ECFS908

Interest Rate Portfolio Management

AFC Term 3 CBD 2015

Dept of Applied Finance and Actuarial Studies

Contents

General Information

Unit convenor and teaching staff
Unit Convenor / Lecturer
Bernd Luedecke
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Contact via Email

Credit points
2

Prerequisites
(Admission to MAppFin or PGCertAppFin or GradDipAppFin) and (AFCP801 or ECFS865) and ECFS867

Corequisites

Co-badged status

Unit description
This unit addresses the commercially important problem of interest rate risk management in a portfolio context. The unit explains the conceptualisation, measurement, display and modification of the risk characteristics of a portfolio of interest rate sensitive financial instruments. The unit describes the construction/calibration of a zero coupon yield curve using observable market data. This yield curve underpins the valuation and risk management of traded cash flows. Topics include construction of the zero coupon discount function, identification of cash flows, valuing known and contingent cash flows, and sensitivity analysis. Across instrument hedging and basis risk minimisation strategies are discussed.

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:

Recognise the key sources of risk in a particular Financial instrument whose valuation depends on interest rates

Identify and explain amelioration strategies for these risks

Identify how best to use interest rate sensitive Financial instruments to solve certain financing and risk management problems

Embrace an analytical and creative problem-solving approach to the use of the yield curve and related Financial instruments as a professional risk manager's tool
Demonstrate deeper and more mature problem-solving skills as they relate to the yield curve and related Financial instruments

General Assessment Information

To pass this unit (requires a Standardised Numerical Grade of 50 or better) the student must pass the final examination.

Assessment Tasks

Name	Weighting	Due
Pre-Unit Assignment	15%	First class
Post-Lectures Assignment	30%	Refer to iLearn
Final Examination	55%	Refer to Timetable

Pre-Unit Assignment

Due: **First class**
Weighting: **15%**

Summary of Assessment Task

Individual / Group: Individual

Due Date: Beginning of first class (absolute rock-hard deadline)

Grading Method: Refer to 'Standards Required to Complete the Unit Satisfactorily' section

Submission Method: In class (at beginning of first class)

Duration: Refer to Assignment coversheet

Extension Requests:

- No extensions are permitted.
- Late submission will result in zero marks.

Other Information:

- Assignment will be available to enrolled Students who download it from iLearn approximately 2 weeks before the start of lectures.

On successful completion you will be able to:

- Recognise the key sources of risk in a particular Financial instrument whose valuation

depends on interest rates
- Embrace an analytical and creative problem-solving approach to the use of the yield curve and related Financial instruments as a professional risk manager's tool

Post-Lectures Assignment

Due: **Refer to iLearn**
Weighting: **30%**

Summary of Assessment Task

Individual / Group: Individual

Due Date: Refer to iLearn

Grading Method: Refer to 'Standards Required to Complete the Unit Satisfactorily' section

Submission Method: Via Turnitin on iLearn

Duration: Refer to Assignment coversheet

Extension Requests:

- If you have extenuating circumstances that prevent you from submitting your assignment by the due date, please make arrangements with your Lecturer prior to the due date.
- Unless prior arrangements have been made, any late submission of assignments will automatically be penalised. In the absence of special circumstances, the penalty will be 10% of the available marks for the assessment for each business day (or part thereof) they are late.

Other Information:

- The post-lectures assignment will either be handed out in class or will be made available for downloading from iLearn.

On successful completion you will be able to:
- Identify and explain amelioration strategies for these risks
- Identify how best to use interest rate sensitive Financial instruments to solve certain financing and risk management problems
- Demonstrate deeper and more mature problem-solving skills as they relate to the yield curve and related Financial instruments

Final Examination

Due: **Refer to Timetable**
Weighting: **55%**

Summary of Assessment Task

Individual / Group: Individual

Due Date: Refer to Timetable.

