UNIT 2: INVESTMENT PRACTICE V.16 TESTED FROM 1 DECEMBER 2018

Commented [JF1]: Amended to 17

Commented [JF2]: Amended to 2019

UNIT AIMS

By the end of this unit, learners should be able to demonstrate:

- An ability to apply statistical and financial mathematics techniques
- An understanding of micro-economics
- An understanding of the macro-economic environment and its impact on investments
- An understanding of accounting principles
- An ability to evaluate the characteristics, inherent risks and behaviour of equities, cash and cash equivalents, and fixed income securities
- An ability the analyse the characteristics, inherent risks, behaviours and relevant tax considerations of derivatives
- An ability the analyse the characteristics, inherent risks and behaviours of alternative investments
- An understanding of the merits and limitations of the main investment theories
- An ability to analyse the correlation of asset classes
- An understanding of the principles of investment management
- An ability to analyse the characteristics, inherent risks and behaviours of investment products
- An understanding of the principles of investment performance measurement

CFA Society United Kingdom

Question allocation across the syllabus is balanced on the guidance of psychometric and industry specialists. The following question allocation for Version 16 of the IMC is provided as a broad indication of the relative 'weighting' of different parts of the syllabus in IMC examinations from1 December 2018.

Commented [JF3]: Amended to 17

Commented [JF4]: Amended to 2019

CONTENT AREA	TOPIC	TOPIC NAME	QUESTION ALLOCATION
Quantitative methods	7	Quantitative methods	10–20
Economics	8	Micro-economics	15–25
	9	Macro-economics	
Accounting	10	Accounting	10–20
Asset classes	11	Equities	25–35
	12	Fixed income	
	13	Derivatives	
	14	Alternative investments	
Investment theory, management and measurement	15	Portfolio management	20–30
	16	Investment products	
	17	Investment performance measurement	

OTHER INFORMATION REGARDING THIS UNIT:

Exam format:

- 105 questions
- Online testing using standard multiple choice, item sets and gap-fill style questions

Time allowed for exam: 2 hours and 20 minutes

Grades: Pass or Fail

Study Materials:

- Official Training Manual v.16 is available from the CFAUK website, including revision questions with fully worked answers for calculations.
- Mock exam available on CFA UK's website

Commented [JF5]: Amended to 17

Recommended study hours: 100 hours

Commented [JF6]: Amended to 120

Availability of exam sessions: Every working day through Pearson VUE testing centre's.

TOPIC 7 QUANTITATIVE METHODS

By the end of this topic, learners should be able to:

- Demonstrate an ability to apply statistical and financial mathematics techniques

7.1 SOURCES OF DATA

7.1.1 Identify and distinguish between primary and secondary sources of data

7.1.2 Distinguish between a population and a sample

7.1.3 Explain the key sampling methods

7.1.4 Distinguish between continuous and discrete data

7.1.5 Define categorical data and explain how it can be converted to ordinal data

7.1.6 Interpret a frequency and relative frequency distribution

7.1.7 Explain the use of the following in the presentation of data: pie chart, bar chart, histogram, scatter plots, line graphs

7.2 SUMMARY DATA

7.2.1 Define, explain and calculate the arithmetic mean, geometric mean, median and mode using raw and interval data, and calculate the geometric mean return using a series of returns

7.2.2 Explain the relationship between the mean, median and mode for symmetric and skewed data

7.2.3 Define, explain and calculate the following measures of dispersion for both raw data and interval data: standard deviation (population and sample), variance, range, quartiles and percentiles, interquartile range

7.2.4 Explain the notion of probability distributions and identify the properties of the normal distribution

7.2.5 Explain and apply the concepts of null hypothesis, alternative hypothesis and the role of statistical significance in rejecting/accepting the null/alternative hypotheses in the context of investment decision making

7.3 CORRELATION AND BIVARIATE LINEAR REGRESSION

7.3.1 Define correlation and identify alternative measures of correlation

7.3.2 Explain the least-squares regression technique in deriving a line of best fit and interpret the correlation coefficient R, R squared, adjusted R squared and measures of unexplained variation (for example the mean squared error).

7.3.3 Calculate and interpret a forecast value for the dependent variable given the intercept and slope coefficients of a regression equation taking into account their statistical significance and adjusted R square.

7.3.4 Explain the shortfalls in the application of linear regression to forecasting, including why correlation does not imply causation, and the pitfalls of data- mining

7.3.5 Describe the impact of extreme events on alternative measures of correlation

7.4 INDEX NUMBERS

7.4.1 Explain the role of financial market indices

7.4.2 Explain and calculate a price relative for a share or index and calculate an index level for the current year, given the base year data and the current year data

7.4.3 Calculate an index level having re-based the index series

7.4.4 Calculate a price weighted index; an equally weighted index; a market value weighted index and a geometrically weighted index.

