

# **AFIN8016**

# Payments, Cryptocurrencies and Blockchain

Session 2, Special circumstances 2021

Department of Applied Finance

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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.

#### Session 2 Learning and Teaching Update

The decision has been made to conduct study online for the remainder of Session 2 for all units WITHOUT mandatory on-campus learning activities. Exams for Session 2 will also be online where possible to do so.

This is due to the extension of the lockdown orders and to provide certainty around arrangements for the remainder of Session 2. We hope to return to campus beyond Session 2 as soon as it is safe and appropriate to do so.

Some classes/teaching activities cannot be moved online and must be taught on campus. You should already know if you are in one of these classes/teaching activities and your unit convenor will provide you with more information via iLearn. If you want to confirm, see the list of units with mandatory on-campus classes/teaching activities.

Visit the MQ COVID-19 information page for more detail.

# **General Information**

Unit convenor and teaching staff Unit Convenor Cynthia Cai cynthia.cai@mq.edu.au

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 <a href="https://www.mq.edu.au/study/calendar-of-dates">https://www.mq.edu.au/study/calendar-of-dates</a>

# 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 (including information about late submissions and extensions) for all assessment tasks will be provided on the unit iLearn site.

# **Assessment Tasks**

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

# Assignment 1

Assessment Type <sup>1</sup>: Report Indicative Time on Task <sup>2</sup>: 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: **University Examination Period** Weighting: **60%** 

A two hour 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.

<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**

| Required Text                      | No prescribed textbook is required. The unit will utilise various library resources, including research papers, book chapters, case studies, etc. All materials will be provided via iLearn or during the lecture. |
|------------------------------------|--|
| Recommended<br>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<br>Used and<br>Required | Necessary technology: Computer with MS Excel and Word, scientific or business calculator and internet access.  |

# **Unit Schedule**

| Teaching Weeks | Topics  |
|----------------|---|
| 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 (Pre-recorded lecture) |
| 10             | Cryptocurrencies: A Regulation Challenge                      |
| 11             | Cryptocurrencies and Blockchain: Social Impact                |
| 12             | The Future: A New Payment Ecosystem                           |

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Revision

# **Policies and Procedures**

Macquarie University policies and procedures are accessible from Policy Central (https://policie s.mq.edu.au). 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

Students seeking more policy resources can visit <u>Student Policies</u> (<u>https://students.mq.edu.au/su</u> <u>pport/study/policies</u>). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

To find other policies relating to Teaching and Learning, visit <u>Policy Central</u> (<u>https://policies.mq.e</u> <u>du.au</u>) and use the <u>search tool</u>.

#### **Student Code of Conduct**

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: https://students.mq.edu.au/admin/other-resources/student-conduct

#### **Results**

Results published on platform other than <u>eStudent</u>, (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 <u>eStudent</u>. For more information visit <u>ask.mq.edu.au</u> 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 <u>http://stu</u> dents.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 <u>http://www.mq.edu.au/about\_us/</u>offices\_and\_units/information\_technology/help/.

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