



The University of Southern Queensland

## Course specification

The current and official versions of the course specifications are available on the web at  
<<http://www.usq.edu.au/coursespecification/current>>.  
Please consult the web for updates that may occur during the year.

### Description: Financial Risk Management

Subject	Cat-nbr	Class	Term	Mode	Units	Campus
FIN	8107	91468	2, 2009	ONC	1.00	Toowoomba

<b>Academic group:</b>	FOBUS
<b>Academic org:</b>	FOB008
<b>Student contribution band:</b>	3A
<b>ASCED code:</b>	081105

### STAFFING

Examiner: Boyd Scheuber  
Moderator: Michelle Goyen

### OTHER REQUISITES

Students are required to have access to a personal computer, e-mail capabilities and Internet access to UConnect. Current details of computer requirements can be found at  
<<http://www.usq.edu.au/ict/students/standards/default.htm>>.

### RATIONALE

When conducting almost all forms of competitive business activity, an understanding of financial risk measurement and management has become essential to survival. Financial risk relates to the volatility of outcomes or unexpected changes in financial variables. The deregulation and/or globalisation of financial and goods markets has resulted in the need for increased awareness by corporations and some individuals, as financial and pricing decisions are exposed to competitive global market forces. This financial risk principally arises due to unexpected changes in interest rates, exchange rates, commodity prices and equity price movements. Given a prioritization of financial risks, management and individuals must decide in each case what their preferred method of dealing with or avoiding those risks will be. In response to the challenge of managing these risks, derivative instruments have provided the means for the financial engineering of strategies relevant to the risk management needs of firms and individuals.

### SYNOPSIS

This course commences by examining the nature and scope of financial risk management as it applies to participants in financial markets. Given no arbitrage opportunities or risk neutral pricing as appropriate, the simplest forms of derivatives (forwards and futures) are then introduced in terms of the mechanics and strategies of these markets together with the theoretical pricing of forward/futures contracts. Given that a swap is nothing more than a convenient way of bundling forward contracts, an introductory exploration of the issues relating to interest rate and currency swaps is then undertaken although the detailed pricing of these instruments is left for a more advanced course. The varied world of options is then explored with particular emphasis on the

mechanics of options markets and the properties and strategies of option contracts/positions. Both the binomial and Black-Scholes option pricing models are treated in detail together with variations in the application of these models to assets other than equities (stocks). The Greek Letters and Value at Risk are of considerable importance to derivative market makers and/or financial institutions and these concepts are then treated at the introductory level. The course concludes with a general treatment of risk management strategies and performance evaluation.

## OBJECTIVES

On successful completion of this course, students should be able to:

1. describe the nature of financial risks and suggest practices for their quantification and management in order to solve various problems facing financial institutions and corporations
2. demonstrate an understanding of the operation and instruments available in forward/futures markets (OTC and exchange traded) together with the theoretical pricing principles of those contracts
3. demonstrate an understanding of the mechanics, comparative advantages, pricing and valuation of interest rate and currency swaps
4. demonstrate an understanding the operation of options markets and the relevant numeracy skills by pricing of the standard option contract using both binomial and Black-Scholes methodology
5. demonstrate the creativity and initiative required of a financial services professional by extending the standard stock option concept to stock indices, currencies and futures contracts
6. demonstrate the critical literacy skills required of a financial services professional by analysing various risk exposures and develop strategies for the management of interest rate, exchange rate, commodity price and equity price exposures using an appropriate instrument(s) covered in the course
7. apply the 'Greek Letters' and 'Value at Risk' concepts to market making by dealers and portfolios of assets held by financial institutions, respectively
8. discuss the important role that no-arbitrage opportunities and/or risk-neutral valuation plays in the pricing of all the above derivatives
9. assess the performance of risk management strategies through the application of appropriate benchmarks.

## TOPICS

	Description	Weighting (%)
1.	Introduction to risk management	5.00
2.	Forward contracts	10.00
3.	Futures markets - mechanics and strategies	10.00
4.	Futures markets - pricing and interest rate futures	15.00
5.	Swaps	15.00
6.	Options - mechanics, properties and strategies	10.00
7.	Options - pricing	15.00
8.	Options - variations	5.00

9.	Greek letters and value at risk	10.00
10.	Risk management strategies and performance evaluation	5.00

### **TEXT and MATERIALS required to be PURCHASED or ACCESSED**

ALL textbooks and materials are available for purchase from USQ BOOKSHOP (unless otherwise stated). Orders may be placed via secure internet, free fax 1800642453, phone 07 46312742 (within Australia), or mail. Overseas students should fax +61 7 46311743, or phone +61 7 46312742. For costs, further details, and internet ordering, use the 'Textbook Search' facility at <http://bookshop.usq.edu.au> click 'Semester', then enter your 'Course Code' (no spaces).

It is intended that the three recommended texts will be available as a shrinkwrap package from the USQ Bookshop at a discounted price for students.

Recommended: Online e-Workbook - Perdisco, 2008, *Introductory derivatives*, 2nd edn, available at <[www.perdisco.com.au/students](http://www.perdisco.com.au/students)>

Frino, A & Jarnecic, E 2005, *Introduction to futures and options markets in Australia*, Pearson Education, Frenchs Forest, New South Wales.

Hull, JC 2008, *Fundamentals of futures and options markets*, 6th edn, Prentice Hall, Upper Saddle River, New Jersey.