7.4.5 Identify and explain the relevance of: free-float and index calculation method (as in 7.4.4 above) for interpreting index performance relative to the performance of an investment

7.4.6 Describe the composition and construction of key global bond and equity market indices and identify strengths and weaknesses of their respective construction methods

7.5 SIMPLE AND COMPOUND INTEREST

7.5.1 Calculate simple and compound interest earned over multiple periods

7.5.2 Calculate the annual compound rate given the simple rate and the frequency of compounding

7.5.3 Calculate the annual simple rate of interest given the annual compound rate and the frequency of compounding

7.5.4 Calculate the effective annual rate given a nominal annual rate with continuous compounding

7.6 THE TIME VALUE OF MONEY – PRESENT AND FUTURE VALUE CALCULATIONS, ANNUITIES, PERPETUITIES, AND MORTGAGES

7.6.1 Calculate and interpret future values for: single sums and annuities

7.6.2 Calculate and interpret present values for: single sums, annuities, and perpetuities

7.6.3 Calculate equal instalments on a repayment mortgage given the present value of the borrowings, the fixed mortgage rate and the term of the borrowing

7.7 THE INTERNAL RATE OF RETURN AND NET PRESENT VALUE

7.7.1 Calculate and interpret the net present value (NPV) and internal rate of return (IRR) of a series of investment cash flows

7.7.2 Explain how NPVs and IRRs can be used in investment decision making and their limitations

TOPIC 8 MICRO-ECONOMICS

By the end of this topic, learners should be able to:

- Demonstrate an understanding of micro-economics

8.1 DEMAND AND SUPPLY

8.1.1 Explain the laws of supply and demand and the concept of equilibrium

8.1.2 Distinguish between movements along demand and supply schedules and shifts thereof

8.1.3 Identify the factors that cause a demand or supply schedule to shift

8.1.4 Describe, calculate and interpret 'own price elasticity of demand', the factors that determine this and its impact on total revenues

8.1.5 Explain, calculate and interpret the concept of cross elasticity of demand (as applied to substitute and complementary goods)

8.1.6 Explain, calculate and interpret elasticity of supply and its dependence on the flexibility of factors of production

8.2 THE COSTS OF PRODUCTION: MARGINAL COSTS, AVERAGE COSTS AND TOTAL COSTS

8.2.1 Distinguish between explicit (accounting) costs and opportunity (economic) costs

8.2.2 Explain the concept of normal, supernormal and subnormal levels of profit

8.2.3 Define fixed costs, variable costs, marginal costs, total costs and average costs

8.2.4 Explain the shapes of the short-run marginal cost, average variable cost, average fixed cost and average total cost curves

8.2.5 Explain the law of diminishing marginal returns and its impact on the shape of short-run cost curves

8.2.6 Explain the relationship between total revenue, average revenue and marginal revenues for a normal demand schedule

8.2.7 Explain the relationship between marginal cost and marginal revenue, and how this determines the profit-maximising level of output for a firm

8.3 SHORT AND LONG-RUN COSTS, ECONOMIES AND DISECONOMIES OF SCALE

8.3.1 Define short run and long run in the context of cost behaviour

8.3.2 Explain the notions of economies of scale, a minimum efficient scale and diseconomies of scale and their impact on the shape of the long-run average cost curve

8.3.3 Explain the relationship between long-run marginal costs and long-run average costs and explain how this determines the level of output for productive efficiency to arise

8.4 MARKET STRUCTURES

8.4.1 Identify the conditions that characterise a perfectly competitive (price-taker) market

8.4.2 Explain the conditions of long-run equilibrium for a price-taker

8.4.3 Explain the market mechanics through which only normal levels of profit can be earned by price-takers in the long run

8.4.4 Explain the relationship between short-run supply and marginal cost for a price-taker

8.4.5 Describe the shape of the long-run supply curve for a perfectly competitive industry

8.4.6 Explain the decision by a price-taker facing economic losses to either continue to operate or shut down

8.4.7 Identify the conditions that characterise a pure monopoly

8.4.8 Distinguish between the equilibrium price, output levels and productive efficiency of a monopoly compared to a perfectly competitive firm

Commented [JF7]: NEW- 8.1 INTRODUCTION

NEW LOS:

8.1.1 Explain the main ways in which economic theory might assist investment professionals.
8.1.2 Describe the strengths and weaknesses of economic theory as a means of analyzing financial market behavior.
8.1.3 Describe the main applications of micro-economic theory

Commented [JF8]: Amended to 8.2 ANALYSING DEMAND AND SUPPLY

Commented [JF9]: All LOS now 8.2

Commented [JF10]: Amended to 8.3 ANALYSING COST AND PROFITABILITY

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Commented [JF13]: Amended to 8.3.8

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Commented [JF15]: Amended to 8.3.10

