



# AFIN739

## Portfolio Management

S1 Day 2016

*Dept of Applied Finance and Actuarial Studies*

### Contents

---

<a href="#"><u>General Information</u></a>	2
<a href="#"><u>Learning Outcomes</u></a>	2
<a href="#"><u>General Assessment Information</u></a>	3
<a href="#"><u>Assessment Tasks</u></a>	3
<a href="#"><u>Delivery and Resources</u></a>	6
<a href="#"><u>Unit Schedule</u></a>	8
<a href="#"><u>Policies and Procedures</u></a>	9
<a href="#"><u>Graduate Capabilities</u></a>	11

---

#### **Disclaimer**

Macquarie University has taken all reasonable measures to ensure the information in this publication is accurate and up-to-date. However, the information may change or become out-dated as a result of change in University policies, procedures or rules. The University reserves the right to make changes to any information in this publication without notice. Users of this publication are advised to check the website version of this publication [or the relevant faculty or department] before acting on any information in this publication.

## General Information

Unit convenor and teaching staff

Unit Convenor

Egon Kalotay

[egon.kalotay@mq.edu.au](mailto:egon.kalotay@mq.edu.au)

Contact via [egon.kalotay@mq.edu.au](mailto:egon.kalotay@mq.edu.au)

Veronica Chen

[veronica.chen@mq.edu.au](mailto:veronica.chen@mq.edu.au)

Credit points

4

Prerequisites

Admission to MRes

Corequisites

Co-badged status

Unit description

This unit covers the principles, theory and techniques of portfolio management. Study of this unit provides a basis for the effective management of investment portfolios, as well as an understanding of the limitations of techniques commonly applied to problems of portfolio construction and performance evaluation.

## Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at <https://www.mq.edu.au/study/calendar-of-dates>

## Learning Outcomes

On successful completion of this unit, you will be able to:

Know the behavioural and statistical assumptions underlying the tools and techniques of portfolio management and have developed an awareness of their rationale and limitations

Understand the economic principles of arbitrage and market efficiency - with a particular focus on their implications for funds management

Be able to apply key factor pricing models to practical problems in portfolio construction and performance evaluation - both as statistical tools and as economic points of

reference

Have an understanding of the sources of modelled risk and approaches to managing such exposures

Have gained an understanding of alternative criteria for constructing portfolios and benchmarking performance

Have developed an awareness of the limitations of models and techniques in light of statistical reasoning and empirical evidence - including published academic research and first-hand investigations.

## General Assessment Information

Students enrolled in AFIN739 will sit similar assessment tasks to students enrolled in AFIN839, however, where appropriate, AFIN739 students will be required to apply techniques and/or demonstrate an ability to evaluate research findings beyond the level expected of AFIN839 students. Specific differences in assessment expectations (i.e. examinable content and/or assignment questions) will be highlighted explicitly as we go.

## Assessment Tasks

Name	Weighting	Due
<a href="#">Class Test 1</a>	10%	Week 3
<a href="#">Class Test 2</a>	25%	Week 7
<a href="#">Assignment</a>	25%	Week 12
<a href="#">Final Exam</a>	40%	TBA

### Class Test 1

Due: **Week 3**

Weighting: **10%**

Submission

20-minute, closed book, in-class test based on the material covered in weeks 1 and 2. Short answers and calculations. The test will commence at the beginning of the week 3 class.

Extension

The class test must be sat on time by all students. No time extension is provided for late arrival at the test.

Penalties

Students who miss the test, cheat or otherwise fail to comply with the test rules will be awarded zero marks.

On successful completion you will be able to:

- Know the behavioural and statistical assumptions underlying the tools and techniques of portfolio management and have developed an awareness of their rationale and limitations
- Understand the economic principles of arbitrage and market efficiency - with a particular focus on their implications for funds management
- Be able to apply key factor pricing models to practical problems in portfolio construction and performance evaluation - both as statistical tools and as economic points of reference
- Have an understanding of the sources of modelled risk and approaches to managing such exposures
- Have gained an understanding of alternative criteria for constructing portfolios and benchmarking performance

## Class Test 2

Due: **Week 7**

Weighting: **25%**

Submission

60-minute, closed book, in-class test based on the material covered in lectures 1 - 6 (inclusive). Short answers and calculations. The test will commence at the beginning of the week 7 class.

Extension

The class test must be sat on time by all students. No time extension is provided for late arrival at the test.

Penalties

Students who miss the test, cheat or otherwise fail to comply with the test rules will be awarded zero marks.

