

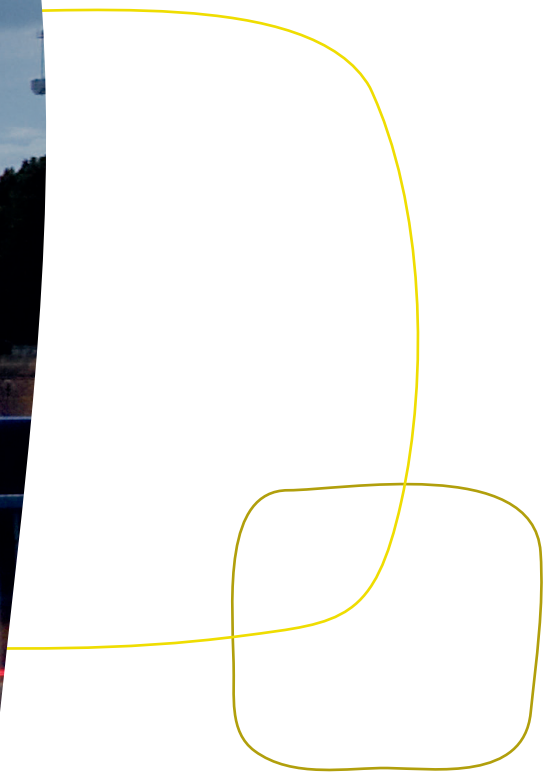
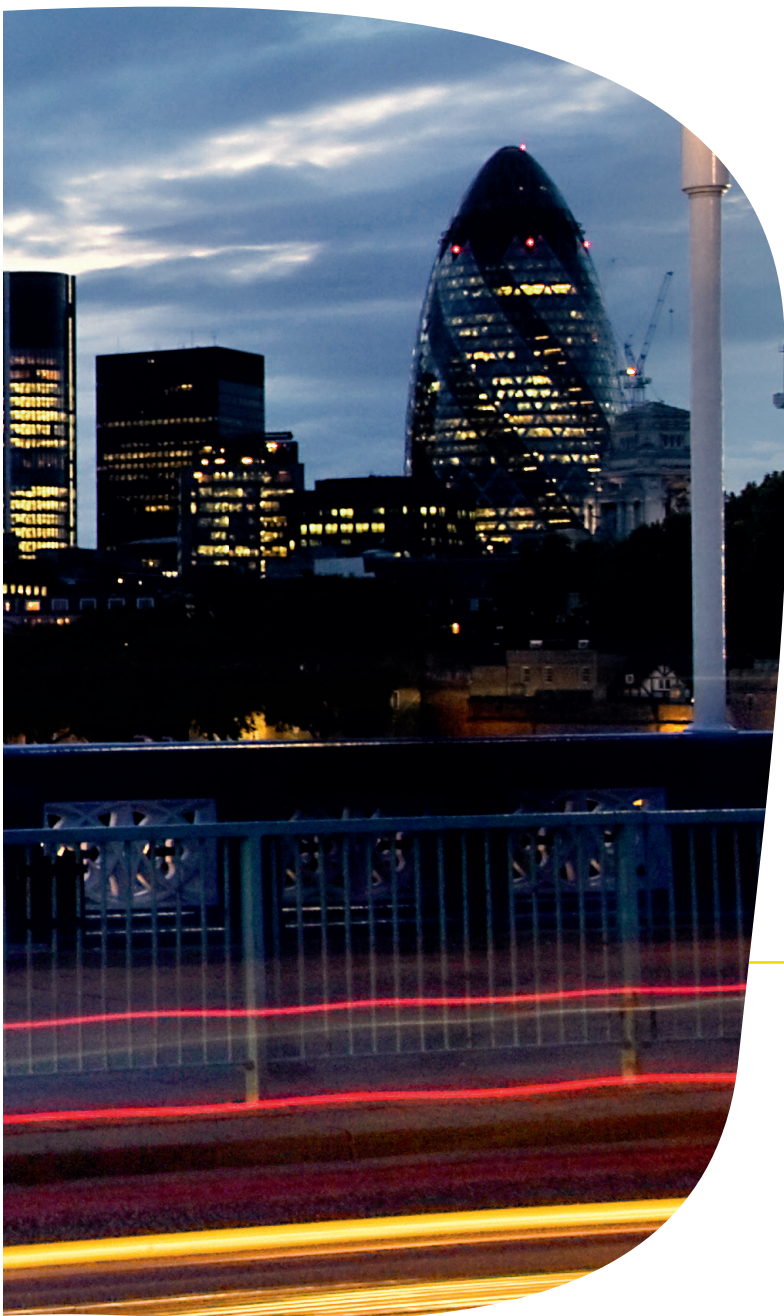


**Cass Business School**  
CITY UNIVERSITY LONDON



# Specialist Masters Programme

Course handbook  
**MSc in Finance & Investment**



**September 2012**





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## **Section 1 Course Director's Welcome**

Dear MSc Finance and Investment Students:

It is my pleasure to welcome you to Cass Business School's MSc in Finance and Investment programme.

We have designed a course that covers the core financial subjects needed for success in the financial services industries. We have built in as much flexibility as possible, giving you the possibility of tailoring the course for your own needs, not only through the electives on offer, but with some of the core modules as well.

The purpose of this handbook is to explain the programme's specific rules and regulations, both at an administrative and academic level. The handbook sets out the structure of the course, information on the individual modules, and outlines the routes on resolving course related problems. You should read all sections of this handbook carefully.

As your Course Director, I will have overall responsibility for the coordination of the teaching and administrative issues. Your Course Officer, Lenka Havlikova, will be your point of contact for day-to-day issues. Together we will ensure that your experience at Cass lives up to and, hopefully, exceeds your expectations. We know that the needs of part-time students differ from those of full-time students and we have prepared the year ahead accordingly.

On behalf of Lenka and myself, I would like to extend a very warm welcome to you.

**Dr Nick Motson**

**Course Director**

## Section 2 Programme information

### Programme aims

The programme aims to provide you with a thorough post-graduate training in the following specialist finance areas: Banking Corporate Finance, Risk Management, and Investment Management. The degree therefore aims to equip you for high level careers in investment banking, commercial banking, asset management and financial consultancies, either in the City or in almost any country in the world. The emphasis is on analytical and academic content, with sufficient practical and vocational application for you to appreciate the relevance of the course material.

