ECFS868

Financial Risk Management

AFC Term 4 City 2018

Archive (Pre-2019) - Dept of Applied Finance and Actuarial Studies

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Disclaimer

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General Information

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Credit points 4
Prerequisites (Admission to MAppFin or MAppFin(Adv) or GradDipAppFin) and (AFCP801 or (ECFS865 and ECFS867))
Corequisites
Co-badged status

Unit description
Financial Risk Management (FRM) is based on an enterprise risk management framework designed to increase the likelihood that an organisation will achieve its objectives. Unlike traditional, purely defensive approaches to risk, FRM's philosophy focuses on how effective risk management adds value to the organisation. We consider methods for identifying, assessing and treating a variety of risks, with special focus on market, credit, funding liquidity and operational risks. The unit encompasses both quantitative skills and broader human and organisational issues. We encourage students to question the assumptions behind the models, to think about behavioural biases, to identify ethical issues, to consider incentives, and to think creatively of risk management solutions. The lectures deliver theoretical and industry relevance by using a case study methodology. Lectures are complemented by online learning activities designed to promote student interaction, engagement, and understanding throughout the Unit. Assessable pre-course activities must be completed prior to the first class.

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:

Apply a risk management framework, having regard to the business context, including the identification of appropriate risk management solutions.

Use, interpret and critique quantitative methods for risk assessment.

Identify and respond effectively to misconduct risks using an ethical framework.

Conduct independent research that communicates effectively.

General Assessment Information

To pass this unit (requires a Mark of 50 or better) the student must pass the final examination.

Assessable pre-course activities are to be completed. Assessable pre-course activities (taking 4-8 hours) MUST be completed prior to the first class. Go to Topic 1 and complete all the Before Class Activities. Non-completion will result in zero marks for these assessments and, more importantly, reduce the quality of your learning experience.

Assessment Tasks

Name	Weighting	Hurdle	Due
Assignment	30%	No	Refer to iLearn

Name	Weighting	Hurdle	Due
Participation	10%	No	In iLearn
Online Quizzes	20%	No	In iLearn
Final Exam	40%	Yes	Refer to Timetable

Assignment

Due: **Refer to iLearn**
Weighting: **30%**

Summary of Assessment Task

Individual / Group: Individual.

Due Date: Refer to iLearn.

Grading Method: Refer to 'Standards Required to Complete the Unit Satisfactorily'.

Submission Method: Via Turnitin on iLearn**;** students are required to use the cover sheet provided.

Extension Requests:

- No extensions will be granted unless an application for Special Consideration is made and approved. If you have extenuating circumstances that prevent you from submitting your assignment by the due date, you must apply for Special Consideration as soon as reasonably possible. Refer to MAFC Program Rules at www.mafc.mq.edu.au for information on the University's Special Consideration Policy.
- Unless such prior arrangements have been made, any late submission of assignments will automatically be penalised. 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).
- No submissions will be accepted after solutions have been posted.

Other Information:

- The assignment may be available on the iLearn site. In some teaching Centres it may be handed out in class.

On successful completion you will be able to:

- Apply a risk management framework, having regard to the business context, including the identification of appropriate risk management solutions.
- Use, interpret and critique quantitative methods for risk assessment.

- Conduct independent research that communicates effectively.

Participation

Due: **In iLearn**
Weighting: **10%**

Summary of Assessment Task

Individual / Group: Individual.

Timing/Duration: Assessable online discussion forums and class discussions will occur throughout the unit, with some assessment completed prior to the first class i.e. the 'Before Class' activities in relation to Topic 1. Students will be notified of closing dates for assessable online discussion forums in class and via the News Forum. Generally, students will have a window of at least one week to make a contribution.

Grading Method: Participation judged on quality and frequency. Good questions are highly valued.

Submission Method: Online via the unit's iLearn site and in class.

Extension Requests:

- No extensions will be granted unless prior arrangements have been made with the lecturer.
- In the absence of such arrangements, late submission will result in zero marks, unless an application for Special Consideration is made and approved. Refer to MAFC Program Rules at www.mafc.mq.edu.au for information on the University's Special Consideration Policy.