On successful completion you will be able to:

- Know the behavioural and statistical assumptions underlying the tools and techniques of portfolio management and have developed an awareness of their rationale and limitations
- Understand the economic principles of arbitrage and market efficiency - with a particular focus on their implications for funds management
- Be able to apply key factor pricing models to practical problems in portfolio construction and performance evaluation - both as statistical tools and as economic points of

reference

## Assignment

Due: **Week 12**

Weighting: **25%**

### Submission

This assignment involves multiple submissions: a progress report due in class in week 7 and a final submission due in week 12. Class presentations will also be scheduled for week 12.

### Extension

Exceptional circumstances notwithstanding, no extensions will be provided. If you experience problems then please seek help sooner rather than later.

### Penalties

Late submissions will be accepted up to 96\* hours after the submission deadline. There will be a deduction of 10%\* of the total available marks made from the total awarded mark for each 24 hour period or part thereof that the submission is late (for example, 25 hours late in submission - 20% penalty). This penalty does not apply for cases in which an application for special consideration is made and approved.

On successful completion you will be able to:

- Know the behavioural and statistical assumptions underlying the tools and techniques of portfolio management and have developed an awareness of their rationale and limitations
- Understand the economic principles of arbitrage and market efficiency - with a particular focus on their implications for funds management
- Be able to apply key factor pricing models to practical problems in portfolio construction and performance evaluation - both as statistical tools and as economic points of reference
- Have an understanding of the sources of modelled risk and approaches to managing such exposures
- Have gained an understanding of alternative criteria for constructing portfolios and benchmarking performance
- Have developed an awareness of the limitations of models and techniques in light of statistical reasoning and empirical evidence - including published academic research and first-hand investigations.

## Final Exam

Due: **TBA**

Weighting: **40%**

Submission

120-minute, closed book examination based on the material covered in lectures 1 - 13 (inclusive). Short answers and calculations. The exam will be held during the university examination period, at a time and date to be advised.

*Note: students will be permitted to take into the examination a single-sided, hand-written A4 page of notes. The notes are to be submitted with the exam paper and must be clearly labelled with name and student ID.*

On successful completion you will be able to:

- Know the behavioural and statistical assumptions underlying the tools and techniques of portfolio management and have developed an awareness of their rationale and limitations
- Understand the economic principles of arbitrage and market efficiency - with a particular focus on their implications for funds management
- Be able to apply key factor pricing models to practical problems in portfolio construction and performance evaluation - both as statistical tools and as economic points of reference
- Have an understanding of the sources of modelled risk and approaches to managing such exposures
- Have gained an understanding of alternative criteria for constructing portfolios and benchmarking performance
- Have developed an awareness of the limitations of models and techniques in light of statistical reasoning and empirical evidence - including published academic research and first-hand investigations.

## Delivery and Resources

### Classes

Classes are 3-hour seminars running 2-5pm on Fridays in C5A 304. A typical class will be structured as a 2-hour lecture followed by 1-hour tutorial - though the distinction between the two may be blurred. Please feel free to ask (and answer!) questions throughout the class.

Attendance at classes is compulsory.

**Consultation hours: Thursdays 9:15-11:15am. If I change my consultation hours I will make an announcement on iLearn.** If you cannot make it during my scheduled consultation hours, then please email me for an appointment.

### Recommended Texts and/or Materials

It is not essential to purchase a textbook for the unit, but the following text is particularly useful.

**Investment Analysis and Portfolio Management** by Reilly and Brown. 10th Edition, 2011, South-Western Cengage Learning. ISBN 0538482389

We will supplement the lecture materials with readings from journals and other textbooks. Other useful texts are listed below.

**Running Money, Professional Portfolio Management** by Stewart, Piros and Heisler. 1st Edition, McGraw-Hill Irwin, 2011.

**Modern Portfolio Theory and Investment Analysis** by Elton, Gruber, Brown and Goetzmann. 7th Edition, John Wiley and Sons, Inc, 2007. ISBN 978-0470-05082-2

**Modern Investment Theory** by Haugen, 5th Edition, Prentice Hall, 2001. ISBN 0-13-019170-1

**Investments** by Levy and Post. Pearson Publishing, 2005. ISBN 0-273-65164-1

Refer to the unit web page for other useful references and resources.

### **Technology Used and Required**

Necessary technology: scientific or business calculator without alphanumeric capabilities, internet access, computer with MS Excel.

Useful technology: The MATLAB software environment is **very** useful if you intend doing this sort of work professionally.

For details of the student version please refer to:

[http://www.mathworks.com.au/academia/student\\_version/](http://www.mathworks.com.au/academia/student_version/)

### **Unit Web Page**

Log in via <https://ilearn.mq.edu.au>

### **Teaching and Learning Activities**

The first two hours of each class will be a lecture-style presentation, the third hour an interactive tutorial.

You are strongly advised to attempt all assigned tutorial questions before the weekly tutorial class, and before consulting the solutions. It is very easy to be lulled into a false sense of security by simply reading questions and looking at the solutions.