The programme aims to develop:

- Your intellectual, social and practical skills
- A strong academic and vocational background
- Your ability to analyse, interpret and understand issues related to corporate finance, banking, risk management and investment management.

The programme will make it possible for you to:

- Acquire a solid theoretical background in the areas of corporate finance, commercial and investment banking, investment management and risk management
- Be able to move into specific departments in your organisation or seek senior positions in a variety of financial institutions.

## Programme structure

The programme is comprised of the following subjects, details of which are provided later. Students on the MSc in Finance and Investment enrol only on a part-time basis and therefore complete the programme over two calendar years. It is possible to complete the programme in five terms, rather than six. Details of how to do this will be provided by the Course Director.

Students study eight core modules. Five of these modules are compulsory. Students then get to choose three additional core modules for a possible choice of five, giving them the flexibility to tailor the course to suit their own learning needs and interests.

### Term 1 - Year 1

Quantitative Methods for Finance

Theory of Finance

### Term 2 – Year 1

Securities

*Choose one of the below modules:*

Behavioural Finance

Financial Statement Analysis

### Term 2 - Year 2

Financial Risk Management

Portfolio Management

### Term 2 – Year 2

*Choose two of the below modules:*

Alternative Investment

Foreign Exchange

Structured Products

### Term 3

**Option 1:** Five specialist electives and Research Project Management Skills of 10 credits each (chosen from the Specialist Masters list and to be taken in the 3<sup>rd</sup> term of either the 1<sup>st</sup> or 2<sup>nd</sup> year).

**Option 2:** Business Research Project with a credit value of 40 and a maximum of 10,000 words taken in tandem with two specialist elective of 10 credits

## Assessment Matrix

Module Title	Module Code	Credits	Assessment weightings used to calculate module	
			Coursework	Examination
<b>Year 1 - Term One</b>				
Quantitative Methods for Finance	SMM951	15	25%	75%
Theory of Finance	SMM952	15	25%	75%
<b>Year 1 - Term Two</b>				
Securities	SMM722	15	25%	75%
<i>Choose one of the below modules</i>				
Behavioural Finance	SMM273	15	25%	75%
Financial Statement Analysis	SMM115	15	25%	75%
<b>Year 2 -Term Two</b>				
Financial Risk Management	SMM124	15	25%	75%
Portfolio Management	SMM950	15	25%	75%
<b>Year 1 - Term Two</b>				
<i>Choose two of the below modules</i>				
Alternative Investment	SMM519	15	25%	75%
Structured Products	SMM962	15	25%	75%
Foreign Exchange	SMM520	15	25%	75%
<b>Term Three</b>				
<b>Option One</b>				
Research Project Management Skills	SMM522	10	100%	
Elective 1	SMMXXX	10	100%	
Elective 2	SMMXXX	10	100%	
Elective 3	SMMXXX	10	100%	
Elective 4	SMMXXX	10	100%	
Elective 5	SMMXXX	10	100%	
<b>Option Two</b>				
Business Research Project	SMM527	40	100%	
Elective 1	SMMXXX	10	100%	

Elective 2	SMMXXX	10	100%	
Degree Total		180		

### ECTS equivalencies

Each MSc course is worth between 180 - 210 CAPS credits. As a general rule two CAPS credits equal one ECTS credit. (For example, a course with 180 CAPS credits is worth 90 ECTS credits.)

\*CAPS (*Credit Accumulation of Programme Specification*)

\*ECTS (*European Credit Transfer and Accumulation System*)



## **Term Dates and Assessment Periods**

### **Induction**

17 – 28 September 2012

### **Term One**

01 October – 07 December 2012

### **Term One Examinations**

14 – 25 January 2013

### **Term Two**

28 January – 09 April 2013

### **Term Two Examinations**

29 April – 10 May 2013

### **Term Three**

13 May – 28 June 2013

### **Term Three Assessments**

01 – 12 July 2013

### **Re-sit Examinations and Assessments (terms one, two and three)**

19 – 30 August 2013

### **Business Research Project Submission Date**

02 September 2013

Students are expected to be in attendance at lectures and other classes during term time; attend all invigilated tests and examinations. Students should not make travel arrangements during term time or assessment periods. Any absence from any form of assessment, which does not constitute valid extenuating circumstances, will result in the student re-sitting the module as a second attempt.

## Section 3 Module Descriptions

### Alternative Investment

#### SMM519

**Module Leader** Dr Nick Motson and Mr Edgar Miller

**Sessions** 10 x 3 hour sessions

In addition, students will be expected to devote an equivalent amount of learning time in private and group study of course material. The preparation of the projects will involve additional time in private study and independent empirical research.

<b>Module Assessment</b>	Coursework	25%
	Examination	75%

Where assessment is by group coursework, 20% of the coursework mark may be determined by Peer Assessment.

#### Educational aims

Over the last 10 years investment has changed very significantly. Stock markets went up and came down again, interest rates dropped to a historical low, and pension fund deficits became widespread. With traditional asset classes expected to deliver lower returns in the future compared with the past, many high net worth individuals and institutional investors have turned to alternative investment classes - with hedge funds, private equity and commodities being amongst the most popular. In this course we will introduce students to these asset classes, their pros and cons, and the role they can play in a diversified investment portfolio. This module will provide students with all the insights needed to make well-informed decisions with regard to today's complex investment management environment.

#### Syllabus

##### Hedge Funds

The purpose of this module is to provide an in-depth study of the hedge fund industry structure and strategies. Students will be provided with an overview of the hedge fund industry organisation and structure as well as the reasons for this structure. They will undertake an exhaustive study of the 10 major strategies paying particular attention to the risks underlying these strategies. Students will be introduced to the key issues involved in constructing portfolios of hedge funds as well as incorporating hedge funds into a traditional portfolio. For all topics students will be provided with both the academic and practitioner perspective.