On successful completion you will be able to:

- Apply a risk management framework, having regard to the business context, including the identification of appropriate risk management solutions.
- Identify and respond effectively to misconduct risks using an ethical framework.

Online Quizzes

Due: **In iLearn**
Weighting: **20%**

Summary of Assessment Task

Individual / Group: Individual.

Timing/Duration: Seven online quizzes will be scheduled throughout the unit with the first two quizzes to be completed before the first class (see 'Before Class' activities in relation to Topic 1). Students can complete the quiz any time before the closing date/time and the duration is 30-60 minutes.

Grading Method: Refer to 'Standards Required to Complete the Unit Satisfactorily'.

Submission Method: Via iLearn.

Examination Conditions: Open book.

Extension Requests:

- You are expected to make yourself available for assessment during the relevant quiz window.
- No extensions will be granted unless an application for Special Consideration is made and approved. If you have extenuating circumstances (such as illness or misadventure) that prevent you from participating, you must apply for Special Consideration as soon as reasonably possible. Refer to MAFC Program Rules at www.mafc.mq.edu.au for information on the University's Special Consideration Policy.
- Unless such prior arrangements have been made, a zero mark will apply.

On successful completion you will be able to:

- Apply a risk management framework, having regard to the business context, including the identification of appropriate risk management solutions.
- Use, interpret and critique quantitative methods for risk assessment.

Final Exam

Due: **Refer to Timetable**
Weighting: **40%**
This is a hurdle assessment task (see assessment policy for more information on hurdle assessment tasks)

Summary of Assessment Task

Individual / Group: Individual.

Due Date: Different Class Groups have different deadlines. Students should find the timetable and dates relevant to their group at www.mafc.mq.edu.au

Timing: Refer to Timetable.

Grading Method: Refer to 'Standards Required to Complete the Unit Satisfactorily'.

Submission Method: As per MAFC Program Rules at www.mafc.mq.edu.au

Duration: 2 hours plus 10 minutes reading time.

Examination Conditions:

- All examinations are closed book. However, permitted materials and aids are:
    - A formula sheet to be provided at the exam

    - A calculator (any, provided it has no communications capacity)
- Exam times and locations are noted in the unit timetable at www.mafc.mq.edu.au.
- Refer to MAFC Program Rules at www.mafc.mq.edu.au.

Extension Requests:

- You are expected to present yourself for examination at the time and place designated in the relevant MAFC Timetable at www.mafc.mq.edu.au.
- Deferral of an examination is not permitted unless an application for Special Consideration is made and approved.
- Refer to MAFC Program Rules at www.mafc.mq.edu.au for information on the University's Special Consideration Policy or non-attendance at an examination.

On successful completion you will be able to:

- Apply a risk management framework, having regard to the business context, including the identification of appropriate risk management solutions.
- Use, interpret and critique quantitative methods for risk assessment.
- Identify and respond effectively to misconduct risks using an ethical framework.

Delivery and Resources

CLASSES

Face-to-Face Teaching: Generally 30 hours.

Online Activities: Under the 'flipped classroom' model, some learning activities will take place independently and online (using iLearn).

Timetable: Detailed timetable for classes are on the Centre's website at www.mafc.mq.edu.au

Consultation Times: Students who wish to contact any of the teaching staff may do so through the unit's iLearn forum in relation to general queries (so that all students may benefit).

REQUIRED AND RECOMMENDED TEXTS AND/OR MATERIALS

Text:

- Crouhy, Galai and Marks Essentials of Risk Management (2nd edition). McGraw-Hill Education.
- Students should buy this text. It provides an up-to-date exposition of relevant material. The lecture notes reference it extensively.

Additional Readings:

- Additional readings are included in the unit notes and/or on the unit's iLearn site.

- Essential readings are examinable but Extension readings are not. If in doubt, students should assume that a reading is examinable.

