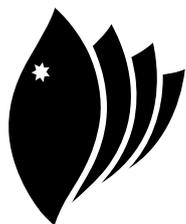


MACQUARIE  
UNIVERSITY



FACULTY OF  
BUSINESS AND ECONOMICS

**ECON828**  
**International Investment and Risk**

**Semester 1, 2010**

*Department of Economics*

**MACQUARIE UNIVERSITY**  
**FACULTY OF Business and Economics**  
**UNIT OUTLINE**

**Year and Semester: First semester, 2010**

**Unit convenor: Associate Professor Stefan Trueck**

Students in this unit should read this unit outline carefully at the start of semester. It contains important information about the unit. If anything in it is unclear, please consult the unit convenor.

**ABOUT THIS UNIT**

- Credit Points: 4
- This is an advanced-level course concentrating on the analysis of risk and return, financial risk management, derivatives and international bond and share investments. A strong emphasis is placed upon developing a rigorous analytical skill-base which can then be applied to real-world issues. Through lectures presented in this course, this unit will help you develop skills for managing, and keeping abreast of, changes that you will face in your professional career in the finance industry.
- Topics include:
  - Portfolio Construction, Risk and Return
  - Single-factor models (CAPM) and Multi-factor models (APT)
  - Pension Plans, Mutual Funds and Hedge Funds
  - Financial Products and how they are used for hedging / managing exposures
  - Interest Rate Risk
  - Volatility Modeling
  - Dependence, Correlations and Copulas
  - Bank Regulations and Basel II
  - Value-at-Risk and other Risk Measures
  - Managing Market Risk
  - Managing Credit Risk
  - Credit Derivatives and the Credit Crunch
  - Operational Risk, Model Risk and Liquidity Risk

## TEACHING STAFF

	Room	Telephone	Email
<b>Unit Convenor</b>			
▪ Dr. Stefan Trueck	E4A 433	9850 8483	<a href="mailto:strueck@efs.mq.edu.au">strueck@efs.mq.edu.au</a>

## CONSULTATION TIMES

Consultation Hours: 2-4 pm, Thursday,  
Room: E4A 433

Students are encouraged to seek help at a time that is convenient to you from the unit convenor during his regular consultation hours. In special circumstances, an appointment may be made outside regular consultation hours. Staff will usually not conduct any consultations by e-mail. Please note however that staff will only answer emails sent from official Macquarie University email accounts. You may, however, phone staff during their consultation hours.

In order to gain access to staff located at level 4 of building E4A during their consultation hours please ring the staff member from the phones available in the lobby (phone numbers of relevant staff members will be provided on Blackboard and are available next to the phones).

Students experiencing significant difficulties with any topic in the unit are strongly encouraged to seek assistance immediately.

## CLASSES

Classes in ECON828 are composed of three hour lectures. Usually one hour of the lecture time will be spent on exercise questions. Unit materials are learnt by attending lectures and through independent learning. The lectures provide a general overview of the topics highlighting a number of concepts and techniques. Further additional reading material will be provided. Students are strongly advised to study the additional reading material provided by the unit convenor and further explore all relevant concepts and techniques.

Students should attend a three-hour lecture every week. Lecture slides will be available prior to the lectures at the unit's Web site.

## REQUIRED AND RECOMMENDED TEXTS AND/OR MATERIALS

### *Required Text:*

Hull, J. (2010) *Risk Management and Financial Institutions*, 2<sup>nd</sup> Edition, Pearson.

Additional to the recommended text, sometimes chapters from other books (see below) will be used in conjunction with journal articles and lecture notes.

### *Other Recommended References:*

Bodie, Z., Kane, A., and Marcus, A. (2002) *Investments*, 5<sup>th</sup> (International) Edition, Mc-Graw-Hill, Boston.

Crouhy, M., Galai, D. and Mark, R. (2005), *The Essentials of Risk Management*, McGraw-Hill.

Elton, E., Gruber, M., et al (2003) *Modern Portfolio Theory and Investment Analysis*, 6<sup>th</sup> Edition, John Wiley & Sons.

Fabozzi, F., 2000, *Bond Portfolio Management*, 2<sup>nd</sup> ed., New Hope, Pennsylvania

Hull, J. (2007) *Options, Futures and other Derivatives*, 6<sup>th</sup> Edition, Prentice Hall.

Jorion, P. (2006), *Value-at-Risk*, 3<sup>rd</sup> Edition, McGraw-Hill.

Saunders, A. and J Boudoukh (2004) *Understanding Market, Credit and Operational Risk: The Value-at-Risk Approach*, Blackwell Publishing.

Solnik, B. and D Mcleavey (2004) *International Investments*, 5<sup>th</sup> Edition, Pearson Addison Wesley.

