Description: Financial Risk Management

<table>
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<th>Subject</th>
<th>Cat-nbr</th>
<th>Class</th>
<th>Term</th>
<th>Mode</th>
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<tr>
<td>FIN</td>
<td>8107</td>
<td>70037</td>
<td>3, 2007</td>
<td>EXT</td>
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<td>Toowoomba</td>
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Academic group: FOBUS
Academic org: FOB008
Student contribution band: 2
ASCED code: 081105

STAFFING
Examiner: Boyd Scheuber
Moderator: Martin Hovey

OTHER REQUISITES
Students are required to have access to a personal computer, e-mail capabilities and Internet access to USQConnect. Current details of computer requirements can be found at http://www.usq.edu.au/business/aboutfob.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
The course objectives define the student learning outcomes for a course. The assessment item/s
that may be used to assess student achievement of an objective is/are shown in parentheses after
each objective. 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 (Assignment, Examination)
2. understand the operation of forward/futures markets (OTC and exchange) together with
   the theoretical pricing of related contracts (Assignment, Examination)
3. understand the mechanics, comparative advantages and valuation of interest rate and
   currency swaps (Assignment, Examination)
4. understand the operation of options markets and the pricing of the standard option contract
   using both binomial and Black-Scholes methodology; (Assignment, Examination)
5. extend the standard stock option concept to stock indices, currencies and futures contracts
   (Assignment, Examination)
6. develop financially engineered strategies to the management of interest rate, exchange
   rate, commodity price and equity price exposures (Assignment, Examination)
7. apply the 'Greek Letters' and 'Value at Risk' concepts to market making and portfolios of
   assets held by financial institutions, respectively (Examination)
8. discuss the important role that no-arbitrage opportunities and/or risk-neutral valuation
   plays in the pricing of all the above derivatives (Examination)
9. assess the performance of risk management strategies through the application of appropriate
   benchmarks (Examination).

TOPICS

<table>
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<th>Description</th>
<th>Weighting (%)</th>
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<tr>
<td>1. Introduction to risk management</td>
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<td>2. Forward contracts</td>
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<td>3. Futures markets - mechanics and strategies</td>
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<td>4. Futures markets - pricing and interest rate futures</td>
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<td>5. Swaps</td>
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<td>6. Options - mechanics, properties and strategies</td>
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<td>8. Options - variations</td>
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<td>9. Greek letters and value at risk</td>
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<tr>
<td>10. Risk management strategies and performance evaluation</td>
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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.


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.


McDonald, RL 2005, Derivatives markets, 2nd edn, Addison Wesley, Boston, Massachusetts.
STUDENT WORKLOAD REQUIREMENTS

<table>
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<tr>
<th>ACTIVITY</th>
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ASSESSMENT DETAILS

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<td>2 HOUR EXAMINATION</td>
<td>100.00</td>
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</table>

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:
   If you are an international student in Australia, you are advised to attend all classes at your campus. For all other students, there are no attendance requirements for this course. However, it is the students’ responsibility 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 is an open examination. Candidates may have access to any material during the examination except the following: electronic communication devices (eg mobile phones, pagers), bulky materials, devices requiring mains power and material likely to disturb other students.
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 Policies and 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 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.