ECON3034

Financial Econometrics

Session 2, In person-scheduled-weekday, North Ryde 2026

Department of Economics

Contents

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General Information

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Credit points 10	
Prerequisites ECON2041 or STAT2372 or AFIN2070	
Corequisites	
Co-badged status	
Unit description This unit examines econometric techniques that are used in portfolio management, risk management and securities analysis. It provides students with the tools necessary for financial applications in these and other areas. Statistical techniques are developed in the context of particular financial applications. Recent empirical evidence is also discussed.	

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 econometric methods to modelling, analysing and forecasting financial data.

ULO2: Demonstrate and explain different estimation methodologies.

ULO3: Critically evaluate empirical econometric work.

ULO4: Present results based on financial econometric analysis, to a non-technical audience, in a clear and understandable manner.

General Assessment Information

Late Assessment Submission Penalty (written assessments)

If you submit your assessment late, 5% of the total possible marks will be deducted for each day (including weekends), up to 7 days. Submissions more than 7 days late will receive a mark of 0.

Example 1 (out of 100): If you score 85/100 but submit 20 hours late, you will lose 5 marks and receive 80/100.

Example 2 (out of 30): If you score 27/30 but submit 20 hours late, you will lose 1.5 marks and receive 25.5/30.

Extensions:

Automatic short extension: Some assessments are eligible for automatic short extension. You can only apply for an automatic short extension before the due date.

Special Consideration: If you need more time due to serious issues and for any assessments that are not eligible for Short Extension, you must apply for Special Consideration. Need help? Review the Special Consideration page for further details.

Assessment Tasks

Name	Weighting	Hurdle	Due	Groupwork/Individual	Short Extension	AI Approach
Formal examination	40%	No	University Examination Period	Individual	No	Observed
Skills development: Data analysis task	30%	No	14/10/2026	Individual	Yes	Open

Name	Weighting	Hurdle	Due	Groupwork/Individual	Short Extension	AI Approach
Skills development: Financial econometrics quiz	30%	No	Week 7 (during lecture time & in person)	Individual	No	Observed

Formal examination

Assessment Type [1]: Examination
Indicative Time on Task [2]: 30 hours
Due: **University Examination Period**
Weighting: **40%**
Groupwork/Individual: Individual
Short extension [3]: No
AI Approach: Observed

The purpose of this assessment is for you to demonstrate the expertise you have gained in this unit.

You will participate in a 2-hour, on campus, closed-book exam held during the University Examination period.

Important information about the exam will be made available on the unit iLearn page. You should also review the MQ Exams website for general tips.

Deliverable(s): Formal exam

Individual assessment

On successful completion you will be able to:

- Demonstrate and explain different estimation methodologies.
- Critically evaluate empirical econometric work.

Skills development: Data analysis task

Assessment Type [1]: Professional task
Indicative Time on Task [2]: 25 hours
Due: **14/10/2026**
Weighting: **30%**
Groupwork/Individual: Individual
Short extension [3]: Yes
AI Approach: Open

The purpose of this task is to help you gain an appreciation for how financial econometrics is applied in practice. You will answer questions that require you to apply appropriate econometric tools to model and estimate economic and financial data.

Skills in focus:

- Discipline Knowledge
- Critical thinking and problem solving
- Digital skills

Deliverable(s): Written submission

Individual assessment

On successful completion you will be able to:

- Critically evaluate empirical econometric work.
- Present results based on financial econometric analysis, to a non-technical audience, in a clear and understandable manner.

Skills development: Financial econometrics quiz

Assessment Type [1]: Problem-based task
Indicative Time on Task [2]: 15 hours
Due: **Week 7 (during lecture time & in person)**
Weighting: **30%**
Groupwork/Individual: Individual
Short extension [3]: No
AI Approach: Observed

The purpose of this problem set is to assess your foundational concepts and skills in financial econometrics. You will be given a set of problem solving questions and receive feedback on your progress.

Skills in focus:

- Discipline knowledge
- Critical thinking and problem solving
- Digital skills

Deliverable(s): Quiz

Individual assessment

On successful completion you will be able to:

- Apply econometric methods to modelling, analysing and forecasting financial data.
- Demonstrate and explain different estimation methodologies.

[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
- Academic Success 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.

[3] An automatic short extension is available for some assessments. Apply through the Service Connect Portal.

Delivery and Resources

Delivery

The intended delivery mode is as per the timetable: https://publish.mq.edu.au/.

Resources

The prescribed textbook for the unit is:

- Brooks, C. (2019) Introductory Econometrics for Finance, 4th Edition, Cambridge University Press.
- Hurn, S., Martin, V. L., Yu, J., and Phillips, P. C.B. (2020), Financial Econometric Modeling, Oxford University Press.

