



# AFCP8092

## Resources Industry Investment Analysis

AFC term 4, Weekday attendance, City 2020

*Department of Applied Finance*

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#### Disclaimer

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#### Notice

As part of [Phase 3 of our return to campus plan](#), most units will now run tutorials, seminars and other small group learning activities on campus for the second half-year, while keeping an online version available for those students unable to return or those who choose to continue their studies online.

To check the availability of face-to-face and online activities for your unit, please go to [timetable viewer](#). To check detailed information on unit assessments visit your unit's iLearn space or consult your unit convenor.

## General Information

Unit convenor and teaching staff

James Hay

[james.hay@mq.edu.au](mailto:james.hay@mq.edu.au)

Contact via Email

Credit points

5

Prerequisites

ECFS866 or AFCP8003

Corequisites

Co-badged status

Unit description

This unit considers valuation and investment issues that are unique to the minerals and energy industries. It is structured around the industry's value chain, from exploration through extraction and to the market, and the methods by which resource companies seek to create shareholder value at all of these stages. In addition, the unit considers how environmental and social mandates are impacting decision-making in the resources sector.

The unit intends to address three aims. The first is to understand investment decisions that an analyst within a resource company may face. The second is to understand the financial information that resource companies release to the market so that we may value and compare the performance of resource stocks. The third is to consider how rapidly evolving Environmental, Social and Governance (ESG) mandates may impact the value of resource-based assets and the investment decisions of resource companies and their prospective owners.

## 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:

**ULO1:** Conduct an analysis of the resources sector to evaluate the characteristics and determinants of risk and value at each stage of its value chain, and the environmental, social, and governance issues affecting the sector.

**ULO2:** Interpret and judge valuation and investment issues unique to the resources sector, and formulate sound investment decisions for companies and/or prospective investors.

**ULO3:** Devise and apply appropriate models and forecasting techniques for measuring and evaluating the performance of resource companies or specified resource assets.

## **General Assessment Information**

### **Information - Extension Requests / Penalties**

#### **Assignment (20%) and Case Study (25%)**

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.

Further information on submitting an Application for Special Consideration can be found at <http://students.mq.edu.au/study/my-study-program/special-consideration>.

#### **Quiz (5%)**

You are expected to make yourself available for assessment during the relevant quiz window.

Students who do not submit this task by the due date and time receive a result of zero. This penalty does not apply when an application for Special Consideration has been made and approved.

Students who do not attempt the quiz receive a mark of zero. This penalty does not apply in cases where an application for Special Consideration has been made and approved.

Further information on submitting an Application for Special Consideration can be found at <http://students.mq.edu.au/study/my-study-program/special-consideration>.

#### **Final Exam (50%)**

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.

Further information on submitting an Application for Special Consideration can be found at <http://students.mq.edu.au/study/my-study-program/special-consideration>.

[s://students.mq.edu.au/study/my-study-program/special-consideration](https://students.mq.edu.au/study/my-study-program/special-consideration).

## Assessment Tasks

Name	Weighting	Hurdle	Due
Assignment	20%	No	Refer to iLearn
Quiz	5%	No	Refer to iLearn
Case Study	25%	No	Refer to iLearn
Final Examination	50%	No	Refer to Timetable

### Assignment

Assessment Type <sup>1</sup>: Report

Indicative Time on Task <sup>2</sup>: 10 hours

Due: **Refer to iLearn**

Weighting: **20%**

An individual assignment of up to 2,000 words assessing knowledge of specific concepts.

On successful completion you will be able to:

- Conduct an analysis of the resources sector to evaluate the characteristics and determinants of risk and value at each stage of its value chain, and the environmental, social, and governance issues affecting the sector.
- Interpret and judge valuation and investment issues unique to the resources sector, and formulate sound investment decisions for companies and/or prospective investors.
- Devise and apply appropriate models and forecasting techniques for measuring and evaluating the performance of resource companies or specified resource assets.

### Quiz

Assessment Type <sup>1</sup>: Quiz/Test

Indicative Time on Task <sup>2</sup>: 0 hours

Due: **Refer to iLearn**

Weighting: **5%**

Quiz to be completed during the interactive classes.

On successful completion you will be able to:

- Conduct an analysis of the resources sector to evaluate the characteristics and determinants of risk and value at each stage of its value chain, and the environmental, social, and governance issues affecting the sector.
- Interpret and judge valuation and investment issues unique to the resources sector, and formulate sound investment decisions for companies and/or prospective investors.

## Case Study

Assessment Type <sup>1</sup>: Case study/analysis

Indicative Time on Task <sup>2</sup>: 12 hours

Due: **Refer to iLearn**

Weighting: **25%**

A case study of up to 2,500 words requiring creation of models and forecasts for a specific project or company.

On successful completion you will be able to:

- Conduct an analysis of the resources sector to evaluate the characteristics and determinants of risk and value at each stage of its value chain, and the environmental, social, and governance issues affecting the sector.
- Interpret and judge valuation and investment issues unique to the resources sector, and formulate sound investment decisions for companies and/or prospective investors.
- Devise and apply appropriate models and forecasting techniques for measuring and evaluating the performance of resource companies or specified resource assets.

## Final Examination

Assessment Type <sup>1</sup>: Examination

Indicative Time on Task <sup>2</sup>: 12 hours

Due: **Refer to Timetable**

Weighting: **50%**

2-hour closed book exam with 10 minutes reading time.

