



Financial Risk Management

MFQ-3-301

**Business, Computing
and Information
Management**

2006-07

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1.0. UNIT DETAILS

Unit Title:	Financial Risk Management
Unit Level:	Three
Unit Reference Number:	MFQ-3-302
Credit Value:	15 CATS Points
Student Study Hours:	150
Contact Hours:	36
Private Study Hours:	114
Course(s):	BA (Honours) Business Administration BA (Honours) Business Studies
Year and Semester	Semester Two 2005-06
Unit Coordinator:	Tony Kilmister
Unit Coordinator Contact Details:	Room: 340A Telephone: 020-7815-7850 Email: kilmisja@lsbu.ac.uk
Subject Area:	Finance
Summary of Assessment Method:	One assignment One, unseen, three-hour examination Weightings: 25 per cent assignment 75 per cent examination Pass mark: 30 per cent for a single element 70 per cent for the unit

2.0 SHORT DESCRIPTION

The unit is aimed at level three undergraduate students who have some familiarity with corporate financial theory. It focuses on how financial derivatives can be used by companies to manage exposure to such various types of price uncertainty. The key issues posed are: the extent to which financial risk can be 'hedged'; the centrality of 'certainty' in the relationship between derivative prices and underlying asset prices; the factors influencing the choice of risk management strategy

3.0 AIMS OF THE UNIT

- To specify the types of economic uncertainty that can be controlled through the use of derivative securities.
- To demonstrate the importance of certainty in the relationship between derivative prices and underlying security prices for the management of financial risk.
- To provide students with an appreciation of the range of risk management tools available.
- To familiarise students with the key innovations in the theoretical understanding of the relationship between derivatives and the underlying assets.

- To encourage students to think critically about the scope and potential of financial risk management.

4.0 LEARNING OUTCOMES

- Be able to identify and appreciate the significance of the risks associated with financial decisions taken under different circumstances.
- Be able to articulate an understanding of the key theoretical models and mathematical procedures used in the valuation of financial assets and derivative securities.
- Be able to evaluate the validity of theoretical statements used to explain the relationships between financial assets and their derivatives.
- Be able to demonstrate the risk management potential of derivatives through worked examples.

4.1. KNOWLEDGE AND UNDERSTANDING

Students will acquire insights into the types of risks that are susceptible to being hedged through the use of financial derivatives. They will be able to articulate an understanding of how financial derivatives work by reference to appropriate theoretical models.

4.2. INTELLECTUAL SKILLS

The unit emphasises the conditional status of the conclusions drawn from theoretical models that have been developed in an effort to codify the operations of financial markets. Students are encouraged to appreciate that theoretical propositions do not necessarily constitute definitive proofs and that it is important to reappraise the validity of such propositions in the light of empirical results. The prominent points of interest in this context are, the pervasive influence of neo-classical/rational expectations theory concerning economic behaviour, the concept of market efficiency and the instrumentalist attitude to testing the validity theoretical propositions.

4.3. PRACTICAL SKILLS

Students are expected to be able to address problems using the mathematics of discounted cash flows, mean-variance analysis and regression. The unit provides students with the opportunity to develop these skills in an applied context, especially in relation to determining the quantitative relationships between securities and their derivatives, and assessing the effectiveness of particular hedge strategies.

4.4. TRANSFERABLE SKILLS

The unit encourages students to develop knowledge of, and utilise, information sources available via the internet, including web sites dedicated to providing financial data and reports, and academic databases providing more rigorous analyses. In addition, students will be expected to use spreadsheets, and other relevant software, to manipulate and analyse financial data. For students pursuing the finance pathway these are essential skills for undertaking the dissertation.

5.0 ASSESSMENT OF THE UNIT

The unit requires that students undertake a single assignment, accounting for 25 per cent of the final mark. It will be made available via Blackboard in week six of the unit.

