ACST2001

Financial Modelling

Session 2, In person-scheduled-weekday, North Ryde 2024

Department of Actuarial Studies and Business Analytics

Contents

General Information

Unit convenor and teaching staff
Kenny Mok
kenny.mok@mq.edu.au

Credit points
10

Prerequisites
50cp at 1000 level or above including [(ACST101 or ACST1001) and (STAT150 or STAT1250 or STAT170 or STAT1170 or STAT171 or STAT1371)]

Corequisites

Co-badged status

Unit description
This unit explores some basic concepts of finance, in particular: price; yield; the relationship between price and yield; interest rate risk; reinvestment risk; duration and its uses; volatility; the contingent payments approach; arbitrage pricing theory; pricing forwards; futures and options. To achieve understanding, this unit uses financial mathematics (the techniques learned in ACST1001 are developed further here) to analyse transactions involving commonly used financial instruments in the context of the markets in which they are traded. At the same time, students develop skills in solving problems; in explaining financial ideas in simple language; in constructing spreadsheet models; and in working as part of a team. A range of assessment tasks are provided, some to generate feedback on how well the understanding and skills are developing, and others to determine the standard of understanding and skills attained.

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: Apply the basic concepts and principles of financial analysis into solving financial problems.

ULO2: Design Excel spreadsheets to solve basic problems in financial analysis.

ULO3: Appraise the work of others in the field of financial analysis.

ULO4: Construct a solution to a problem in financial analysis as part of a team.

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
Spreadsheet Project Task	20%	No	Week 09
Take-home Quizzes	30%	No	Week 04 & 10
Final Exam	50%	No	Exam period

Spreadsheet Project Task

Assessment Type [1]: Quantitative analysis task
Indicative Time on Task [2]: 20 hours
Due: **Week 09**
Weighting: **20%**

There are two components (an individual task and a group spreadsheet task). You will need to submit the tasks via iLearn.

On successful completion you will be able to:

- Apply the basic concepts and principles of financial analysis into solving financial problems.
- Design Excel spreadsheets to solve basic problems in financial analysis.
- Appraise the work of others in the field of financial analysis.
- Construct a solution to a problem in financial analysis as part of a team.

Take-home Quizzes

Assessment Type [1]: Quiz/Test
Indicative Time on Task [2]: 20 hours
Due: **Week 04 & 10**
Weighting: **30%**

You will use the quiz links on iLearn to complete two take-home quizzes.

On successful completion you will be able to:

- Apply the basic concepts and principles of financial analysis into solving financial problems.
- Appraise the work of others in the field of financial analysis.

Final Exam

Assessment Type [1]: Examination
Indicative Time on Task [2]: 28 hours
Due: **Exam period**
Weighting: **50%**

The final examination will be a two-hour written paper with ten minutes reading time, to be held during the University Examination period.

On successful completion you will be able to:

- Apply the basic concepts and principles of financial analysis into solving financial problems.
- Design Excel spreadsheets to solve basic problems in financial analysis.
- Appraise the work of others in the field of financial analysis.
- Construct a solution to a problem in financial analysis as part of a team.

---

[1] 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.

[2] 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

Delivery and Resources

Lectures

Lectures will be held on campus—please refer to the timetable or eStudent for class details. A lecture recording will be available to students after the on-campus lecture is held.

Tutorials and Practicals

Tutorials will be held in week 01, and then in weeks 06 to 13, inclusive. Practical classes will only be held in weeks 02 to 05. Tutorials and practicals never run concurrently—in any week, you attend either a tutorial or practical, but never both.

Calculators

You may use a calculator in the class tests and at the final exam provided that it is portable, silent and battery operated, but you must show clearly the steps involved in every calculation. In the final exam you may NOT use any calculators that have a text-retrieval capacity, whether or not they have a full alphabet on the keyboard. Calculators may be checked at the commencement of the final exam, and the make/model may be recorded.

Software

Many of the problems you will encounter in this unit can be solved easily with the spreadsheet program, Excel. You can use this spreadsheet program to verify your solutions to many of the problems you are solving. You will need to use Excel to do the Group Spreadsheet Project. Excel can also be used to easily create and edit CSV (comma-separated values) files. You will submit your answers to the two take-home quizzes (and the *individual part* of the Group Spreadsheet Project) using CSV files. In addition, students in ACST2001 will be given access to the financial industry data platform, FactSet. This can be accessed through a web browser. You will use the data from FactSet to complete a number of the assessment tasks in the unit.

Unit Schedule

Week 01: Simple interest and short-term financial instruments, compound interest and bonds.

Weeks 02–03: Short-term financial instruments and bond prices.

Week 04: Bond prices, bond yields and zero coupon bonds.

Week 05: Re-investment risk and TRCY

Week 06: Horizon analysis.

Week 07: Horizon analysis, bond duration.

Week 08: Bond duration.

Weeks 09-10: Contingent payments, forward contracts.

Week 11: Forward contracts.

Week 12: Option pricing.

Week 13: Revision.

Policies and Procedures

Macquarie University policies and procedures are accessible from Policy Central (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). 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) 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 or if you are a Global MBA student contact 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/.

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.

Unit information based on version 2024.05 of the Handbook