Lecture Notes: Available in printed form and electronically via iLearn.

Useful References:

- Hull, John C., Risk Management and Financial Institutions (5th edition), Wiley Finance.

Calculators:

- A financial calculator that can handle time value of money calculations, logs and power functions is required.
- The Hewlett Packard calculator hp17bII+ is recommended.
- In examinations, any calculator is permitted provided it does not have communication capacity.
- No mobile phones or computers are permitted in examinations.

Laptop Computers:

- Some classes (Topics 3 and 6) involve in-class computer exercises. Students are strongly encouraged to bring (fully charged) laptops to those classes.

Assumed Knowledge: Mathematics, Statistics and Economics content

- Finance has a high level of numerate content. Consequently this unit is, in parts, mathematical and statistical. As an indication of the level of statistics, students should find the following problem easy to solve: If an asset has expected return of 10% p.a. and standard deviation of 15% p.a., what is the probability that returns over the next year will be less than 0%?
- Finance is a branch of Economics. This unit assumes knowledge of market structures (monopoly vs perfect competition), price elasticity of demand etc.
- AFCP812 Quantitative and Economic Analysis (gateway unit for MAF students) covers both quantitative techniques and microeconomics. If you wish to brush up your skills you may request enrolment into this unit on a non-award basis by sending an email to campusprogramservices@mafc.mq.edu.au
- A useful reference for quantitative matters is Berenson, Levine, Szabat, O'Brien, Jayne and Watson Basic Business Statistics, 4th edition.
- A useful reference for microeconomic matters is Frost, L. and J. Taylor Microeconomics: Principles and Practice. Cengage Learning.
- Free information on statistics and regression is available here: http://mafcstudents.mq.edu.au/new-to-mafc/pre-course-materials/

Assumed Access: Access to a computer with word processing and spreadsheet capability is assumed, as is general student computer literacy.

TECHNOLOGY USED AND REQUIRED

Unit's iLearn Site:

- Found by logging on to iLearn ilearn.mq.edu.au, then clicking on ***ECFS868 Financial Risk Management***.
- This is where you will find forums, downloadable resources and links to important pages.
- The forum allows you to communicate with other students and lecturer(s) and may provide supplementary material.
- You are requested to post your questions on the forums at least 24 hours prior to the assignment submission date or the examination date. Questions posted after that time may not be answered. **Please try to not leave your questions to the last few days.**

Important Notice:

- It is important that you familiarise yourself with the unit's iLearn site.
- All students should check iLearn regularly (minimum twice a week and prior to all lectures) and look for updates and distribution of materials (including case studies) related to the unit or assessments and, if relevant, participate in forum discussions.

Unit Schedule

1. A RISK MANAGEMENT FRAMEWORK

References: Shortreed 'ERM Frameworks', Chapter 7 in Fraser and Simkins (eds) Enterprise Risk Management Kolb Series in Finance, Wiley 2010.

Topics:

- Defining risk and risk management
- Review of crucial risk concepts (including quantitative methods). The Enterprise Risk Management (ERM) Framework
- The bank perspective
- The corporate perspective
- Exposure types (transaction, translation, economic)
- Handling exposure uncertainty
- Case Study: BHP Billiton

Pre-Class: Statistics Review, ERM Frameworks, Introductions, Bank Scandals.

2. RISK AND THE BALANCE SHEET

References: Crouhy, Galai and Marks Chapters 3, 8 and 17.

Topics:

- Asset and liability mismatch (gap analysis)
- Earnings variability, product repricing issues
- Funding liquidity risk (liquidity coverage ratio, net stable funding ratio)
- Early warning indicators and risk management for funding/liquidity risk
- Role of the Asset and Liability Committee
- Economic v. Regulatory Capital
- Risk-adjusted Return on Capital (RAROC)
- Bank regulatory frameworks
- Case Study: Lehman Brothers

3. ANALYSING MARKET RISK

References: Crouhy, Galai and Marks Chapter 7.

