



AFIN8016

Payments, Cryptocurrencies and Blockchain

Session 2, Special circumstance 2020

Department of Applied Finance

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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

Unit Convenor

Cynthia Cai

cynthia.cai@mq.edu.au

Contact via +61 (2) 9850 9161

Building 4ER, Room 508

By Appointment

Credit points

10

Prerequisites

AFIN8014

Corequisites

Co-badged status

Unit description

The development of Cryptocurrencies, using the fundamentals of cryptography and blockchain, is predicted to have significant impact on banks, financial institutions, governments, economies and business in general. The decentralization of payment networks and the establishment of an ecosystem of various stakeholders results in various benefits and challenges that will influence their adoption and diffusion in the marketplace. This unit examines cryptocurrencies and blockchain and their emergence and role in financial markets. This unit discuss the technical underpinnings of blockchain and key concepts such as decentralization and consensus algorithms. Students will learn how these new financial instruments and technologies are disrupting traditional ways of doing business.

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: Understand the fundamentals of blockchain and demonstrate knowledge of theoretical crypto-currency concepts and their applications.

ULO2: Critically evaluate the use of cryptocurrencies from a social and economic

perspective with regard to regulatory frameworks that govern adoption and use.

ULO3: Apply different financial instruments and technology infrastructures including digital currencies and blockchain that facilitate the operation of financial markets.

ULO4: Compare and contrast how these new instruments and technologies are disrupting traditional ways of doing business in the financial industry.

General Assessment Information

Assessment criteria for all assessment tasks will be provided on the unit iLearn site.

It is the responsibility of students to view their marks for each within-session-assessment on iLearn within 20 days of posting. If there are any discrepancies, students must contact the unit convenor immediately. Failure to do so will mean that queries received after the release of final results regarding assessment tasks (not including the final exam mark) will not be addressed.

Late submissions and extensions

Tasks 10% or less – No extensions will be granted. Students who have not submitted the task prior to the deadline will be awarded a mark of 0 for the task, except for cases in which an application for special consideration is made and approved.

Tasks above 10% - 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 – 20% penalty). This penalty does not apply for cases in which an application for special consideration is made and approved. No submission will be accepted after solutions have been posted.

Assessment Tasks

Name	Weighting	Hurdle	Due
Assignment 1	20%	No	Week 6
Assignment 2	20%	No	Week 11
Final Examination	60%	No	During University Examination Period

Assignment 1

Assessment Type ¹: Report

Indicative Time on Task ²: 15 hours

Due: **Week 6**

Weighting: **20%**

The assignment will cover quantitative and/or qualitative analysis and students will be required to produce a report regarding their find(s). The report should not exceed 1,500 words.

On successful completion you will be able to:

- Understand the fundamentals of blockchain and demonstrate knowledge of theoretical crypto-currency concepts and their applications.
- Critically evaluate the use of cryptocurrencies from a social and economic perspective with regard to regulatory frameworks that govern adoption and use.
- Apply different financial instruments and technology infrastructures including digital currencies and blockchain that facilitate the operation of financial markets.
- Compare and contrast how these new instruments and technologies are disrupting traditional ways of doing business in the financial industry.

Assignment 2

Assessment Type ¹: Project

Indicative Time on Task ²: 20 hours

Due: **Week 11**

Weighting: **20%**

Students will conduct a quantitative analysis / financial modelling project and present their solutions and outcomes.

On successful completion you will be able to:

- Critically evaluate the use of cryptocurrencies from a social and economic perspective with regard to regulatory frameworks that govern adoption and use.
- Apply different financial instruments and technology infrastructures including digital currencies and blockchain that facilitate the operation of financial markets.
- Compare and contrast how these new instruments and technologies are disrupting traditional ways of doing business in the financial industry.

Final Examination

Assessment Type ¹: Examination

Indicative Time on Task ²: 20 hours

Due: **During University Examination Period**

Weighting: **60%**

A two hour open book online exam will be held during University Examination Period.

On successful completion you will be able to:

- Understand the fundamentals of blockchain and demonstrate knowledge of theoretical crypto-currency concepts and their applications.
- Critically evaluate the use of cryptocurrencies from a social and economic perspective with regard to regulatory frameworks that govern adoption and use.
- Apply different financial instruments and technology infrastructures including digital currencies and blockchain that facilitate the operation of financial markets.
- Compare and contrast how these new instruments and technologies are disrupting traditional ways of doing business in the financial industry.

¹ 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.

² 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

Required Text	No prescribed textbook is required. The unit will utilize various library resources, including research papers, book chapters, case studies, etc. All materials will be provided via iLearn or during the lecture.
Recommended Readings	We will supplement the lecture materials with readings from journals and other textbooks. A list of relevant material will be provided via iLearn.
Technology Used and Required	Necessary technology: Computer with MS Excel and Word, scientific or business calculator and internet access.

Unit Schedule

1	Introduction
2	Issues of Current Payment System
3	Payment Innovations upon Centralized Architectures (I)
4	Payment Innovations upon Centralized Architectures (II)
5	Bitcoin: A Blockchain Mechanism (I)
6	Bitcoin: A Blockchain Mechanism (II)

7	Bitcoin: A Blockchain Mechanism (III)
8	Cryptocurrencies: The System Disruption
9	Cryptocurrencies: Value and Investment
10	Cryptocurrencies: A Regulation Challenge
11	Cryptocurrencies and Blockchain: Social Impact
12	The Future: A New Payment Ecosystem
13	Revision

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 or if you are a Global MBA

student contact 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) 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

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.