- An overview of the hedge fund industry, history, organisation, issues and current trends
- A Review of the 10 major hedge fund strategies
- Analysis of hedge fund performance, performance metrics and factor models
- Hedge fund data, availability, biases and statistical properties

## Private Equity Investment

The objective of this course is to provide a broad appreciation of private equity for investment management and finance students who are likely to take up careers in such areas as asset management, principle investment, commercial banking, or other financial services or industrial sectors where an appreciation of private equity may be important. It is not intended to prepare students to become practitioners in the private equity sector, although it will provide a good introduction for such students.

On completion of the course, students should understand:

- How private equity has evolved over time, its global structure and importance
- The distinctive characteristics of the two primary forms of private equity – Venture Capital and Buyouts – and the role they play in investments, their economics, returns, risks, skill requirements, and similarities/differences
- The key phases and disciplines of the private equity investment life-cycle, as well as the time-scale for making and realising private equity investments
- How prospective private equity deals are evaluated, modelled, valued, and structured
- How private equity fund managers do their job and interact with the entrepreneurs who manage their portfolio companies
- How private equity funds work, their economics, investment returns, and how returns are measured and benchmarked
- The distinctive characteristics of private equity as an important asset class, the role private equity plays in diversified multiple-asset-class investing, and key considerations for institutional investment in private equity funds

# Behavioural Finance

## SMM273

### Module Leader

**Sessions** 10 x 3 hour sessions

<b>Module Assessment</b>	Coursework	25%
	Examination	75%

The coursework will consist of a group presentation (on a weekly topic / article)

Where assessment is by group coursework, 20% of the coursework mark may be determined by Peer Assessment.

### Educational aims

This module will help provide you with an understanding of the financial decision making process of professional and individual investors. Understanding of these concepts is particularly important given recent problems within financial markets and understanding the psychology that drives both markets and investors is a key element in applying the more quantitative aspects of the MSc in Finance and Investment. By offering this as an optional core course, the choice between Financial Statement Analysis or Behavioural Finance achieves two key objectives. Firstly, it gives those students who already have an accounting background the opportunity to broaden their focus. Secondly, it allows students who do not feel accounting is relevant to their focus area the opportunity to study a subject that might be more relevant.

The course aims to introduce you to the key insights from research in behavioural finance, an emerging body of literature that attempts to understand the effect of cognitive bias and social psychology on financial decision making. You will be motivated to grasp these ideas by application in trading games, forecasting exercises, experiments and computer simulations designed to record the degree of bias in financial decisions and suggest techniques to combat such bias.

### Learning outcomes

On successful completion of this module, you will be expected to be able to:

- Demonstrate systematic understanding of the technical tools required to understand issues in Behavioural Finance.
- Demonstrate sound comprehensive knowledge of how market psychology influences financial markets.
- Accurately interpret financial models while demonstrating sound understanding of their behavioural foundations.

### Skills:

- Ability to derive abstract understanding of issues through simplified model building.
- Ability to undertake mathematical and numerical exercises in a way which builds both technical skill and economic intuition.
- Ability to work successfully in groups.

### Values and attitudes:

- Build awareness of your own biases in financial decision making.
- Establish confidence in understanding others biases in financial markets.
- Develop awareness of the ethical issues to be considered in financial decision making and the likely impact on financial behaviour.

### Reading List

Given the need to use contemporary research articles to develop understanding of the particular relevancy of this module up-to-date reading lists will be provided at the beginning of the term.

The following are some sample texts which will be useful:

- Forbes, W., *Behavioural Finance*, John Wiley and Sons, West Sussex, UK, 2009.
- Thaler, R.H., Sunstein, C. *Nudge: Improving decisions about health, wealth and happiness*, Yale University Press, 2008
- Shiller, R., *The Subprime Solution*, Princeton University Press, 2008.
- Shefrin, H., *A Behavioural Approach to Asset Pricing*, Elsevier Academic Press, London, UK, 2005.
- Nofsinger, J.R., *The Psychology to Investing*, Prentice Hall, New Jersey, USA, 2005.
- Shiller, R., *The New Financial order: Risk in the 21st Century*, Princeton University Press, New Jersey, USA, 2003.
- Montier, J. *Behavioural Finance: Insights into Irrational Minds and Markets*, John Wiley and Sons, West Sussex, UK, 2002.
- Shefrin, H., *Beyond Greed and Fear: Understanding Behavioural Finance and the Psychology of Investing*, McGraw Hill, London, 1999.
- Thaler, R.H., *Advances in Behavioural Finance*, Russell Sage Foundation, NY, 1993

- Thaler, R.H., *Quasi Rational Economics*, Russell Sage Foundation, NY, 1991.

# Financial Risk Management

## SMM124

**Module Leader** Professor Keith Cuthbertson

**Sessions** 10 x 3 hour sessions

<b>Module Assessment</b>	Coursework	25%
	Examination	75%

### Educational aims

The purpose of this module is to provide a solid background in the use of derivatives for risk management and methods to evaluate financial market risks (Value at Risk-VAR). Regulators and leaders in the corporate and financial communities are now converging on VAR as an acceptable method to measure and control financial risks. The practical exercises will illustrate the implementation of VAR measurement system for typical portfolios, including the RiskMetrics system. We also provide a brief overview of credit risk and credit risk models under Basel II. The assumptions and limitations behind current methodologies will also be discussed.

### Learning outcomes

Students will be able to:

- Have a comprehensive understanding of the use of derivatives in risk management for total portfolio market exposure for banks, other financial institutions and corporates.
- Understand practical issues in using derivatives in risk control and modelling related to VAR / Risk Metrics.
- Understanding, implementation and use of market risk management techniques is one of the main learning outcomes of the MSc Investment Management programme.
- Familiarise themselves with dynamic hedging using derivatives and measuring risk using portfolio VAR, VAR for fixed-income, currency, equity instruments, Monte Carlo Simulation, Historic Simulation and Bootstrapping.

### Syllabus

- Stock index and interest rate futures: pricing, hedging and risk management.
- Uses, pricing and valuation of interest rate and currency swaps and their Value at Risk.
- Derivatives on fixed income, currency and equity portfolios.
- Options: BOPM and risk-neutral pricing. Delta hedging and the Greeks.
- Exotic Options and Weather Derivatives: uses in risk management

- Forecasting Risk and Correlations
- Implementing VCV(Delta-Normal) Extreme Value Theory and Structured Monte Carlo, Historic Simulation and Bootstrapping.
- Overview of Credit risk-VAR models.