Commented [JF16]: Amended to 8.4 ANALYSING THE COMPETITIVE ENVIRONMENT

8.4.9 Explain price discrimination and the conditions under which it will prevail

8.4.10 Describe the characteristics of monopolistic competition and oligopoly

8.5 COMMONLY USED METHODS OF ASSESSING INDUSTRIES/COMPANIES

8.5.1 Describe how business cycles may affect relative industry performance

8.5.2 Identify Porter's five competitive forces that drive industry competition

8.5.3 Describe the product life cycle and the characteristics of each phase (introduction, growth, maturity and decline)

8.5.4 Describe the concept of strengths, weaknesses, opportunities and threats (SWOT) analysis and its role in corporate evaluation

8.5.5 Describe the four Ps of marketing mix (product, price, promotion and place) in the context of analysing competitive advantage and threats

TOPIC 9 MACRO-ECONOMICS

By the end of this topic, learners should be able to:

- Demonstrate an understanding of the macro-economic environment and its impact on investments

9.1 THEMACRO-ECONOMICENVIRONMENT

9.1.1 Identify the main long-term UK and global socio-economic trends

9.1.2 Identify key economic indicators and their trends

9.1.3 Describe the relationship between and importance of the main world economies

9.1.4 Identify international differences in consumption, credit and savings

9.1.5 Describe economic and financial cycles including their predictability and regional differences

9.2 DETERMINATION OF NATIONAL INCOME, THE CIRCULAR FLOW OF INCOME, CONSUMPTION, THE MULTIPLIER, THE PARADOX OF THRIFT, FOREIGN TRADE AND INCOME DETERMINATION

9.2.1 Distinguish between gross domestic product (GDP), gross national product (GNP) and national income

9.2.2 Identify the difference between real and nominal GDP

9.2.3 Identify the components of the circular flow of income, distinguishing between injections into and withdrawals ('leakages') from the circular flow

9.2.4 Identify the major components of the Keynesian Monetarist and Classical schools of thought and distinguish between them

9.2.5 Calculate the Keynesian multiplier given the marginal propensity to consume (MPC) or propensities to withdraw (tax, import and save)

9.2.6 Identify the nature of the relationship between aggregate saving, consumption and investment as predicted by the Paradox of Thrift

9.3 INFLATION, UNEMPLOYMENT, FISCAL AND MONETARY POLICY AND THE ROLE OF CENTRAL BANKS

9.3.1 Describe fiscal policy and its influence on aggregate demand

9.3.2 Identify the role of debt in the business cycle

9.3.3 Identify the problems associated with fiscal policy

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Commented [JF18]: Amended to 8.4.11

Commented [JF19]: Amended to 8.4.12

Commented [JF20]: Amended to 8.4.13

Commented [JF21]: Amended to 8.4.14

Commented [JF22]: Amended to 8.4.15

Commented [JF23]: NEW 9.1 INTRODUCTION

NEW LOS:

9.1.1 Describe the main applications of macro-economic theory

9.1.2 Identify the key economic characteristics of historical financial crisis.

Commented [JF24]: Amended to 9.2 ANALYSING THE OUTLOOK FOR GDP GROWTH

Commented [JF25]: Amended to 9.2.1

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Commented [JF33]: Amended to 9.2.7

Commented [JF34]: New 9.3 ANALYSING ECONOMIC POLICY

LOS amended to 9.3.1 Identify the major components of the Classical, Monetarist Keynesian and Austrian schools of thought and distinguish between them.

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Commented [JF36]: Amended to 9.3.2

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Commented [JF38]: Amended LOS 9.3.3 to 9.3.17

9.3.4 Identify money supply (from ‘narrow’ through to ‘wide’)

9.3.5 Identify the key features of the fractional reserve banking system

9.3.6 Define the money multiplier and identify its determinants

9.3.7 Calculate the potential money multiplier given a cash reserve ratio

9.3.8 Explain the transmission mechanism whereby monetary policy influences economic aggregates

9.3.9 Define inflation (including deflation), explain how it is measured in the UK, and identify the different causes

9.3.10 Define unemployment and explain how it is measured in the UK

9.3.11 Explain the relationship between inflation and unemployment according to the Phillips curve

9.3.12 Explain how inflation targeting operates in the UK

9.3.13 Distinguish between the different mandates and approaches of the major central banks

9.3.14 Explain the unconventional tools used by central banks to manage the economy

9.3.15 Explain the impact of bank capital and liquidity requirements and the move towards macro prudential regulation of the macro-economy

9.4 THE FOREIGN EXCHANGE MARKET, GOVERNMENT POLICY AND EXCHANGE RATES, FIXED FLOATING AND MANAGED EXCHANGE RATES, AND THE BALANCE OF PAYMENTS

