CEFA Syllabus 2021

As of November 2021, this new CEFA syllabus approved by the EMC 29.04.2021 and ratified by the AGM 04.06.2021 will enter into force.

Part 1 Economics

1.	**Macroeconomics**		
1.1.	Measuring National Income and Price		
1.1.1.		National income accounting	
			Concept of national income
1.1.2.		Consumption	
			Consumption function
			Investment
			Investment function
1.2.3.		1.2.3 Government expenditure	
			Government revenue and expenditure
			Effect of government expenditure and tax on national income
			Government expenditure and crowding-out effect
1.2.4.		Equilibrium relationship in the good/service market: IS curve	
1.3.	Equilibrium in the Money Market		
1.3.1.		Demand for money	
1.3.2.		Equilibrium relationship in the monetary market: LM curve	
1.4.	Equilibrium in Economy and Aggregate Demand		
1.4.1.		Aggregate demand	
1.5.	Aggregate Supply and Determination of Price of Goods/Services		
1.5.1.		Aggregate supply	
2.	**Macro Dynamics**		
2.1.	Inflation		
2.1.1.		Unemployment and inflation rate	
			Tradeoff between unemployment and inflation
			Natural rate of unemployment hypothesis and expected inflation
2.2.	Economic Growth		
2.2.1.		Main factor of economic growth	
			Saving rate/capital
			Population growth
2.2.2.		Theory of economic growth	
			Capital accumulation and economic growth
			Technological innovation and economic growth

Human resources and economic growth
Financial market and economic growth

2.3. Business Cycles
2.3.1. Theory of exogenous business cycle
2.3.2. Theory of endogenous business cycle
2.3.3. Fiscal/monetary policy and business cycle

3. International Economy and Foreign Exchange Market
3.1. Open Macroeconomics
3.1.1. International balance of payments and capital flows
Balance of payment statement
Balance of payment and capital flows
Factor affecting international capital movement
Government's intervention and money supply
3.1.2. Determination of equilibrium national income in the open economy
Foreign trade multiplier under floating system
Open macro economics model: preliminary
Equilibrium model of open economy
Effect of fiscal policy
Effect of monetary policy
3.2. Foreign exchange rate
3.2.1. Determinants of exchange rate in the long-run
Concept of foreign exchange rate
Price and foreign exchange rate
Interest rate and foreign exchange rate
3.2.2. Determination of foreign exchange rates
Monetary approach
Asset approach
Overshooting model
Portfolio balance approach
3.2.3. 3.2.3 Government intervention and foreign exchange policy
Government intervention
Foreign exchange rate and foreign exchange policy in local market
3.2.4. 3.2.4 Foreign exchange risk and risk management
Risk hedging with currency derivatives
Growth of currency derivatives markets
3.2.5. Historical movement and forecasting of foreign exchange rate
Historical analysis of foreign exchange rate
Forecasting of foreign exchange rate
Impact of foreign exchange rate change on security prices
3.3. Central bank and monetary policy
3.3.1. Monetary policy
Target of monetary policy
Instruments of monetary policy
3.3.2. Transmission effect of monetary policy on real economy

3.3.3.	Central bank operations in major countries
3.3.4.	Effect of monetary policy on security markets

Part 2 Corporate Finance

1. Fundamentals of Corporate Finance

1.1. Goals of Corporate Finance
1.1.1. Value maximisation of shareholders
1.1.2. Corporate Governance issue
- Agency relationship
- Control of the firm

1.2. The Finance Function and the Firm's Objectives
1.3. Role of Financial Managers
1.4. Principles of Valuation
1.4.1. What is value?
1.4.2. The valuation process
1.4.3. Value creation for shareholders
1.5. Discounted Cash Flows
1.5.1. What is cash flow?
1.5.2. Basics of cash flow analysis
1.5.3. Terminal values
1.6. Capital Budgeting
1.6.1. Investment decision criteria
- Payback rules
- Discounting payback period method
- IRR
- NPV

1.6.2. Cost of capital
- Cost of equity capital
- Cost of debt capital
- WACC
- Corporate taxes, interest subsidy and cost of capital

1.6.3. CAPM
- Measuring beta
- Certainty equivalents
- Risk free rate
- Risk adjusted discount rates
  - CML
  - SML

2. Long-Term Finance Decision

2.1. Investment Decision
2.1.1. Periodic budgeting
2.1.2. Project evaluation
2.2. Project Evaluation
2.2.1. Method for ranking investment proposals
2.2.2. Capital resource rationing
2.2.3. Common pitfalls (eg. Sunk costs, depreciation)

