



ECFS880

Infrastructure and Property

AFC Term 1 CBD 2017

Dept of Applied Finance and Actuarial Studies

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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 / Lecturer

David Wing

david.wing@mq.edu.au

Contact via Email

Credit points

2

Prerequisites

(Admission to MAppFin or GradDipAppFin) and ECFS866

Corequisites

Co-badged status

Unit description

This unit focuses on the principles, issues and documentation involved in structuring and arranging finance for property developments and infrastructure projects. It complements ECFS877 by focusing on the application of project financing principles and techniques to property developments and smaller infrastructure projects in non-traditional areas – especially social infrastructure. It examines the structuring and arranging of capital for property developments and in tendering of certain classes of infrastructure projects. It also examines the latest developments in infrastructure delivery methods such as PPPs.

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:

Understand how to structure and arrange capital for property development and infrastructure projects, with a solid understanding of the key principles, issues and documentation.

Understand how to undertake real estate development and infrastructure projects, with solid understanding of current market practices and procedures.

Understand, apply and evaluate the application of project financing principles and techniques to property development and infrastructure projects (especially social

infrastructure).

Identify, evaluate and analyse the key risks in property development and infrastructure projects and the connection between those underlying risks and their components of return.

Explain and evaluate the latest developments in public private partnerships and other infrastructure delivery methods, including the key risks and appropriateness of each.

General Assessment Information

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

Assessment Tasks

Name	Weighting	Hurdle	Due
In Class Exercise	10%	No	To be advised in class
Case Study	30%	No	Refer to iLearn
Final Exam	60%	Yes	Refer to Timetable

In Class Exercise

Due: **To be advised in class**

Weighting: **10%**

Summary of Assessment Task

Individual / Group: Individual

Due Date: To be advised in class by Lecturer

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

Submission Method: In class

Duration: 30 - 60 minutes

Extension Requests:

- If you have extenuating circumstances that prevent you from submitting your In Class Exercise by the due date, please make arrangements with your Lecturer prior to the due date.
- Late submission will result in zero marks.

Other Information:

- Assignment question will be distributed in class.
- Data for spreadsheet analysis will be placed on iLearn.

On successful completion you will be able to:

- Understand how to undertake real estate development and infrastructure projects, with solid understanding of current market practices and procedures.
- Identify, evaluate and analyse the key risks in property development and infrastructure projects and the connection between those underlying risks and their components of return.
- Explain and evaluate the latest developments in public private partnerships and other infrastructure delivery methods, including the key risks and appropriateness of each.

Case Study

Due: **Refer to iLearn**

Weighting: **30%**

Summary of Assessment Task

Individual / Group: In groups subject to enrolments

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.

On successful completion you will be able to:

- Understand how to structure and arrange capital for property development and infrastructure projects, with a solid understanding of the key principles, issues and documentation.
- Understand how to undertake real estate development and infrastructure projects, with solid understanding of current market practices and procedures.
- Understand, apply and evaluate the application of project financing principles and techniques to property development and infrastructure projects (especially social

infrastructure).

- Identify, evaluate and analyse the key risks in property development and infrastructure projects and the connection between those underlying risks and their components of return.

Final Exam

Due: **Refer to Timetable**

Weighting: **60%**

This is a hurdle assessment task (see [assessment policy](#) for more information on hurdle assessment tasks)

Summary of Assessment Task

Individual / Group: Individual

Due Date: Refer to Timetable. Assessments: Different Class Groups have different deadlines. Students should find the timetable and dates relevant to their group at www.mafc.mq.edu.au

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 closed book. However, permitted Calculators are allowed, as noted under 'Calculators' below.
- Exam times and locations are noted in the unit timetable at www.mafc.mq.edu.au.
- Refer to MAFC Program Rules & Procedures at 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:

- Understand how to structure and arrange capital for property development and infrastructure projects, with a solid understanding of the key principles, issues and documentation.
- Understand how to undertake real estate development and infrastructure projects, with

solid understanding of current market practices and procedures.

- Understand, apply and evaluate the application of project financing principles and techniques to property development and infrastructure projects (especially social infrastructure).
- Identify, evaluate and analyse the key risks in property development and infrastructure projects and the connection between those underlying risks and their components of return.
- Explain and evaluate the latest developments in public private partnerships and other infrastructure delivery methods, including the key risks and appropriateness of each.

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.
- **Students should assume these readings are examinable unless otherwise advised.**

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

Pre-Unit Materials: Information papers on statistics, regression, accounting and other material may be found at <http://www.mafc.mq.edu.au/applications/minimum-knowledge-requirement/pre-course-materials1/>. 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:

- Bruce, McKern, et al, 1997, *Handbook of Australian Corporate Finance*, 5th edn, Butterworths, Sydney.
- There are books available to help develop your Excel skills, which are needed for

assignments. Two helpful books are:

- Craig W. Holden, *Excel Modelling in Corporate Finance*, 2nd ed., Pearson Prentice Hall, 2005; or
- Michael Rees, *Financial Modelling in Practice*, Wiley, 2008.