Grading Method: Refer to 'Standards Required to Complete the Unit Satisfactorily' section

Submission Method: As per MAFC Program Rules & Procedures at www.mafc.mq.edu.au

Duration: 2 hours plus 10 minutes reading time

Examination Conditions:

- All examinations are open book. Any material and aid is permitted.
- Exam times and locations are noted in the Unit Timetable at http://www.mafc.mq.edu.au/
- Refer to MAFC Program Rules & Procedures at http://www.mafc.mq.edu.au.

Extension Requests:

- You are expected to present yourself for examination at the time and place designated in the relevant MAFC Timetable at www.mafc.mq.edu.au.
- Deferral of an examination is not permitted, unless special consideration has been approved by the Director of Studies under the University's Disruption to Studies Policy.
- Refer to MAFC Program Rules & Procedures at www.mafc.mq.edu.au for information on the University's Disruption to Studies Policy or non-attendance at an examination

On successful completion you will be able to:

- Recognise the key sources of risk in a particular Financial instrument whose valuation depends on interest rates
- Identify and explain amelioration strategies for these risks
- Identify how best to use interest rate sensitive Financial instruments to solve certain financing and risk management problems
- Embrace an analytical and creative problem-solving approach to the use of the yield curve and related Financial instruments as a professional risk manager's tool
- Demonstrate deeper and more mature problem-solving skills as they relate to the yield curve and related Financial instruments

Delivery and Resources

CLASSES

Face-to-Face Teaching: Generally 20 hours

Timetable: Detailed timetable for classes are on the Centre's web site www.mafc.mq.edu.au

Consultation Times:

Students who wish to contact any of the teaching staff may do so through:

- The Unit's iLearn site, in relation to general queries (so that all students may benefit); or
- Individual consultation with the lecturer by email in the first instance, if necessary.

REQUIRED AND RECOMMENDED TEXTS AND/OR MATERIALS

Text: Nil

Additional Readings:

- Additional readings are included in the Unit notes and may be placed on iLearn.
- Students should assume these readings are examinable unless otherwise advised.

Lecture Notes: Available in printed form and electronically via iLearn.

Study Problems: Students are required to work systematically through suggested problem sets. These problems will not be collected but they will help you prepare for the exams. Answers to the problems will be posted on the Unit's iLearn site.

Pre-Unit Materials: Information papers on statistics, regression, accounting and other material may be found at http://mafcstudents.mq.edu.au/new-to-mafc/pre-course-materials/. Students should work through this material prior to commencing the degree. The material will remain a useful reference as students progress through the program.

Useful References:

- McDonald, Robert. Derivatives MARKETS (3rd edition). Pearson Education, Boston, 2013.
- Choudhry, Moorad. Analysing & Interpreting the YIELD CURVE. John Wiley & Sons, Singapore, 2004.
- Miron, Paul & P. Swannell. Pricing and Hedging Swaps. Euromoney Publications, London, 1991.
- Smithson, Charles W. Managing Financial Risk (3rd edition). McGraw-Hill, New York, 1998.
- Stander, Yolanda S. Yield Curve Modeling. Palgrave MacMillan, New York, 2005.
- Sydney Futures Exchange. Various futures contract specifications.
- Tuckman, Bruce. Fixed Income Securities: Tools for Today's Markets. (2nd edition).
- John Wiley & Sons, New Jersey, 2002.

Calculators:

- A financial calculator that can handle time value of money calculations, logs and power functions is required.

- The Hewlett Packard calculator hp17bII+ is recommended.
- In examinations, any of the following calculators are permitted:
    - Hewlett Packard hp17bII+
    - Hewlett Packard hp12c platinum or hp12c
    - Texas Instruments BAII PLUS (also the PROFESSIONAL version).
- No other calculators, mobile phones or computers are permitted in examinations.

