



# AFIN8006

## Risk Management and Derivatives

Session 1, In person-scheduled-weekday, North Ryde 2023

*Department of Applied Finance*

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## General Information

Unit convenor and teaching staff Lei Shi <a href="mailto:l.shi@mq.edu.au">l.shi@mq.edu.au</a>
Credit points 10
Prerequisites (Admission to MActPrac or MFin) or (ACST603 or ACST6003 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:

**ULO1:** Recognise the role of derivatives in financial risk management.

**ULO2:** Discover the fundamental principles of derivatives valuation and its application in managing risks.

**ULO3:** Evaluate alternative risk management strategies and tactics.

**ULO4:** Encourage peer learning, peer support and collaborative work in implementing appropriate risk management solutions for corporate risk scenarios.

## General Assessment Information

Late Assessment Submission Penalty (written assessments)

*Unless a Special Consideration request has been submitted and approved, a 5% penalty (of the total possible mark) will be applied each day a written assessment is not submitted, up until the*

7th day (including weekends). After the 7th day, a grade of '0' will be awarded even if the assessment is submitted. Submission time for all written assessments is set at 11.55pm. A 1-hour grace period is provided to students who experience a technical concern.

For any late submissions of time-sensitive tasks, such as scheduled tests/exams, performance assessments/presentations, and/or scheduled practical assessments/labs, students need to submit an application for Special Consideration.

## Assessment Tasks

Name	Weighting	Hurdle	Due
<u>Online Quiz</u>	0%	No	Week 4
<u>Mid Session Test</u>	20%	No	Week 8
<u>Group Assignment</u>	20%	No	Week 10
<u>Final Examination</u>	60%	No	University Exam Period

### Online Quiz

Assessment Type <sup>1</sup>: Quiz/Test

Indicative Time on Task <sup>2</sup>: 1 hours

Due: **Week 4**

Weighting: **0%**

The online quiz will consist of 5 to 10 questions and will be available on iLearn. Please use the quiz result as an indicator of whether you are progressing satisfactorily in the unit.

On successful completion you will be able to:

- Recognise the role of derivatives in financial risk management.

### Mid Session Test

Assessment Type <sup>1</sup>: Quiz/Test

Indicative Time on Task <sup>2</sup>: 19 hours

Due: **Week 8**

Weighting: **20%**

A 90 minute mid session test will be held during the session.

On successful completion you will be able to:

- Recognise the role of derivatives in financial risk management.
- Discover the fundamental principles of derivatives valuation and its application in managing risks.

## Group Assignment

Assessment Type <sup>1</sup>: Report

Indicative Time on Task <sup>2</sup>: 20 hours

Due: **Week 10**

Weighting: **20%**

Students will work in groups to conduct quantitative and qualitative analysis on a topical issue in financial risk management.

On successful completion you will be able to:

- Recognise the role of derivatives in financial risk management.
- Discover the fundamental principles of derivatives valuation and its application in managing risks.
- 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 Examination

Assessment Type <sup>1</sup>: Examination

Indicative Time on Task <sup>2</sup>: 20 hours

Due: **University Exam Period**

Weighting: **60%**

A two hour exam will be held during University Examination Period.

On successful completion you will be able to:

- Recognise the role of derivatives in financial risk management.
- Discover the fundamental principles of derivatives valuation and its application in

managing risks.

- Evaluate alternative risk management strategies and tactics.

<sup>1</sup> If you need help with your assignment, please contact:

- the academic teaching staff in your unit for guidance in understanding or completing this type of assessment
- the [Writing Centre](#) for academic skills support.

<sup>2</sup> Indicative time-on-task is an estimate of the time required for completion of the assessment task and is subject to individual variation

## Delivery and Resources

Refer to iLearn.

## Unit Schedule

Week	Textbook Chapters	Topic
1	1,2,3	Introduction to futures, options and hedging strategies
2	5	Forwards and futures pricing and hedging
3	7	Swaps pricing and construction
4	10,11,13	Options pricing using binomial trees
5	14,15	Options pricing using the Black-Scholes-Merton model
6	19,20	Greek letters and volatility smiles
7	22	Value at risk
		<i>Mid-semester break</i>
8		<i>Mid-session Test</i>
9	23	Volatilities, correlations, and dependence
10	24	Credit risk
11	35	Energy and commodity derivatives
12	37,8	Ethical issues in risk management
13		Revision

## Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central \(https://policies.mq.edu.au\)](https://policies.mq.edu.au). 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](#)
- [Assessment Procedure](#)
- [Complaints Resolution Procedure for Students and Members of the Public](#)
- [Special Consideration Policy](#)

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

To find other policies relating to Teaching and Learning, visit [Policy Central](https://policies.mq.edu.au) (<https://policies.mq.edu.au>) and use the [search tool](#).

## Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: <https://students.mq.edu.au/admin/other-resources/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](https://ask.mq.edu.au) or if you are a Global MBA student contact [globalmba.support@mq.edu.au](mailto:globalmba.support@mq.edu.au)

## Academic Integrity

At Macquarie, we believe [academic integrity](#) – honesty, respect, trust, responsibility, fairness and courage – is at the core of learning, teaching and research. We recognise that meeting the expectations required to complete your assessments can be challenging. So, we offer you a range of resources and services to help you reach your potential, including free [online writing and maths support](#), [academic skills development](#) and [wellbeing consultations](#).

## Student Support

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

## The Writing Centre

[The Writing Centre](#) provides resources to develop your English language proficiency, academic writing, and communication skills.

- [Workshops](#)
- [Chat with a WriteWISE peer writing leader](#)
- [Access StudyWISE](#)
- [Upload an assignment to Studiosity](#)
- [Complete the Academic Integrity Module](#)

The Library provides online and face to face support to help you find and use relevant information resources.

- [Subject and Research Guides](#)
- [Ask a Librarian](#)

## Student Services and Support

Macquarie University offers a range of [Student Support Services](#) including:

- [IT Support](#)
- [Accessibility and disability support](#) with study
- Mental health [support](#)
- [Safety support](#) to respond to bullying, harassment, sexual harassment and sexual assault
- [Social support including information about finances, tenancy and legal issues](#)
- [Student Advocacy](#) provides independent advice on MQ policies, procedures, and processes

## Student Enquiries

Got a question? Ask us via [AskMQ](#), or contact [Service Connect](#).

## 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.