2.3. Liquidation and Reorganisation

3. Short-Term Finance Decision

3.1. Short-Term Financing

3.1.1. Current asset financing
- Needs for working capital
- Components of working capital

3.1.2. Short term financing
- Short-term financing resources
- Short-term financial planning models

3.2. Cash Management

3.2.1. Credit management
- Commercial credit instruments
- Credit decision

3.2.2. Cash management
- Target cash balance model
- Cash conversion cycle
- Investing idle cash balance

3.3. Short-Term Lending and Borrowing

3.3.1. Short-term lending
- Money markets
- Alternatives to money markets

3.3.2. Short-term borrowing
- Credit rationing
- Secured and unsecured loans

4. Capital Structure and Dividend Policy

4.1. Leverage and the Value of the Firm

4.1.1. Modigliani-Miller Theory
- 1) Irrelevance Theorem
- 2) Corporate taxes and capital structure

4.1.2. Bankruptcy cost model

4.1.3. Agency cost model

4.2. Dividend Policy

4.2.1. Types of dividend (cash dividend, stock dividend, and splits)

4.2.2. Repurchase of stock

4.2.3. Irrelevance Theorem

4.2.4. Clientele effect

4.2.5. Signalling model

4.2.6. Dividend policy in local market

5. Mergers and Acquisitions

5.1. Valuation Issues

5.1.1. Valuation of the target

5.2. Forms of Acquisitions

5.2.1. Take-overs
5.2.2. Approved acquisitions
5.2.3. Creeping take-overs
5.2.4. Eliminating minority interests
5.3. Strategies for the Acquirer
5.3.1. Aggressive or agreed
5.3.2. Conditional or unconditional
5.3.3. Timing
5.3.4. Board considerations
5.4. Defensive Strategies
5.4.1. Pre-emptive versus reactive
5.4.2. Pre-emptive (long-term) strategies
5.4.3. Pre-emptive (short-term) strategies

6. International Corporate Finance

6.1. International Capital Budgeting for Multinational Firm
6.1.1. Foreign project appraisal
6.1.2. Political risk analysis
6.1.3. Managing foreign exchange exposure
6.2. Asset and Project Finance
6.2.1. Asset-backed securities
6.2.2. Leasing
6.2.3. Project evaluation
6.2.4. Lender's evaluation of the project
6.2.5. Syndication

Part 3 Financial Accounting and Financial Statement Analysis

1. Financial Reporting Environment

1.1. Financial Statements
1.1.1. Balance sheet
1.1.2. Income statement
Presentation formats
Classification of expenses (by nature or by function)
1.1.3. Statement of cash flows
1.1.4. Statement of changes in equity
The comprehensive income
1.1.5. Notes to financial Statements
1.1.6. Relation between business activities and financial statements
1.2. Financial Reporting Issues
1.2.1. Uses of financial statements
Equity investment
Credit extension
Competition
Merger & Acquisition
1.2.2. International differences in accounting
International differences in accounting
Market – oriented accounting systems
Bank – oriented accounting systems
The IASB and the IFRSs

2. Framework for the Preparation and Presentation of Financial Statements

2.1. Objective of financial statements
2.2. Accounting conventions (going concern, accrual Basis, etc)
2.3. Criteria for accounting recognition
2.4. Fundamental definitions (asset, liability, equity, revenue, expense)

3. The cash flow statement

3.1. Rationale for the Statement of Cash Flows
3.2. Relation between Income Flows and Cash Flows
3.3. Presentation of the cash flow statement
3.3.1. The direct method
3.3.2. The indirect method

4. The income statement: Revenue recognition

4.1. Criteria for revenues recognition
4.1.1. Sales of goods
4.1.2. Rendering of services
4.2. Measurement of revenues
4.3. Construction contracts
4.3.1. Percentage of completion method

4.3.2. Completed contract method
4.4. Accounting for stock – options and similar benefits
4.4.1. Classification of sharebased payments
4.4.2. Equity – settled sharebased payments
4.4.3. Cash-settled sharebased payments