Topics:

- Market risk in the corporate setting
- Monte Carlo simulation
- Analysing risk in trading/investment portfolios
- Some features of real-world data (violations of Normality)
- Value-at-risk and Expected Shortfall
- Regulatory trends in market risk
- Using risk measures to manage market risk
- Grappling with model risk

4. GOVERNANCE, ETHICS AND RISK

References: Crouhy, Galai and Marks Chapter 4.

Topics:

- Why governance?
- Corporate governance overview
- Corporate governance and risk management
- Risk governance in banks
- Risk culture
- Designing the risk management framework
- Remuneration and Performance Measurement

- Performance based remuneration
- Equity based remuneration
- Ethical dilemmas for risk managers
- Case study: Barclays

Pre-Class: Readings, videos, online quiz and assessable forums.

5. CREDIT RISK

References: Crouhy, Galai and Marks Chapters 9, 10.

Topics:

- Retail vs Commercial vs Corporate Credit Context
- Key elements of credit risk (probability of default, loss given default, exposure at default)
- Methods of credit risk management
- Regulatory trends in credit risk
- Structural approach to credit analysis
- Reduced form methods for credit analysis (hazard rate modelling)
- Credit Rating Agencies
- Principles of credit model selection
- Counterparty credit risk (introduction)
- Credit Default Swaps (introduction)

6. OPERATIONAL RISK

References: Crouhy, Galai and Marks Chapter 14.

Topics:

- Definition, scope and nature of operational risk (including long tail)
- Assessing operational risk with simulation methods and structured workshops
- Regulatory trends in operational risk
- Key Risk Indicators (KRI's) for operational risk
- Risk mitigation and treatment options

Learning and Teaching Activities

Strategy

Financial Risk Management has adopted the 'flipped classroom' methodology where students take greater responsibility for their own learning outside of the classroom. Students come to class better prepared and this enables class time to be used more effectively to explore complex issues and cases. There are more opportunities for student-to-student interaction, helping students to build the professional networks that are invaluable for career advancement. We expect that this learning and teaching method will encourage deeper and more effective learning.

The unit relies heavily on student engagement and participation by: (a) Continuous learning throughout the term. This is encouraged through a combination of students undertaking prescribed reading throughout the units and/or completion of practice problems, online activities, case studies, assignments, class discussions, etc and interaction via forums; and (b) Assessments, which enable the student to demonstrate his/her understanding of the learning objectives achieved through the continuous learning.

Student Participation

Students participate in this unit by: (a) Attending lectures and participating in class discussion; (b) Before each class, completing the pre-class activities, reading notes and other prescribed readings; (c) After each class, working systematically through suggested problem sets and completing post-class on-line activities; (d) Interacting in forums; and (e) Completing all assessment tasks and exams. On average, the unit will require students to complete, for every hour of class time, approximately 4 hours private study.

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). 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). 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 (https://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 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.

Students should also consult the MAFC Program Rules & Procedures found at http://www.mafc.mq.edu.au

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 enquiry service (MAFC-specific)

For all student enquiries, please contact studentsupport@mafc.mq.edu.au

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.

Learning Skills

Learning Skills (www.students.mq.edu.au/support/learning_skills/) 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 Enquiries

For all student enquiries, visit Student Connect at 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/.

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

- Apply a risk management framework, having regard to the business context, including the identification of appropriate risk management solutions.
- Use, interpret and critique quantitative methods for risk assessment.

Assessment tasks

- Assignment
- Participation
- Online Quizzes
- Final Exam

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 outcome

- Conduct independent research that communicates effectively.

Assessment task

- Assignment

PG - Engaged and Responsible, Active and Ethical Citizens

Our postgraduates will be ethically aware and capable of confident transformative action in

relation to their professional responsibilities and the wider community. They will have a sense of connectedness with others and country and have a sense of mutual obligation. They will be able to appreciate the impact of their professional roles for social justice and inclusion related to national and global issues

This graduate capability is supported by:

Learning outcome

- Identify and respond effectively to misconduct risks using an ethical framework.