Assumed Knowledge: Mathematical content

- Finance has a high level of numerate content. Consequently this unit is, in parts, mathematical and arithmetical. As an indication of the level of algebra required, students should find the following problem easy to solve:

Solve for *Z*5:$1,000 = $681.20(1+*Z*5/2)10

- Occasionally the unit dips into the differential calculus. As an indication of the level of calculus required, students should be able to interpret the following equation:

D = - ((1+y) / P) (ΔP/Δy)

- Students should look at the Web link below to obtain notes on the minimum mathematical and statistical knowledge required to undertake the Master of Applied Finance degree: http://mafcstudents.mq.edu.au/new-to-mafc/pre-course-materials/

Assumed Access: Access to a computer with word processing and spreadsheet capability is assumed, as is general Student computer literacy.

TECHNOLOGY USED AND REQUIRED

Unit iLearn Site:

- Found by logging on to iLearn ilearn.mq.edu.au, then clicking on ***Interest Rate Portfolio Management***.
- This is where you will find forums, downloadable resources and links to important pages.
- The forum allows you to communicate with other students and lecturer(s) and may provide supplementary material.
- You are requested to post your questions on the forums at least 24 hours prior to the assignment submission date or the examination date. Questions posted after that time may not be answered. **Please try to not leave your questions to the last few days.**

Important Notice:

- It is important that you familiarize yourself with the Unit's iLearn site.

- Students should check the Unit's iLearn site regularly (minimum twice a week and prior to all lectures) and look for updates and distribution of materials (including case studies) related to the unit or assessments and, if relevant, participate in forum discussions.

Unit Schedule

0. PRE-UNIT ASSIGNMENT

The pre-Unit assignment and a relevant spreadsheet file will be made available for download from the IRPM course forum about 2½ weeks before the lectures. Students should go to http://www.mafc.mq.edu.au/coursewebpages/irpm/downloads.htm to download these.

The pre-Unit assignment represents 15% of the assessment for this Unit. It is due at the start of the very first lecture.

1. CONTEXT & OVERVIEW

1.1: What you should have learned by doing the pre-unit assignment.

1.2: Introduction to the yield curve -- definition, theory and estimation.

1.3: Valuation: application of discount factors to future cash flows.

1.4: The notion of a traded cash flow.

1.5: Common/Familiar Financial instruments that involve traded cash flows.

1.5.1 Bank bills, certificates of deposit, commercial paper.

1.5.2 Bonds.

1.5.3 Interest rate swaps.

1.5.4 Why aren't there more longer dated ZC traded cash flows?

1.6: Contingent cash flows.

1.6.1 Swaps.

1.6.2 Options.

1.6.3 Credit risk contingencies.

1.7: Risk management of traded cash flows -- asking and answering a whole bunch of "What if?" questions.

1.8: Bringing it all together -- context and scope of this course.

1.9: The business context.

PE1: Problems and exercises for Topic 1.

ICE1: Points drawn out of the pre-unit assignment.

References:

- Choudhry, Moorad. Analysing & Interpreting the YIELD CURVE. John Wiley & Sons,

Singapore, 2004.

- James, Todd. Interest Rate Derivatives. Risk Books, London, 2006.
- McDonald, Robert L. Derivatives MARKETS (3rd edition). Pearson Education, Boston, 2013.
- Smithson, Charles W. Managing Financial Risk. McGraw-Hill, New York, 1998.
- IRPM_1.xlsx spreadsheet.

2. THE YIELD CURVE AND RANDOMNESS IN INTEREST RATES

2.1: Definition and some parameters.

2.1.1 The meaning of the drift coefficient.

2.1.2 The meaning of the standard deviation.

2.1.3 Putting it together thus far.

2.2: Specifications for α(r) and σ(r).

2.2.1 The Rendleman-Bartter model.

2.2.2 The Vasicek model.

2.2.3 The Cox-Ingersoll-Ross (CIR) model.

2.3: Estimation.

2.3.1 Identify the parameters.

2.3.2 Choose a criterion function.

2.3.3 Optimise the criterion.

2.3.4 Class exercise: Estimation.

2.4: Modelling the yield curve.

2.4.1 Regression-type models.

2.4.2 Empirical yield curve models.

2.4.3 Equilibrium models.

2.5: The Black model for pricing bond options and caps.

