#### **SYLLABUS**

## **Securities and Investment**

This paper will contain questions on five main categories of securities; Equities, Fixed Income, Index Linked, Real Property and Cash Instruments. It will also contain questions on Options, Futures, Swaps, Warrants, Convertibles and Currency and their relationship to the main categories of securities. Candidates should be aware that approximately 50% of the paper will relate to Equities while approximately 30% of the paper will relate to Fixed Interest, Index Linked and Cash Instruments. Detailed knowledge of UK markets will be expected: familiarity with the major overseas capital markets (in particular US, Japan, Germany, France) and the international dimension, in general, will also be required.

Candidates will be expected to show an understanding of:

- (i) Fundamental characteristics of securities and their derivatives, in terms of risk, marketability and performance, and
- (ii) The main methods by which these securities and their derivatives are valued. Candidates will be expected to be able to demonstrate their familiarity with valuation methods by means of practical examples.

The paper will be a three hour paper and will be divided into two parts:

SECTION A (60% of marks)

A number of compulsory short answer questions covering the entire syllabus

SECTION B (40% of marks)

Six questions of which candidates will be expected to answer two.

## **EQUITIES**

#### A. CHARACTERISTICS

Basic characteristics of ordinary shares in respect of priority for dividends and capital

**Risk** – Market or Systematic Risk (both economic and political).

Volatility; Specific Risk; Theoretical framework for measurement of risk

Market Features - Size; Principal Investors;

Transaction costs; Classes of equity capital Efficient market hypothesis factors contributing to operational efficiency; trading mechanisms Rutterford, Ch. 5, 8 & 9
Sharpe, Alexander & Bailey, Ch. 6, 7, 8
Black, Ch. 13
Elton & Gruber, Ch. 4, 7, 8
Solnik, Ch. 4

Levey & Sarnat, Ch. 1 Rutterford, Ch. 1, 13 Rutterford, Ch. 10 Elton & Gruber, Ch. 3, 17 Sharpe, Alexander & Bailey, Ch. 2,3 Solnik, Ch. 6

A basic knowledge of these characteristics will be required for the major overseas markets.

#### **Performance**

Indices - Commonly used Indices in the major equity markets

Rutterford, Ch. 10, appendix pp 308-311 Solnik, Ch. 6 Sharpe, Alexander & Bailey, Ch. 26 pp 965–969

- Historical Perspective

Solnik, Ch. 4, pp 91-93

- Relationship between equities, economic growth and inflation

- Individual shares - concept of capital return, income return, total return, pre-tax and post-tax return

Rutterford, Ch. 2

A basic knowledge of these characteristics will be required for the major overseas markets.

## **B. VALUATION**

## **Present Value Theory of Share Prices**

Dividend Valuation Models; Effects of Dividend Policy; Effects of Financing Policy

Rutterford, Ch. 5, pp 138-158 Sharpe, Alexander & Bailey, Ch. 18 Elton & Gruber, Ch. 18 Blake, Ch. 6

## **Earnings**

Forecasting - Importance of economic and industry factors; Quality of Earnings; Extrapolation, validity of; success of forecasting methods. Candidates should be familiar with the US and UK evidence

Sharpe, Alexander& Bailey, Ch. 19 Elton & Gruber, Ch. 19

Price/Earnings Ratio - Use of, including use of relative price/earnings ratio

Rutterford, Ch. 5, pp 144-150 Solnik, Ch. 7, pp 221–226

#### **Dividends**

Use of dividend yield; Importance of dividend cover

Rutterford, Ch. 5, pp 139-144

#### **Assets**

Methods of valuation; use of asset valuation

Solnik, Ch. 7, pp 221–226

## FIXED INTEREST SECURITIES

## A. CHARACTERISTICS

Components of return; capital and income

Risk

Economic Risk - Impact of Inflation

Rutterford, Ch. 2, pp 38-43

Credit Risk - Government; Corporate, range of seniori-

pp 437-450

ty of debt.

Elton & Gruber, Ch. 21, pp 518-524

Sharpe, Alexander & Bailey, Ch. 15,

Blake, Ch. 5, pp 115

Volatility - Impact of Duration

Sharpe, Alexander & Bailey, Ch. 16,

pp 469-477

Blake, Ch. 15, pp 105-109

Elton & Gruber, Ch. 21, pp 534-540

Convexity

Elton & Gruber, Ch. 21, pp 540-541

Blake, Ch. 5, pp 109-111

Sharpe, Alexander & Bailey, pp 468-469

**Market Features** 

Size of major government bond markets; Principal Solnik, Ch. 9

investors; Transaction costs

A basic knowledge of these characteristics will be required for the major overseas markets.