Hull, JC 2008, *Fundamentals of futures and options markets - solutions manual and study guide*, 6th edn, Prentice Hall, Upper Saddle River, New Jersey.

### **REFERENCE MATERIALS**

Reference materials are materials that, if accessed by students, may improve their knowledge and understanding of the material in the course and enrich their learning experience.

Chance, DM 2007, *An introduction to derivatives and risk management*, 7th edn, Thomson/South-Western, Mason, Ohio.

Copeland, TE, Weston, JF & Shastri, K 2005, *Financial theory and corporate policy*, 4th edn, Pearson Addison Wesley, Boston, Massachusetts.  
(international edition)

Cuthbertson, K & Nitzsche, D 2001, *Financial engineering: derivatives and risk management*, John Wiley, New York.

Hull, JC 2006, *Options, futures, and other derivatives*, 6th edn, Pearson/Prentice Hall, Upper Saddle River, New Jersey.  
(international edition)

Kolb, RW & Overdahl, JA 2007, *Futures, options and swaps*, 5th edn, Blackwell, Malden, Massachusetts.

Kuruc, A 2003, *Financial geometry: a geometric approach to hedging and risk management*, Financial Times/Prentice Hall, New York.

Marthinsen, JE 2005, *Risk takers: uses and abuses of financial derivatives*, Addison Wesley, Boston, Massachusetts.

McDonald, RL 2006, *Derivatives markets*, 2nd edn, Addison Wesley, Boston, Massachusetts.

## STUDENT WORKLOAD REQUIREMENTS

ACTIVITY	HOURS
Assessments	20.00
Directed Study	56.00
Private Study	89.00

## ASSESSMENT DETAILS

Description	Marks out of	Wtg (%)	Due date	Objectives assessed	Graduate skill	Level assessed
ASSIGNMENT	100.00	30.00	20 Jul 2009	1, 2, 3, 4, 5, 6		
2-HOUR EXAMINATION	100.00	70.00	END S2 (see note 1)	All		

### NOTES

1. The examination is scheduled to be held in the end-of-semester examination period. Students will be advised of the official examination date after the timetable has been finalised.

## IMPORTANT ASSESSMENT INFORMATION

- 1 Attendance requirements:  
It is the students' responsibility to attend and participate appropriately in all activities (such as lectures, tutorials, laboratories and practical work) scheduled for them, and to study all material provided to them or required to be accessed by them to maximise their chance of meeting the objectives of the course and to be informed of course-related activities and administration.
- 2 Requirements for students to complete each assessment item satisfactorily:  
To satisfactorily complete an individual assessment item a student must achieve at least 50% of the marks. (Depending upon the requirements in Statement 4 below, students may not have to satisfactorily complete each assessment item to receive a passing grade in this course.)
- 3 Penalties for late submission of required work:  
If students submit assignments after the due date without prior approval of the examiner, then a penalty of 5% of the total marks gained by the student for the assignment may apply for each working day late up to ten working days at which time a mark of zero may be recorded.
- 4 Requirements for student to be awarded a passing grade in the course:  
To be assured of receiving a passing grade a student must achieve at least 50% of the total weighted marks available for the course.
- 5 Method used to combine assessment results to attain final grade:  
The final grades for students will be assigned on the basis of the aggregate of the weighted marks obtained for each of the summative assessment items in the course.
- 6 Examination information:

- This will be an open examination. Candidates may have access to any printed or written material and a calculator during the examination. In line with regulation 5.6.4.2 'Use of Electronic Devices during Examinations', laptop and notebook computers are not permitted.
- 7 Examination period when Deferred/Supplementary examinations will be held:  
Any Deferred or Supplementary examinations for this course will be held during the next examination period.
  - 8 University Regulations:  
Students should read USQ Regulations 5.1 Definitions, 5.6 Assessment, and 5.10 Student Academic Misconduct for further information and to avoid actions which might contravene university regulations. These regulations can be found at <http://www.usq.edu.au/corporateservices/calendar/part5.htm>. Students should also read the Faculty of Business Procedures which can be found at <http://www.usq.edu.au/business/aboutfob.htm>.

## ASSESSMENT NOTES

- 1 Assignments: (i) The due date for an assignment is the date by which a student must despatch the assignment to the USQ. The onus is on the student to provide proof of the despatch date, if requested by the examiner. (ii) Students must retain a copy of each item submitted for assessment. This must be produced within 24 hours if required by the examiner. (iii) In accordance with university policy, the examiner may grant an extension of the due date of an assignment in extenuating circumstances. All applications for assignment extensions must be accompanied by appropriate supporting documentation. Under no circumstances will assignments submitted more than two calendar weeks after the due date be accepted. (iv) The examiner will not accept submission of assignments by facsimile. (v) Assignments are to be submitted in the appropriate assignment folders.
- 2 Referencing in assignments: Harvard (AGPS) is the referencing system required in this course. Students should use Harvard (AGPS) style in their assignments to format details of the information sources they have cited in their work. The Harvard (AGPS) style to be used is defined by the USQ Library's referencing guide at <http://www.usq.edu.au/library/help/referencing/default.htm>.
- 3 Course weightings: Course weightings of topics should not be interpreted as applying to the number of marks allocated to questions testing those topics in an examination paper. The examination may test material already tested in assignments.

## OTHER REQUIREMENTS

- 1 Computer, e-mail and Internet access: Students are required to have access to a personal computer, e-mail capabilities and Internet access to UConnect. Current details of computer requirements can be found at <http://www.usq.edu.au/ict/students/standards/default.htm>.
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