Calculators: In examinations, hand held calculators are permitted. Mobile phones and computers are not permitted.

Assumed Knowledge: 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://www.mafc.mq.edu.au/applications/minimum-knowledge-requirement/pre-course-materials1/>.

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 ***Infrastructure and Property***.
- 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.

Important Notice:

- It is important that you familiarize yourself with iLearn.
- Students should check iLearn 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

SESSION 1 – PROPERTY DEVELOPMENT

Topics:

- Introduction to the development process
- Participants
- Property as an asset class
- Property markets generally
- Concepts of value and valuation

- Steps in the development process

SESSION 2 – PROPERTY FINANCE

Topics:

- Types of finance
 - Equity
 - Debt
 - Mezzanine
- Participants and their role
- Providers of finance
- Construction arrangements
 - Construction only
 - Design and Construct
 - Design, Construct and Finance
 - Turnkey

SESSION 3 – STRUCTURING A PROPERTY FINANCE TRANSACTION I

Topics:

- Introduction to structuring issues
- Legal issues and taxation considerations in the choice of development/ownership structure
- Basic forms of legal documentation required
- Risks and their allocation
- Financing structures generally

SESSION 4 – STRUCTURING A PROPERTY FINANCE TRANSACTION II

Topics:

- Project evaluation
 - Financial
 - Risks
 - Security
 - Margins and fees
- Exit strategies
 - Put options
 - Take-outs

- Syndication
- Securitisation
- Case studies

SESSION 5 – INFRASTRUCTURE PROJECTS

Topics:

- Historical perspective
- Recent trends
- Types of infrastructure projects
- Infrastructure transactions generally
- Tender process
- Forming a bidding consortium
- Risk allocation
- Capital raising
- Legal documentation/negotiation
- Implementation
- General structure of a BOOT transaction
- Parties
- Risk allocation
- Capital raising
- Legal documentation
- Implementation
- Case studies

SESSION 6 – PUBLIC PRIVATE PARTNERSHIPS

Topics:

- Rationale for private sector participation
- The development of private sector participation models
- The Australian experience of private sector participation
- The development of alternative models
- The private financing initiative
- Public private partnerships (PPP)
- Key features of a PPP
- Typical agreements
- Are PPP's new?
- The concept of partnership

- The contractual framework
- Allocation of risk
- Quality of service
- Other issues
- Case studies

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_2016.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

Disruption to Studies Policy (in effect until Dec 4th, 2017): http://www.mq.edu.au/policy/docs/disruption_studies/policy.html

Special Consideration Policy (in effect from Dec 4th, 2017): <https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policies/special-consideration>

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://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 - 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

- Understand how to structure and arrange capital for property development and infrastructure projects, with a solid understanding of the key principles, issues and documentation.
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- Understand, apply and evaluate the application of project financing principles and techniques to property development and infrastructure projects (especially social infrastructure).
- Identify, evaluate and analyse the key risks in property development and infrastructure projects and the connection between those underlying risks and their components of return.
- Explain and evaluate the latest developments in public private partnerships and other infrastructure delivery methods, including the key risks and appropriateness of each.

Assessment tasks

- In Class Exercise
- Case Study
- 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

- Understand how to structure and arrange capital for property development and infrastructure projects, with a solid understanding of the key principles, issues and documentation.
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- Explain and evaluate the latest developments in public private partnerships and other infrastructure delivery methods, including the key risks and appropriateness of each.

Assessment tasks

- In Class Exercise
- Case Study
- 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 how to structure and arrange capital for property development and infrastructure projects, with a solid understanding of the key principles, issues and

documentation.

- Understand how to undertake real estate development and infrastructure projects, with solid understanding of current market practices and procedures.
- Understand, apply and evaluate the application of project financing principles and techniques to property development and infrastructure projects (especially social infrastructure).
- Identify, evaluate and analyse the key risks in property development and infrastructure projects and the connection between those underlying risks and their components of return.
- Explain and evaluate the latest developments in public private partnerships and other infrastructure delivery methods, including the key risks and appropriateness of each.

Assessment tasks

- In Class Exercise
- Case Study
- Final Exam

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

- Understand how to structure and arrange capital for property development and infrastructure projects, with a solid understanding of the key principles, issues and documentation.
- Understand how to undertake real estate development and infrastructure projects, with solid understanding of current market practices and procedures.
- Understand, apply and evaluate the application of project financing principles and techniques to property development and infrastructure projects (especially social infrastructure).
- Identify, evaluate and analyse the key risks in property development and infrastructure projects and the connection between those underlying risks and their components of return.
- Explain and evaluate the latest developments in public private partnerships and other

infrastructure delivery methods, including the key risks and appropriateness of each.

Assessment tasks

- In Class Exercise
- Case Study
- Final Exam

Important Notice

This Unit Guide may be subject to change. The latest version is on the Centre's web site www.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 numerical Mark which is a summation of the individual assessment components, 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
 - Grades for all individual assessment items will be released to students, but Marks may not necessarily be released.

Specific Unit Grading:

- To pass this unit (requires a Mark of 50 or better) the student must pass the final examination.
- All final Marks and 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>.