5. Assets, Liabilities and Shareholders Equity
5.1. Assets
5.1.1. Property, plant and equipment
Measurement at cost
Measurement at fair value
5.1.2. Investment property
Measurement at cost
Measurement at fair value
5.1.3. Intangible assets
Criteria for recognition
Accounting for research and development costs
5.1.4. Inventories
Measurement
Cost formulas(FIFO, LIFO, weighted average Cost)
5.1.5. Financial instruments
Classification
Measurement at fair value
Measurement at amortized cost
Hedge accounting
5.1.6. Impairment of assets
Measuring the recoverable amount
Impairment tests
5.2. Liabilities
5.2.1. Bonds
Accounting for bond discounts/premiums
5.2.2. Hybrid securities
Convertible debt securities
Debt issues with detachable warrants
5.2.3. Leases
Operating leases
Finance leases
5.2.4. Borrowing costs
Conditions for capitalization
Costs that may be capitalized
5.2.5. Retirement benefits
Pensions
Post-retirement benefits other than pensions
5.2.6. Income Taxes
Temporary differences

Deferred taxes
5.2.7. Provisions
Conditions for the recognition of provisions
Contingent liabilities
5.3. Shareholders' Equities
5.3.1. Issuance of capital stock
5.3.2. Acquisition and reissue of treasury stocks
5.3.3. Cash, property and stock dividends
5.3.4. Accounting
5.4.5. Other changes inretained earnings

6. Business Combination
6.1. Mergers and Acquisitions
6.1.1. Acquisitions
Asset valuation in acquisitions
Accounting for goodwill
6.1.2. Mergers
Pooling of interests method
Purchase method
6.2. Consolidated Financial Statements
6.2.1. The scope of consolidation
6.2.2. Consolidation methods
6.2.3. The difference arising from consolidation
6.2.4. Uses of each method
6.2.5. The consolidation procedure
6.2.6. Analysis of the difference arising from initial consolidation
6.2.7. Impairment of goodwill

7. Foreign Currency Transactions
7.1. Foreign Currency Transaction
7.1.1. Initial recognition
7.1.2. Reporting at subsequent B/S daily
7.1.3. Recognition of exchange differences
7.2. Financial Statements of Foreign Operations
7.2.1. Classification of foreign operations
7.2.2. Translation to the presentation currency

8. **Financial Reporting and Financial Statement Analysis**
8.1. Income Flow vs Cash Flow
8.1.1. Relation between net income and cash flows from operating activities
8.1.2. Net income and cash flows in various stages of life cycle
8.2. Quality of Earning, Earnings Management
8.2.1. Data issues in analyzing financial statements
Non-recurring income items
Income, gains and losses from discontinued operations

8.2.2. Accounting changes
- Changes in accounting estimates
- Changes in accounting policies
- Adjustments to prior financial statements

8.3. Earnings per Share
8.3.1. Basic earnings per share
8.3.2. Diluted earnings per share
8.3.3. Using EPS to value firms
8.3.4. Criticisms of EPS
8.4. Segment Reporting
8.4.1. Definition
- Industry segments
- Geographical segments

8.4.2. Disclosure requirements
8.4.3. Using segment information
8.5. Interim Financial Statements

9. Analytical Tools for Gaining Financial Statement Insights
9.1. Balance Sheet
9.1.1. Common size analysis
9.1.2. Time series analysis
9.2. Income Statement
9.2.1. Common size analysis
9.2.2. Time series analysis

10. Analytical Tools for Assessing Profitability and Risk
10.1. Profitability Analysis
10.1.1. ROA
- Breakdown of ROA
- Interpreting ROA

10.1.2. ROCE
- Relating ROA to ROCE
- Breakdown of ROCE

10.2. Risk Analysis
10.2.1. Short term liquidity risk
- Current ratio
- Quick ratio
- Operating cash flow to current liabilities
- Working capital activity ratio
- Operating cash flow to cash interest cost

10.2.2. Long term solvency risk
- Debt ratio
- Interest coverage ratio
- Operating cash flow to total liabilities
- Operating cash flow to capital expenditure

10.2.3. Financial distress risk

Univariate analysis

Multiple discriminant analysis

10.3. Break-even Analysis

10.4. Pro Forma Financial Statements

10.4.1. Steps in preparing pro forma financial statements

10.4.2. Conditions when common size percentage, growth rates, and turnover provide the best projections of financial statements amounts

