



# AFIN806

## Risk Management and Derivatives

S1 Day 2014

*Applied Finance and Actuarial Studies*

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## General Information

Unit convenor and teaching staff

Unit Convenor

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Credit points

4

Prerequisites

ACST603 or AFIN858 or admission to MCom or MIntBus or MEc or MActPrac prior to 2011

Corequisites

Co-badged status

Unit description

This unit examines current techniques for measuring and managing the financial risk faced by corporate and financial institutions, with an emphasis on the practical use of derivative financial products such as forwards, futures, swaps and options to manage risk.

## Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at <https://www.mq.edu.au/study/calendar-of-dates>

## Learning Outcomes

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

Recognise the role of derivatives in financial risk management

Know the fundamental principles of derivatives valuation

Understand the value of effective risk management and the dangers of poor risk management

Evaluate alternative risk management strategy and tactics

Implement appropriate risk management solutions for corporate risk scenarios

## Assessment Tasks

Name	Weighting	Due
<u>Class Test</u>	20%	Week 6
<u>Case Study</u>	30%	Week 12
<u>Final Examination</u>	50%	Examination period

### Class Test

Due: **Week 6**

Weighting: **20%**

#### Description

60 minute written test.

#### Submission

Activity completed in class.

#### Absence

Absence from the class test is not permitted, except for cases in which an application for special consideration is made and approved.

**There will be no make-up class tests.** If you fail to attend the class test, the weight on the final exam will increase to 70%.

On successful completion you will be able to:

- Recognise the role of derivatives in financial risk management
- Know the fundamental principles of derivatives valuation

### Case Study

Due: **Week 12**

Weighting: **30%**

#### Description

Students conduct a case study on a topical issue in risk management and derivatives.

## Group work

This task is to be conducted by groups consisting of between 3 and 5 members.

## Submission

Hand case study report to instructor during class in week 12.

No extensions will be granted. Students who have not submitted the task prior to the deadline will be awarded a mark of 0 for the task, except for cases in which an application for special consideration is made and approved.

On successful completion you will be able to:

- Recognise the role of derivatives in financial risk management
- Know the fundamental principles of derivatives valuation
- Understand the value of effective risk management and the dangers of poor risk management
- Evaluate alternative risk management strategy and tactics
- Implement appropriate risk management solutions for corporate risk scenarios

## Final Examination

Due: **Examination period**

Weighting: **50%**

### Description

2 hour exam with 10 minutes reading time.

To be eligible for a passing grade in this unit **a pass is required in the final examination.**

On successful completion you will be able to:

- Recognise the role of derivatives in financial risk management
- Know the fundamental principles of derivatives valuation
- Understand the value of effective risk management and the dangers of poor risk management
- Evaluate alternative risk management strategy and tactics
- Implement appropriate risk management solutions for corporate risk scenarios

## Delivery and Resources

### Classes

- Classes comprise a weekly, three-hour seminar. Students should attend all classes, both for learning and assessment purposes.
- The timetable for classes can be found on the University web site at:  
<http://www.timetables.mq.edu.au/>

### **Required and Recommended Texts and/or Materials**

- There is no required textbook.
- The recommended text is Hull, Treepongkaruna, Heaney, Pitt and Colwell, Fundamentals of Futures and Options Markets: Australasian edition. However, almost any textbook on derivatives should be suitable for our purposes.
- Additional references may be added during the semester. Details of these will be provided at the unit web page.

### **Unit Web Page**

- Course material is available on the learning management system (iLearn)
- Students should consult the web page frequently. Learning, teaching and other reference materials are posted to this site throughout the semester.

### **Teaching and Learning Activities**

- Learning and teaching activities are designed to both equip students with necessary technical skills for effective risk management with derivatives, as well as to develop their generic skills, especially within the context of corporate risk management.
- This unit is taught in a seminar style. Each session runs for three hours including breaks and consists of a variety of interactive learning activities.
- Class activities include a short interactive lecture on topic material and discussion of key issues.
- With regard to preparing for the final examination, students should develop their ability to understand unit concepts and how to apply them in practical situations, rather than merely being able to memorise and use formulas.

### **Technology Used and Required**

- Access to the unit Web Site.
- Word processing software for report writing.
- Spreadsheets for applying quantitative models studied in the unit.

### **Research and practice**

- This unit uses research from external sources.
- This unit gives you practice in applying research findings in your assessment tasks.

- This unit gives you opportunities to conduct your own research.

### Changes since the Last Offering of this Unit

- Some revision of weekly topics.
- Case study replaces major assignment and class presentation.

