



AFCP859

Advanced Valuation for Corporate Finance

AFC Term 3 MB 2019

Department of Applied Finance

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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

Lecturer

Stephen Reid

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Contact via Email

Credit points

2

Prerequisites

(Admission to MAppFin or MAppFin(Adv) or GradDipAppFin) and ECFS866

Corequisites

Co-badged status

Unit description

This unit develops skills required in the assessment and valuation of projects, companies or divisions, and is designed for those with a role in business development, strategic planning or advising companies on financing, investment or restructuring decisions. Students will be equipped to address a wide range of valuation situations by being able to critically evaluate and apply the variety of valuation techniques used in practice. Building on the principles from Corporate Finance we consider in detail the assumptions and implementation issues involved in valuation models, recent developments in cost of capital estimation, valuation methodologies and real options. Valuation in an international context will also be considered. Considerable emphasis is placed on assessing the robustness of valuations and how to incorporate risk into valuation and decision making. The unit provides opportunities to develop financial modelling skills, and provides exposure to @Risk software (used for Monte Carlo simulation), and access to S&P Capital IQ.

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:

Analyse and explain the range of decision making situations that require valuations.

Critically evaluate and develop valuation techniques and models for a range of business contexts.

Assess risk issues and develop reasoned recommendations.

Demonstrate critical reflection in applying valuation models to real world situations.

Demonstrate skills in assessing cost of capital and report preparation.

General Assessment Information

To pass this unit the student needs to (1) Achieve an aggregate mark of 50 or more, and; (2) Pass the Final Exam.

Assessment Tasks

Name	Weighting	Hurdle	Due
Pre-unit Assignment	10%	No	First Class
Assignment	35%	No	Refer to iLearn
Final Exam	55%	Yes	Refer to Timetable

Pre-unit Assignment

Due: **First Class**

Weighting: **10%**

Summary of Assessment Task

Individual / Group: Individual.

Due Date: First Class.

Submission Method: At or before the first class. Please bring a copy to class for class use as well.

Duration: Refer to Assignment Coversheet.

Extension Requests:

- No extensions will be granted.
- There will be a deduction of 10% of the total available marks for each 24 hour period or part thereof. This penalty does not apply for cases in which an application for Special Consideration has been made and approved.
- No submission will be accepted after solutions have been discussed or posted by the lecturer. As this normally occurs on day 2 of classes, students need to be aware that submissions are rarely accepted beyond the first 24 hour late period.
- Note: Applications for Special Consideration must be made within 5 (five) business days of the due date and time.
- Refer to MAFC Program Rules at <https://mafstudents.mq.edu.au/> for information on the

University's [Special Consideration Policy](#).

On successful completion you will be able to:

- Analyse and explain the range of decision making situations that require valuations.

Assignment

Due: **Refer to iLearn**

Weighting: **35%**

Summary of Assessment Task

Individual / Group: Individual.

Due Date: Refer to the unit's iLearn site.

Submission Method: Online via Turnitin on the unit's iLearn site.

Duration: Refer to Assignment Coversheet.

Extension Requests:

- No extensions will be granted. 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 incurs a 20% penalty). This penalty does not apply for cases in which an application for Special Consideration is made and approved.
- Late submissions will be accepted up to 96 hours after the due date and time.
- Note: Applications for Special Consideration must be made within 5 (five) business days of the due date and time.
- Refer to MAFC Program Rules at <https://mafstudents.mq.edu.au/> for information on the University's [Special Consideration Policy](#).

Other Information:

- The assignment will give students the opportunity to apply the techniques used in the unit. It is *expected* that there will be a choice of applications, to cater for individual student interests.
- The requirements of the assignment will be further reviewed in class.

On successful completion you will be able to:

- Analyse and explain the range of decision making situations that require valuations.
- Critically evaluate and develop valuation techniques and models for a range of business contexts.

- Assess risk issues and develop reasoned recommendations.
- Demonstrate critical reflection in applying valuation models to real world situations.
- Demonstrate skills in assessing cost of capital and report preparation.

Final Exam

Due: **Refer to Timetable**

Weighting: **55%**

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.

Submission Method: As per MAFC Program Rules at <https://mafcstudents.mq.edu.au/>

Duration: 2 hours plus 10 minutes reading time.