Part 4 Equity Valuation and Analysis

1. Equity Markets and Structures

1.1. Types of equity securities

- Common stock
- Preferred stock
- Equity mutual fund shares

1.2. 1.2. Indices

2. Understanding the Industry Life Cycle

3. Analysing the Industry Sector and its Constituent Companies

3.1. The industry sector

3.2. Characteristic of the industry

3.3. Macro factor

3.4. Forecasting for companies in the sector

3.5. Balance sheet factors

3.6. Corporate strategy

3.7. Valuations

4. Understanding the Company

4.1. Historical financial performance

4.2. Segmental information

4.3. Inventory, debtors and creditors

4.4. Depreciation and amortisation

4.5. Completing the forecasts

5. Valuation Model of Common Stock

5.1. Dividend discount model

5.1.1. Zero-growth model

5.1.2. Constant growth model

5.1.3. Multiple growth model

5.2. Free cash flow model

5.3. EVA, MVA, CFROI, Abnormal earnings discount model

5.4. Measures of relative value

5.4.1. Price/earning ratio

5.4.2. Price/book value ratio

5.4.3. Price/cash flow ratio

5.4.4. Price/sales ratio

Part 5 Derivative Valuation and Analysis

1. Financial Markets and Instruments

1.1. Derivatives Markets

1.1.1. Fixed income derivatives
- Interest rate options
- Interest rate futures
  - Delivery options
  - Conversion factors
  - Cheapest-to-deliver bonds
- Custom interest rate agreements (interest swap, IRA, cap, floor and swaptions)

1.1.2. Equity derivatives
- Options on individual stocks
- Stock index futures and options

1.2. Futures Markets
- Basic characteristics of futures contract
- Mechanics of trading in futures markets

1.3. Related Markets

1.3.1. Swaps
- Characteristics of swaps
- Related products (IRA, cap, floor, swaptions)

1.4. Credit derivatives: Market, instruments and general characteristics

1.4.1. Market of credit derivatives

1.4.2. Definition of credit default swaps (CDS)

1.4.3. Structural diagram of credit default swaps

1.4.4. Credit events
- Physical settlement
- Cash settlement
- Trigger events

1.4.5. CDS products
- Credit default swaps and credit linked notes
- Index products
- Other credit default swap products

1.4.6. The role of credit derivatives
- Isolating credit risk
- Efficient mechanism to short a credit
- Market for pure credit risks
- Liquidity provision in times of turbulence
- Tailor credit investments and hedges
- Confidential transactions

1.4.7. Market participants
- Bank and loan portfolio managers
- Market makers
- Hedge funds
- Asset managers

Insurance companies
Corporations
1.4.8. Institutional framework
Marking to market
Standardised documentation
Counterparty consideration
1.4.9. Spread volatility of credit default swaps
1.4.10. Credit derivatives:valuation of credit default swaps
Creating synthetic CDS
Valuation of credit default swaps by a non-arbitrage approach
Estimating default probabilities

2. Analysis of derivatives and other products
2.1. Futures
2.1.1. Factors determining contract price
2.1.2. Theoretical price of futures
2.1.3. Basis and factors causing change
2.1.4. Arbitrage problems
2.1.5. Hedging strategies
The hedge ratio
The perfect hedge
Minimum variance hedge ratio
Hedging with several futures contracts
2.2. Options
2.2.1. Determinants of option price
2.2.2. Options pricing models
B&S option pricing formula and variants
European options on stocks paying known dividends
European options on stocks paying unknown dividends
American options on stocks paying known dividends
Options on stock indices
Options on futures
Options on currencies
Warrants
Binomial option pricing model
2.2.3. 2.2.3 Sensitivity analysis of options
Premiums
The strike price
Price of underlying assets, and delta and gamma
The time to maturity and theta
Interest rate and rho
Volatility of the stock returns and vega
2.2.4. Volatility and related topics
Estimating volatility from historical data
Implied volatility and volatility smile

2.2.5. Exotic options

2.2.6. Options strategies

- Covered call
- Protective put
- Spreads
- Straddles
- Strangles

2.3. Asset-backed Securities

2.3.1. Types of underlying assets

- Instalment contract
- Revolving lines of credit
- Other assets

2.3.2. Cash flow characteristics

2.3.3. Credit enhancement

2.3.4. Valuation methodologies

Part 6 Fixed Income Valuation and Analysis

1. Financial Markets and Instruments

1.2. Fixed Income: Corporate and Government

1.2.1. Types of fixed income securities

- Money market instruments
- Government bonds
- Corporate securities

1.2.2. Indices

2. Time Value of Money

2.1. Time value of money

2.1.1. Simple versus compound interest

2.1.2. Present and future value

2.1.3. Annuities

2.1.4. Continuous discounting and compounding

2.2. Bond Yield Measures

2.2.1. Yield vs discount

2.2.2. Current yield

2.2.3. Yield to maturity

2.2.4. Yield to call

2.2.5. Other basic concepts

- Spot rates
- Discount function
- Forward rates
- Relations between spot rate, forward rate and the slope of the term structure

