
School of Economics and Finance

MMAF 524: Financial Econometrics

Trimester 2 2012

COURSE OUTLINE

Name and Contact Details

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Trimester Dates

Teaching Period: Monday 16 July - Friday 19 October
Study Period: Monday 22 October - Thursday 25 October
Examination Period: Friday 26 October - Saturday 17 November (inclusive)

Please note that Monday 22 October is a public holiday, Labour Day.

Withdrawal from Course

1. Your fees will be refunded if you withdraw from this course on or before Friday 27 July 2012.
2. The standard last date for withdrawal from this course is 28 September 2012. After this date, students forced to withdraw by circumstances beyond their control must apply for permission on an “*Application for Associate Dean’s Permission to Withdraw Late*” including supporting documentation.

The application form is available from either of the Faculty’s Student Customer Service Desks.

Class Times and Room Numbers

	Date	Time	Room
Lectures:	Tuesday	08:30-10:20	RWW202

We will often use the second lecture hour as a tutorial session.

Course Content

This course is concerned with the application of quantitative tools to model, estimate and forecast financial variables. Topics considered include: the analysis of the properties of financial data with an emphasis on non-normality and non-stationarity; the application of estimation methods including unit roots and co-integration, to the rational valuation model of share prices; the application of the GARCH class of models to estimate volatility and to test the capital asset pricing model.

Course Learning Objectives

Students should be able to:

1. apply quantitative tools to model, estimate and forecast financial variables,
2. analyze the statistical properties of financial prices and returns,
3. evaluate models of risk based on the Capital Asset Pricing Model and variants assuming non-normal return processes,
4. analyze recent advances in unit root and co-integration methods in modeling the term structure of interest rates and asset price bubbles,
5. describe the strengths and limitations of alternative quantitative methods by reproducing existing results using computer skills and mathematical modeling techniques, in conjunction with a range of financial data set,
6. perform sensitivity analyses on proposed models, which should include the application of alternative distributional specifications to model risk.

Course Delivery

A 110-minute lecture per week for 12 weeks. As mentioned in the “Class Times and Room Numbers”, we will often use the second lecture hour as a tutorial session.

Expected Workload

The **expected workload** is a total of 200 hours. In addition to the lecture times, this might include tutorial preparation of 36 hours, reviewing material for the test and exam of 100 hours and working on assignments for 40 hours.

Readings

Lecture notes, **announcements**, assignment questions and other information will be posted on the blackboard website: <http://blackboard.vuw.ac.nz>.

There are copies of the following recommended textbooks in the library:

- Campbell, J.Y., A.W. Lo, and A.C. MacKinlay, *The Econometrics of Financial Markets*, Princeton University Press, 1997.
- Cochrane, J.H., *Asset Pricing*, Princeton University Press, 2001.
- Taylor, Stephen J., *Asset Price Dynamics, Volatility, and Prediction*, Princeton University Press, 2005.
- Ait-Sahalia, Y., and Hansen, L., *Handbook of Financial Econometrics*, Elsevier.

Assessment Requirements

Type	Number	Weight	Total
Assignments:	2	30%	60%
Final Exam:	1	40%	40%
Total			100%

Your assessed work may also be used for quality assurance purposes, such as to assess the level of achievement of learning objectives as required for accreditation and audit purposes. The findings may be used to inform changes aimed at improving the quality of FCom programmes. All material used for such processes will be treated as confidential, and the outcome will not affect your grade for the course.

Materials and Equipment

To implement the theoretical development of forecasting, we will use *EViews* to practice forecasting techniques. *EViews* is installed and ready-to-use in the computer classrooms located in the Railway West Wing. Students who find use of the university computer labs less convenient may wish to purchase a student version of *EViews* (available online). Students may also use a calculator during the tests.

Examinations

Students who enrol in courses with examinations are obliged to attend an examination at the University at any time during the formal examination period. The final examination for this course will be scheduled at some time during the period from Friday 26 October - Saturday 17 November (inclusive).

Penalties

Each of the assignments will be marked out of a maximum that diminishes by 5 percent for every day late. You may submit your assignment in hard-copy or soft-copy format. The final cut off date is the first Friday after the due date for each assignment, so no assignment will be accepted afterwards.

Mandatory Course Requirements

There are no mandatory course requirements.

Class representative

A class representative will be elected in the first class, and that person's name and contact details made available to VUWSA, the Course Coordinator and the class. The class representative provides a communication channel to liaise with the Course Coordinator on behalf of students.

Use of Turnitin

Student work provided for assessment in this course may be checked for academic integrity by the electronic search engine <http://www.turnitin.com>. Turnitin is an on-line plagiarism prevention tool which compares submitted work with a very large database of existing material. At the discretion of the Head of School, handwritten work may be copy-typed by the School and subject to checking by Turnitin. Turnitin will retain a copy of submitted materials on behalf of the University for detection of future plagiarism, but access to the full text of submissions will not be made available to any other party.

Links

For the following important information follow the links provided:

- Academic Integrity & Plagiarism:
<http://www.victoria.ac.nz/home/study/plagiarism.aspx>
- General University Policies & Statutes: Find key dates, explanations of grades and other useful information at:
www.victoria.ac.nz/home/study
Find out about academic progress and restricted enrolment at:
<http://www.victoria.ac.nz/home/study/academic-progress.aspx>
The University's statutes and policies are available at:
www.victoria.ac.nz/home/about/policy,
except qualification statutes, which are available via the Calendar webpage at:
<http://www.victoria.ac.nz/home/study/calendar.aspx> (See Section C).
Further information about the University's academic processes can be found on the website of the Assistant Vice-Chancellor (Academic) at:
www.victoria.ac.nz/home/about_victoria/avcacademic/default.aspx
- AVC (Academic) Website: information including: Conduct, Academic Grievances, Students with Impairments, Student Support
http://www.victoria.ac.nz/home/about_victoria/avcacademic/Publications.aspx
- Faculty of Commerce Offices: <http://www.victoria.ac.nz/fcom/studenthelp/>
- Te Putahi Atawhai - Maori and Pacific Mentoring Programme:
<http://www.victoria.ac.nz/tpa>

Intended Timetable

Date	Homework Assignments	Topic
Week 1		Part 1 - Introduction
Week 2		Part 1 - (cont.d)
Week 3	HW#1 assigned	Part 2 - Classic Linear Regression Model
Week 4		Part 2 - (cont.d)
Week 5		Part 3 - Unit Roots and Cointegration
Week 6		Part 3 - (cont.d)
		Midterm break
		Midterm break
Week 7	HW#1 due SEP-11-2012	Part 4 - Forecasting
Week 8	HW#2 assigned	Part 4 - (cont.d)
Week 9		Part 5 - Time-Varying Volatility
Week 10		Part 5 - (cont.d)
Week 11		Part 6 - Nonlinear Models
Week 12	HW#2 due OCT-16-2012	Part 6 - (cont.d)
22-OCT-2012		Study period begins
26-OCT-2012		Final exam period begins
17-NOV-2012	2-hour Final Exam	Final exam period ends

Note: Each homework assignment is due the first lecture of its specified week.