

School of Economics and Finance

## **FINA412: Applications and Extensions of the Capital Asset Pricing Model**

Trimester One 2010

### **COURSE OUTLINE**

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#### **Names and Contact Details**

The Course Coordinator and lecturer for the course is Martin Lally, RH 301, ext 5998, [martin.lally@vuw.ac.nz](mailto:martin.lally@vuw.ac.nz). Students are free to contact him at any time.

#### **Trimester Dates**

The teaching period runs from Monday 1 March till Friday 4 June and the examination period is from Friday 11 June to Wednesday 30 June (inclusive).

#### **Withdrawal from Courses:**

Information available via

**Withdrawal dates: Late withdrawals with Associate Dean (Students) permission**  
(See Section 8: Withdrawals - from the Personal Courses of Study Statute)

<http://policy.vuw.ac.nz/Amphora!~~policy.vuw.ac.nz~POLICY~000000001743.pdf>

**Withdrawal dates: refunds:**

<http://www.victoria.ac.nz/home/admisenrol/payments/withdrawalsrefunds.aspx>

#### **Class Times and Room Numbers**

Classes will run on Mondays from 3.40pm till 6.30pm in RWW413.

#### **Course Learning Objectives**

The course learning objectives are as follows:

- To demonstrate an understanding of selected extensions to the Capital Asset Pricing Model, and the estimation of parameters in those models. The exam and weekly assignments relate to this.
- To demonstrate an ability to critically assess a piece of financial analysis involving some of the preceding issues. The essay relates to this.

#### **Course Delivery**

The delivery of the course will involve weekly classes, involving review of the previous week's assignment and the presentation of new material.

#### **Expected Workload**

A minimum of 13 hours per week, comprising 3 hrs for the class, 3 hrs in preparing the assignment, 4 hrs in undertaking the background reading, and 3 hrs in researching and writing the essay. In addition, students will require time in preparation for the exam.

### **Materials and Equipment**

Students are permitted to use electronic calculators in the exam, providing that they are not programmable and do not have a full set of alphabetic keys.

### **Assessment Requirements**

The final mark for the course will be based upon the following approximate weights

Weekly assignments	25%
Essay	25%
Final Exam	50%

The essay comprises a critical review of the ESC's estimates for the market risk premium and the equity beta in the *Electricity Distribution Price Review 2006-2010 Final Decision Volume 1, Chapter 9*, pp. 345-365 ([www.esc.vic.gov.au](http://www.esc.vic.gov.au)). It must be typed, 1.5 spaced A4, font 12, with a maximum of 18 pages at 25 lines per page excluding the bibliography (approx. 6000 words). Pages must be **numbered**. Students should consult a book on essay style and may also wish to examine the following example of a critical review: *Investing in New Zealand: A Review* ([www.nzsuperfund.co.nz](http://www.nzsuperfund.co.nz)). An Executive Summary is not required. The Introduction and Conclusion should be brief. The due date is **June 4** (5.00pm).

*Note: 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 FCA programmes. All material used for such processes will be treated as confidential, and the outcome will not affect your grade for the course.*

### **Examinations**

Students who enrol in courses with examinations are obliged to attend an examination at the University at some time during the formal examination period. The final examination for this course will be scheduled at some time during the period from Friday 11 June to Wednesday 30 June, 2010.

### **Penalties**

Late essays will suffer a penalty of 5% per business day (i.e. marked out of 95, 90, etc.) unless an extension has been granted in advance for significant medical or personal problems. Essay material in excess of the limit prescribed above will **not** be evaluated.

### **Mandatory Course Requirements**

There are no mandatory requirements for passing the course.

### **Class Representative**

A class representative will be elected in the second class, and that person's name and contact details will be 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.

### **Communication of Additional Information**

Additional information will be conveyed to students during classes.

**Use of Turnitin (if applicable)**

The following words below (modified as necessary for particular circumstances) should be added to the section on plagiarism when work submitted by students is likely to be checked by 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.

**For the following important information follow the links provided:**

**Academic Integrity and Plagiarism**

<http://www.victoria.ac.nz/home/study/plagiarism.aspx>

**General University Policies and Statutes**

<http://www.victoria.ac.nz/home/about/policy>

**AVC (Academic) Website: information including: Conduct, Academic Grievances, Students with Impairments, Student Support**

[http://www.victoria.ac.nz/home/about\\_victoria/avcacademic/Publications.aspx](http://www.victoria.ac.nz/home/about_victoria/avcacademic/Publications.aspx)

**Faculty of Commerce and Administration Offices**

<http://www.victoria.ac.nz/fca/studenthelp/>

**Manaaki Pihipihinga Programme**

[http://www.victoria.ac.nz/st\\_services/mentoring/](http://www.victoria.ac.nz/st_services/mentoring/)

**Course Content**

The following topics will be examined.