### Reading List

The recommended texts are:

Cuthbertson K and Nitzsche, D. *'Financial Engineering, Derivatives and Risk Management'*, J. Wiley.

Hull, J, *Risk Management and Financial Institutions*, 2<sup>nd</sup> ed. Pearson (2009).

Hull, J *Options, Futures and Other Derivatives* 6<sup>th</sup> ed. Pearson.



# Financial Statement Analysis

## SMM115

<b>Module Leader</b>	Stefano De Cesaris	
<b>Sessions</b>	10 x 3 hour sessions	
<b>Module Assessment</b>	Coursework	25%
	Examination	75%

Where assessment is by group coursework, 20% of the coursework mark may be determined by Peer Assessment.

### Educational aims

To provide a clear understanding of how users of financial information interpret accounting reports when making business decisions and to learn the key skills necessary to analyze financial statements, for performance and credit assessment, and for investment purposes. To familiarise students with the International Financial Reporting Standards (IFRS) accounting framework and the main differences between IFRS and US GAAP.

### Learning outcomes

Systematic understanding of:

- The mechanics and practice of accounting
- The role of accounting as an input to corporate valuation
- The role of accounting as a means of resolving (or a cause of!) agency problems between shareholders, lenders and managers.

Ability to:

- Understand the content of financial statements
- Use accounting information to assess the performance of a business
- Separate operating performance from the impact of financing choices (capital structure)
- Understand the relationship between, and the relative importance of, earnings performance vs cash flow performance
- Use accounting information for credit analysis

## **Syllabus**

### **Fundamentals of Financial Statements Analysis**

- Accounting: what it is, double-entry bookkeeping, different types of accounting
- Accounting standards (GAAP)
- Fundamental accounting principles
- Financial statements: what they are and their basic content
- Reformulating financial statements
- Financial reports: annual, interim and SEC filings

### **Income Statement: composition and analysis**

- Key elements
- Revenue: definition and recognition rules
- Expenses: presentation layouts, the matching principle, types of expenses
- Tax analysis: effective tax rate and marginal tax rate
- Profit metrics: gross profit, EBIT, EBITDA, PBT, PAT, comprehensive income
- Common size analysis
- Reformulating the income statement
- Earnings per share
- Normalizing non-recurring items

### **Balance sheet: composition and analysis**

- Assets and liabilities: definitions and recognition criteria
- Reformulating a balance sheet
- Operating working capital analysis
- Credit analysis: working capital, liquidity ratios, financial debt and net debt
- Depreciation, impairments and capital expenditure

- Understanding expense capitalisation
- Accounting for financial assets (securities)
- Deferred taxes
- Analyzing leverage
- Understanding the components of shareholders' equity
- Share counts and basic vs diluted shares

### **Cash flow statement: composition and analysis**

- Sections
- Direct vs indirect method for presenting operating cash flows
- Reconciling earnings with cash flows
- Building a cash flow statement
- Reformulating and analysing the cash flow statement
- Calculating free cash flow

### **Credit analysis**

- Understanding credit ratios
- Credit ratios and credit ratings

### **Group accounting**

- Single company accounts vs group accounts
- Consolidation methods: equity method, full consolidation, proportional consolidation
- Noncontrolling interests
- Translation of foreign subsidiaries

## Some complex issues in financial statement analysis

### Lease accounting

- Operating leases vs finance lease
- Comparability distortions and how to correct them
- Capitalising the operating leases
- EBITDAR

### Derivatives and hedge accounting

- Standard accounting for derivatives
- Fair value hedges and cash flow hedges
- Understanding the disclosure

### Analyzing returns

- Return on invested capital (ROIC) and Return on Equity (ROE)
- Decomposing returns (“DuPont analysis”)

## Reading List

- Lecture notes
- Reference textbooks: no single textbooks cover the entire course content. Specific references will be provided with the course materials. Some textbooks that cover a substantial part of the course materials are:
  - Stolowy, Lebas, Ding, *Financial Accounting and Reporting 3e*, Cengage Learning (2010)
  - Alexander, Nobes, *Financial Accounting: An International Introduction 4e*, FT Prentice Hall (2010)
  - Alexander, Britton, Jorissen, *International Financial Reporting and Analysis, 5e*, (2011), Cengage

# Foreign Exchange

## SMM520

<b>Module Leader</b>	Professor Keith Pilbeam	
<b>Sessions</b>	10 x 3 hour sessions	
<b>Module Assessment</b>	Coursework	25% (mid-term invigilated test)
	Examination	75%

This is a how-to-do module. A fair amount of reading should be done before the lectures. Class discussions and Q&A should play an important role.

### Educational aims

In a highly globalized world, foreign exchange (FX) clearly plays a crucially important role in economics and finance.

The FX market (which includes both the cash and the derivatives markets) is today the largest financial market in the world.

The educational aim of this module is to enable Cass MSc students in “Investment Management” and in “Finance and Investments” to deal effectively with the FX problems they will come across in their professional lives. It will also lead to a better understanding of the economics behind currency movements and the limitations of forecasting.

### Learning outcomes

In this module we shall cover a number of topics designed to give a solid operational understanding of FX, from the point of view of:

- Investments denominated in foreign currency (international portfolio diversification and currency hedging)
- Analyzing the implications of fx exposure and risk for companies
- Capital markets and corporate finance activity (Msc in investment management and finance and investments are often employed in banks and other financial institutions)
- Investments in foreign currency as an asset class

### Syllabus

- Statistics on the forex market
- FX quotations, cross rates, exchange rate indices, trade weighted exchange rates
- Covered Interest Rate Parity – arbitrage, speculation and hedging using forward market
- Foreign exchange intervention both sterilized and non-sterilized

- Purchasing Power Parity and Uncovered Interest Rate Parity
- FX derivatives (futures, currency swaps, options)
- The macroeconomic modelling of exchange rates, the monetary and portfolio balance models and the risk premium
- Forecasting FX rates can we beat a random walk?

### **Reading List**

Keith Pilbeam (2013), *International Finance 4<sup>th</sup> edition*, Palgrave Macmillan.