A detailed outline of the assessment criteria will be provided with the assignment. These criteria will be in the form of an indicative set of guidelines concerning the technical and analytical requirements that students need to consider when undertaking the assignment. In addition, the guidelines will indicate the weighting given to each component of the question.

The unit also requires that students take a single three-hour examination.

The submission date for the assignment is Friday..... It should be submitted to the faculty office together with a completed submission sheet securely attached. **Assignments cannot be accepted directly by the unit convenor or seminar tutors.**

Students are reminded that there are penalties for late submission of the assignment, details of which can be found in the Course Guide. Requests for extensions should be directed to the course director and will only be granted on provision of evidence supporting mitigating circumstances. The maximum permitted extension is two weeks. Students should also refer to the University guidelines regarding academic misconduct, which detail the penalties associated with plagiarism and other assessment misdemeanours

6.0. FEEDBACK

Feedback will normally be given to students 15 working days after the submission of an assignment.

7.0 INTRODUCTION TO STUDYING THE UNIT

7.1. OVERVIEW OF THE MAIN CONTENT

The unit examines the role of derivative instruments (such as forward contracts, futures, options and swaps) in management of financial risk. The key aspects of the examination are:

- The specification the nature and significance of different financial risk exposures.
- An investigation of the relationships between underlying asset prices and the prices of derivative instruments.
- An appraisal of the potential benefits, limitations and dangers associated with using derivatives for risk management.

7.2. OVERVIEW OF TYPES OF CLASSES

Each week consists of a one-hour lecture slot and a two-hour seminar. The lecture consists of a formal presentation of the key practical and theoretical aspects of the topic. Detailed lecture notes are provided for each lecture via Blackboard.

The seminar programme will operate one week in arrears of the lectures. This provides students with the opportunity to prepare for seminars through working on questions accompanying the lecture.

7.3. IMPORTANCE OF STUDENT SELF-MANAGED STUDY TIME

Students are expected to have prepared for the seminars by working through questions provided with the lecture. This gives students the opportunity to review the lecture notes provided, establish the key issues and practice problem solving.

It is important that students endeavour to work in a conscientious and systematic manner as successive topics generally assume some appreciation of the earlier material. There is a large amount to cover during the formal teaching programme, and hence opportunities to review issues from earlier in the course are very limited.

7.4 EMPLOYABILITY

Successful completion of this unit will provide students with a knowledge base relevant to the pursuit of professional employment in the arenas of corporate financial decision-making and financial risk management. This embraces responsibilities such as the appraisal and management of investment projects, raising investment finance, the management of investor relations, the appraisal of financial risk and the application of risk management tools.

8.0 THE PROGRAMME OF TECHING, LEARNING AND ASSESSMENT

Week 1 The Concept of Financial Risk

Scheduled class activities:	Lecture
Lecture content:	Distinguishing financial risk from other forms of risk, the objectives of risk management and the strategic options.
Self managed learning:	RL McDonald, Ch 4, RM Stulz, Ch1, 2 & 3 Lecture notes and set questions.

Week 2 Introduction to Share Options

Scheduled class activities:	Lecture Seminar on week 1 questions.
Lecture content:	Outline of technical characteristics of options, put-call parity, Black-Scholes solution to valuing option

contracts, option value based on probability distribution of returns profile versus shares.
Self-managed learning: McDonald Chs 9 & 12, Stulz 12.
Financial Times traded options data.
Lecture notes and set questions.

Week 3 The Principles of Risk Management Using Options

Scheduled class activities: Lecture
Seminar on week 2 questions.
Lecture content: The significance of delta for hedging, dynamic hedging, share portfolios, gamma, theta, kappa, etc.
Self-managed learning: McDonald, Ch 13, TJ Watsham, pp. 575-580..
Lecture notes and set questions.

Week 4 Bonds and Duration

Scheduled class activities: Lecture
Seminar on week 3 questions.
Lecture content: The calculation of duration, McCauley and modified duration and the role of duration in estimating price volatility.
Self-managed learning: TJ Watsham, pp. 557-569, Stulz, Ch 9.
Lecture notes and set questions.