## Unit Schedule

Week	Topic
1	Managing risk with forwards/futures and swaps
2	Managing risk with options
3	Pricing forwards/futures and swaps
4	Pricing options: binomial model
5	Pricing options: Black-Scholes-Merton model
6	Class test
	<i>Mid-session break</i>
7	Measuring risk
8	Managing interest rate and credit risk
9	Major derivatives losses
10	Model risk
11	Ethical issues in risk management
12	Valuing risk management
13	Review

## Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central](#). Students should be aware of the following policies in particular with regard to Learning and Teaching:

Academic Honesty Policy [http://mq.edu.au/policy/docs/academic\\_honesty/policy.html](http://mq.edu.au/policy/docs/academic_honesty/policy.html)

Assessment Policy <http://mq.edu.au/policy/docs/assessment/policy.html>

Grading Policy <http://mq.edu.au/policy/docs/grading/policy.html>

Grade Appeal Policy <http://mq.edu.au/policy/docs/gradeappeal/policy.html>

Grievance Management Policy [http://mq.edu.au/policy/docs/grievance\\_management/policy.html](http://mq.edu.au/policy/docs/grievance_management/policy.html)

Disruption to Studies Policy [http://www.mq.edu.au/policy/docs/disruption\\_studies/policy.html](http://www.mq.edu.au/policy/docs/disruption_studies/policy.html) *The Disruption to Studies Policy is effective from March 3 2014 and replaces the Special Consideration Policy.*

In addition, a number of other policies can be found in the [Learning and Teaching Category](#) of Policy Central.

## Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: [https://students.mq.edu.au/support/student\\_conduct/](https://students.mq.edu.au/support/student_conduct/)

### Supplementary Exams

Further information regarding supplementary exams, including dates, is available here [http://www.businessandeconomics.mq.edu.au/current\\_students/undergraduate/how\\_do\\_i/special\\_consideration](http://www.businessandeconomics.mq.edu.au/current_students/undergraduate/how_do_i/special_consideration)

## Student Support

Macquarie University provides a range of support services for students. For details, visit <http://students.mq.edu.au/support/>

## Learning Skills

Learning Skills ([mq.edu.au/learningskills](http://mq.edu.au/learningskills)) provides academic writing resources and study strategies to improve your marks and take control of your study.

- [Workshops](#)
- [StudyWise](#)
- [Academic Integrity Module for Students](#)
- [Ask a Learning Adviser](#)

## Student Services and Support

Students with a disability are encouraged to contact the [Disability Service](#) who can provide appropriate help with any issues that arise during their studies.

## Student Enquiries

For all student enquiries, visit Student Connect at [ask.mq.edu.au](http://ask.mq.edu.au)

## IT Help

For help with University computer systems and technology, visit <http://informatics.mq.edu.au/help/>.

When using the University's IT, you must adhere to the [Acceptable Use Policy](#). The policy applies to all who connect to the MQ network including students.

## Graduate Capabilities

### PG - Discipline Knowledge and Skills

Our postgraduates will be able to demonstrate a significantly enhanced depth and breadth of knowledge, scholarly understanding, and specific subject content knowledge in their chosen fields.

This graduate capability is supported by:

#### Learning outcomes

- Recognise the role of derivatives in financial risk management
- Know the fundamental principles of derivatives valuation
- Understand the value of effective risk management and the dangers of poor risk management
- Evaluate alternative risk management strategy and tactics
- Implement appropriate risk management solutions for corporate risk scenarios

#### Assessment tasks

- Class Test
- Case Study
- Final Examination

### PG - Critical, Analytical and Integrative Thinking

Our postgraduates will be capable of utilising and reflecting on prior knowledge and experience, of applying higher level critical thinking skills, and of integrating and synthesising learning and knowledge from a range of sources and environments. A characteristic of this form of thinking is the generation of new, professionally oriented knowledge through personal or group-based critique of practice and theory.

This graduate capability is supported by:

#### Learning outcomes

- Recognise the role of derivatives in financial risk management
- Know the fundamental principles of derivatives valuation
- Understand the value of effective risk management and the dangers of poor risk



management

- Evaluate alternative risk management strategy and tactics
- Implement appropriate risk management solutions for corporate risk scenarios

## Assessment tasks

- Class Test
- Case Study
- Final Examination

## PG - Research and Problem Solving Capability

Our postgraduates will be capable of systematic enquiry; able to use research skills to create new knowledge that can be applied to real world issues, or contribute to a field of study or practice to enhance society. They will be capable of creative questioning, problem finding and problem solving.

This graduate capability is supported by:

## Learning outcomes

- Know the fundamental principles of derivatives valuation
- Understand the value of effective risk management and the dangers of poor risk management
- Evaluate alternative risk management strategy and tactics
- Implement appropriate risk management solutions for corporate risk scenarios

## Assessment tasks

- Case Study
- Final Examination