2.5.1 Class exercise: Using the Black model to price a cap.

2.6: The Black-Derman-Toy (BDT) model.

2.6.1 Class exercise: Implementing a Black-Derman-Toy tree.

2.6.2 Pricing caplets and caps using a BDT tree.

2.6.3 Pricing FRAs using a BDT tree.

2.7: Summary and learnings.

PE2: Problems and exercises for Topic 2.

References:

- Choudhry, Moorad. Analysing & Interpreting the YIELD CURVE. John Wiley & Sons, Singapore, 2004.
- James, Todd. Interest Rate Derivatives. Risk Books, London, 2006.
- McDonald, Robert L. Derivatives MARKETS (3rd edition). Pearson Education, Boston, 2013. (Chapter 25).
- Stander, Yolanda. Yield Curve Modeling. Palgrave MacMillan, New York, 2005.
- IRPM_1.xlsx spreadsheet.

3. THE ZERO-COUPON YIELD CURVE

3.1: What's observable?

3.2: Discount factors.

3.3: The key connecting relationship -- DFs and par swap rates.

3.4: Interpolation techniques.

3.4.1 Linear interpolation.

3.4.2 Exponential interpolation.

3.4.3 Cubic splining.

3.5: Construction of a "blended" zero-coupon yield curve.

3.5.1 The AUD Money Mkt worksheet.

3.5.2 The AUD Futures worksheet.

3.5.3 The AUD Swaps worksheet.

3.5.4 The AUD Discount Function worksheet.

PE3: Problems and exercises for Topic 3.

ICE3: Topic 3 in-class exercise.

References:

- Choudhry, Moorad. Analysing & Interpreting the YIELD CURVE. John Wiley & Sons, Singapore, 2004.
- James, Todd. Interest Rate Derivatives. Risk Books, London, 2006.
- McDonald, Robert L. Derivatives MARKETS (3rd edition). Pearson Education, Boston, 2013. (Chapter 25).
- Walsh, Owen. The Art and Science of Curve Building. Wilmott magazine, November 2003.

- Webb, Tony. The Art and Science of Curve Building Revisited. Wilmott magazine, June 2004.
- IRPM_2.xlsx spreadsheet.

4. PRICING, VALUATION AND REVALUATION

4.1: The net cash flows meet the discount function.

4.2: A sign convention.

4.3: A useful definition -- the accrual factor.

4.4: Valuing the fixed side of an interest rate swap.

4.5: Valuing the floating side of an interest rate swap.

4.6: Bringing the two sides together.

4.7: Revaluation.

4.8: Currency considerations -- a spot FX perspective.

4.9: Cross-currency swaps (CCS) and long dated foreign exchange (LDFX).

PE4: Problems and exercises for Topic 4.

References:

- Choudhry, Moorad. Analysing & Interpreting the YIELD CURVE. John Wiley & Sons, Singapore, 2004.
- James, Todd. Interest Rate Derivatives. Risk Books, London, 2006.
- McDonald, Robert L. Derivatives MARKETS (3rd edition). Pearson Education, Boston, 2013.
- Walsh, Owen. The Art and Science of Curve Building. Wilmott magazine, November 2003.
- Webb, Tony. The Art and Science of Curve Building Revisited. Wilmott magazine, June 2004.
- IRPM_2.xlsx spreadsheet.

5. THE PORTFOLIO EFFECT -- DELTA, THETA AND SUCH

5.1: One TCF has many NPV sensitivities.

5.2: The effect of the passage of time.

5.3: The effect of changes in interest rates -- Delta (?).

5.4: The effect of changes in FX rates.

5.5: The portfolio effect.

PE5: Problems and exercises for Topic 5.

References:

- Luedecke, Bernd P. Measuring, displaying and hedging the market risk on a swap.
- Chapter 30 of Das, Satyajit, Global Swap Markets, IFR Publishing Ltd, London, 1991, pp:359-376.
- Miron, Paul & P. Swannell. Pricing and Hedging Swaps. Euromoney Publications, London, 1991.
- IRPM_2.xlsx spreadsheet.

