



AFIN806

Risk Management and Derivatives

S1 Day 2019

Department of Applied Finance

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Disclaimer

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General Information

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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 strategies and tactics

Encourage peer learning, peer support and collaborative work in implementing

appropriate risk management solutions for corporate risk scenarios

General Assessment Information

- To provide **early feedback**, you are to complete a self-assessment online quiz to be released in Week 4. Use this quiz as an indicator of whether you are progressing satisfactorily in the unit. If you are having difficulties, please see the Unit Convenor and consider withdrawing before the census date. Your score on the quiz will not count towards your grade.
- It is the responsibility of students to view their marks for each within session assessment on iLearn within 20 working 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 marks (not including the final exam mark) will not be addressed.
- Assessment criteria for all assessment tasks will be provided on the unit iLearn site.

Assessment Tasks

Name	Weighting	Hurdle	Due
<u>Week 4 class test</u>	25%	No	Week 4
<u>Mid-semester class test</u>	35%	No	Week 8
<u>Assignment</u>	20%	No	Week 11
<u>Final Project</u>	20%	No	Week 13

Week 4 class test

Due: **Week 4**

Weighting: **25%**

Task Description: Students will sit an invigilated in-class test. Further details will be provided on the iLearn website **Type of Collaboration:** Individual **Submission:** In-class **Format:** Refer to iLearn **Length:** 90 minutes **Inherent Task Requirements:** Refer to iLearn **Late Submission:** No extensions will be granted. Students who do not sit the test 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

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- Evaluate alternative risk management strategies and tactics

Mid-semester class test

Due: **Week 8**

Weighting: **35%**

Task Description: Students will sit an invigilated in-class test. Further details will be provided on the iLearn website **Type of Collaboration:** Individual **Submission:** In-class **Format:** Refer to ilearn **Length:** 90 minutes **Inherent Task Requirements:** Refer to ilearn **Late Submission:** No extensions will be granted. Students who do not sit the test 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:

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- Evaluate alternative risk management strategies and tactics

Assignment

Due: **Week 11**

Weighting: **20%**

Task Description:

Students complete a major assignment on a topical issue in financial risk management chosen by the convenor. Further details will be provided on the unit iLearn website.

Type of Collaboration: Groups of 4 or less. **Submission:** The project must be submitted via the unit iLearn website. **Format:** Refer to ilearn **Length:** Refer to ilearn **Inherent Task Requirements:** Refer to ilearn **Late Submission:** 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 special consideration 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 strategies and tactics
- Encourage peer learning, peer support and collaborative work in implementing appropriate risk management solutions for corporate risk scenarios

Final Project

Due: **Week 13**

Weighting: **20%**

Task Description:

Students complete a major project and prepare an extensive report on a problem in risk management using derivatives. The project will be chosen by the convenor.

Further details will be provided on the unit iLearn website.

Type of Collaboration: Individual **Submission:** The project must be submitted via the unit iLearn website. **Format:** Refer to ilearn **Length:** Refer to ilearn **Inherent Task Requirements:** Refer to ilearn **Late Submission:** 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 special consideration 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
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Delivery and Resources

Recommended Text:	The recommended textbook is 'Options, Futures, and other Derivatives' (Global Edition) by John C. Hull, 9th Edition, Pearson.
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:	<ul style="list-style-type: none"> • Access to the unit Web Site. • Word processing software for report writing. • Spreadsheets for applying quantitative models studied in the unit.
Delivery Format and Other Details:	<p>Classes</p> <p>Classes comprise a weekly, three-hour seminar, typically structured as a two-hour lecture plus one hour for exercise questions. Students should attend all classes, both for learning and assessment purposes.</p> <p>The timetable for classes can be found on the University web site at: http://www.timetables.mq.edu.au/</p>

Recommended Readings:	Additional references may be added during the semester. Details of these will be provided at the unit web page.
Other Course Materials:	

Unit Schedule

Week	Date	Topic
1	25.2.19	Introduction to futures, options and hedging strategies.
2	4.3.19	Forwards and futures pricing and hedging.
3	11.3.19	Options pricing using binomial trees.
4	18.3.19	Week 4 class test (25%).
5	25.3.19	Options pricing using the Black-Scholes-Merton model.
6	1.4.19	The normal versus log-normal distributions and value at risk (VaR).
7	8.4.19	Swaps pricing and construction.
		Mid-semester break from Monday 15.04.19 to Friday 26.04.19.
8	29.4.19	Mid-semester class test (35%).
9	6.5.19	Credit risk and model risk.
10	13.5.19	Volatilities, correlations, and dependence.
11	20.5.19	The Greek letters and volatility smiles.
12	27.5.19	Energy and commodity derivatives.
13	3.6.19	Ethical issues in risk management.

Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central \(https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central\)](https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central). Students should be aware of the following policies in particular with regard to Learning and Teaching:

- [Academic Appeals Policy](#)
- [Academic Integrity Policy](#)
- [Academic Progression Policy](#)
- [Assessment Policy](#)
- [Fitness to Practice Procedure](#)
- [Grade Appeal Policy](#)
- [Complaint Management Procedure for Students and Members of the Public](#)
- [Special Consideration Policy](#) (**Note:** *The Special Consideration Policy is effective from 4 December 2017 and replaces the Disruption to Studies Policy.*)

Undergraduate students seeking more policy resources can visit the [Student Policy Gateway](https://students.mq.edu.au/support/study/student-policy-gateway) (<https://students.mq.edu.au/support/study/student-policy-gateway>). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

If you would like to see all the policies relevant to Learning and Teaching visit [Policy Central](http://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central) (<http://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/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/study/getting-started/student-conduct>

Results

Results published on platform other than [eStudent](#), (eg. iLearn, Coursera etc.) 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 or if you are a Global MBA student contact globalmba.support@mq.edu.au

Supplementary exams

Information regarding supplementary exams, including dates, is available at: http://www.businessand economics.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) 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

If you are a Global MBA student contact globalmba.support@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/.

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 - Capable of Professional and Personal Judgment and Initiative

Our postgraduates will demonstrate a high standard of discernment and common sense in their professional and personal judgment. They will have the ability to make informed choices and decisions that reflect both the nature of their professional work and their personal perspectives.

This graduate capability is supported by:

Learning outcomes

- Recognise the role of derivatives in financial risk management
- Understand the value of effective risk management and the dangers of poor risk management
- Evaluate alternative risk management strategies and tactics
- Encourage peer learning, peer support and collaborative work in implementing appropriate risk management solutions for corporate risk scenarios

Assessment tasks

- Week 4 class test
- Assignment
- Final Project

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 strategies and tactics
- Encourage peer learning, peer support and collaborative work in implementing appropriate risk management solutions for corporate risk scenarios

Assessment tasks

- Week 4 class test
- Mid-semester class test
- Assignment
- Final Project

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 strategies and tactics
- Encourage peer learning, peer support and collaborative work in implementing appropriate risk management solutions for corporate risk scenarios

Assessment tasks

- Week 4 class test
- Mid-semester class test
- Assignment
- Final Project

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:

Assessment task

- Mid-semester class test