

School of Economics and Finance
MMAF 532 STOCK PRICES AND VOLATILITY

Trimester 1 2006

COURSE OUTLINE

Staff Dr John Randal, RH308, phone 463-5558 (coordinator)
contact by email preferred at: john.randal@vuw.ac.nz
Dr Peter Thomson, RH312
contact by email preferred at: peter@statsresearch.co.nz

Lecture times Fridays, 14:40-16:30, GB G04

Tutorial/lab time Fridays, 16:40-17:30, RLWY102

Objectives

This course has been designed to introduce students to some of the special features of financial data and the specialised techniques used to cope with these features. The course is intended to be useful preparation for a job as a quantitative analyst, or for postgraduate study in finance. Throughout the course, general and transferable computer skills will be developed, including the ability to program modern financial techniques.

Course content

The course will be run as a series of modules. These will be as follows:

- Extracting and confirming features of financial data. (JR, wks 1-2);
- Modelling and simulating stock prices (JR, wks 3-4);
- Estimation of continuous time models (JR, wks 5-6);
- Volatility modelling (PT, wks 7-9);
- Modelling heavy tails and regimes (PT, wks 10-12).

Readings

There will be background reading (textbook and/or journal) for each module and a reading list will be made available at the beginning of each module.

Course Materials

The statistical software R has been installed on the SCS computers. If you regularly use a non-VUW PC, R is available free of charge at <http://www.r-project.org/> for Windows, Mac or Linux. Alternatively, bring a blank CD-R to John, and he will burn a copy of the most recent version for you.

Assessment

Each module will be assessed by way of a project-type assignment. These assignments will be distributed before the end of the modules, and will consist of theoretical problems, and computer exercises. They may require some additional background reading. The assignments will be worth 60% in total, but will not likely be equally weighted. Weights will be indicated on the instruction sheet.

The course will also be assessed via a two hour exam in the University exam period (30 May–18 June). This exam will consist of essay questions (possibly including mathematical argument) which will test appreciation and understanding of the techniques covered and their role in financial research. The exam will be worth the remaining 40%.

In the event that this assessment scheme yields a fail grade, but the exam mark alone yields a pass, a C pass will be awarded. In order to obtain an A+ pass, at least 80% must be met in both forms of assessment, and 85% overall.

Penalties

Projects handed in late will attract a 10% penalty per day for the first five days, and be awarded zero after five days. Extensions may be negotiated prior to the deadline with the lecturer concerned.

Mandatory course requirements

All projects must be submitted, and the examination attended. A short computing assignment must be completed to the required standard, and submitted at or before the second lecture.

Communication of additional information

Course notices will generally be relayed in class, via email, and put on Blackboard. Any queries should be directed to John.

Faculty of Commerce and Administration Offices

Railway West Wing (RWW) - FCA Student Administration Office

The Student Administration 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 office on 463-5376.

Easterfield (EA) - FCA/Law Kelburn Office

The Kelburn Campus Office for the Faculties of Commerce & Administration and Law is situated in the Easterfield Building - it includes the ground floor reception desk (EA005) and offices 125a to 131 (Level 1). The office is available for the following:

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

Check with the Student Administration Office for opening times, on 463-5376.

General University policies and statutes

Students should familiarise themselves with the University's policies and statutes, particularly those regarding assessment and course of study requirements, and formal academic grievance procedures.

Student Conduct and Staff Conduct

The Statute on Student Conduct together with the Policy on Staff Conduct ensure that members of the University community are able to work, learn, study and participate in the academic and social aspects of the University's life in an atmosphere of safety and respect. The Statute on Student Conduct contains information on what conduct is prohibited and what steps can be taken if there is a complaint. For queries about complaint procedures under the Statute on Student Conduct, contact the Facilitator and Disputes Advisor. This Statute is available in the Faculty Student Administration Office or on the website at:

<http://www.vuw.ac.nz/policy/StudentConduct>.

The policy on Staff Conduct can be found on the VUW website at:

<http://www.vuw.ac.nz/policy/StaffConduct>.

Academic Grievances

If you have any academic problems with your course you should talk to the tutor or lecturer concerned or, if you are not satisfied with the result of that meeting, see the Head of School or the Associate Dean (Students) of your Faculty. Class representatives are available to assist you with this process. If, after trying the above channels, you are still unsatisfied, formal grievance procedures can be invoked. These are set out in the Academic Grievances Policy which is published on the VUW website:

<http://www.vuw.ac.nz/policy/AcademicGrievances>.

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. Plagiarism is **prohibited** at Victoria.

The University defines plagiarism as follows:

Plagiarism is presenting someone else's work as if it were your own, whether you mean to or not.

'Someone else's work' means anything that is not your own idea, even if it is presented in your own style. It includes material from books, journals or any other printed source, the work of other students or staff, information from the Internet, software programmes and other electronic material, designs and ideas. It also includes the organization or structuring of any such material.

Plagiarism is not worth the risk.

Any enrolled student found guilty of plagiarism will be subject to disciplinary procedures under the Statute on Student Conduct

(<http://www.vuw.ac.nz/policy/studentconduct>)

and may be penalized severely. Consequences of being found guilty of plagiarism can include:

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

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

<http://www.vuw.ac.nz/home/studying/plagiarism.html>.

Students with Disabilities

The University has a policy of reasonable accommodation of the needs of students with disabilities. The policy aims to give students with disabilities an equal opportunity with all other students to demonstrate their abilities. If you have a disability, impairment or chronic medical condition (temporary, permanent or recurring) that may impact on your ability to participate, learn and/or achieve in lectures and tutorials or in meeting the course requirements, then please contact the Course Coordinator as early in the course as possible. Alternatively you may wish to approach a Student Adviser from Disability Support Services to confidentially discuss your individual needs and the options and support that are available. Disability Support Services are located on Level 1, Robert Stout Building, or phoning 463-6070, email: disability@vuw.ac.nz. The name of your School's Disability Liaison Person can be obtained from the Administrative Assistant or the School Prospectus.

Student Support

Staff at Victoria want students' learning experiences at the University to be positive. If your academic progress is causing you concern, please contact the relevant Course Co-ordinator, or Associate Dean who will either help you directly or put you in contact with someone who can.

The Student Services Group is also available to provide a variety of support and services. Find out more at

http://www.vuw.ac.nz/st_services/
or email student-services@vuw.ac.nz.

VUWSA employs two Education Coordinators who deal with academic problems and provide support, advice and advocacy services, as well as organising class representatives and faculty delegates. The Education Office is located on the ground floor, Student Union Building, phone 463-6983 or 463-6984, email education@vuwsa.org.nz.

Manaaki Pihipihinga Māori and Pacific Mentoring programme

(Faculties of Humanities and Social Sciences and Commerce and Administration).

- What: Academic Mentoring for Māori and Pacific students studying at all levels in the above schools. Weekly sessions for an hour with a mentor to go over assignments and any questions from tutorials or lectures. Registered students can use the facilities study rooms and computer suite, at any time, at Kelburn and Pipitea.
- Mature student and Post grad network.

If you would like to register as a mentor or mentee please contact the coordinator.

Where: Melissa Dunlop, Programme Coordinator, Room 109 D, 14 Kelburn Parade (back courtyard), 463-6015, Email: Maori-Pacific-Mentoring@vuw.ac.nz.

Please Note: A mentoring room will also be running at Pipitea Campus starting January. Please contact the Programme Coordinator for details.