# Portfolio Management

## SMM950

<b>Module Leader</b>	Cesario Mateus	
<b>Sessions</b>	10 x 3 hour sessions	
<b>Module Assessment</b>	Coursework	25%
	Examination	75%

Where assessment is by group coursework, 20% of the coursework mark may be determined by Peer Assessment.

### Educational aims

The main objective of this course is to give students a thorough understanding of practical application of modern portfolio theory. The course provides the students with coherent framework for thinking about a range of practical, topical asset management and risk management issues.

### Learning outcomes

On completing the course the students will:

- Be able to apply their theoretical learning in practical contexts
- Understand some of the main issues and themes currently facing the asset
- Management industry; and
- Be able to formulate investment strategies of their own.

### Syllabus

- Performance evaluation
- Investment styles and strategies
- Asset allocation: strategic and tactical
- Liability driven investment

### Reading List

The primary reading materials are the lecture notes which contain detailed sources of information. However, the following book covers most of the course and is therefore a good reference source:

Clare, A. and Wagstaff, C, *The Trustee Guide to Investment*, Palgrave MacMillan, 2011.

The following books are also be useful reference sources:

Fabozzi, F.J et al., '*Handbook of Equity Style Management*', Frank J. Fabozzi Associates.

Arnott, R.D. and Fabozzi, F.J., '*Active Asset Allocation*', Probus Publishing.

Klein R.A. and J. Lederman, '*Equity Style Management: Evaluating and Selecting Investment Styles*', Irwin Professional Publishing.

Fabozzi F. J. and Fabozzi T. D, '*Current Topics in Investment Management*', Harper & Row.



# Quantitative Methods for Finance

## SMM951

<b>Module Leader</b>	Dr Elena Kalotychou and Professor Richard Payne	
<b>Sessions</b>	10 x 3 hour sessions	
<b>Module Assessment</b>	Coursework	25%
	Examination	75%

Where assessment is by group coursework, 20% of the coursework mark may be determined by Peer Assessment.

### Educational aims

The module will provide a review of the classical linear regression model and a discussion of how econometric models can be validly estimated. Both univariate time-series and multivariate structural models will be considered. Via case studies and computer modelling exercises, students then learn how to apply these techniques to real data. Emphasis is placed on applications of methods, and the teaching involves an examination of some empirical studies using models for the equity and fixed income markets

### Learning outcomes

By the end of the module, it is expected that the student will be able to:

- Comprehensively understand how econometrics can be applied to real-world problems
- Explain the fundamentals of the statistical theory underlying financial models
- Formulate econometric models for testing financial theories and hypotheses
- Interpret and analyse the results from an estimated econometric model
- Comprehend and critically evaluate the use of econometrics in the published academic finance literature
- Appreciate the range of more advanced techniques that exist and have the foundations for further study of econometrics
- Introduce the principles and tools of financial risk measurement

### Syllabus

- Introduction to Econometrics and Simple Linear Regression
- The Multiple Regression Model: Estimation, Joint Hypotheses, Goodness of Fit
- Misspecification: Multicollinearity, Functional Form, Normality, Seasonality

- Heteroskedasticity and Autocorrelation
- Eviews Lab
- Stationarity; ARMA models
- Cointegration
- Eviews Lab
- Volatility Models
- Eviews Lab

Note: The above syllabus is subject to change depending on the prevailing conditions

### Reading List

Pre course reading

- Cass MSc Induction Programme 2011, *Statistics and Financial Mathematics*

Core reading

- Brooks, C., *Introductory Econometrics for Finance*, Cambridge University Press

Additional reading list

- Gujarati, D., *Basic Econometrics*, McGraw-Hill
- Ramanathan, R., *Introductory Econometrics with Applications*, Southwest
- Wooldridge, J. M., *Introductory Econometrics*, Thomson
- Hill, R., W. Griffiths and G. Judge, *Undergraduate Econometrics*, Wiley & Sons
- Enders, T., *Applied Econometric Time Series*, Wiley & Sons

## Securities

### SMM722

<b>Module Leader</b>	Dr Sotiris Staikouras and Reader in Finance Enrique Schroth	
<b>Sessions</b>	10 x 3 hour sessions	
<b>Module Assessment</b>	Coursework	25%
	Examination	75%

Where assessment is by group coursework, 20% of the coursework mark may be determined by Peer Assessment.

#### Educational aims

The aim of the course is to develop an understanding of the cash securities which will enable students to understand how portfolio managers, corporate treasurers, investment bankers, financial analysts and traders use such securities in their various roles.

#### Learning outcomes

A student should be able to understand the:

- Interaction between the macro-economy and cash securities
- Interaction between fixed income securities and equities nature of different fixed income securities
- Risk characteristics of plain vanilla and more complex fixed income securities
- Construction of a yield curve and also the messages that that curve might convey about investor' expectations
- Operational, strategic and valuation aspects of modern equity markets methods used to analyse complex equity market investment decisions
- Importance of the dcm methods of valuing equities.

#### Syllabus

- The macroeconomic environment and cash instruments
- Bond returns and bond price volatility
- Term structure of interest rates
- Interest rate derivatives and swaps
- Credit derivatives

- Market based valuation and equity price multiples
- DCF valuation models
- Contingent claim equity valuation

### Reading List

Stowe J.D. – T.R.Robinson – J.E.Pinto – D.W.McLeavey “*Equity Asset Valuation*” CFA Institute, Wiley.

Damodaran A. “*Investment valuation*” Wiley.

# Structured Products

## SMM962

<b>Module Leader</b>	Dr Nick Motson	
<b>Sessions</b>	10 x 3 hour sessions	
<b>Module Assessment</b>	Coursework	25%
	Examination	75%

The coursework will be assigned in week five and will be undertaken in groups. The exam will last two hours and consist of six essay questions from which students will have to answer four.

Where assessment is by group coursework, 20% of the coursework mark may be determined by Peer Assessment.

### Educational aims

The aim of the course is to develop students' understanding of structured products from the point of view of both issuers and investors. A strong emphasis will be placed on understanding the factors that drive the prices of forwards, options and swaps in both vanilla and exotic forms which will then be used to reverse engineer structured products. By the end of the course students should understand how existing products are structured, how they will perform in the secondary market and be capable of structuring their own products.

