

School of Economics and Finance
QUAN304 FINANCIAL ECONOMETRICS

Trimester One 2009

COURSE OUTLINE

Names and Contact Details

Course coordinator: Dr. Pian Chen
Room: RH404
Phone: (04) 463-6770
Email: Pian.Chen@vuw.ac.nz
Office Hours: TBA

Trimester Dates

Monday 2 March to Wednesday 1 July 2009

Class Times and Room Numbers

Class times: 10:30 to 11:20 Monday and Friday
11:30 to 12:20 Wednesday
Room: Railway West Wing 129

Tutorial time and Room: 16:40 to 17:30 Friday RH G03

Midterm exam time: One of the days during 7th week - TBA
Final exam time: Between Friday, 12 June to Wednesday, 1 July 2009.

Withdrawal dates: Information available via
<http://www.victoria.ac.nz/home/admisenrol/payments/withdrawalsrefunds.aspx>

Course Content

This course focuses on econometric methods for analysing financial time series data. It begins with important financial variables and types of stationarity. The first six weeks will be devoted to linear regression with applications to the Capital Asset Pricing Model (CAPM). In the second six weeks, nonlinear models for stationary data will be addressed.

Every week (except first weeks of each half) has four-hour classes: three-hour regular lectures and one-hour tutorial. Course information, assignments and answer keys will be distributed via Blackboard. We will use *EViews*, a statistical software package available at the Cyber-common room, for data cleaning and analysis.

Course Plan

The First Half:

1st week: Definition of important financial variables and stationarity

2nd week: Introduction to basic stochastic processes

3rd week: Classic linear regression (CLR)

4th week: The CAPM

5th week: Generalized Least Squares (GLS)

Seemingly Unrelated Regression (SUR)

6th week: Hypothesis testing

Mid-trimester Break: 13 to 25 April

The Second Half:

7th week: Maximum Likelihood Estimation

8th – 9th week: ARCH and GARCH

10th – 11th week: Regime Switching Models

12th week: Review

Course Learning Objectives

Completing students should be able to :

- understand and use types of financial data and the relevant econometric tools
- apply classical regression models to CAPM
- use extensions of classical regression models in applications in finance
- understand and apply maximum likelihood estimations
- estimate ARCH and GARCH models
- estimate regime switching models.
- use real financial data to test existing financial theories, which promotes critical thinking.

Expected Workload

For students who have fulfilled the normal prerequisites at VUW, about 12 hours per week should be weekly average workload, which includes class times. From the prior experiences, students can reduce workloads substantially by participating in class activities vigorously and not by accumulating them at the end of trimester.

Group Work

Group study and discussion are strongly encouraged. Each student to hand their own assignments.

Readings

Textbook: The Econometrics of Financial Markets, by John Y. Campbell, Andrew W. Lo, & A. Craig MacKinlay, Princeton University Press, 2007.

Lecture notes and handouts will be available via Blackboard.

Materials and Equipment

A non-programmable calculator is allowed for the mid term test and the final examination.

Assessment Requirements

There will be one test and one final examination. Assessment will be based on the following formula: $0.2 \text{ Assignments} + 0.4 \text{ Test} + 0.4 \text{ Final}$.

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. Examination dates for trimester one: Friday, 12 June to Wednesday, 1 July 2009.

Penalties

Late or no submission of assignments will receive zero score.

Mandatory Course Requirements

Attempting each item of assessment.

Communication of Additional Information

Additional information will be announced via Blackboard.

Faculty of Commerce and Administration Offices

Railway West Wing (RWW) - FCA Student and Academic Services Office

The Faculty's Student and Academic Services Office is located on the ground and first floors of the Railway West Wing. The ground floor counter is the first point of contact for general enquiries and FCA forms. Student Administration Advisers are available to discuss course status and give further advice about FCA qualifications. To check for opening hours call the Student and Academic Services Office on (04) 463 5376.

Easterfield (EA) - FCA/Education/Law Kelburn Office

The Kelburn Campus Office for the Faculties of Commerce and Administration, Education and Law is situated in the Easterfield Building on the ground floor (EA005). This counter is the first point of contact for:

- Duty tutors for student contact and advice.
- Information concerning administrative and academic matters.
- Forms for FCA Student and Academic Services (e.g. application for academic transcripts, requests for degree audit, COP requests).
- Examinations-related information during the examination period.

To check for opening hours call the Student and Academic Services Office on (04) 463 5376.

General University Policies and Statutes

Students should familiarise themselves with the University's policies and statutes, particularly the Assessment Statute, the Personal Courses of Study Statute, the Statute on Student Conduct and any statutes relating to the particular qualifications being studied; see the Victoria University Calendar or go to www.victoria.ac.nz/home/about/policy/students.aspx

For information on the following topics, go to the Faculty's website www.victoria.ac.nz/fca under Important Information for Students:

- Academic Grievances
- Student and Staff Conduct
- Meeting the Needs of Students with Impairments
- Student Support

Academic Integrity and Plagiarism

Academic integrity is about honesty – put simply it means *no cheating*. All members of the University community are responsible for upholding academic integrity, which means staff and students are expected to behave honestly, fairly and with respect for others at all times.

Plagiarism is a form of cheating which undermines academic integrity. The University defines plagiarism as follows:

The presentation of the work of another person or other persons as if it were one's own, whether intended or not. This includes published or unpublished work, material on the Internet and the work of other students or staff.

It is still plagiarism even if you re-structure the material or present it in your own style or words.

Note: including the work of others will not be considered plagiarism as long as the work is acknowledged by appropriate referencing.

Plagiarism is prohibited at Victoria and is not worth the risk. Any enrolled student found guilty of plagiarism will be subject to disciplinary procedures under the Statute on Student Conduct and may be penalised severely. Consequences of being found guilty of plagiarism can include:

- an oral or written warning
- cancellation of your mark for an assessment or a fail grade for the course
- suspension from the course or the University.

Find out more about plagiarism, and how to avoid it, on the University's website:

www.victoria.ac.nz/home/studying/plagiarism.html

Manaaki Pihipihinga Programme

Manaaki Pihipihinga is an academic mentoring programme for undergraduate Māori and Pacific students in the Faculties of Commerce and Administration, and Humanities and Social Sciences. Sessions are held at the Kelburn and Pipitea Campuses in the Mentoring Rooms, 14 Kelburn Parade (back courtyard), Room 109D, and Room 210, Level 2, Railway West Wing. There is also a Pacific Support Coordinator who assists Pacific students by linking them to the services and support they need while studying at Victoria. Another feature of the programme is a support network for Postgraduate students with links to Postgraduate workshops and activities around Campus.

For further information, or to register with the programme, email manaaki-pihipihinga-programme@vuw.ac.nz or phone (04) 463 6015. To contact the Pacific Support Coordinator, email pacific-support-coord@vuw.ac.nz or phone (04) 463 5842.