Examination Conditions:

- All examinations are closed book. However, permitted materials and aids are:
 - A study sheet, prepared by the student (one double-sided A4 page), to be advised by the Lecturer prior to the Exam.
 - Calculators - permitted calculators are noted under 'Calculators' below.
- Exam times and locations are noted in the unit timetable at <https://www.mq.edu.au/about/about-the-university/faculties-and-departments/business/study-with-us/macquarie-applied-finance-centre/timetables>.
- Refer to MAFC Program Rules at <https://mafcstudents.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 <https://www.mq.edu.au/about/about-the-university/faculties-and-departments/business/study-with-us/macquarie-applied-finance-centre/timetables>.
- Deferral of an examination is not permitted unless an application for Special Consideration is made and approved.
- Students who do not attend receive a mark of zero. This penalty does not apply in cases where an application for Special Consideration has been made and approved.
- Note: Applications for Special Consideration must be made within 5 (five) business days of the due date and time.
- Refer to MAFC Program Rules at <https://mafcstudents.mq.edu.au/> for information on the

University's [Special Consideration Policy](#).

On successful completion you will be able to:

- Analyse and explain the range of decision making situations that require valuations.
- Critically evaluate and develop valuation techniques and models for a range of business contexts.
- Assess risk issues and develop reasoned recommendations.
- Demonstrate critical reflection in applying valuation models to real world situations.
- Demonstrate skills in assessing cost of capital and report preparation.

Delivery and Resources

CLASSES

Face-to-Face Teaching: Generally 20 hours.

Timetable: Detailed timetable for classes are available at <https://www.mq.edu.au/about/about-the-university/faculties-and-departments/business/study-with-us/macquarie-applied-finance-centre/timetables>.

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

Course Resources:

- iLearn contains all the requisite material for the classes, assignments and final examination. The value of the unit will be maximised if you are able to review unit notes and readings prior to classes. Please critically assess the material in these readings, in particular the case studies.
- iLearn contains spreadsheet solutions for the problems in the notes, and additional discussion on a number of items. Students should download the spreadsheets prior to class, and you should bring printouts or a laptop to help you follow them in class.
- Students should assume any additional readings are examinable unless otherwise advised.

Lecture Notes: Available via iLearn.

Case Studies:

- There are case studies in the notes (Trees and Portes). Please read these cases before classes, as they will be discussed in class.
- **Students are not required to solve the cases – this will be covered in class.**

Pre-unit Materials:

- Your time in class will benefit from having read the course material prior to class.
- The pre-unit assignment draws on your Corporate Finance material, so should be regarded as an opportunity for quick revision of Corporate Finance notes on valuation.

Useful References:

- Tim Koller, Marc Goedhardt and David Wessels, *Valuation: Measuring and Managing the Value of Companies*, Wiley, 2011, 5th edition.
- Tom Copeland and Vladimir Antikarov, *Real Options: a practitioners guide*, Thomson Texere, 2003, **Updated edition**
- Titman, S and J.D. Martin., *Valuation: The Art & Science of Corporate Investment Decisions*, 3rd ed., Pearson, 2016
- 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.
- For those of you with an engineering background, or more interested in the technical aspects of evaluation procedures, The Engineering Economist journal is an excellent source.

Calculators:

- A financial calculator that can handle time value of money calculations is required.
- In examinations, hand held calculators are permitted. Mobile phones and computers are not permitted.

Assumed Knowledge: Mathematical content

- This unit relies heavily on present value techniques. Students should be able to use the general formula for calculating the present value of a series of cash flows, as shown below:

$$\text{Present Value} = \sum_{t=0}^n ((\text{Cash Flow}_t) / (1+K_t)^t)$$

as well as alternate expressions for calculating the present value of a series of cash flows

using level and growing perpetuities and annuities.

You should review Chapter 4 of the textbook if you are not comfortable with this material.

- Students should also be familiar with option valuation, including the Black Scholes model and binomial valuation.

Assumed Access:

- Access to a computer with word processing and spreadsheet capability is assumed, as is general student computer literacy.
- Access to a laptop, taken to class, is desirable.
- The @Risk software is available for downloading from iLearn.