In addition to the textbook, the following references are useful but are not required.

- Diebold, F. (2007) Elements of Forecasting, 4th Edition, South-Western College.
- Enders, W. (2014) Applied Econometric Time Series, 4th Edition, Wiley.

Material such as lecture slides, examples, and tutorial questions will be available on the unit home page. The text and lecture notes, together with the lectures and additional references will provide students with a clear indication of the basic content of the unit.

It is recommended that students attend all lectures and tutorials for several reasons including:

- Not all the material in the text is included in the unit, and not all the material in the unit is covered in the text. In some places the text deals with issues in greater depth than is necessary for the unit, and in other places it doesn’t go far enough. The lectures contain all the unit material taught at the level required for the assessment tasks, and are your guide to the unit content.
- The approaches to some problems that are recommended by the lecturer are different to those in the text.
- The lectures will include guidance about the style and content of the final exam and recommendation about study technique.

- It is difficult (and often impossible) for staff to provide meaningful assistance to students outside class times on topics for which they did not attend the relevant lectures and tutorials.

Technology Used and Required

Students are required to use a computer to carry out certain tasks of the course, such as tutorials and assignments.

Unit Web Page

Course material is available on the learning management system (iLearn), which can be found at: http://ilearn.mq.edu.au.

Unit Schedule

The list below is a proposed study plan, but this may be modified as we progress through the semester to allow us to take more or less time with different sections of the course as required.

Week No.	Lecture Topic	Tutorials
1	Characteristics of Financial Data; Revision of Basic Mathematical and Statistical Concepts Textbook: Chapter 1 and Chapter 2, all sections; 4th or 3rd Edition. Lecture Notes.	
2	Correlation and Basic Regression Methods Textbook: Chapter 3, all sections, excluding the appendix; 4th or 3rd Edition. Lecture Notes.	Tutorial Week 2
3	Multiple Linear Regression Model Textbook: 4th Edition Chapter 4, Sections 4.1 to 4.7 inclusive, Section 4.9. Lecture Notes; or Textbook: 3rd Edition Chapter 4, Sections 4.1 to 4.8 inclusive, Section 4.10. Lecture Notes.	Tutorial Week 3
4	Regression Model Diagnostics Textbook: Chapter 5, all sections. Chapter 10, Sections 10.1 to 10.3 inclusive; 4th or 3rd Edition. Lecture Notes.	Tutorial Week 4
5	Time Series Models Textbook: Chapter 6, Sections 6.1 to 6.5; 4th or 3rd Edition. Lecture Notes.	Tutorial Week 5
6	Identification of Time Series Models Textbook: Chapter 6, Sections 6.1 to 6.5; 4th or 3rd Edition. Lecture Notes.	Tutorial Week 6
	Mid-semester Break	

7	Class Test	Tutorial Week 7
8	Forecasting with Time Series Models Textbook: 4th Edition, Chapter 6, Sections 6.10. Lecture Notes; or Textbook: 3rd Edition, Chapter 6, Sections 6.11 and 6.12. Lecture Notes.	Tutorial Week 8
9	Modeling Volatility: Specification and Estimation of ARCH and GARCH Models Textbook: Chapter 9, Sections 9.1 to 9.4 inclusive, Sections 9.6 to 9.9 inclusive; 4th or 3rd Edition. Lecture Notes.	Tutorial Week 9
10	Modeling Volatility (Extensions of GARCH Models) and Forecasting Volatility Textbook: 4th Edition, Chapter 9, Sections 9.10 to 9.18 inclusive, Lecture Notes; or Textbook: 3rd Edition, Chapter 9, Sections 9.10 to 9.19 inclusive, Lecture Notes. **Assignment due Wednesday @ 11:55pm (Sydney time).**	Tutorial Week 10
11	Nonstationarity in Financial Time Series Textbook: 4th Edition, Chapter 8, Sections 8.1. Lecture Notes; or Textbook: 3rd Edition, Chapter 8, Sections 8.1 & 8.3. Lecture Notes	Tutorial Week 11
12	Long-Run Relationships in Finance Textbook: 4th Edition, Chapter 8, Sections 8.3 to 8.6.1 inclusive. Lecture Notes; or Textbook: 3rd Edition, Chapter 8, Sections 8.3 to 8.7.1 inclusive. Lecture Notes.	Tutorial Week 12
13	Revision	Tutorial Week 13

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 connect.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/

Academic Success

Academic Success provides resources to develop your English language proficiency, academic writing, and communication skills.

- Ask a Study Coach
- 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 the Service Connect Portal, or contact Service Connect.

IT Help

For help with University computer systems and technology, visit https://students.mq.edu.au/support/technology/service-desk.

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 2026.04 of the Handbook