Week 5 The Role of Duration in the Management of Reinvestment Risk

Scheduled class activities: Lecture
Seminar on week 4 questions.
Lecture content: Liability funding and how duration can be used to hedge such funding strategies against reinvestment risk.
Self managed learning: D Blake, pp 521-528, RA Haugen, Ch 15.
Lecture notes and set questions.

Week 6 Spot Rates, Forward Rates and Currency Risk

Scheduled class activities: Lecture
Seminar on week 5 questions.
Lecture content: Price volatility, the arbitrage relation between spot and forward exchange rates, cost of carry, expectations and the difference between forward and futures prices.
Self-managed learning: TJ Watsham, Ch 3 and Stulz, Ch 5.
Financial Times interest rate and currency data
Lecture notes and set questions.

Week 7 Managing Currency Risk with Forward Exchange and Futures

Scheduled class activities:	Lecture Seminar on week 6 questions. Lecture content: Currency derivatives as means of hedging exchange rate risk, DIY hedge (arbitrage), the choice between forwards and futures, key theories explaining the determination of futures prices, reasons for differences between forward and futures prices.
Self-managed learning:	TJ Watsham, Ch 9. Stulz Ch 6 Lecture notes and set questions.

Week 8 Money Markets and Short-term Interest Rates

Scheduled class activities:	Lecture Seminar on week 7 questions. Lecture content: Forward-forward rates, quoting conventions, exchange traded and over-the-counter products, spot and forward rates.
Self-managed learning:	JC Hull, Ch 4. Lecture notes set questions. Financial Times money market data

Week 9 The Management of Short-Term Interest Rate Risk

Scheduled class activities:	Lecture Seminar on week 8 questions. Lecture content: Characteristics of forward rate agreements (FRAs) and interest rate futures, differences between FRAs and futures, demonstration of hedging, appraisal of the cost of carry and expectations theories of futures prices.
Self-managed learning:	TJ Watsham, Ch 11. Lecture notes set questions.

Week 10 The Swap Markets

Scheduled class activities:	Lecture. Seminar on week 9 questions. Lecture content: Origins of swaps, focus on interest rate swaps, valuation of interest rate swaps.
Self-managed learning:	Stulz Ch 16, JC Hull Ch5. Lecture notes set questions. Financial Times swap market data

Week 11 The Use of Swaps in the Management of Interest Rate Risk

Scheduled class activities:	Lecture Seminar on week 11 questions. Lecture content: Factors that make swaps an appropriate tool in the management of interest rate risk, illustration of a swap transaction, the risks associated with swaps.
Self-managed learning:	TJ Watsham, Ch 14. Lecture notes set questions.

9.0 LEARNING RESOURCES

9.1. CORE MATERIALS

Unit Blackboard Site: Contains lecture notes, seminar questions and solutions, and exam revision exercises.

TJ Watsham, **Futures and Options in Risk Management**, 2nd Edition, Thompson, 1998.

RL McDonald, **Derivatives Markets**, Addison Wesley, 2nd Edition, 2006.

RM Stulz, **Risk Management and Derivatives**, Thomson, 2003

These texts are cited in the self-managed learning for most of the weekly seminars. It is vital that students consult at least one of these sources as part of the self-managed learning process.

9.2. SUPPLEMENTARY MATERIALS

Financial Times and Wall Street Journal

JC Hull, **Fundamentals of Futures and Options Markets**, 4th Edition, Prentice Hall, 2002.

JC Hull, **Options, Futures and Other Derivatives**, 4th Edition, Prentice Hall, 2000.

Both texts cover similar ground, with the latter being the more advanced version.

D.Blake, **Financial Market Analysis**, 2nd Edition, Wiley, 2000.

RA Haugen, **Modern Investment Theory**, 4th Edition, Prentice Hall, 1997.

10.0 NOTES