6. DIFFERENT CASH FLOW STRUCTURES

6.1: Basis swaps.

6.2: Amortising swaps.

6.3: Roller coaster swaps.

6.4: Commodity swaps.

6.5: Equity swaps.

6.6: Asset swaps.

6.7: Total return swaps.

6.8: Constant maturity swaps (CMS).

6.9: Overnight index swaps (OIS).

6.10: Delayed reset (= in-arrears, or back-end-reset) swaps.

6.11: Flexibility = “glue”.

6.12: Swaptions.

PE6: Problems and exercises for Topic 6.

ICE6: Topic 6 in-class exercise.

References:

- Miron, Paul & P. Swannell. Pricing and Hedging Swaps. Euromoney Publications, London, 1991.
- Smithson, Charles W. Managing Financial Risk (3rd edition). McGraw-Hill, New York, 1998.
- IRPM_2.xlsx spreadsheet.

7. HEDGING: MORE TECHNICAL EXTENSIONS

7.1: Basis risk analysis.

7.2: Minimum variance basis hedging.

7.3: The hedging coefficient model.

7.4: Calculating hedging coefficients.

7.5: Stationarity of hedging relationship(s).

PE7: Problems and exercises for Topic 7.

References:

- Luedecke, Bernd P. Measuring, displaying and hedging the market risk on a swap.
- Chapter 30 of Das, Satyajit, Global Swap Markets, IFR Publishing Ltd, London, 1991, pp:359-376.
- Miron, Paul & P. Swannell. Pricing and Hedging Swaps. Euromoney Publications, London, 1991.
- Smithson, Charles W. Managing Financial Risk (3rd edition). McGraw-Hill, New York, 1998.
- IRPM_3.xlsx spreadsheet.

8. MANAGEMENT/BUSINESS ISSUES

8.1: Where does the next deal come from?

8.2: Are we well managed, prudentially and governance-wise?

8.2.1 Risk limits and impartial enforcement.

8.2.2 Adequate measurement of capital usage and appropriate risk-adjusted return on that.

8.2.3 Internal “contracting” (enforceable?) between the portfolio manager and her/his manager(s).

8.3: Legal considerations.

8.3.1 Has our company signed/executed the required documentation? (e.g., ISDA agreements).

8.3.2 Do you personally have authority to deal, and appropriate training & competence?

8.4: Are we well managed as a business?

8.4.1 A going concern.

8.4.2 Providing for future operations.

8.4.3 Liquidity is crucial.

8.4.4 Dealing lines/limits.

8.4.5 Cash management.

8.4.6 Exiting the business.

PE8: Problems and exercises for Topic 8.

References:

- Das, Satyajit. Swaps and Financial Derivatives (2nd ed). Law Book Company, Sydney, 1994.
- Luedecke, Bernd P. Measuring, displaying and hedging the market risk on a swap.
- Chapter 30 of Das, Satyajit, Global Swap Markets, IFR Publishing Ltd, London, 1991, pp:359-376.
- Smithson, Charles W. Managing Financial Risk (3rd edition). McGraw-Hill, New York, 1998.

9. POST-LECTURES ASSIGNMENT

The assignment itself will be handed out in class or made available for downloading from the IRPM unit ilearn site. This assignment comprises 30% of the overall assessment for the IRPM unit.

10. EXAMINATION

This examination comprises 55% of the assessment for the IRPM unit.

Learning and Teaching Activities

Strategy

The Master of Applied Finance degree adopts a deep teaching and learning strategy, in which Students acquire and retain knowledge and also are able to make sense of the issues and concepts and apply them in the “real world”. The degree relies heavily on student engagement and participation by: (a) Continuous learning throughout the semester. This is encouraged through a combination of students undertaking prescribed reading throughout the units and / or completion of practice problems, case studies, assignments, class presentations etc and interaction via forums in the unit’s iLearn site; and (b) Assessments, which enable the student to demonstrate his / her understanding of the learning objectives achieved through the continuous learning.