Commented [JF39]: Amended to 9.4 ANALYSING EXCHANGE RATES

9.4.1 Explain how changes in supply and demand for a currency will affect its value on the foreign exchange markets

9.4.2 Identify the key components of the balance of payments

9.4.3 Explain the relationship between the supply and demand for a currency, and the underlying transactions represented in the balance of payments

9.4.4 Distinguish between a fixed, floating and a managed exchange rate (‘dirty floating’ regime)

9.4.5 Explain the economic benefits and costs of a fixed exchange rate mechanism

9.4.6 Explain an optimal currency area (OCA) and identify the advantages and disadvantages of implementing a single currency in an OCA

9.4.7 Explain the implications of persistent global imbalances of trade and capital

9.4.8 Explain the notion of purchasing power parity (PPP) as a forecasting tool for exchange rates

9.4.9 Explain the effectiveness of monetary and fiscal policy in fixed and floating exchange rate regimes

9.4.10 Describe the nature and basic operations of the spot and forward exchange markets

9.4.11 Explain the nature of exchange rate risk and how it can be managed

9.4.12 Distinguish between covered and uncovered interest rate parity and calculate forward rates using the appropriate method

9.4.13 Apply the concept of purchasing power parity (PPP) to forecast expected future spot exchange rates using the differential inflation rates between two countries

TOPIC 10 ACCOUNTING

By the end of this topic, learners should be able to:

- Demonstrate an understanding of accounting principles

10.1 FUNDAMENTAL PRECEPTS

10.1.1 Explain the legal requirement to prepare financial statements

10.1.2 Explain the concept of a company being a separate legal entity, and the purpose of the preparation of the accounts

10.1.3 Define 'small companies' for the purpose of financial statement preparation and explain the relevance of this definition to financial reporting requirements

10.1.4 Explain when accounts may be required to be prepared under International Financial Reporting Standards (IFRS) rather than Generally Accepted Accounting Principles in the UK (UK GAAP)

10.1.5 Explain the role of the auditor and identify, in outline, the reasons for auditors issuing a qualified report

10.2 THE BALANCE SHEET

10.2.1 Explain the purpose of a balance sheet or statement of financial position

10.2.2 Identify and explain the key balance sheet categories and content

10.2.3 Distinguish between capitalising costs and expensing costs

10.2.4 Explain the valuation of non-current assets

10.2.5 Calculate depreciation under the straight-line and reducing balance methods

10.2.6 Calculate the profit or loss on disposal of a non-current asset

10.2.7 Explain the principles behind the valuation of inventories

10.2.8 Explain the effects of first-in-first-out and last-in-first-out valuations on inventory values and profits

10.2.9 Identify the types of current and non-current liabilities that typically appear in financial statements

10.2.10 Explain the concept of a provision and its treatment within the financial statements

10.2.11 Explain the concept of a contingent liability and its treatment within financial statements

10.2.12 Describe the treatment of pension costs in financial statements

10.2.13 Explain what is meant by a post-balance sheet event

10.2.14 Distinguish among authorised, issued, paid-up and called-up share capital

10.2.15 Explain the effect of the following on a balance sheet: rights issue, bonus/scrip issue, stock split, share repurchases

10.2.16 Identify and explain the main types of reserve found in the balance sheet

10.3 THE ACCOUNTING TREATMENT OF FINANCIAL INSTRUMENTS

10.3.1 Identify the various classifications of financial instrument and describe the accounting treatment of each

10.4 THE INCOME STATEMENT AND STATEMENT OF CHANGES IN EQUITY

10.4.1 Identify and explain the classification of expenses based on nature or function

10.4.2 Explain the principle of revenue recognition

10.4.3 Identify the following different levels of profit and which classes of expenses are considered in arriving at each level: gross profit, operating profit and net profit

10.4.4 Explain the objective of, and identify the information to be reported in, a statement of changes in equity

10.5 THE CASH FLOW STATEMENT

10.5.1 Explain the purpose of a cash flow statement

10.5.2 Identify the classification of cash flow activities

10.5.3 Calculate net cash flow from operations given operating profit (or vice versa) and the relevant balance sheet movements

10.6 GROUP ACCOUNTS

10.6.1 Define and distinguish between corporate investments, associated companies and subsidiaries

10.6.2 Explain the purpose of group accounts

10.6.3 Define a minority interest and explain how it is represented in the financial statements

10.6.4 Explain how goodwill arises in acquisition accounting

10.6.5 Explain the treatment of goodwill and intangible assets in the group accounts, including amortisation, useful lives and the requirement for impairment reviews

10.7 MAJOR ACCOUNTING RATIOS

10.7.1 Distinguish between profitability, liquidity and gearing ratios

10.7.2 Define and calculate return on capital employed and equity

10.7.3 Define and calculate return on equity

10.7.4 Explain how return on capital employed can be broken down into profit margin and asset turnover

10.7.5 Define, calculate and interpret: operational gearing, financial gearing, the current ratio, the quick ratio (acid test)

10.7.6 Explain the effect of the following on the major accounting ratios: rights issue, bonus/ scrip issue, stock split, share repurchases

Commented [JF40]: LOS DELETED

Commented [JF41]: Amended to 10.7.2 Define and calculate return on capital employed and return on equity ratios.

