



# AFIN806

## Risk Management and Derivatives

S1 Day 2016

*Dept of Applied Finance and Actuarial Studies*

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#### **Disclaimer**

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## General Information

Unit convenor and teaching staff

Unit Convenor

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To be advised

Angela Chow

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Credit points

4

Prerequisites

ACST603 or AFIN858

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

## General Assessment Information

It is the responsibility of students to view their marks for each within session assessment on iLearn within 20 days of posting. If there are any discrepancies, students must contact the unit convenor immediately. Failure to do so will mean that queries received after the release of final results regarding assessment tasks (not including the final exam mark) will not be addressed.

## Assessment Tasks

Name	Weighting	Due
<a href="#"><u>Class Test</u></a>	20%	Week 6
<a href="#"><u>Case Study</u></a>	20%	Week 12
<a href="#"><u>Final Examination</u></a>	60%	Examination period

### Class Test

Due: **Week 6**

Weighting: **20%**

Description 60 minute written test. Submission Activity completed in class. Absence from the class test is not permitted, 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

### Case Study

Due: **Week 12**

Weighting: **20%**

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. There will be a deduction of 10% of the total available marks made from the total awarded mark for each 24 hour period or part thereof that the submission is late (for example, 25 hours late in submission – 20% penalty). This penalty does not apply for cases in which an application for disruption of studies is made and approved. No submission will

be accepted after solutions have been posted.

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: **60%**

Description 2 hour exam with 10 minutes reading time.

You are permitted ONE A4 page of paper containing reference material printed on both sides. The material may be handwritten or typed. The page will not be returned at the end of the final examination.

To be eligible to pass 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.

### 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.

## 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

## Learning and Teaching Activities

### Learning and teaching 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.

## 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)

**New Assessment Policy in effect from Session 2 2016** [http://mq.edu.au/policy/docs/assessment/policy\\_2016.html](http://mq.edu.au/policy/docs/assessment/policy_2016.html). For more information visit [http://students.mq.edu.au/events/2016/07/19/new\\_assessment\\_policy\\_in\\_place\\_from\\_session\\_2/](http://students.mq.edu.au/events/2016/07/19/new_assessment_policy_in_place_from_session_2/)

Assessment Policy prior to Session 2 2016 <http://mq.edu.au/policy/docs/assessment/policy.html>

Grading Policy prior to Session 2 2016 <http://mq.edu.au/policy/docs/grading/policy.html>

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

Complaint Management Procedure for Students and Members of the Public [http://www.mq.edu.au/policy/docs/complaint\\_management/procedure.html](http://www.mq.edu.au/policy/docs/complaint_management/procedure.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/)

## Results

Results shown in *iLearn*, or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in [eStudent](#). For more information visit [ask.mq.edu.au](#).

### Supplementary Exams

Further information regarding supplementary exams, including dates, is available here [http://www.businessandconomics.mq.edu.au/current\\_students/undergraduate/how\\_do\\_i/special\\_consideration](http://www.businessandconomics.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://www.mq.edu.au/about\\_us/offices\\_and\\_units/information\\_technology/help/](http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/).

When using the University's IT, you must adhere to the [Acceptable Use of IT Resources 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

## **Changes from Previous Offering**

Some revision of weekly topics.

## **Research & Practice, Global & Sustainability**

**Research & Practice:** This unit draws on seminal and latest research in derivatives and financial risk management from external sources. Unit concepts are based on theoretical research and practical implications are developed from theoretical and empirical research. This unit gives you practice in applying research findings in your assessment tasks.

**Global & Sustainability:** Firms operate in global market places. Financial risk management and other corporate decisions take place in the context of globalisation and are subject to sustainability constraints.

In preparing their case study, students are encouraged to use relevant research and to consider the practical, global and sustainability implications for firm choices in the context of risk management. The class test and final examination will also partly test students' understanding of these issues.