2.2.6. Yield curves

- Market Curves (Observed)
  - Yield
  - Swaps
  - Credit
- Theoretical Curves (Imputed)
  - Term Structures
  - Parametric modelling

2.3. Term Structure of Interest Rates

2.3.1. Yield curves and shapes

2.3.2. Theories of term structure

- Expectations hypothesis
- Liquidity preferences
- Market segmentation and preferred habitat theories

2.3.3. Term structures

- Risk Management
- Asset Management/Liability Management/ALM
- Financial Engineering

Structured Products
Regulatory
Portfolio Valuation
Mark-to-Mark with Unobserved Prices
2.4. Bond Price Analysis
2.4.1. Basic price/yield relationship
2.4.2. Yield spread analysis
Types of spreads
Determinants of yield spreads
2.4.3. Valuation of coupon bonds using zero-coupon prices
Static arbitrage and valuation of coupon bonds
Strips markets
2.5. Risk Measurement
2.5.1. Risk measurement tools
2.5.2. Duration and modified duration
2.5.3. Convexity
2.5.4. Hedging
2.6. Usage
2.6. Bond Yield Curves
2.6.1. Zero (Spot), Coupon and Par curves
2.6.2. Bond Curves in Market Usage
Structure and Smoothness
Trade Horizon: Yield, Duration & Convexity
Reversion to Mean
2.6.3. Curve Shapes and Future Rates
Constraints: Absolute & Relative (Slope)
Negative Discount Function
2.6.4. Curves and Economic Activity
2.6.5. Curves and Monetary Policy
2.6.6. Other Curves
Swap Curves
Credit Curves
Spread Curves
2.7. Credit Risk
2.7.1. Industry consideration
2.7.2. Ratio analysis
2.7.3. Credit rating and rating agencies
2.7.4. Curves and credit
The Additional Dimensions of Credit
Default risk
Recovery Rates
Annualised Expected Loss Rates
Bankruptcy processes
Term Structure of Credit
Credit Default Swaps (CDS)

Curve Shapes and Credit Quality
Historical Behaviour: Curves Under Shock

3. **Bonds with Warrants**
3.1. Investment Characteristics
3.2. Value of Warrants

4. **Convertible Bonds**
4.1. Investment Characteristics
4.2. Value of Conversion Benefits

5. **Callable Bonds**
5.1. Investment Characteristics
5.1.1. Price-yield relationship for a callable bond
5.1.2. Negative convexity
5.2. Valuation and Duration
5.2.1. Determining the call option value
5.2.2. Option-adjusted spread
5.2.3. Effective duration and convexity

6. **Floating Rate Notes**
6.1. Investment Characteristics and Types
6.2. Valuation Method

7. **Mortgage-Backed Securities**
7.1. Types of Mortgages
7.1.1. Level-payment fixed-rate
7.1.2. Adjustable-rate (ARM)
7.2. Types of Securities
7.2.1. Pass-through securities
7.2.2. Collateralised mortgage obligations
7.3. Factors Affecting Market Price
7.3.1. Underlying collateral
7.3.2. Structure and seasoning
7.3.3. Prepayment rate
7.3.4. Level of interest rate
7.3.5. Liquidity
7.3.6. Credit risk
7.4. Valuation Methodologies
7.4.1. Static cash flow yield methodology
7.4.2. Prepayment model

8. **Fixed Income Portfolio Management Strategies**
8.1. Active Management
8.1.1. Interest rate anticipation strategies

8.1.2. Yield spread analysis
8.1.3. Maturity spacing strategies
8.2. Passive Management
8.2.1. Buy and hold
8.2.2. Indexation
8.2.3. Immunisation
8.2.4. Cash flow matching
8.3. Portfolio Construction based on a Factor Model
8.3.1. Model specification
8.3.2. Suitable factors such as interest rates, spreads
8.3.3. Managing factor sensitivities
8.4. Computing the Hedge Ratio: the Modified Duration Method