Commented [JF42]: Amended to 10.7.3

Commented [JF43]: Amended to 10.7.4

Commented [JF44]: Amended to 10.7.5

TOPIC 11 EQUITY

By the end of this topic, learners should be able to:

- Demonstrate an ability to evaluate the characteristics, inherent risks and behaviour of equities

11.1 EQUITY CAPITAL – CHARACTERISTICS

11.1.1 Identify the characteristics, and the risks to the investor, of the various classes of equity capital

11.1.2 Identify the reasons for the primary and secondary issuance of shares and the implications to the investor

11.1.3 Identify the reasons for issuance of preference shares and the implications to the investor

11.1.4 Identify the characteristics of global and American depository receipts

11.2 EQUITY – ISSUANCE

11.2.1 Distinguish between primary and secondary share issuance

11.2.2 Describe the key features of the following equity issuance

11.2.3 Define and explain the purpose of a rights issue, a bonus/scrip issue and a stock split

11.2.4 Calculate the theoretical ex-rights price and the value of the right (nil-paid) given the cum- rights price, the issuance ratio and the subscription price

11.2.5 Calculate the theoretical ex-scrip price given the scrip ratio and the cum-scrip price

11.2.6 Evaluate the options open to an investor in response to a rights offer and explain the effect on the investor's wealth

11.2.7 Identify and explain the motivations behind a company buying back its own shares

11.3 EQUITY–VALUATION

11.3.1 Calculate a holding period return for an ordinary share, comprising capital gain and dividend income

11.3.2 Identify the reasons for a company's chosen dividend policy

11.3.3 Explain the practical constraints on companies paying dividends

11.3.4 Explain the importance of the dividend yield and dividend cover in stock analysis

11.3.5 Calculate dividend yield and dividend cover

11.3.6 Calculate an estimated growth rate for dividends using historic data, or using return on equity, and a retained earnings ratio

11.3.7 Distinguish between and evaluate the merits of relative valuation models and absolute valuation models, and between historic and prospective measures of value

11.3.8 Identify the components, assumptions and limitations of the dividend discount model (Gordon growth model)

11.3.9 Calculate the present value of a share using the dividend discount model

11.3.10 Explain what is meant by earnings per share, and diluted earnings per share

11.3.11 Calculate a basic earnings per share

11.3.12 Explain the rationale for the use of the following ratios in equity valuation: price–

Commented [JF45]: Amended to 11.2.2 Describe the key features of an equity issuance.

earnings, price to book, price to sales, price to cash flow, enterprise value to earnings before interest tax, depreciation and amortisation (EBITDA)

11.3.13 Explain the possible shortfalls of using price multiples in corporate valuation

11.3.14 Explain the basics of free cash-flow based valuation methods (FCFF, FCFE) and residual income valuation methods

11.3.15 Calculate price to earnings (both historic and prospective), price to book, price to sales, price to cash flow ratios for a company

11.3.16 Define financial gearing and evaluate the effect on required equity returns and thus valuations

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Commented [JF47]: Amended to 11.3.12

Commented [JF48]: Amended to 11.3.13

Commented [JF49]: Amended to 11.3.14 Calculate price to earnings (both historic and prospective), price to book, price to sales, price to cash-flow, enterprise value to earnings before interest, tax, depreciation and amortization (EBITDA) ratios for a company.

Commented [JF50]: Amended to 11.3.15

TOPIC 12 FIXED INCOME

By the end of this topic, learners should be able to:

- Demonstrate an ability to analyse the characteristics, inherent risks, and behaviour of cash and cash equivalents, and fixed income securities

12.1 CASH AND CASH EQUIVALENTS

12.1.1 Explain the main characteristics and risks associated with cash deposits and money market instruments (including Treasury Bills, CDs, CP, FRNs)

12.1.2 Calculate the discount and quoted yield on a UK Treasury Bill

12.2 FIXED INCOME SECURITIES - CHARACTERISTICS

12.2.1 Explain the structure and characteristics of the various types of fixed income instruments issued in the UK, including government bonds, index-linked bonds, corporate bonds and Eurobonds

12.2.2 Identify the rationale for and risks to the issuer and holder of a convertible, callable or puttable bond

12.2.3 Explain clean (quoted) and dirty pricing

12.2.4 Calculate the price of a fixed income security given its maturity, coupon and yield

12.3 FIXED INCOME SECURITIES - RISK AND RETURN

12.3.1 Identify the components of return of fixed income securities

Commented [JF51]: Amended to 12.3.1 Identify the components of the present value calculation.