TECHNOLOGY USED AND REQUIRED

Unit iLearn Site:

- Found by logging on to iLearn ilearn.mq.edu.au, then clicking on ***AFCP859 Advanced Valuation for Corporate Finance***.
- This is where you will find links to forums, downloadable resources and other 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 to the forum 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:

- It is important that you familiarise 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

1: REVIEW OF VALUATION FRAMEWORK

Taking the basic DCF model as the starting point, the topic presents some extensions of the valuation models introduced in pre-requisite subjects and demonstrates how they can be used in practice to inform strategy development and decision making.

Key learning outcomes for this topic:

- Be able to evaluate the validity of chosen decision criteria in context of shareholder value

maximization objective.

- Critically analyse the link between value, value creation and value drivers.
- Have a working knowledge of typical valuation models, understand the nature of assumptions made using different valuation models and assess their similarities and differences.
- Start to critically assess usefulness of alternative models.
- Understand the consistency principal as applied to valuation models.

2: ALTERNATIVE VALUATION MODELS

The topic examines the linkages between the various models, similarities and differences and how to determine the appropriate model for a range of valuation scenarios. Special attention is paid to the Residual Income valuation method as a forerunner to linking it with strategy development.

Key learning outcomes:

- Understand the different valuation methods, the nature of assumptions made, the inputs required and assess their similarities and differences.
- Critically assess the usefulness of alternative models.
- Understand how simultaneous solution to market value gearing and market values can be assessed i.e. how the circularity problem can be solved using a numerical method.
- Critically analyse the link between value, value creation and value drivers.
- Understand the benefit of using a Residual Income model for valuation and business management.

3: USING THE VALUATION MODELS

The wide ranging applications of valuation techniques used in practice will be reviewed. The material includes a critical analysis of the types of valuation issues which often arise in practice, especially around the estimate of the terminal value which generally represents the largest component of a valuation. [NOTE: this unit does NOT consider the legal or other regulatory issues involved in preparing a valuation, nor issues such as marketability or other discounts. These matters are covered in Applied Valuation].

Key learning outcomes for this topic:

- Students should feel comfortable to be thrown into any valuation situation and be able to develop a strategy for undertaking the necessary valuation.
- Technical proficiency in application of various valuation models.
- Understand practical issues in estimating Terminal Value, incremental cash flows, and how best to value financial strategy.

4: RISK AND VALUATION

How to address risk in the different contexts of valuation is considered. Various ways to assess and measure risk and whether each risk can be assessed by a valuation adjustment (i.e. cash flows or discount rate), deal structure or decision making process (e.g. more information, decision criteria under risk) is considered. Also examined is how to assess the source of a project's NPV, and how it can be incorporated into risk appraisal.

Key learning outcomes for this topic:

- Be able to critically assess the impact of risk on value, and on the relevant decision.
- Be able to implement and critically evaluate various methods for measuring risk in the context of valuation.
- Be able to undertake a risk assessment of a business or project, appropriate to the relevant valuation and decision making context.

5: PREPARING A COST OF CAPITAL RECOMMENDATION

This topic extends the discussion of cost of capital from Corporate Finance and discusses the practical application of the cost of capital concepts in the range of valuation situations.

Key learning outcomes for this topic:

- Be able to prepare a defensible cost of capital recommendation in most valuation situations.
- Students should be familiar with key reference sources for various valuation parameters.
- Introduce the concept of implied cost of capital.
- Understand difference between hurdle rates and cost of capital, and issues in determining hurdle rates.

5A: FINANCIAL MODELLING AND FORECASTING TOOLS

This topic reviews financial modelling best practice, and procedures for establishing key relationships in a financial model, including multiple regression.

Key learning outcomes for this reading (time available in class to discuss questions arising from the material):

- Be able to identify and address issues in developing practical and reliable financial models.
- Determining and estimating relationships in financial modelling.
- Understand issues in applying a range of forecasting techniques, including regression techniques.
- Incorporating Monte Carlo simulation into financial modelling using @risk.
- Modelling issues: tax losses, circularity, modeling incorporating financial covenants.