Part 7 Portfolio Management

1.	**Modern Portfolio Theory**	
1.1.	The Risk/Return Framework	
1.1.1.		Return
		Measures of return
1.1.2.		Risk
		Components of total risk
1.1.3.		Measures of risk
		Measures
		Value at risk
1.2.	Efficient Market Hypothesis	
1.2.1.		Definition & assumptions
1.2.2.		Alternative hypothesis
1.2.3.		Types of market efficiency
1.2.4.		Market anomalies
1.3.	Portfolio Theory	
1.3.1.		Diversification and portfolio risk
1.3.2.		Markowitz model and efficient frontier
1.4.	Capital Asset Pricing Model (CAPM) - building on fundamentals in Part 2 module 1.6.3	
1.4.1.		Major assumptions
1.4.2.		Capital market line (CML)
1.4.3.		Security market line (SML)
1.4.4.		International CAPM
1.5.	Arbitrage Pricing Theory	
1.5.1.		Assumptions
1.5.2.		One factor models
1.5.3.		Multi-factor models
1.5.4.		Arbitrage pricing theory
2.	**Investment Policy**	
2.1.	Investment Objectives	
2.1.1.		Setting investment objectives for individuals
2.1.2.		Deciding portfolio structure
2.1.3.		Setting objectives for institutions
3.	**Asset Allocation**	
3.1.	Asset Allocation Overview	
3.1.1.		What is asset allocation?
3.1.2.		Who does asset allocation?
3.1.3.		Implementing and managing the asset allocation process
3.1.4.		Evolution of asset allocation
3.1.5.		Capital Market Expectations
3.2.	Type of Asset Allocation	
3.2.1.		Integrated asset allocation

3.2.2. Strategic asset allocation
3.2.3. Tactical asset allocation
3.2.4. Dynamic asset allocation

4. Asset Liability-Analysis and Management
4.1. Introduction
4.1.1. Background of ALM
4.1.2. ALM with pension funds
4.1.3. Types of ALM models
4.2. Modelling Liabilities
4.2.1. Types of liabilities
4.2.2. Valuation of pension liabilities
4.2.3. Annuity factors and discount rates
4.3. Modelling Assets
4.3.1. Types of asset classes
4.3.2. Risk and return characteristics
4.4. Funding Ratios
4.4.1. Defintions
4.4.2. Surplus risk management
4.5. Integrated Optimisation
4.5.1. Stochastic simulation
4.5.2. Target functions and trade offs
4.5.3. Scenario analysis and stress testing
4.6. Implementation of strategies
4.6.1. Active versus passive ALM strategies
4.6.2. Dynamics adjustment of assets and liabilities
4.7. Dynamics and Implementation
4.7.1. Dynamic adjustment of liabilities
4.7.2. Dynamic asset allocation and rebalancing
4.7.3. Liability driven investing

5. Practical Portfolio Management
5.1. Managing an Equity Portfolio
5.1.1. Active management
Technical analysis/market timing
Stock selection/industry selection
selection
Growth/value style
Specialisation/themes
Anomalies
Top-down/bottom-up
Adjusting the beta of an equity portfolio
5.1.2. Passive management
Buy and hold
Stock index funds

Customised funds
Completeness funds
Factor/style funds
Indexing technology
Benchmark choice
Choice of the tracking error

5.1.3. Combined strategies
Active/passive combinations

5.1.4. Portfolio construction based on a factor model

5.2. Derivatives in Portfolio Management

5.2.1. Combining options and traditional assets

5.2.2. Portfolio insurance
Static portfolio insurance
Dynamic portfolio insurance
Constant Proportion Portfolio Insurance

5.2.3. Hedging with stock index futures

5.2.4. Hedging with foreign exchange futures

5.2.5. Hedging with interest rate futures

5.2.6. Use of swaps in portfolio management

5.2.7. Asset allocation with futures

5.3. Managing a Property Portfolio

5.3.1. The role of property in a diversified portfolio

5.3.2. The property investment decision

5.3.3. Micro economic influences on property returns

5.3.4. Macro economic influences on property returns

5.3.5. Difference property investments

5.4. Alternative Assets/Private Capital

5.4.1. Unlisted (non-property) securities

5.4.2. Terms, conditions and characteristics

5.4.3. Role in a traditional portfolio

5.4.4. Managing unlisted security vehicles

5.4.5. Monitoring and reporting

5.5. International Investments

5.5.1. International diversification
Cross-correlations
Country risk
Emerging markets

5.5.2. Hedging foreign exchange risk
Effective management of currency risk
Behaviour of currency returns
Is it a separate asset class / zero sum game?
Treatment of currency within a portfolio
Black's paper on universal currency hedge
Use of overlay strategies
Key sensitivities

