

MACQUARIE  
UNIVERSITY



FACULTY OF  
BUSINESS AND ECONOMICS

# ECON828 International Investment & Risk

Semester 1, 2009

*Department of Economics*

# ECON828 INTERNATIONAL INVESTMENT & RISK

## 1. COURSE OBJECTIVES

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. Topics include:

- Portfolio Construction, Risk and Return
- Single-factor models (CAPM) and Multi-factor models (APT)
- 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
- Operational Risk
- Model Risk and Liquidity Risk

## 2. ASSESSMENT

Essay	-	3000 words (see separate handout)	% 30
Final Exam	-	Multiple choice + essays (see separate handout)	70
<b>Total</b>			<hr/> <b>100</b>

### 3. ENQUIRIES & COURSE TIMETABLE

*Unit Coordinator:*

Stefan Trueck  
Room: E4A 432  
Email: [strueck@efs.mq.edu.au](mailto:strueck@efs.mq.edu.au)  
Tel.: 9805 8483

*Lecture Times:*

10 - 1 pm, Thursday, Room: C5A 232

*Consultation Hours:*

2 -4 pm, Thursday, Room: E4A 432

*Unit Homepage:*

In order to ensure that every student is kept fully informed and that any unnecessary duplication is avoided, all communications for this course will take place via the unit homepage. This can be accessed by logging onto

<http://www.learn.mq.edu.au/>

with your personal username and password, and then selecting the link commencing "ECON828..."

*University Rules:*

Students are reminded of University rules governing requests for special consideration when illness, misadventure or other cause prevents attendance at classes, affects the submission of work or impairs performance in examinations.

## **4. LECTURE OUTLINE – SEMESTER 1, 2009**

Lecture 1 (February 26)

Hull Chapter 1: Introduction, Portfolio Construction, Risk and Return, CAPM

Lecture 2 (March 5)

Hull Chapter 2: Financial Products and how they are used for hedging, Options, Futures, Swaps

Lecture 3 (March 12)

Hull Chapter 3: How traders manage their exposure, Option Pricing, The Greeks

Lecture 4 (March 19)

Hull Chapter 4: Interest rate risk, Duration, Convexity

Lecture 5 (March 26)

Hull Chapter 5: Volatility, EWMA and GARCH models

Lecture 6 (April 2)

Hull Chapter 6: Correlations and Copulas, multivariate distributions

Lecture 7 (April 9)

Hull Chapter 7+8: Bank regulation and Basel II, Value-at-Risk

*Mid-Semester Break: Monday 13 April to Friday 24 April 2009*

Lecture 8 (April 30)

Hull Chapter 9+10: Market Risk VaR: historical simulation and model building approach

Lecture 9 (May 7)

Hull Chapter 11: Credit Risk - Probabilities of Default (PD), risk-neutral and historical PDs

Lecture 10 (May 14)

Hull Chapter 12: Credit VaR, Credit Risk Models

Lecture 11 (May 21)

Hull Chapter 13: Credit Derivatives, The Credit Crunch

Lecture 12 (May 28)

Hull Chapter 14+15: Operational Risk, Model risk and liquidity risk

Lecture 13 (June 4)

Hull Chapter 16: Economic capital and RAROC, Revision

## 5. TEXTBOOK AND RECOMMENDED READINGS

*Text:* Hull, John (2007) *Risk Management and Financial Institutions*, 1<sup>st</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, McGraw-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.

Jüttner, D.J. 1998, *International Finance and Global Investments*, 4<sup>th</sup> ed., Addison Wesley, Melbourne.

Madura, J. 2000, *International Financial Management*, 6th edition West Publishing, New York.

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