On successful completion you will be able to:

- Conduct an analysis of the resources sector to evaluate the characteristics and determinants of risk and value at each stage of its value chain, and the environmental, social, and governance issues affecting the sector.
- Interpret and judge valuation and investment issues unique to the resources sector, and formulate sound investment decisions for companies and/or prospective investors.
- Devise and apply appropriate models and forecasting techniques for measuring and evaluating the performance of resource companies or specified resource assets.

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<sup>1</sup> If you need help with your assignment, please contact:

- the academic teaching staff in your unit for guidance in understanding or completing this type of assessment
- the [Writing Centre](#) for academic skills support.

<sup>2</sup> Indicative time-on-task is an estimate of the time required for completion of the assessment task and is subject to individual variation

## Delivery and Resources

### CLASSES

Timetable: Detailed timetable for classes are on the Centre's web site [www.mafo.mq.edu.au](http://www.mafo.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:

- A reading pack will be made available online prior to commencement of the unit.
- In addition to selected readings, the pack will contain case study materials and questions for discussion related to each case study.
- These readings and lecture materials are examinable.

Lecture Notes: Available electronically via iLearn.

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

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 Resource Industry Investment Analysis.
- 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 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**

### **TOPIC 1: THE RESOURCES INDUSTRY IN AN 'ESG WORLD'**

Topics:

- Unit introduction, objectives and requirements
- What is the resources industry?
- Base metals, precious metals, industrial minerals and energy
- How and where is value created in the resources industry?
- Environmental and social mandates: constraints and opportunities

### **TOPIC 2: EXPLORATION, RESERVES AND RESOURCES**

Topics:

- Mineral licensing – rights and obligations
- The mineral license versus the 'social license' to operate
- How are exploration decisions made? Where do we drill next?
  - Decision Trees
  - Expected Monetary Values
  - Farm in/Farm out agreements

- What are Reserves and Resources? What level of knowledge and confidence is required so that reserves can be “booked”? What judgment should we make about field life if we want to value a resource?

### **TOPIC 3: VALUATION APPROACHES**

Topics:

- How do we value un(der)explored but prospective acreage? How do we value properties with known but uneconomic reserves? Issues in resource project valuation.
  - Valuing development properties
  - Valuation assumptions – discount rates, terminal values
  - Real option applications
  - ‘Stranded’ resources
  - Framing project expenditure decisions
  - Acceleration economics
  - Unit technical costs

### **TOPIC 4: COMMODITY MARKETS**

Topics:

- How are commodities marketed and sold? What is the purpose of price hedging? Why have hedging issues been at the centre of several corporate collapses?
  - Exchange traded commodities
  - Long term supply contracts
  - Hedging: objectives, instruments and strategies
  - Hedging: managing risk or creating risk?
  - Making price forecasts
- Case Study: Sons of Gwalia, Pasminco

### **TOPIC 5: FISCAL REGIMES AND COUNTRY INVESTMENT RISK**

Topics:

- The natural resources of a country are the property of the state or crown. Resource companies therefore face two levels of taxation: a “rent” tax, to compensate the state/ crown for the development of a finite resource, and general corporate taxation. How are



these “rent” taxes levied? What impact will they have on our investment decisions?

- Government take versus exploration prospectivity
- Royalties and rent taxes
- Production sharing contracts
- What is ‘sovereign risk’? How might ESG issues impact perceptions of sovereign risk?

## **TOPIC 6: ESG INVESTING AND THE RESOURCES INDUSTRY**

Topics:

- Value versus ‘values’ investing
- How has the investment landscape changed over the past decade for the resources sector? What are the impacts on the availability of capital?
  - Shareholder activism
  - Lending restrictions
- Green Indexes
- Funds Management – ESG reporting

## **TOPIC 7: INTERPRETING RESOURCE STOCK FINANCIAL STATEMENTS**

Topics:

- Investors external to a resource company must make judgments about future profitability on the basis of published accounting reports. What are the critical accounting issues that relate to resource companies?
  - Resource company accounting conventions
  - How is the value of in-ground reserves presented?
  - Accounting for exploration success/failure
  - Depletion of mine development
  - What is “impairment”? When is a property “impaired”?
  - Provisions for rehabilitation
  - Unit costs: full costs and cash costs
- Case Study: Western Area NL

## **SESSION 8: RESOURCE STOCK VALUATION**

Topics:

- How can we combine reserves reports, accounting statements, fiscal regimes and commodity prices to create an earnings and free cash flow forecast for a resource stock? What stock valuation approaches are most applicable to resource stocks?
- Forecasting sustainable earnings
- Forecasting financial statements

## 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.*)

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](https://ask.mq.edu.au) or if you are a Global MBA student contact [globalmba.support@mq.edu.au](mailto:globalmba.support@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](http://mq.edu.au/learningskills)) provides academic writing resources and study strategies to help you improve your marks and take control of your study.

- [Getting help with your assignment](#)
- [Workshops](#)
- [StudyWise](#)
- [Academic Integrity Module](#)

The Library provides online and face to face support to help you find and use relevant information resources.

- [Subject and Research Guides](#)
- [Ask a Librarian](#)

## 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)

If you are a Global MBA student contact [globalmba.support@mq.edu.au](mailto: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/](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.