12.3.2 Identify the main risks faced by bond holders and how these risks can be addressed

12.3.3 Identify the two components of interest rate risk (price and reinvestment risk)

12.3.4 Identify the nature of the relationship between yield and price

12.3.5 Analyse the factors that affect the sensitivity of a bond's price to a change in required yield

12.3.6 Define and calculate the (Macaulay) duration of a bond

12.3.7 Define and calculate the modified duration of a bond

12.3.8 Calculate, given the duration of a bond, the change in price given a change in required yield

12.3.9 Explain the convexity error that arises from using duration to estimate a change in bond price using duration

12.3.10 Define credit risk as it affects bonds

12.3.11 Identify the role and drawbacks of the major credit rating agencies

12.3.12 Interpret the key classes of rating on the scales published by the major rating agencies

12.3.13 Explain the concept of debt seniority

12.3.14 Identify key features and financial ratios considered by credit rating agencies in conducting a corporate rating

12.4 FIXED INCOME SECURITIES – YIELDS AND THE YIELD CURVE

12.4.1 Define and calculate: flat yield, gross redemption yield (GRY), net redemption yield (NRY), grossed-up NRY

12.4.2 Explain when each of these measures may be appropriate to use

12.4.3 Define the yield curves

12.4.4 Explain the theories that contribute to explaining the shape of the yield curve

12.4.5 Define and calculate forward and spot interest rates

12.4.6 Explain the relationship between forward rates, spot rates and the GRY

TOPIC 13 DERIVATIVES

By the end of this topic, learners should be able to:

- Demonstrate an ability to analyse the characteristics, inherent risks and behaviours of derivatives

13.1 CREDIT DERIVATIVES

13.1.1 Distinguish between forwards, futures and options

13.1.2 Explain the nature, trading and settlement of exchange traded derivatives

13.1.3 Identify the motive for using a futures contract rather than a trade in the underlying asset

13.1.4 Explain the nature of, and reasoning behind, a contango and backwardation market

13.1.5 Define the ‘basis’ of a futures contract

13.1.6 Describe the main features of the following ICE Futures Europe contracts: short-term interest rate futures, long gilt futures, FTSE 100 futures

13.1.7 Explain the possible uses of the above contracts in an investment management context

13.1.8 Define the concept of index arbitrage

13.1.9 Distinguish between American-style and European-style options

13.1.10 Differentiate the time value and intrinsic value components of an option premium

13.1.11 Determine when an option is in-the-money, out-of-the-money or at-the money

13.1.12 Calculate the time value of an option, given the premium, strike price and current market price

13.1.13 Identify and explain the factors that determine the premium of an option

13.1.14 Determine the maximum profit, maximum loss and the motivation behind the following option strategies: short and long call, put, straddle, covered call and protective put

13.1.15 Explain the use of futures and options in hedging an equity portfolio

13.1.16 Calculate the number of futures or options contracts required to hedge a portfolio with a specified beta value

13.2 SELLING SHORT, STOCK LENDING AND CONTRACT FOR DIFFERENCES (SWAPS)

13.2.1 Explain the mechanics and uses of short selling

13.2.2 Explain the role of stock lending in the markets, and the benefits to the participants

13.2.3 Explain the nature of contracts for differences

13.2.4 Explain the nature of, and motivations behind: interest rate swaps, currency swaps, equity swaps and inflation swaps

13.3 CONVERTIBLES AND WARRANTS

13.3.1 Explain the nature of convertible bonds and convertible preference shares

13.3.2 Calculate a conversion price, conversion value and conversion premium

13.3.3 Explain the component parts of the valuation of a convertible bond (namely straight bond value, call option value, dilution effect and conversion ratio)

13.3.4 Distinguish between a warrant and a call option

13.3.5 Explain the key features of covered warrants

13.4 CREDITDERIVATIVES

13.4.1 Identify the main purposes, mechanics and implications of a credit default swap (CDS)

13.4.2 Identify the main risks to the financial system resulting from credit derivatives

TOPIC 14 OTHER INVESTMENTS

By the end of this topic, learners should be able to:

- Demonstrate an ability to analyse the characteristics, inherent risks and behaviours of alternative investments

14.1 COMMODITIES

14.1.1 Describe the main features of commodity markets

14.1.2 Identify the main ways investors can access the commodity markets

14.1.3 Explain the characteristics of the main commodity derivatives, including: energy, softs/biofuels, metals, emissions and weather

14.1.4 Identify the main commodity derivative indices

14.1.5 Explain how commodity exposure can be viewed as a hedge against inflation and 'event' risk

14.1.6 Explain the characteristics and risks of investing in precious metals

14.2 PROPERTY

14.2.1 Distinguish between the commercial and residential property markets

14.2.2 Explain the rationale for investing in property and contrast the investment characteristics of property with the other major asset classes

14.2.3 Identify the main investors in the commercial property market and the characteristics of the principal commercial property sectors