#### **Performance**

Indices - Commonly used Government bond indices; Historical perspective of government bond markets in the major countries; difference between the performance of government and corporate bond markets in the UK and US

Solnik, Ch. 9

## **Types of Fixed Interest Security**

Discount and coupon paying securities; straight bonds, zero coupon bonds; asset backed bonds; mortgage bonds; callable bonds; Eurobonds; Yankee bonds; Bulldogs; International bonds

Rutterford, Ch. 3, pp 62-67 Ch. 4, pp 115-119 Blake, Ch. 5, pp 78-80

Sharpe, Alexander & Bailey, Ch. 14 Solnik, Ch. 9

**B. VALUATION** 

**Yields** 

Flat yields and redemption yields; Semi-annual and annual yields

Elton & Gruber, Ch. 20, pp 497-506 Sharpe, Alexander & Bailey, Ch. 5 Rutterford Ch.4

Blake, Ch. 5, pp 81-93

**The Term Structure of Interest Rates** 

Yield curves; factors affecting them

Elton & Gruber, Ch. 20, pp 506-518 Blake, Ch. 5, pp 93-105

#### INDEX LINKED SECURITIES

The following section relates to Index Linked bonds issued by the UK government, in the main. Some knowledge of index linked securities in other countries will be required.

#### A. CHARACTERISTICS

Risk

Economic Risk - Impact of inflation; effects of not holding to maturity; impact of duration on volatility

Bootle, Ch. 1, 2

**Market Features** 

Size; Principal investors; transaction costs

Solnik, Ch. 10, pp 335-343

**Performance** 

Indices; Historical Perspective

Bootle, Ch. 6

**B. VALUATION** 

Real redemption yields

Calculation method; term structure of real yields

Rutterford, Ch. 3, pp 82-89 Blake, Ch. 5, pp 90-93

Risk premium

Relative to equities; relative to conventional gilts

Brooke & Pain, Investment Analyst, July 1983 Bootle, Ch. 3

REAL PROPERTY

The following section relates solely to real property in the UK

#### A. CHARACTERISTICS

**Market Risk** 

Economic; Political - effects of legislation of new building and landlord/tenant relationship

Baum & Crosby, Ch. 2, 8 Fraser), Ch. 12, 13 Enever, Ch. 2, 4

**Individual Risk** 

Effects of local supply/demand; effects of method of construction/changes in building requirements

Millington, Ch. 5

Volatility

Enever, Ch. 11

**Market Features** 

Size of UK institutional property holdings; Principal institutional investors; transaction costs

Millington, Ch. 5 Fraser, Ch. 21

**Performance** 

Indices; Historical perspective; Management costs - potential for added value

Enever, Ch. 12, 13

**Types of Property** 

Commercial, Industrial, Retail, Residential, Agricultural; Legal aspects - Freehold and Leasehold property; Investment property and property development

Millington, Ch. 9

**Direct/Indirect Investment** 

Direct Investment - Financial Structures; Indirect Investment - Vehicles available Millington, Ch. 4, 22

**B. VALUATION** 

Methods of valuing individual properties

**Assessment by investors** 

Net present value of future cash flow; Rental comparisons; Yield Baum & Crosby, Ch. 7, 8 Millington, Ch. 13, 15, 16, 17 Enever, Ch. 5, 6, 7, 8, 9, 10

**CASH INSTRUMENTS** 

A. CHARACTERISTICS

**Types of Instrument** 

Deposits, Certificates of Deposit, Commercial Paper, Building Society Instruments, Floating Rate Notes Blake, Ch. 4 Sharpe, Alexander & Bailey, Ch. 14, pp 388-391

Risk

Economic Risk - Inflation - Interest Rate Movements; Individual Risk - Government and commercial instruments; Length of Instrument - significance of Sharpe, Alexander & Bailey, Ch. 5, pp 112-114

**Market Features** 

Liquidity of major types of cash instrument in the UK; Principal Investors in bank deposits, certificates of deposit, floating rate notes and treasury bills in the UK; Transaction costs