Student Participation

Students participate in this unit by: (a) Attending lectures and participating in class discussion; (b) Before each class, completing the recommended readings of notes and text, and working systematically through suggested problem sets; (c) Interacting on the unit’s iLearn site; and (d) Completing all assessment tasks and exams. On average the unit will require students to complete, for every hour of class time, approximately 3 hours private study.

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

Assessment Policy http://mq.edu.au/policy/docs/assessment/policy.html

Grading Policy http://mq.edu.au/policy/docs/grading/policy.html

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

Grievance Management Policy http://mq.edu.au/policy/docs/grievance_management/policy.html

Disruption to Studies Policy 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/

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.

Students should also consult the MAFC Program Rules & Procedures found at http://www.mafc.mq.edu.au

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) 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 enquiry service (MAFC-specific)

For all student enquires, please contact studentsupport@mafc.mq.edu.au

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.

Learning Skills

Learning Skills (http://www.students.mq.edu.au/support/learning_skills/) 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 Enquiries

For all student enquiries, visit Student Connect at ask.mq.edu.au

IT Help

For help with University computer systems and technology, visit http://informatics.mq.edu.au/help/.

When using the University's IT, you must adhere to the Acceptable Use Policy. The policy applies to all who connect to the MQ network including students.

Graduate Capabilities

PG - Capable of Professional and Personal Judgment and Initiative

Our postgraduates will demonstrate a high standard of discernment and common sense in their professional and personal judgment. They will have the ability to make informed choices and decisions that reflect both the nature of their professional work and their personal perspectives.

This graduate capability is supported by:

Learning outcomes

- Recognise the key sources of risk in a particular Financial instrument whose valuation depends on interest rates
- Identify and explain amelioration strategies for these risks
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- Embrace an analytical and creative problem-solving approach to the use of the yield curve and related Financial instruments as a professional risk manager’s tool
- Demonstrate deeper and more mature problem-solving skills as they relate to the yield curve and related Financial instruments

Assessment tasks

- Pre-Unit Assignment
- Post-Lectures Assignment
- Final Examination

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

- Recognise the key sources of risk in a particular Financial instrument whose valuation depends on interest rates
- Identify and explain amelioration strategies for these risks
- Identify how best to use interest rate sensitive Financial instruments to solve certain financing and risk management problems
- Embrace an analytical and creative problem-solving approach to the use of the yield curve and related Financial instruments as a professional risk manager’s tool
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Assessment tasks

- Pre-Unit Assignment
- Post-Lectures Assignment
- Final Examination

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

- Recognise the key sources of risk in a particular Financial instrument whose valuation

depends on interest rates
- Identify and explain amelioration strategies for these risks
- Identify how best to use interest rate sensitive Financial instruments to solve certain financing and risk management problems
- Embrace an analytical and creative problem-solving approach to the use of the yield curve and related Financial instruments as a professional risk manager's tool
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Assessment tasks

- Pre-Unit Assignment
- Post-Lectures Assignment
- Final Examination

PG - Engaged and Responsible, Active and Ethical Citizens

Our postgraduates will be ethically aware and capable of confident transformative action in relation to their professional responsibilities and the wider community. They will have a sense of connectedness with others and country and have a sense of mutual obligation. They will be able to appreciate the impact of their professional roles for social justice and inclusion related to national and global issues

This graduate capability is supported by:

Learning outcomes

- Recognise the key sources of risk in a particular Financial instrument whose valuation depends on interest rates
- Identify and explain amelioration strategies for these risks
- Identify how best to use interest rate sensitive Financial instruments to solve certain financing and risk management problems
- Embrace an analytical and creative problem-solving approach to the use of the yield curve and related Financial instruments as a professional risk manager's tool
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Assessment tasks

- Pre-Unit Assignment
- Post-Lectures Assignment
- Final Examination

Important Notice

This Unit Guide may be subject to change. The latest version is on the Centre's web site www.mafc.mq.edu.au.