14.2.4 Explain how the direct commercial property market works with regard to: ownership and lease structures; buying and selling; costs, the valuation of property and investment performance measurement

14.2.5 Describe the main valuation techniques applied to property investment

14.2.6 Explain the routes to indirect property investment

14.2.7 Identify the role of Sustainability and ESG characteristics in property valuation and investment

14.2.8 Describe the role of the Investment Property Databank indices in the market

TOPIC 15 PORTFOLIO MANAGEMENT

By the end of this topic, learners should be able to:

- Demonstrate an understanding of the merits and limitations of the main investment theories
- Demonstrate an ability to analyse the correlation of asset classes
- Demonstrate an understanding of the principles of investment management

15.1 RISK AND RETURN AND THE IMPORTANCE OF DIVERSIFICATION

15.1.1 Explain the 'normal' trade-off between risk and return, and the concept of 'dominance' between investment strategies

15.1.2 Explain the implications of assuming that returns are normally distributed

15.1.3 Explain the importance of risk measurement in the analysis of investments, and why ex-ante and ex-post measures of risk may be very different

15.1.4 Identify the commonly used measures of risk in investment analysis and fund management

15.1.5 Explain the advantages and disadvantages of standard deviation as a measure of risk

15.1.6 Explain tracking error and identify its advantages and disadvantages as a measure of risk

15.1.7 Explain the meaning of drawdown and its advantages and disadvantages as a measure of risk

15.1.8 Explain the meaning of relative weights and the concept of active share and their respective advantages and disadvantages as measures of risk

15.1.9 Explain the impact of changing levels of price volatility over time and how this impacts measures of risk

15.1.10 Explain the importance of correlation in constructing efficient portfolios, and the difficulties, limitations and meaning of correlation coefficients

15.1.11 Calculate correlation coefficients from standard deviation/covariance of two investments

15.1.12 Explain diversification and its role in constructing efficient portfolios, and its limitations during extreme market conditions

15.1.13 Explain the meaning of value at risk (VaR) and its advantages and disadvantages for risk management

15.1.14 Analyse and explain other types of investment risk, including inflation, currency, interest rate, fraud and counterparty risk

15.2 CORRELATION BETWEEN ASSET CLASSES

15.2.1 Identify the correlation between the various asset classes (equity, fixed income, property, cash and alternative investments) and explain its relevance to asset allocation

15.2.2 Explain the limitations of correlation analysis in extreme market conditions

15.3 MODELS OF RETURN AND RISK

15.3.1 Identify the assumptions behind the single-factor capital asset pricing model (CAPM) and identify other factors in common use

15.3.2 Explain the limitations of the CAPM model

15.3.3 Define the segmentation of risk into systematic (factor) risk and unsystematic ('investment specific') risk

15.3.4 Calculate the total risk given systematic and unsystematic components

15.3.5 Calculate the expected return on a security by applying the CAPM through interpreting the beta of a security

15.3.6 Explain how the historic beta may be estimated using a scatter chart of historic returns

15.3.7 Calculate the beta of an investment given the systematic risk of the investment and the risk of the market

15.3.8 Calculate the beta of an investment given the variance of the market return, and the covariance of the investment return with the market return

15.3.9 Calculate the beta of a portfolio given the component betas and the investment weightings

15.3.10 Explain the concept of investments being exposed to a number of common factors which partially explain their return and risk profile ('arbitrage pricing theory')

15.4 THE EFFICIENT MARKETS HYPOTHESIS

15.4.1 Identify and explain the key concepts of the efficient markets hypothesis (EMH)

15.4.2 Explain the limitations of the EMH

15.4.3 Evaluate the evidence on market anomalies in relation to EMH

15.4.4 Explain the basic concepts of the behavioural finance school of thought

15.4.5 Evaluate the evidence on market anomalies in relation to behavioural finance

15.4.6 Explain the notion of 'bubbles' and 'financial amnesia' in markets

15.5 PRICING, LIQUIDITY AND FAIR VALUE

15.5.1 Explain the relationship between pricing, liquidity and fair value for the asset classes of equity, fixed income, derivatives and alternative investments

15.5.2 Explain the relationship between liquidity and the capacity of investment strategies

15.6 APPROACHES TO FUND MANAGEMENT

15.6.1 Distinguish between a 'top-down' and 'bottom-up' approach to fund management

15.6.2 Distinguish between active and passive fund management, and explain the costs and benefits to the investor

15.6.3 Distinguish between strategic and tactical asset allocation

15.6.4 Explain the major investment styles prevalent in the fund management industry

15.7 INVESTMENT MANAGEMENT PRINCIPLES – FIXED INCOME

15.7.1 Explain the following bond portfolio management techniques: cash matching/dedication, immunisation, credit risk management, riding the yield curve

15.7.2 Calculate the theoretical gain from riding the yield curve

Commented [JF52]: Amended to 15.4.1 Identify and explain the key concepts of the efficient markets hypothesis (EMH) and explain the limitations of EMH.