Trueck, S. and Rachev, S., (2009) *Rating Based Modeling of Credit Risk*, Elsevier Academic Press.

*Students needing assistance with **mathematics** should first consult:*

Dowling, E.T. (1992) *Introduction to Mathematical Economics*, (2<sup>nd</sup> Ed) New York: McGraw-Hill

Gujarati, D. (2003) *Basic Econometrics*, (4<sup>th</sup> Ed), McGraw-Hill

## TECHNOLOGY USED AND REQUIRED

Blackboard CE6 is an online program available at <http://learn.mq.edu.au/> through which students will be able to access resources to assist them throughout the semester.

## UNIT WEB PAGE

The following information will be made available on Blackboard:

<ul style="list-style-type: none"><li>• Unit Outline</li></ul>	<ul style="list-style-type: none"><li>• Announcements</li></ul>
<ul style="list-style-type: none"><li>• Lecture slides</li></ul>	<ul style="list-style-type: none"><li>• Staff consultation hours and contact details</li></ul>
<ul style="list-style-type: none"><li>• Information on Assessments</li></ul>	<ul style="list-style-type: none"><li>• Bulletin Board</li></ul>
<ul style="list-style-type: none"><li>• Tutorial / Exercise questions</li></ul>	<ul style="list-style-type: none"><li>• Other relevant material</li></ul>

You are strongly encouraged to regularly visit the website and use it as a resource centre to assist with your learning.

If you are unable to access the website because you are not aware of or have forgotten your username and password, please contact the IT helpdesk located on Level 1 of the Library on 9850 6500. The IT helpdesk will also be able to assist you with using Blackboard. Please note that there is also a help feature in Blackboard and you may refer to this instead for assistance in using Blackboard. If you have contacted the helpdesk in regard to your username and password and you are still unable to login to Blackboard you should then contact the Unit Administrator.

Please remember to log out when you have finished using Blackboard. Failure to do so could result in unauthorised access to your Blackboard account.

## GENERIC SKILLS

Dealing with advanced material in our subject area requires a range of generic skills. This unit aims to develop such skills. The lectures are tailored to enhance critical thinking and analysis, problem solving, and creative expression, while contributions to the Bulletin Board improve your writing skills, which are gaining in importance because of the increased use of email in business communications. However, you will only gain these skills through practice and application, and that begins with attending lectures, immersing yourself in solving problems raised in lectures, and participating in verbal and written debates and discussions in the classroom and online.

## **LEARNING OUTCOMES**

The globalization of financial markets offers opportunities, but it also introduces new risks. As a response, novel investment techniques as well as advanced models for risk management have been introduced or are being developed. The aim of the unit is to prepare students for analytical duties a graduate is expected to carry out in a financial institution or for research for a higher degree. On completing the unit, successful students will also attain practical knowledge of how to apply and evaluate the quantitative methods covered in the course in analysing and managing portfolios as well as the risk arising from various financial investments. In particular, students are expected to be able to:

- examine and find optimal investments strategies with respect to expected returns and risks involved and dependencies between financial instruments
- attain an excellent knowledge of the role and characteristics of international financial markets and the institutions and intermediaries;
- understand the pricing of various financial products like equity, fixed income instruments or derivatives and know how these products can be used for hedging;
- evaluate econometric models for financial variables, for example with respect to their volatility, dependence structure and time series properties; and
- acquire an extensive knowledge on the major approaches to managing market, credit and operational risks and banking regulations as they are suggested in the new Basel Capital Accord;

## **TEACHING AND LEARNING STRATEGY**

The teaching strategy in ECON828 recognises that students learn independently and assume responsibility for the learning process and with academic integrity. Students are expected to participate in the unit by attending lectures, reading the provided material, thoroughly revising the lecture notes and preparing answers to the provided exercise questions and reading additional material about important issues in investment and risk.

What we aim to achieve in ECON828 is deep (as opposed to surface) learning. Thus, learning is interpreted as making sense or abstracting meaning. Learning involves relating parts of the subject matter to each other and to the real world. Further learning is understood as comprehending the world by understanding and re-interpreting knowledge.

The teaching philosophy is articulated as follows:

**Lectures – large group learning (3 hour each teaching week)**

Lectures are intended to provide an overview of conceptual frameworks and issues in applied finance that are critical to the core themes of the unit. Usually one hour of the lecture time will be spent on exercise questions.

**Independent learning – learning by doing (about 6 hours each teaching week and 9 hours each week during the 2-week mid-semester recess)**

ECON828 relies heavily on independent learning where students read the textbook and other relevant material, revise the lecture notes, prepare answers to the provided exercise questions participate in the discussion board and extend themselves by doing additional reading, questions, exercises and problems.

