.
(ii) Outline the possible motives for mergers and divestitures.
(iii) Discuss the key findings in behavioural finance.
(iv) Outline the main steps involved in financial planning.

(i) Demonstrate a knowledge and understanding of the characteristics of specialist financial instruments:

- financial instruments available for short-term lending and borrowing
- corporate debt and credit derivatives
- swaps and swaptions
- private debt
- asset-backed securities, securitisation
- venture capital
- hedge funds
- currency
- infrastructure
- commodities
- structured products
- new ways of investing in old asset classes

(j) Describe the main types of derivative contract, how they are traded, and define their payoffs.

(k) Show how actuarial techniques may be used to develop an appropriate investment strategy.

- asset pricing models
- asset / liability modelling
- asset / liability mismatch reserving
- credit rating an entity
- liability hedging
- dynamic liability benchmarks

(l) Analyse the performance of an investment and discuss the limitations of such measurement techniques.

- portfolio risk and return analysis
- equity price
- net present value
- net asset value
- return on capital

(m) Describe the construction of investment indices and the principal features of major investment indices.

  (i) Discuss the uses of investment indices.

  (ii) Describe the principal indices in the United Kingdom, United States, Japanese, German and French stock markets.

  (iii) Explain the problems encountered in constructing property indices.

(n) Analyse the performance of an investment portfolio and discuss the limitations of such portfolio measurement.

  (i) Assess the performance of a portfolio relative to a published market index.

  (ii) Assess the performance of a portfolio relative to a predetermined benchmark portfolio.

  (iii) Analyse the performance of a portfolio into components relating to investment sector selection and individual stock selection.

  (iv) Discuss the relative merits of assessing portfolio performance relative to published indices, other portfolios or a predetermined benchmark portfolio.

  (v) Discuss the uses of risk adjusted performance measures.

  (vi) Discuss the value of portfolio performance measurement and its limitations.

(o) Demonstrate a knowledge and understanding of the principal techniques in portfolio management including risk control techniques.

  (i) Describe and discuss the principal active management “styles” (value, growth, momentum, rotational).

  (ii) Discuss the principal equity portfolio management techniques.

  (iii) Discuss the principal bond portfolio management techniques.

  (iv) Discuss the uses which an institutional investor might make of financial futures and options, including over the counter contracts.

  (v) Discuss the uses which an institutional investor might make of interest rate and currency and inflation swaps.

  (vi) Discuss the uses which an institutional investor might make of forward foreign exchange contracts for currency hedging.

  (vii) Discuss the usefulness of multifactor models in practical investment management and risk control.

  (viii) Discuss the problems of making significant changes to the investment allocation of a substantial portfolio.

  (ix) Transition management and asset allocation techniques (including overlay strategies).

  (x) Role of the custodian.

(xi) Portfolio construction with attention to:

- value at risk
- tracking error
- risk budgets

(xii) Measurement, comparison and attribution of risk.

END OF SYLLABUS