Currency-related example of performance attribution

5.5.3. International equities

Reasons for holding international equity assets

Performance objectives

5.5.4. International fixed income

Reasons for holding international fixed interest assets

Performance objectives

5.5.5. Managing a portfolio of international assets

International investing

Global asset allocation

Portfolio management styles

Portfolio construction

Portfolio management strategy

6. Performance Measurement

6.1. Performance Measurement and Evaluations

6.1.1. Risk-return measurement

Market and book value evaluation

Time horizon and performance measurement

Inflow/outflow of cash and performance measurement

Time-weighted and dollarweighted rate of return

6.1.2. Risk-adjusted performance measures

Sharpe's measure

Treynor's measure

Jensen's alpha

Appraisal ratio

6.1.3. Relative investment performance

Manager-universe comparison

Indices and benchmarks

- Index definition and calculation
- Choosing and constructing a benchmark
- Domestic vs. International benchmarks
- Cash benchmark and currencies
- Multi-currency investments and interest rate differentials
- Currency overlay and performance measurement
- Balanced benchmarks
- Random and normal portfolios
- Index vs. universe median

Style-bogey comparisons

6.1.4. Performance attribution analysis

Asset allocation effect

Industry selection effect

Security selection effect

Investment timing effect

Attribution analysis of fixed income portfolio

6.1.5. Special issues

Performance evaluation of international investments
A single currency attribution model by Brinson & al.
Multi-currency attribution and interest rate differentials
Performance evaluation of international investments derivative investments
Effects of costs

7. Management of Investment Institutions

7.1. Assessing and Choosing Managers

7.1.1. Style analysis

Means of style analysis
Style analysis
Risks, controls and prudential issues: organisational issues
Risks, controls and prudential issues: fee structures

8. Behavioural Finance

8.1. Definition and scope of Behavioural Finance
8.2. Rationality (homo oeconomicus) versus Bounded Rationality (according to Herbert Simon)
8.3. Anomalies in human behaviour
8.3.1. Anomalies regarding perception of information
8.3.2. Anomalies regarding information processing
8.3.3. Anomalies regarding decision making
8.4. Heuristics
8.4.1. Simplification heuristic
8.4.2. Mental accounting
8.4.3. Availability heuristic
8.4.4. Anchoring
8.4.5. Representativity
8.5. Prospect Theory
8.5.1. Value function
8.5.2. Asymmetry effect
8.5.3. Disposition effect
8.5.4. Reference points
8.6. Loss aversion
8.7. Regret aversion
8.8. Framing
8.9. Overconfidence
8.10. Home bias

Part 8: European Regulation

Chapter I: European Legal Framework for Financial Services

0. Why regulation?

1. European Legislation

1.1. A brief history of European Union
1.2. Enlargement
1.3. Decision-Making Bodies
1.3.1. The European Parliament
1.3.2. The Council of the European Union
1.3.3. The EU Commission
1.4. Legislative Acts
1.4.1. Directives
1.4.2. Regulations
1.4.3. Decisions
1.4.4. National Implementing Measures
1.5. Legislative Procedure
1.5.1. Co-Decision Procedure
1.5.2. Comitology Procedure (Lamfalussy Process)

2. The Single Market for financial services

2.1. The four principles of General Freedom in the EU
2.1.1. Free Movement of People
2.1.2. Free Movement of Goods
2.1.3. Free Movement of Services
2.1.4. Free Movement of Capital
2.2. Harmonisation of Legislation
2.2.1. Minimum harmonisation
2.2.2. Maximum harmonisation
2.2.3. Harmonisation via regulations
2.3. FSAP Financial Services Action Plan
2.4. Single Market Act

3. Regulation of Capital Markets

3.1. Market in Financial Instruments Directive (MiFID II / MiFIR)
3.1.1. Guiding Principles
3.1.2. Rules of Conduct
3.2. Market Abuse Directive (MAD II / MAR)
3.2.1. Insider Transactions
3.2.2. Market Manipulation
3.2.2.1. Manipulative deals and orders
3.2.2.2. Deals and orders with accompanying manipulative actions
3.2.2.3. Manipulative information
3.3. Directive on Takeover Bids
3.4. Prospectus Directive

3.5. Transparency Directive
3.6. EMIR European Market Infrastructure Regulation
3.7. Regulation on Investment Funds (UCITS)
3.8. Alternative Investment Fund Managers Directive (AIFMD)
3.9. Regulation on Credit Rating Agencies
3.10. Investor compensation schemes
3.11. Anti Money Laundering Directive
3.12. Regulation on PRIIPS
3.13. New Investment vehicles