Students should read the Unit Guide carefully at the start of semester. It contains important information about the unit. If anything is unclear, please consult one of the unit lecturers.

Standards Required to Complete the Unit Satisfactorily

University Policy on Grading:

- Macquarie University's Academic Senate has established a Grading Policy available at http://www.mq.edu.au/policy/docs/grading/policy.html. Your final result will include:
    - A grade ranging from Fail to High Distinction; and
    - A Standardised Numerical Grade (SNG). A SNG is not a summation of the individual assessment components, but is allocated on the basis of the performance in all assessment items, providing the examination component is passed.
- It is important to note:
    - The Policy does not require that a minimum or maximum number of students are to be failed in any unit;
    - Grades will not be allocated to fit a predetermined distribution; and
    - The process of allocating SNGs does not change the rank order of marks among students who pass the unit.

Specific Unit Grading:

- To pass this unit (requires a Standardised Numerical Grade of 50 or better) the student must pass the final examination.
- All final grades in the Applied Finance Centre are determined by a grading committee and are not the sole responsibility of the unit convenor.
- The core criteria used to assess student work in this unit are:
    - Knowledge and understanding: Understanding key ideas, knowledge and use of concepts.
    - Application: Ability to apply theoretical ideas and frameworks in practice and in a critically reflective way.
    - Reasoning and analysis: Ability to analyse, use critical reasoning and principles to formulate a position, balancing theory and personal reflection.

    - Professional literacy and research: Understanding of professional factors (language and landscape) and ability to undertake appropriate research.
    - Communication and presentation: Ability to communicate and present effectively (written and oral, as relevant).
    - Use of mathematical and statistical ideas: Ability to use mathematical and statistical ideas, methods and formulae appropriately.
- Performance in relation to each of these criteria are assessed against the University's grading descriptors:

Grade	Expectation
High Distinction	Provides consistent evidence of deep and critical understanding in relation to the learning outcomes. There is substantial originality and insight in identifying, generating and communicating competing arguments, perspectives or problem solving approaches; critical evaluation of problems, their solutions and their implications; creativity in application as appropriate to the discipline.
Distinction	Provides evidence of integration and evaluation of critical ideas, principles and theories, distinctive insight and ability in applying relevant skills and concepts in relation to learning outcomes. There is demonstration of frequent originality in defining and analysing issues or problems and providing solutions; and the use of means of communication appropriate to the discipline and the audience.
Credit	Provides evidence of learning that goes beyond replication of content knowledge or skills relevant to the learning outcomes. There is demonstration of substantial understanding of fundamental concepts in the field of study and the ability to apply these concepts in a variety of contexts; convincing argumentation with appropriate coherent justification; communication of ideas fluently and clearly in terms of the conventions of the discipline.
Pass	Provides sufficient evidence of the achievement of learning outcomes. There is demonstration of understanding and application of fundamental concepts of the field of study; routine argumentation with acceptable justification; communication of information and ideas adequately in terms of the conventions of the discipline. The learning attainment is considered satisfactory or adequate or competent or capable in relation to the specified outcomes.
Fail	Does not provide evidence of attainment of learning outcomes. There is missing or partial or superficial or faulty understanding and application of the fundamental concepts in the field of study; missing, undeveloped, inappropriate or confusing argumentation; incomplete, confusing or lacking communication of ideas in ways that give little attention to the conventions of the discipline.

Review of Grade and final examination Script viewing:

- A student who has been awarded a final grade for a unit and who does not believe it is an accurate reflection of their performance, and has grounds for such a claim and can demonstrate those grounds, may apply to have their grade reviewed.
- For information on requesting a review of grade and/or viewing your final exam script, please refer to the University's Grade Appeal Policy at http://www.mq.edu.au/policy/docs/gradeappeal/policy.html and MAFC Program Rules & Procedures at http://www.mafc.mq.edu.au.