6: STRATEGIC FLEXIBILITY AND VALUE

The impact of strategic flexibility on value is reviewed to introduce the use of option valuation techniques to value this flexibility. An approach for introducing real options into a valuation is considered along with and comparing the use of decision trees and option valuation approaches. It presents a number of straightforward scenarios which demonstrate the impact of introducing real options into the traditional DCF framework.

Key learning outcomes for this topic:

- Understand the impact that strategic flexibility can have on the risk and return profile of a project or business.
- Ability to discern presence of strategic flexibility in a project or business, and map real option characteristics into option valuation models.
- Ability to evaluate simple growth and divestment options using binomial and Black Scholes models.
- Understand the impact of presence of real options on traditional investment criteria, and the traditional approach the capital investment.
- Evaluating whether to invest in the option.

7: REAL OPTIONS: ADVANCED VALUATION ISSUES

This topic examines advanced issues in using option pricing methods in real option applications. It will examine in detail the robustness of real options methodology in practice. It will look at the impact of early exercise on option value, projects whose value declines prior to exercise, how to incorporate multiple options within one project and the impact of different project risk profiles on option value. This topic will concentrate on understanding of issues and identifying the appropriate modelling techniques available.

Key learning outcomes for this topic:

- Critically assess the practical application of option pricing methodology in valuation applications.
- Understand and critically assess how to approach a more complex, and realistic, real option situation.

8: SPECIAL TOPICS IN VALUATION

If time is available, this topic will address emerging or interesting issues in the application of valuation techniques. It can vary from class to class, depending on interests of class, issues of the day and time available. The focus will be on using existing knowledge of finance to resolve interesting valuation problems.

Key learning outcomes for this topic:

- Be able to use understanding of the valuation theories and frameworks to solve and critically assess a new valuation issue, or a contentious issue of the day.
- Understand available reference sources to stay current on valuation issues.

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 term. 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 \(https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central\)](https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central). Students should be aware of the following policies in particular with regard to Learning and Teaching:

- [Academic Appeals Policy](#)
- [Academic Integrity Policy](#)
- [Academic Progression Policy](#)
- [Assessment Policy](#)
- [Fitness to Practice Procedure](#)
- [Grade Appeal Policy](#)
- [Complaint Management Procedure for Students and Members of the Public](#)
- [Special Consideration Policy](#) (**Note:** *The Special Consideration Policy is effective from 4 December 2017 and replaces the Disruption to Studies Policy.*)

Undergraduate students seeking more policy resources can visit the [Student Policy Gateway \(https://students.mq.edu.au/support/study/student-policy-gateway\)](https://students.mq.edu.au/support/study/student-policy-gateway). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

If you would like to see all the policies relevant to Learning and Teaching visit [Policy Central \(https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central\)](https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/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/study/getting-started/student-conduct>

Results

Results published on platform other than [eStudent](#), (eg. iLearn, Coursera etc.) 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 or if you are a Global MBA student contact globalmba.support@mq.edu.au

Students should also consult the MAFC Program Rules at <https://mafcstudents.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 enquiries, 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.

Student Enquiries

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

If you are a Global MBA student contact globalmba.support@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

- Critically evaluate and develop valuation techniques and models for a range of business contexts.
- Assess risk issues and develop reasoned recommendations.
- Demonstrate critical reflection in applying valuation models to real world situations.
- Demonstrate skills in assessing cost of capital and report preparation.

Assessment tasks

- Assignment
- Final Exam

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

- Analyse and explain the range of decision making situations that require valuations.
- Critically evaluate and develop valuation techniques and models for a range of business contexts.
- Assess risk issues and develop reasoned recommendations.
- Demonstrate critical reflection in applying valuation models to real world situations.
- Demonstrate skills in assessing cost of capital and report preparation.

Assessment tasks

- Pre-unit Assignment
- 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

- Analyse and explain the range of decision making situations that require valuations.
- Critically evaluate and develop valuation techniques and models for a range of business contexts.
- Assess risk issues and develop reasoned recommendations.
- Demonstrate critical reflection in applying valuation models to real world situations.
- Demonstrate skills in assessing cost of capital and report preparation.

Assessment tasks

- Assignment
- Final Exam

Important Notice

This Unit Guide may be subject to change. Students will be advised, via an "Announcement" on iLearn, if the Unit Guide is changed.

The latest version is available at <https://unitguides.mq.edu.au/>.

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