### Learning outcomes

At the end of the course students will be able to:

- Understand the pricing models for derivative securities
- Apply derivatives to the development of structured products
- Understand the factors that influence the primary and secondary markets for structured products.

### Syllabus

- Introduction to Derivatives, Pricing Forwards and Futures
- Introduction to Options, Binomial Model, Black Scholes Model and Option Strategies
- Advanced Options and Exotic Options
- An Introduction to Equity Structured Products
- Advanced Equity Structure Products
- Commodity Derivatives and Commodity Structured Products

- Interest Rate Derivatives and Structured Products
- Foreign Exchange Derivatives and Structured Products
- Structured Products on Funds (traditional and hedge fund)

### Reading List

The module makes extensive use of industry articles and term sheets that will be provided at each lecture and posted on Moodle.

The following texts will also be used:

John C. Hull. *“Options, Futures, and Other Derivatives”* Prentice Hall

Andreas Blumke. *“How to Invest in Structured Products: A Guide for Investors and Asset Managers”* Wiley

# Theory of Finance

## SMM952

**Module Leader** Dr Dirk Nitzsche  
Reader in Finance Giovanni Cespa

**Sessions** 10 x 3 hour sessions

**Module Assessment** Coursework 25% (mid-term invigilated test)  
Examination 75%

In addition, participants are expected to devote two-to-three times the amount of contact time in learning either privately or in groups

Where assessment is by group coursework, 20% of the coursework mark may be determined by Peer Assessment.

### Educational aims

The aim of this course is to develop an understanding of modern finance so that the corporate manager, the investment banker and the financial analyst will have the conceptual foundations for making informed assessments of key financial decisions. The course will make it possible for participants to:

- Introduce students to the principles and tools of financial theory as used in asset pricing.
- To acquire a clear understanding of portfolio risk and return characteristics, use of diversification for risk reduction, determination of efficient and optimal portfolios with and without short-selling restriction, evaluation of portfolio performance and role of asset pricing models for pricing securities.
- Familiarise students with the use of these tools, both through the lectures and through empirical examples.
- Examine recent developments in the theory and practice of portfolio management
- Appreciate the implications of modern finance theory on practical corporate finance issues.
- Develop analytical skills to evaluate complex corporate finance decisions.
- Understand the perspectives of corporate managers, shareholders, financiers and the financial intermediaries of key financial decisions.
- Familiarise with contemporary corporate finance practice and market trends evolving in different countries.

## Learning outcomes

On completing the course the students will:

- Have a comprehensive understanding of asset pricing theory
- Have a comprehensive understanding of analysing risk and return characteristics of individual financial assets and their application in portfolio construction and investment management process
- Be able to address and solve real asset pricing problems
- Be able to contribute to the implementation and use of quantitative and theoretical tools in a financial organisation
- Know the key considerations affecting corporate finance decisions
- Understand the context and structure of corporate finance transactions
- Compete for management positions in corporate and financial institutions
- Develop and execute complex corporate finance deals.

## Syllabus

The aim and the learning outcomes will be addressed in the lectures. The lectures will embody activities such as participative discussions and problem solving. The following topics will be covered in the lectures:

- Introduction to portfolio theory and asset management
- Concept of diversification, portfolios of risky assets and choice of optimal portfolio
- Portfolios of risky and riskless assets and choice of optimal portfolio
- Capital Asset Pricing Model
- Fundamentals of Capital Budgeting
- Cost of Capital
- Capital Structure Decision: Fundamental Principles
- Dividend Policy
- Mergers and Acquisitions



## Reading List

Cuthbertson K and Nitzsche, D. (2008) *Investments*, 2<sup>nd</sup> Edition, J. Wiley

Brealey, R., S. Myers and F. Allen, 2006, *Corporate Finance*, McGraw-Hill, (8th edition).  
ISBN 0-07-111551-X

Research papers and financial press.

## Supplementary reading

Damodaran, A., 2006, *Applied Corporate Finance: A user's manual*, 2nd edition, John Wiley

Cuthbertson, K. and Nitzsche, D., 2001, *Investments: Spot and Derivatives Markets*, J. Wiley  
Elton, E., M. Gruber, S. Brown, and W. Goetzmann, 2003, (EGBG) *Modern portfolio theory and investment analysis*, 6th edition, John Wiley

Elton, E., M. Gruber, (EG) *Modern portfolio theory and investment analysis*, latest edition,  
John Wiley

# Business Research Project

## SMM527

<b>Module Leader</b>	A project supervisor will be allocated
<b>Sessions</b>	This is an individual project which students will develop in their own time with support from their project supervisor.
<b>Module Assessment</b>	Coursework 100%
	Delivery of the final project, indicative length: 10,000 words

### Educational aims

- To train students to undertake individual research and provide them with an opportunity to specialise in a contemporary business or finance topic related to their future career aspirations
- To integrate and apply concepts from different aspects of their MSc.

### Learning outcomes

On completing the project students will be able to:

- Identify specific business or finance related issues which would be useful to research and shape an achievable research question around them.
- Develop a research question and plan and carry out a research programme to address the question.
- Understand the theories and recent research relating the project topic.
- Understand how to apply research methodologies to practical business and commercial issues.
- Show confidence in overcoming problems raised in the course of a practical research project and
- Accept the challenge of carrying out a piece of research with elements of originality.

### Project requirements

The choice of project is **your** responsibility. It is most important that you choose an area you are happy to work in, and in which you are confident of your abilities.

Students are encouraged to start thinking about project ideas at the beginning of their studies. By the end of the first term you will have gained sufficient knowledge to start to develop ideas that can be discussed with faculty. We expect you to identify the basic idea or research question, though this is likely to be modified after discussion with academic staff.