Assessment tasks

- Participation
- Final Exam

Important Notice

This Unit Guide may be subject to change. The latest version is on the Centre's website at www.mafc.mq.edu.au. Students should read the Unit Guide carefully at the start of the term. It contains important information about the unit. If anything is unclear, please consult one of the unit lecturers.

Standards Required to Complete the Unit Satisfactorily

University Policy on Grading:

- Macquarie University's Academic Senate has established a Grading Policy available at http://www.mq.edu.au/policy/docs/grading/policy.html. Your final result will include:
    - A Grade ranging from Fail Hurdle to High Distinction; and
    - A numerical Mark which is a summation of the individual assessment components, providing the examination component is passed.
- It is important to note:
    - The Policy does not require that a minimum or maximum number of students are to be failed in any unit;
    - Grades will not be allocated to fit a predetermined distribution; and
    - Grades for all individual assessment items will be released to students, but Marks may not necessarily be released.

Specific Unit Grading:

- To pass this unit (i.e. requires a Mark of 50 or better) the student must pass the final examination.
    - Students who have attained a total raw mark of 50% or greater in a unit, but

have failed the unit's exam requirement and who have demonstrated "sufficient effort" in the exam, will be granted a single opportunity to sit a Supplementary Exam which will be graded on a pass/fail basis. The unit mark and grade for students who pass this examination will be those corresponding to the original total raw mark of all their assessment tasks, including the original exam. That is, the Supplementary Hurdle Exam only determines the meeting of the hurdle requirement. Students who have attained a raw mark of 50% or greater in a unit, yet failed all attempts at the requirement, will be awarded an Fail Hurdle Grade with a final Mark of 49.

- All final Marks and Grades in the Applied Finance Centre are determined by a grading committee and are not the sole responsibility of the unit convenor.

Grade	Expectation
High Distinction	Provides consistent evidence of deep and critical understanding in relation to the learning outcomes. There is substantial originality and insight in identifying, generating and communicating competing arguments, perspectives or problem solving approaches; critical evaluation of problems, their solutions and their implications; creativity in application as appropriate to the discipline.
Distinction	Provides evidence of integration and evaluation of critical ideas, principles and theories, distinctive insight and ability in applying relevant skills and concepts in relation to learning outcomes. There is demonstration of frequent originality in defining and analysing issues or problems and providing solutions; and the use of means of communication appropriate to the discipline and the audience.
Credit	Provides evidence of learning that goes beyond replication of content knowledge or skills relevant to the learning outcomes. There is demonstration of substantial understanding of fundamental concepts in the field of study and the ability to apply these concepts in a variety of contexts; convincing argumentation with appropriate coherent justification; communication of ideas fluently and clearly in terms of the conventions of the discipline.
Pass	Provides sufficient evidence of the achievement of learning outcomes. There is demonstration of understanding and application of fundamental concepts of the field of study; routine argumentation with acceptable justification; communication of information and ideas adequately in terms of the conventions of the discipline. The learning attainment is considered satisfactory or adequate or competent or capable in relation to the specified outcomes.
Fail	Does not provide evidence of attainment of learning outcomes. There is missing or partial or superficial or faulty understanding and application of the fundamental concepts in the field of study; missing, undeveloped, inappropriate or confusing argumentation; incomplete, confusing or lacking communication of ideas in ways that give little attention to the conventions of the discipline.
Fail Hurdle	Student has obtained a raw mark over 50, yet failed all available attempts of at least one hurdle assessment.

Review of Grade and final examination Script viewing:

- A student who has been awarded a final grade for a unit and who does not believe it is an accurate reflection of their performance, and has grounds for such a claim and can demonstrate those grounds, may apply to have their grade reviewed.
- For information on requesting a review of grade and/or viewing your final exam script, please refer to the University's Grade Appeal Policy at http://www.mq.edu.au/policy/doc

s/gradeappeal/policy.html and MAFC Program Rules at http://www.mafc.mq.edu.au.