1. Extensions of the CAPM to deal with personal taxes: March 1, 8, 15
2. Extensions of the CAPM to deal with international investment opportunities: March 22, 29
3. Price setting under the CAPM: April 19, 26
4. Estimation of the market risk premium: May 3, 10, 17
5. Estimation of beta: May 24, 31

### **Readings**

Students should first be familiar with the mathematics in

Copeland, T. and Weston, J., *Financial theory and Corporate Policy*, 4th edition, Pearson Addison-Wesley, 2005, Appendix D.

Spiegel, M., *Advanced Calculus*, McGraw-Hill, 1974, Ch. 1-6.

and the statistics in

Wonnacott, R. and Wonnacott, T., *Introductory Statistics*, 3rd edition, Wiley, 1977, Ch 1-13.

Where appropriate reference should also be made to

Mood, A., Graybill, F. and Boes, D., *Introduction To The Theory of Statistics*, 3rd edition, McGraw-Hill, 1974.

Prescribed reading for the seminar topics is as follows:

1. Extensions of the CAPM to deal with personal taxes

Lally, M., 1992. "The CAPM Under Dividend Imputation", *Pacific Accounting Review*, vol.4, 31-44.

\_\_\_\_\_, 2000. "Valuation of Projects and Companies Under Differential Personal Taxation", *New Zealand Investment Analyst*, vol. 21, 36-39.

\_\_\_\_\_ 2000. "Valuation of Companies and Projects Under Differential Personal Taxation", *Pacific-Basin Finance Journal*, vol. 8, 115-133.

Officer, R., 1994. "The Cost of Capital of a Company Under an Imputation Tax System", *Accounting and Finance*, vol. 34, 1-18.

2. Extensions of the CAPM to deal with international investment opportunities

Solnik, B., 1974. "An Equilibrium Model of the International Capital Market", *Journal of Economic Theory*, 500-524.

Stulz, R., 1995. "International Portfolio Choice and Asset Pricing: An Integrative Survey", in R. Jarrow et al (ed), *Handbooks in Operations Research and Management Science*, vol. 9, Elsevier Science BV.

### 3. Price Setting Under the CAPM

Hirshleifer, J., 1970. *Investment, Interest and Capital*, Prentice-Hall Inc., Ch 10.

### 4. Estimation of the Market Risk Premium

Siegel, J., "The Equity Premium: Stock and Bond Returns Since 1802", *Financial Analysts Journal* (Jan-Feb 1992), pp 28-38.

Dimson, E., Marsh, P. and Staunton, M. "Global Evidence on the Market Risk Premium", *Journal of Applied Corporate Finance*, vol. 15 (4), Fall 2003, pp. 27-38.

Lally, M., "Time-Varying Market Leverage, the Market Risk Premium and the Cost of Capital", *Journal of Business Finance and Accounting* 29 (2002), pp. 1301-1318.

Merton, R., "On Estimating The Expected Return on the Market", *Journal of Financial Economics* 8 (1980), pp 323-361.

Cornell, B., *The Equity Risk Premium*, John Wiley & Sons Inc (1999), Ch 3.

Bernstein, P. and Arnott, R. "Earnings Growth: The Two Percent Dilution", *Financial Analysts Journal*, Sept-Oct 2003, pp. 47-55.

Cooper, I., "Arithmetic Versus Geometric Mean Estimators: Setting Discount Rates for Capital Budgeting", *European Financial Management* 2, (1996), pp. 157-67.

### 5. Estimation of Beta

Conine, T., "Corporate Debt and Corporate Taxes: An Extension", *Journal of Finance* (1980), pp 1033-1036.

Cornell, B. and Green, K., "The Investment Performance of Low-Grade Bond Funds", *Journal of Finance* (1991), pp. 29-48.

Ehrhardt, E. and Shrieves, R., "The Impact of Warrants and Convertible Securities on the Systematic Risk of Common Equity", *The Financial Review* 30 (1995), pp 843-856.

Lally, M., "An Examination of Blume and Vasicek Betas", *The Financial Review* 33, (1998), pp 183-198.

\_\_\_\_\_ "Correcting Betas for Changes in Firm and Market Leverage", *Pacific Accounting Review* 10, (1998), pp. 97-115.

\_\_\_\_\_ "Betas and Market Leverage", *Accounting Research Journal* 15(1), (2002), pp. 91-97.