

**Subject SA5
Finance
Specialist Applications**

Syllabus

for the 2009 Examinations

1 June 2008

**The Faculty of Actuaries and
Institute of Actuaries**

Subject SA5 — Finance Specialist Applications Syllabus

Aim

The aim of the Finance Specialist subject is to instil in successful candidates the ability to apply knowledge of the United Kingdom financial environment and the principles of actuarial practice to the financial management of clients' affairs.

Links to other subjects

Subjects ST5 — Finance and Investment Specialist Technical A provides the underlying principles upon which this subject is based. It is assumed that candidates have a good understanding of the principles covered in the Finance and Investment Technical subjects.

Candidates can expect to be examined in aspects of general principles developed in Subject ST5 — Finance and Investment Specialist Technical A as well as the United Kingdom specific aspects developed in this subject.

Subject P5 — Finance UK Practice Module Specialist: the knowledge required to pass Subject P5 is contained in this subject.

Objectives

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

- (a) Demonstrate a knowledge and understanding of the financial markets with particular reference to the needs of a United Kingdom user.
 - (i) Outline the main features of the capital markets in the United Kingdom, United States, Japan, Germany and France.
 - (ii) Outline the main features of the derivatives markets in the United Kingdom, United States, Japan, Germany and France.
 - (iii) Outline the main features of the structures of the economies of the United Kingdom, United States, Japan, Germany and France.
- (b) Demonstrate a knowledge of the influences over the United Kingdom commercial and economic environment from:
 - Central Banks
 - Government policy
- (c) Demonstrate a knowledge of the personal and corporate taxation framework in the United Kingdom.

- (d) Demonstrate a knowledge of the legislative and regulatory framework for finance in the United Kingdom.
- Corporate Governance
 - Role of the listings authority
 - Competition and Fair Trading controls
 - Monopolies regulators
 - Provision of financial services
 - EU legislation
 - Role and responsibilities of directors
- (e) Show how actuarial techniques may be used to identify and measure financial and non-financial risk.
- Interest rate risk
 - Market risk
 - Credit risk
 - Off-balance-sheet activities
 - Product, Operational and Technology risk
 - Foreign Exchange risk
 - Sovereign risk
 - Liquidity risk
 - Compliance risk
- (f) Identify and describe means for transferring risk to a third party and identify the costs and benefits of doing so.
- (g) Identify and describe means for reducing risk without transferring it, and determine how these may be evaluated.
- (h) Describe how derivatives, synthetic securities and financial contracting may be used to reduce risk or to assign it to the party most able to bear it.
- (i) Discuss the assessment of Capital Adequacy:
- (i) for risk control purposes
- Capital and insolvency risk
 - Capital adequacy regulations (incl. CAD 1 and 2, Basel I and II)
 - Risk Based Capital
- (ii) for development purposes
- “War chest” capital

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- (j) Apply the concept of economic capital and describe methodologies for allocating capital within a financial organisation.
- (k) Demonstrate a knowledge of the principal techniques of hedging using:
- Futures and Forwards
 - Options
 - Swaps
 - Credit Derivatives
 - Securitisation and debt issuance
- (l) Describe how financial risks and opportunities influence the selection of firm strategy.
- (m) Determine the value of cash flows with embedded options:
- Determine the cost and price-yield relationship of an embedded option in a series of cash flows
 - Calculate option-adjusted spreads including the impact of prepay on Mortgage-Backed Securities
 - Apply option-adjusted pricing techniques to Mortgage-Backed Securities and other financial instruments.
- (n) Demonstrate a knowledge and understanding of the different methods of evaluating a credit derivative.
- (o) Demonstrate a knowledge and understanding of the main issues associated with corporate finance:
- (i) Capital structure and the cost of capital
- Describe the effect that the capital structure used by a company will have on the market valuation of the company.
 - Demonstrate an understanding of the competing views on “optimal” capital structure.
 - Describe how an optimal capital structure for a company to maximise shareholder value might be determined.
 - Analyse the effect of taxes on the value of a company.

- Describe how market imperfections and taxes will affect the optimal capital structure for a company and discuss the practical difficulties involved.
 - Discuss the direct and indirect costs associated with financial distress and bankruptcy.
 - Discuss how asymmetric information affects choices in financing.
 - Explain how securitisation can be used to develop a company's capital structure.
- (ii) Debt financing
- Show how debt can be represented as an option on the assets of a firm.
 - Explain the process by which debt can be valued by:
 - Accounting Authorities
 - Investors
 - Owners
 - Shareholders
 - Corporate Financiers
 - Outline the analysis of credit and factors to be considered when advancing credit.
 - Explain the role of rating agencies in assessing the security of debts.
 - Explain the classes of repayment provision associated with debt securities.
 - Describe the nature and analysis of operational and financing leases.
 - Outline the use of structured lending and leveraged transactions, including mezzanine finance.
 - Describe the main providers of debt finance.
- (iii) Dividend policy
- Discuss the effect that the dividend policy of a company will have on the market valuation of the company.
 - Discuss the nature of the practical factors that companies should allow for in setting dividend policy.

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- Describe and evaluate the effect on a company's value of bonus issues, share splits, share repurchases, scrip dividends / scrips in lieu and dividend reinvestment plans.
- (iv) Mergers and acquisitions
- Outline the possible motives for mergers and divestitures.
 - Determine the impact of a merger or acquisition on earnings and market value.
 - Outline the mechanics of a merger or takeover, including the accounting treatment, financing and defence tactics.
 - Describe the basics of risk assessment for acquisitions.
 - Outline the external influences on mergers and acquisitions including government policy, regulation and controls.
- (v) Outline the processes of cash and treasury management.
- (vi) Capital project appraisal
- Describe the features of project financing.
 - Discuss the frameworks and techniques for risk assessment, mitigation and management (e.g. RAMP and PRAM).
 - Outline the features of public-private partnerships.
 - Discuss the use of hurdle rates in practice.
 - Discuss the application of appraisal techniques to inventions and innovations.
- (p) Solve complex problems associated with:
- managing and hedging financial risk
 - determining capital structures
 - measuring financial risk
 - assessing capital adequacy
- and, through integrating and critically evaluating the results, draw conclusions therefrom, in particular in relation to:
- control of financial risk exposures

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- establishing an appropriate capital structure
- developing a financing policy
- establishing a dividend policy
- assessing the merits of a merger or acquisition
- appraising capital projects

End of Syllabus