**B. VALUATION** 

Methods of yield calculation on different cash instruments

**Money Market Yield Curve** 

Blake, Ch. 4 Sharpe, Alexander & Bailey, Ch. 5, pp 117-119

# OPTIONS, FUTURES, WARRANTS AND CONVERTIBLES

#### A. CHARACTERISTICS

#### **Options**

Options as derivative instruments; Puts and calls; buying and selling exercise prices; traded options markets; underlying assets; equities, stock indices, bonds, futures and currencies; exotic options

## Futures

Futures as derivative instruments; traded futures markets; long and short positions; types of futures contract

## Securities which contain options

Warrants and convertibles - Use and valuation; Equity as an option; Underwriting as an option; swaps; other derivative assets

#### **B. BASIC VALUATION**

## **Options**

Basic - Variables affecting the price; Limits to the price relative to the asset price; Put/call parity

Advanced - Binomial model; simple illustrations of Black/Scholes model; Use and limitations of models; Adjustment for dividends

Use of Options - Outright positions; Spreads and straddles and when to use them; Covered options and hedged positions

Rutterford, Ch. 7 Sharpe, Alexander & Bailey, Ch 20 pp 662-673, Ch. 21, pp 766-769 Booklets from LIFFE, Stock Exchange Elton & Gruber, Ch. 22, pp 570-581 Blake, Ch. 9, pp 184-187 Solnik, Ch. 13 Hull, Ch. 8, 9

Elton & Gruber, Ch. 21 Sharpe, Alexander & Bailey, Ch. 19 Blake, Ch. 8 Rutterford, Ch. 6 Solnik, Ch. 12 Hull, Ch. 2

Brealey & Myers, Ch. 22 Sharpe, Alexander & Bailey, Ch. 20, pp 713-717 Solnik, Ch. 11 Hull, Ch. 6

Elton & Gruber, Ch. 22, pp 576-581 Brealey & Myers, Ch. 21 Hull, Ch. 8

Elton & Gruber, Ch. 22, pp 581-593 Bookstabler, Ch. 4 (incl. appendix) Sharpe, Alexander & Bailey, Ch. 20, pp 675-703 Hull, Ch. 10, 13, 15

Bookstabler, Ch. 4 (incl. appendix)
Brealey & Myers, Ch. 25
Elton & Gruber, Ch. 22, pp 574-576 and 594-597
Sharpe, Alexander & Bailey, Ch. 20, pp 704-708
Hull, Ch. 9, 12, pp 275-295

**Futures, Warrants, Convertibles and Swaps** 

Use and valuation methods

Brealey & Myers, Ch. 22 Elton & Gruber, Ch. 23

Sharpe, Alexander & Bailey, Ch. 21

Solnik, Ch. 11 Hull, Ch. 4, 5, 6

**CURRENCIES** 

A. CHARACTERISTICS

Risk

Nature of Exchange Rate Risk

Rutterford, Ch. 11

Solnik, Ch. 4, pp 105-107

**Transaction Costs** 

Performance

Historical perspective of the five major currencies

Solnik, Ch. 1

Methods of gaining exposure to foreign currencies

Spot and forward markets; Borrowing

Solnik, Ch. 1

**B. VALUATION** 

Purchasing Power Parity; Relevance of relationship

between exchange rates, interest rates and inflation rates

Brealey & Myers, Ch. 34

Solnik, Ch. 2, 3

## Readings

J. Rutterford, Introduction to Stock Exchange Investment, 2nd Edition, Macmillan Press, 1993

W. Sharpe, G. Alexander and J. Bailey, Investment, Fifth Edition, Prentice Hall, 1995

D. Blake, Financial Market Analysis, McGraw Hill, 1990

Levy & Sarnat, Capital Investment & Financial Decisions, Prentice Hall

Bootle, Index Linked Gilts, Woodhead Faulkner

Brealey & Myers, Principles of Corporate Finance, McGraw Hill

Bookstabler RM, Options, Pricing and Strategies in Investing, Addison Wesley

Baum, A. & Crosby, N. Property Investment Appraisal, London: Routledge, 1988

Millington, A, An Introduction to Property Valuation, London: Estates Gazette, 1988

Enever, N, The Valuation of Property Investments, London: Estates Gazette, 1989

Fraser, W.D, Property Investment and Pricing, London: Macmillan, 1984

E. Elton & M. Gruber, Modern Portfolio Theory and Investment Analysis, John Wiley, Fifth Edition, 1995

B. Solnik, International Investments, Addison Wesley, Third Edition, 1996

J. Hull, Introduction to Futures and Options Markets, Prentice-Hall, 1991