The types of project allowed are:

What you can do.	What you can't do
<ul style="list-style-type: none"> <li>• Business report on a contemporary issue</li> <li>• Business plan</li> <li>• Statistical test of literature driven hypothesis</li> <li>• Empirical feasibility of a financial strategy</li> <li>• Development of a new product/ service / finance strategy</li> <li>• Market survey</li> <li>• Case study on a specific issue within a particular company / organisation</li> <li>• Numerical project that describes and implements one or more numerical methods for pricing, hedging or reserving for derivatives or portfolios.</li> </ul>	<ul style="list-style-type: none"> <li>• Pure literature surveys</li> <li>• Some evidence that the writer has learnt a new subject, a sort of extra elective</li> <li>• A synthesis of other writing or a piece of journalism</li> <li>• A mere compendium of facts and statistics</li> <li>• Projects totally unrelated to relevant academic discipline and literature.</li> </ul>

### Reading list

Student research and reading list will be defined by the subject matter of the project.

## Elective Information

Cass Business School provides an extensive range of elective modules for the different MSc programmes. A special elective handbook, regarding your term three selection of modules, will be distributed in the second term and will provide further information.

Electives which have previously been pre-selected and offered to MSc Finance and Investment students include:

- Monetary Policy in the Global Context (Singapore based)
- Advanced Corporate Finance (Dubai based)
- Credit Risk Management
- Fixed Income Securities and Derivatives
- Mergers and Acquisitions
- Trading and Hedging in the Forex Market

Please note the School reserves the right to withdraw an elective if demand is insufficient and to add new electives if they are available. Space restrictions and timetable availability may also apply.

## Section 4 Regulations

Described below are the rules governing the award of a master degree in Finance and Investment. For further information, the City University's complete set of "Ordinances and Regulations", including the Assessment Regulations (Regulation 19), are published on the University's website <http://www.city.ac.uk/about/education/academic-services/senate-regulations>

### Periods of Registration

The periods allowed for completion of the qualifications are:

- Four years for a masters degree, full or part time
- Two years for a postgraduate diploma, full or part time

### Degree Requirements

To qualify for a Masters degree a candidate must achieve at least 50% as an aggregate mark for each module and an overall degree average mark of 50%. This will result in the acquisition of 180 credits, which is the number required to achieve a master's degree in Finance and Investment.

### Assessment Calculations

The rules governing calculation of module and overall degree marks are as follows;

- To receive credits for a MSc all modules must be passed
- There are no minimum mark requirements for separate assessment components (unless specifically stated). However, it is compulsory to complete all components and no module mark can be awarded until these are completed.
- A module mark is calculated by aggregating marks for all assessment components as stated in the module outline (section three).
- Where modules are assessed by both exam and coursework, these are weighted to calculate the module mark. Please see the assessment matrix in section two for the relative weightings.
- Where there are several pieces of coursework, the coursework results are calculated according to the relevant weightings.
- To calculate the overall degree mark, module marks are combined using weightings in line with the relative credit value of each module.

## Coursework

All coursework and invigilated tests are compulsory and count towards the final degree. In some modules presentations or invigilated tests may replace written coursework assignments.

Some subjects may be assessed by coursework only. Precise details concerning examined and non examined modules are provided in the module outlines.

Please note coursework is required to be submitted for assessment by the specified deadline date. Late coursework will receive imposed penalties. Late coursework will immediately receive a deduction of five marks on the first day of lateness, with one further mark deducted for each day of lateness, for a maximum of five days. After this point coursework will not be accepted and a mark of zero will be awarded.

All coursework should be submitted electronically via the virtual learning environment, Moodle. **It is essential that you keep a copy of all coursework submitted.**

All sources used should be cited using the Harvard referencing system. Further information about this can be found on the Cass website:

<http://www.cass.city.ac.uk/intranet/student/learning-resource-centre/citing-references>

Coursework will be returned to students as quickly as possible with the aim of students receiving feedback within three to four weeks of their submission

## Peer Assessment

In many careers working as part of a team is an integral part of the role. Learning the skills to support successful team working and build successful interpersonal relationships is an important element of your MSc course. To help you do this Cass has developed a peer review strategy which is part of the assessment for some of the modules on your degree.

The process works as follows:

- At the end of each of the applicable modules you will receive a link to the peer review database, which will allow you to complete the assessment.
- You can access the database from anywhere there is Internet access, but you will **only** be able to access it for a defined period of time (usually around one - two weeks) following submission of your coursework, after which the database will be closed and you will not be able to access it.
- You should think carefully about the grades you give and the comments you make – ensure they are truthful and constructive as they will be reviewed by lecturers.

Please refer to the individual module outlines for clarification of which modules this applies to. Further information about how to do peer assessment, and how it might affect your grades, is available via Moodle.

**Please note:** Where peer assessment is used you **must** complete it in order to access the full range of marks for the module. If you do not complete the peer review element of your assessment by the given deadline you will receive a **zero grade** for it which will impact on the final result you receive for the module.

## Failure and the Re-sitting of Modules

- Any module with an aggregate mark of less than 50% is deemed to have been failed and will have to be re-sat.
- To re-sit a failed module, a candidate must re-do all assessment components which gained marks of less than 50%.
- Candidates may re-sit a module only once.
- A candidate who successfully completes a re-sit will be awarded the credits for the module. The mark awarded for the components will be capped at 50%. The mark awarded for other components will be the original mark. This mark will also be used in calculating the overall degree mark
- A candidate who does not pass his or her re-sit by the date specified by the Assessment Board will not progress on the programme and the Assessment Board will normally make a recommendation that they withdraw.

## Award of Distinction

To calculate the overall degree mark all module marks are combined using the weighting in the assessment matrix table. The award of distinction for the masters is based on:

- An overall degree mark of at least 70% with no modules failed at first attempt.