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15.6.3 Explain how active and passive approaches can be blended in portfolio construction.

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15.7.3 Calculate duration for a bond portfolio

15.7.4 Explain the benefits and risks of bond portfolio management strategies such as the barbell

15.7.5 Explain the characteristics and risks of a liability driven investment (LDI)strategy

15.7.6 Explain the process of an LDI strategy

15.7.7 Evaluate some of the techniques and basic measures of risk used in LDI

15.8 SOCIALLY RESPONSIBLE INVESTING AND ENVIRONMENTAL SOCIAL GOVERNANCE INVESTING

15.8.1 Explain what is meant by Environmental Social and Governance (ESG) characteristics and describe what is meant by Socially Responsible Investment (SRI).

15.8.2 Describe the history of ESG investing

15.8.3 Explain the factors that have led to the development of ESG investing.

15.8.4 Describe the evidence on whether ESG investing leads to superior portfolio returns

15.8.5 Explain the main methods of incorporating ESG characteristics into investment decisions

15.8.6 Describe the main challenges of incorporating ESG characteristics in to investment decisions

15.8.7 Identify why investors might (or might not) include ESG issues in their investment decisions

15.8.8 Explain what is meant by Impact Investing and contrast Impact Investing with traditional investment and ESG strategies

Commented [JF61]: Amended to 15.8.1 Explain what is meant by Environmental, Social and Governance (ESG) characteristics, Socially Responsible Investment (SRI) and how they differ.

Commented [JF62]: Amended to 15.8.2 Describe the history of ESG investing and explain the factors that have led to its development.

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TOPIC 16 INVESTMENT PRODUCTS

By the end of this topic, learners should be able to:

- Demonstrate an ability to analyse the characteristics, inherent risks and behaviours of investment products

16.1 INVESTMENTPRODUCTS

16.1.1 Compare and contrast investing through direct investments in securities and assets, and investing through indirect investments

16.1.2 Distinguish the features, risks and benefits of unit trusts, investment trusts and open- ended investment companies

16.1.3 Identify the key features and objectives of exchange traded funds (ETFs) and exchange traded commodities (ETCs)

16.1.4 Identify the advantages and disadvantages of investing in ETFs

16.1.5 Explain the features and objectives of: private client funds, structured products, wraps and other platforms

16.1.6 Identify the characteristics and advantages of life assurance-based investments

16.1.7 Identify the characteristics and advantages and disadvantages of defined contribution versus defined benefit pension arrangements from the perspective of both sponsors and beneficiaries

16.2 HEDGE FUNDS AND PRIVATE EQUITY

16.2.1 Explain the features and objectives of hedge funds and funds of hedge funds
16.2.2 Describe the various hedge fund strategies
16.2.3 Describe the various approaches to private equity investing
16.2.4 Identify the potential benefits and limitations of hedge funds
16.2.5 Identify the potential benefits and limitations of private equity investing
16.2.6 Describe the management fee structure for hedge funds and private equity investing

TOPIC 17 INVESTMENT PERFORMANCE MEASUREMENT

By the end of this topic, learners should be able to:

- Demonstrate an understanding of the principles of investment performance measurement

17.1 TOTAL RETURN AND ITS COMPONENTS

17.1.1 Identify the components of total return for a fixed income or equity portfolio

17.1.2 Calculate the income, capital and total return over a single period for an equity or fixed portfolio

17.1.3 Calculate the reinvestment return on income over a specified investment horizon

17.1.4 Explain how returns are decomposed and attributed within equities (sector/stock/interaction effect) and fixed income (shift/twist/spread return)

17.2 MONEY-WEIGHTED AND TIME-WEIGHTED RETURNS

17.2.1 Distinguish between money-weighted return and time-weighted return

17.2.2 Calculate and interpret the money-weighted return or time-weighted return from data provided

17.3 CHOOSING A BENCHMARK, COMPARISONS WITH INVESTMENT OBJECTIVES, BASE PORTFOLIO AND INDICES

17.3.1 Identify the desirable properties and characteristics of an appropriate benchmark

17.3.2 Identify the key types of benchmark used in the investment management industry

17.3.3 Explain how to construct a benchmark equity portfolio

17.4 PERFORMANCEMEASUREMENTINCLUDINGRISKADJUSTEDRETURNS

17.4.1 Explain the importance of risk analysis in performance evaluation

17.4.2 Calculate and interpret the following risk-adjusted measures of return: The Sharpe measure, the Treynor measure, the information ratio and Jensen's alpha

17.4.3 Explain how total return can be decomposed into the following: risk-free return, return due to choice of benchmark, return due to market timing, return due to diversifiable risk and pure selectivity