Each week you are required to submit your attempt at the tutorial questions. Success in this unit depends on keeping up with the weekly content, so doing the tutorial work is essential. Whilst no assessment marks are allocated to tutorial assignments, submission of your work will be recorded to provide evidence of your satisfactory performance/progress.

Solutions to tutorial questions will be provided at the end of the week in which they're due.

### **Research and Practice**

- This unit uses research by Macquarie University researchers (Week 10, 11)
- This unit uses research from external sources (most weeks)
- This unit gives you practice in applying your own research findings in your assignments

## Unit Schedule

*The unit schedule below is provided as a guide only. I may amend the coverage of topics as we go, so always check the lecture notes.*

**Week 1: Introduction & Overview** (*Week beginning February 29, 2016*)

*Topics:* Objectives, some statistical and mathematical background, definitions etc.

*Reading:* Lecture notes and supplements, + Reilly and Brown (R&B) Ch 1 & 2.

**Week 2: Traditional (Mean-Variance) Portfolio Theory** (*Week beginning March 7, 2016*)

*Topics:* Risk aversion, discrete versus continuous compounding, optimisation problem, estimation issues

*Reading:* R&B Ch 7; Elton, Gruber, Brown and Goetzmann (EGBG) Ch 4 & 5.

**Week 3: Informational Efficiency + Class Test 1** (*Week beginning March 14, 2016*)

*Topics:* Definitions, theory, empirical evidence with relevance to funds management.

*Reading:* R&B Ch 6 + Additional readings

**Week 4: No Class due to Good Friday** (*Week beginning March 21, 2016*)

**Week 5: Asset Allocation Parameters** (*Week beginning March 28, 2016*)

*Topics:* Issues of estimation, shrinkage, factor models

*Reading:* Haugen Chapter 6; EGBG Chapter 7.

**Week 6: Equity Portfolio Management** (*Week beginning April 4, 2016*)

*Topics:* Index investment, active management, investment strategies (strategic, tactical, statistical arbitrage etc), Black-Litterman

*Reading:* R&B Ch 16

**Mid-Semester Break: April 11 - April 22, 2016**

**Week 7: Class Test 2 (Mid-semester)** (*Week beginning April 25, 2016*)



**Week 8: Performance Measurement** (*Week beginning May 2, 2016*)

*Topics:* Jensen, Sharpe, Treynor Indices; Information ratio, Portfolio Performance Index (PPI), Extrapolation issues.

*Reading:* R&B Ch 25, plus additional readings on the unit web page.

**Week 9: Portfolio Construction (Extensions), Derivatives and Portfolio Management** (*Week beginning May 9, 2016*)

*Topics:* Alternative objectives and portfolio construction criteria; role of derivatives.

*Reading:* R&B Ch 20 + additional readings

**Week 10: Hedge Funds, Alternative Assets and Risk Management** (*Week beginning May 16, 2016*)

*Topics:* Alternative investments with particular focus on Hedge Funds

*Reading:* R&B Ch 24 + additional readings

**Week 11: Models: Limitations & Failure** (*Week beginning May 23, 2016*)

*Topics:* Behavioural biases, statistical issues and potential responses

*Reading:* To be provided

**Week 12: Miscellaneous Extensions and Group Presentations** (*Week beginning May 30, 2016*)

*Reading:* To be provided

**Week 13: Summary** (*Week beginning June 6, 2016*)

## **Policies and Procedures**

Macquarie University policies and procedures are accessible from [Policy Central](#). Students should be aware of the following policies in particular with regard to Learning and Teaching:

Academic Honesty Policy [http://mq.edu.au/policy/docs/academic\\_honesty/policy.html](http://mq.edu.au/policy/docs/academic_honesty/policy.html)

**New Assessment Policy in effect from Session 2 2016** [http://mq.edu.au/policy/docs/assessment/policy\\_2016.html](http://mq.edu.au/policy/docs/assessment/policy_2016.html). For more information visit [http://students.mq.edu.au/events/2016/07/19/new\\_assessment\\_policy\\_in\\_place\\_from\\_session\\_2/](http://students.mq.edu.au/events/2016/07/19/new_assessment_policy_in_place_from_session_2/)

Assessment Policy prior to Session 2 2016 <http://mq.edu.au/policy/docs/assessment/policy.html>

Grading Policy prior to Session 2 2016 <http://mq.edu.au/policy/docs/grading/policy.html>

Grade Appeal Policy <http://mq.edu.au/policy/docs/gradeappeal/policy.html>

Complaint Management Procedure for Students and Members of the Public [http://www.mq.edu.au/policy/docs/complaint\\_management/procedure.html](http://www.mq.edu.au/policy/docs/complaint_management/procedure.html)

Disruption to Studies Policy [http://www.mq.edu.au/policy/docs/disruption\\_studies/policy.html](http://www.mq.edu.au/policy/docs/disruption_studies/policy.html) *The Disruption to Studies Policy is effective from March 3 2014 and replaces the Special Consideration Policy.*

In addition, a number of other policies can be found in the [Learning and Teaching Category](#) of Policy Central.

## Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: [https://students.mq.edu.au/support/student\\_conduct/](https://students.mq.edu.au/support/student_conduct/)

## Results

Results shown in *iLearn*, or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in [eStudent](#). For more information visit [ask.mq.edu.au](http://ask.mq.edu.au).

Supplementary Exams

Further information regarding supplementary exams, including dates, is available here

[http://www.businessandeconomics.mq.edu.au/current\\_students/undergraduate/how\\_do\\_i/special\\_consideration](http://www.businessandeconomics.mq.edu.au/current_students/undergraduate/how_do_i/special_consideration)

## Student Support

Macquarie University provides a range of support services for students. For details, visit <http://students.mq.edu.au/support/>

## Learning Skills

Learning Skills ([mq.edu.au/learningskills](http://mq.edu.au/learningskills)) provides academic writing resources and study strategies to improve your marks and take control of your study.

- [Workshops](#)
- [StudyWise](#)
- [Academic Integrity Module for Students](#)
- [Ask a Learning Adviser](#)

## Student Services and Support

Students with a disability are encouraged to contact the [Disability Service](#) who can provide

appropriate help with any issues that arise during their studies.

## Student Enquiries

For all student enquiries, visit Student Connect at [ask.mq.edu.au](http://ask.mq.edu.au)

## IT Help

For help with University computer systems and technology, visit [http://www.mq.edu.au/about\\_us/offices\\_and\\_units/information\\_technology/help/](http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/).

When using the University's IT, you must adhere to the [Acceptable Use of IT Resources Policy](#). The policy applies to all who connect to the MQ network including students.

## Graduate Capabilities

### PG - Discipline Knowledge and Skills

Our postgraduates will be able to demonstrate a significantly enhanced depth and breadth of knowledge, scholarly understanding, and specific subject content knowledge in their chosen fields.

This graduate capability is supported by:

### Learning outcomes

- Know the behavioural and statistical assumptions underlying the tools and techniques of portfolio management and have developed an awareness of their rationale and limitations
- Understand the economic principles of arbitrage and market efficiency - with a particular focus on their implications for funds management
- Be able to apply key factor pricing models to practical problems in portfolio construction and performance evaluation - both as statistical tools and as economic points of reference
- Have an understanding of the sources of modelled risk and approaches to managing such exposures
- Have gained an understanding of alternative criteria for constructing portfolios and benchmarking performance

### Assessment tasks

- Class Test 1
- Class Test 2
- Assignment
- Final Exam

## PG - Critical, Analytical and Integrative Thinking

Our postgraduates will be capable of utilising and reflecting on prior knowledge and experience, of applying higher level critical thinking skills, and of integrating and synthesising learning and knowledge from a range of sources and environments. A characteristic of this form of thinking is the generation of new, professionally oriented knowledge through personal or group-based critique of practice and theory.

This graduate capability is supported by:

### Learning outcomes

- Know the behavioural and statistical assumptions underlying the tools and techniques of portfolio management and have developed an awareness of their rationale and limitations
- Understand the economic principles of arbitrage and market efficiency - with a particular focus on their implications for funds management
- Have an understanding of the sources of modelled risk and approaches to managing such exposures
- Have gained an understanding of alternative criteria for constructing portfolios and benchmarking performance
- Have developed an awareness of the limitations of models and techniques in light of statistical reasoning and empirical evidence - including published academic research and first-hand investigations.

### Assessment tasks

- Class Test 1
- Class Test 2
- Assignment
- Final Exam

## PG - Research and Problem Solving Capability

Our postgraduates will be capable of systematic enquiry; able to use research skills to create new knowledge that can be applied to real world issues, or contribute to a field of study or practice to enhance society. They will be capable of creative questioning, problem finding and problem solving.

This graduate capability is supported by:

### Learning outcomes

- Understand the economic principles of arbitrage and market efficiency - with a particular focus on their implications for funds management

- Be able to apply key factor pricing models to practical problems in portfolio construction and performance evaluation - both as statistical tools and as economic points of reference
- Have an understanding of the sources of modelled risk and approaches to managing such exposures
- Have gained an understanding of alternative criteria for constructing portfolios and benchmarking performance
- Have developed an awareness of the limitations of models and techniques in light of statistical reasoning and empirical evidence - including published academic research and first-hand investigations.

## **Assessment tasks**

- Class Test 1
- Class Test 2
- Assignment
- Final Exam