## Award of Merit

To calculate the overall degree mark all module marks are combined using the weighting in the assessment matrix table. The award of merit for the masters is based on:

- An overall degree mark between 65% - 69.9% inclusive and no modules failed at first attempt
- Or an overall degree mark of 70% or more and one module failed at first attempt

## Postgraduate Diploma

A student who has not accumulated enough credits to be awarded a masters degree may be awarded a postgraduate diploma provided they have satisfied the following conditions:

- The total number of credits gained is equal to or greater than the minimum credits stipulated in the programme specification for the award of a diploma

For the award of a diploma a student may compensate a maximum of twenty core or core elective credits provided the following conditions are met:

- The mark achieved for the module(s) to be compensated is at least 40%

- The average mark of all modules to be counted towards the diploma, including those modules to be compensated, is at least 50%

Note that:

- The diploma average will be calculated in the same way as the masters average as specified in the programme specification.
- The award of distinction and merit will also be calculated in the same way for the masters degree, as specified in the programme specification



## Grade Related Criteria

Class	%	Literary		Knowledge	Independent thought, uses of sources and research materials	Presentation	Professional
<b>Distinction</b>	85-100	A	Outstanding	Comprehensive and informative knowledge of subject area, may include - new knowledge derived from which the marker and wider community may learn; addresses the learning outcomes/ assessment criteria in full	Where relevant, evidence of independent reading, thinking and analysis and strong critical ability	Well-constructed	<b>Distinction</b>
	80-84		Excellent				
	75-79		Very good	Sophisticated or strong - shows knowledge of complex issues or a broad range of issues and addresses the learning outcomes/assessment criteria well.	Where relevant, show evidence of wide and comprehensive reading and critical ability	Clearly written	
	70-74						
<b>Merit</b>	65-69	B	Good	Sound knowledge of a broad range of issues or detailed knowledge of a smaller number of issues; makes a good attempt to address the learning outcomes/assessment criteria, realising all to some extent and some well	Evidence of thorough research of the topic(s) but some answers may not be complete or arguments sufficiently explored. Some critical ability will be evident.	Well-structured and logically written	<b>Merit</b>
<b>Pass</b>	50-64	C	Satisfactory	Adequate knowledge of important issues – some level of response to all learning outcomes/assessment criteria but may not include important elements or information that is fully accurate.	Where relevant, development of ideas is limited but attempts will be made to analyse materials critically	Expression and structure may lack clarity	<b>Pass</b>
<b>Fail</b> (0%-49%)	41-49	D	Poor	Unsatisfactory work - inadequate knowledge of the important issues and doesn't succeed in grasping key issues, therefore learning outcomes/ assessment criteria will not be realised	No real development of ideas and critical analysis will be very limited.	Presentation is confused or incoherent	<b>Fail</b> (0%-49%)
	20-40	E	Very poor	Knowledge is lacking either through omission, the inclusion of large amounts of irrelevant information or evidence of significant misunderstanding - totally inadequate attempt to address the learning outcomes/ assessment criteria	No critical ability will be displayed	Confused, incoherent or unstructured presentation	

## Section 5 Additional Information

## MSc Course Office

The MSc Course Office is here to support both staff and students and each MSc course has its own dedicated Course Officer who you will get to know over the course of your time here at Cass. The Course Office team will provide you with course related information, material and your grades, advice relating to other areas of City University and support throughout the duration of your studies.

### Location

The Course Office is located on the 3<sup>rd</sup> floor of Cass Business School, 106 Bunhill Row, London EC1Y 8TZ

### Contact

You can contact the Course Office team either in person at the office, by email, telephone or via Moodle, our virtual learning environment.

The MSc Finance and Investment Course Officer is **Lenka Havlikova** and can be contacted directly via telephone 020 7040 5294 or by email [lenka.havlikova.1@city.ac.uk](mailto:lenka.havlikova.1@city.ac.uk)

### Office Opening Hours

During term time the Course Office is open to students:

Monday	1300 – 1830
Tuesday	1300 – 2000
Wednesday	1300 – 1830
Thursday	1300 – 2000
Friday	1030 – 1530

Outside of term time the Course Office is open to students:

Monday to Thursday	1300 – 1700
Friday	1030 – 1530

### Moodle: Your Virtual Learning Environment

Moodle is the virtual learning environment used at City University and it provides a wide variety of information and interactive environments to students, including the following:

- Module material and supplementary learning documents, including areas for the submission of coursework and the release of coursework results
- Timetables, including teaching and examination
- Specialist Masters, MSc specific and module pages providing information relating to each area with supporting documents and forums
- Links to the Learning Resource Centre, Careers, Student Advice and Clubs and Societies

Students are responsible for checking their Moodle pages and their City email account regularly. This is how all information, including changes to teaching, is communicated. Course Officers manage the communications sent to students via Moodle and all administrative enquiries should be directed to them for assistance.

## **Personal Tutors**

Postgraduate Taught students are assigned a personal tutor at the beginning of the year. This personal tutor will be available to provide general academic, professional and pastoral support and will also ensure students are aware of the additional and more specialised support mechanisms available within the University.

Students should have the opportunity to see their personal tutor at least once a term; however it is the student's responsibility to contact their personal tutor to make an appointment.

The Course Office team is also here to assist should you need any support during the course of your studies.

## **Academic Staff Contact Details**

In addition to their main teaching responsibilities academics also engage in research, administration and external work. As a result staff members may not be able to see you without an appointment.

If the matter is non-urgent please make an appointment or make use of the office hours many academics hold. If the matter is urgent please make this clear when contacting the member of staff to request an appointment.

Lecturers' contact details and office hours can be found on Moodle.

## Programme Disclaimer

The information in this Specialist Masters Programme Handbook is correct at the time of going to press in August 2012. The University reserves the right to make amendments to:

- a) the contents of the Programme Handbook and in particular to the timetable, location and methods of delivery or the content, syllabus and assessment of any of its programmes as set out in the programme and module specifications in this Handbook and/or on the University's website; and
- b) its statutes, ordinances, regulations, policies, procedures and fee structures,

provided that such amendments are (i) as a result of student demand (or lack thereof), (ii) as a result of unforeseen events or circumstances beyond the University's control or (iii) are deemed reasonably necessary by the University.

In the event that amendments are made, the University shall take reasonable steps to notify you as soon as is reasonably possible.







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[www.cass.city.ac.uk/masters](http://www.cass.city.ac.uk/masters)



#### **Cass Business School**

In 2002, City University's Business School was renamed Sir John Cass Business School following a generous donation towards the development of its new building in Bunhill Row. The School's name is usually abbreviated to Cass Business School.

#### **Sir John Cass's Foundation**

Sir John Cass's Foundation has supported education in London since the 18th century and takes its name from its founder, Sir John Cass, who established a school in Aldgate in 1710. Born in the City of London in 1661, Sir John served as an MP for the City and was knighted in 1713.