Chapter II: European Supervision of Capital Markets

4. European Regulatory Bodies

4.1. Old Supervisory Architecture
4.1.1. National Supervisory Authorities
4.1.2. EU Committees
4.1.2.1. Committee of Banking Supervisors (CEBS)
4.1.2.2. Committee of Insurance and Occupational Pension Supervisors (CEIOPS)
4.1.2.3. Committee of Securities Regulators (CESR)
4.1.2.4. Colleges of Supervisors
4.2. New Supervisory Architecture
4.2.1. European Systemic Risk Board (ESRB)
4.2.2. European System of Financial Supervisors
4.2.2.1. European Banking Authority (EBA)
4.2.2.2. European Insurance and Occupational Pensions Authority (EIOPA)
4.2.2.3. European Securities and Markets Authority (ESMA)
4.3. Banking Union
4.4. Capital Markets Union

Part 9: Ethics

1.	**Ethical Conduct**
1.1.	Why ethical behaviour in financial markets?
1.2.	The 'client first' principle
1.3.	Conflicts of interest
1.4.	Market Abuse (insider trading, market manipulation)
2.	**Self Regulation and Ethical Conduct**
2.1.	IOSCO
2.2.	Basel Committee for Banking Supervision
2.3.	Corporate Governance & Compliance
2.3.1.	Corporate Governance Codes
2.3.2.	Standard Compliance Codes
2.4.	**Code of Ethics for Financial Analysts**
2.4.1.	EFFAS Principles of Ethical Conduct
2.4.2.	Practical case studies on 1.2 to 1.4.
2.4.3.	ACIIA Principles of Ethical Conduct (overview)
Annex	EFFAS Principles of Ethical Conduct in full text

Part 10: ESG

1. ESG - an introduction
1.1. ESG Investment - where do we stand?
1.2. Definitions and developments
1.3. ESG strategies
1.4. Empirical evidence about ESG and financial performance
1.5. Barriers to ESG

2. Recent Developments of ESG integration
2.1. Market drivers
2.2. Regulatory Framework (Investor demands and initiatives)
2.3. ESG Reporting Frameworks for companies and investors

3. Investment Process Chain
3.1. Introduction
3.2. Macro research and asset allocation
3.3. Company analysis
3.4. Portfolio construction
3.5. Trading
3.6. Portfolio and risk analytics
3.7. Compliance and reporting
3.8. Engagement and voting

4. Responsible investing across asset classes
4.1. Introduction
4.2. Brief reflections on individual asset classes

5. ESG Integration in Valuation
5.1. Disclosure and Data Source
5.2. Identification of ESG value drivers
5.3. Analysis of governance, controversies
5.4. Analysis of Environmental and Social: sector specific
5.5. ESG integration in valuation models

Part 11: Mandatory National Components

1.	**National Regulation of Financial Services**	
1.1.	National Competent Authorities	
1.2.	Licence Regime for Financial Services Providers	
1.3.	Organisational Requirements for Financial Services Providers	
1.4.	National Implementation of EU Law on Financial Services	
2.	**Liability for Advice**	
2.1.	Contractual obligations	
2.2.	Obligations imposed by capital markets law	
2.3.	Court rulings	
2.4.	Self regulation (if applicable)	
3.	**Regulation of Financial Research**	
3.1.	National regulations of Financial Research	
	National Code of Conduct for Financial Research (if applicable)	
4.	**Micro-market Structure**	
4.1.	Structure of Capital Markets	
4.1.1.		Stock Exchange
4.1.2.		Derivatives Exchange
4.1.3.		Commodities Exchange (if applicable)
4.2.	Size of Markets	
4.2.1.		Listed Companies
		OTC Market
		Private Equity (if applicable)
4.3.	Trading Rules for Securities	
4.4.	Settlement of Securities Trades	
5.	**Taxation of Investments / Investors**	
5.1.	Taxation of private / institutional investors	
5.1.1.		Taxable Income
5.1.2.		Types of Income
5.1.3.		Investment Income
5.2.	Taxation of investments with private/institutional investors	
5.3.	Double Tax Treaties	
5.4.	Automated Information Exchange	
5.5.	FATCA	

Part 12: Recommended National Components

1.	**National accounting rules (if applicable)**
2.	**National Codes of Ethics (if applicable)**