## LECTURE AND TOPIC SCHEDULE

Lecture 1 (February 25)

Hull Chapter 1&2: Introduction, Risk and Return, Banks

Lecture 2 (March 4)

Hull Chapter 3&4: Portfolio Construction, Pension Plans, Mutual Funds and Hedge Funds

Lecture 3 (March 11)

Hull Chapter 5: Financial Instruments

Lecture 4 (March 18)

Hull Chapter 6: How traders manage their exposure

Lecture 5 (March 25)

Hull Chapter 7: Interest rate risk, Duration, Convexity

Lecture 6 (April 1)

Midsemester Test

*Mid-Semester Break: Monday 5 April to Friday 16 April 2009*

Lecture 7 (April 22)

Hull Chapter 8&11: Value-at-Risk, Bank Regulation and Basel II

Lecture 8 (April 29)

Hull Chapter 9: Volatility, EWMA and GARCH models

Lecture 9 (May 6)

Hull Chapter 10: Correlations and Copulas

Lecture 10 (May 13)

Hull Chapter 12&13: Market Risk VaR: historical simulation and model building approach

Lecture 11 (May 20)

Hull Chapter 14&15: Credit Risk - Probabilities of Default (PD), Credit VaR

Lecture 12 (May 27)

Hull Chapter 16,17&18: Credit Derivatives and the Credit Crunch of 2007, Stress Testing and Operational Risk

Lecture 13 (June 4)

Revision Lecture

## RELATIONSHIP BETWEEN ASSESSMENT AND LEARNING OUTCOMES

The unit assessment will be based on a mid-semester test, an essay and a final examination.

The **mid-semester test** will be multiple choice questions that will cover everything up to Lecture 5; these questions may include calculations as well as “verbal” answers. The test is scheduled for **Thursday, April 1, 2010**.

The **essay** will provide the opportunity for students to write about a specified topic covering important concepts of investment or risk management. The topic and reading material will be provided in week 5, the due date will be **April 30, 2010**. The essay provides further opportunity for students to develop their critical analysis skills, problem-solving skills and creative thinking skills.

The **final examination** will be comprised of both multiple choice and long-answer questions, and it will cover the entire semester. The date for the final examination will be announced within the first three weeks of semester 1.

All assessment tasks further develop problem solving, knowledge on applied finance and communication skills.

The individual tasks enter the overall assessment with the following weights:

		%
Midterm Exam	- Multiple Choice Questions (MCQ)	15
Essay	- 3000 words (see separate handout)	25
Final Exam	- MCQ + long answer questions (see separate handout)	60
<b>Total</b>		<b>100</b>

The final grade will be determined after consideration of performance in all aspects of the course.

You are expected to present yourself for examination at the time and place designated in the University Examination Timetable. The timetable will be available in Draft form approximately eight weeks before the commencement of the examinations and in Final form approximately four weeks before the commencement of the examinations. The relevant website is <http://www.timetables.mq.edu.au/exam>

The only exception to not sitting an examination at the designated time is because of documented illness or unavoidable disruption. In these circumstances you may wish to consider applying for Special Consideration.

If a Supplementary Examination is granted as a result of the Special Consideration process the examination will be scheduled after the conclusion of the official examination period.

You are advised that it is Macquarie University policy not to set early examinations for individuals or groups of students. All students are expected to ensure that they are available until the end of the teaching semester, that is, the final day of the official examination period.

### **PLAGIARISM**

The University defines plagiarism in its rules: "Plagiarism involves using the work of another person and presenting it as one's own." Plagiarism is a serious breach of the University's rules and carries significant penalties. You must read the University's practices and procedures on plagiarism. These can be found in the 2009 *Handbook of Undergraduate Studies* or on the web at: <http://www.student.mq.edu.au/plagiarism/>

The policies and procedures explain what plagiarism is, how to avoid it, the procedures that will be taken in cases of suspected plagiarism, and the penalties if you are found guilty. Penalties may include a deduction of marks, failure in the unit, and/or referral to the University Discipline Committee.

### **GRADING APPEALS AND FINAL EXAMINATION SCRIPT VIEWING**

If, at the conclusion of the unit, you have performed below expectations, and are considering lodging an appeal of grade and/or viewing your final exam script please refer to the following website which provides information about these processes and the cut off dates at the first instance. Please read the instructions provided concerning what constitutes a valid grounds for appeal before appealing your grade.

[http://www.businessandconomics.mq.edu.au/for/new\\_and\\_current\\_students/undergraduate/admin\\_central/grade\\_appeals](http://www.businessandconomics.mq.edu.au/for/new_and_current_students/undergraduate/admin_central/grade_appeals).