Cryptocurrency Markets: Market Order, Regulation, and Crime

Lecturers: Dr. Csaba Győry, Department of Theory of Law and Society

Prof. Fernando Miró-Llinares (Miguel Hernández University of Elche)

What is this course about?

This introductory course surveys cryptocurrencies with a secondary emphasis on crime in cryptocurrency markets. We begin with the concept of cryptocurrency and its ideological roots, then cover the political economy and economic sociology of crypto. We also examine challenges for, and approaches to, crypto regulation. The final third of the course offers a systematic look at crime on these markets—their characteristics and current/future trends.

Who should take this course?

Students interested in financial regulation, the political economy of finance, and financial crime.

Prerequisites

A basic grasp of financial markets and terminology is helpful but not required. The course is suitable for complete beginners and for students who already follow crypto closely. All technical terms will be explained in class.

Materials

All required and recommended readings will be provided in the course reader on the Moodle page. As the course progresses, PowerPoint slides and/or session outlines will also be posted there.

Attendance

Regular attendance is required.

Assignments

Recommended readings are for students who wish to go deeper; they are optional. There will also be optional short paper assignments on selected topics (mostly case studies), announced at the start of the term. Completing an assignment waives the end-of-term essay requirement.

Assessment

Students will deliver a group presentation on a crypto-related topic. A detailed grading policy will be posted on Moodle at the start of term. The presentation grade constitutes the final grade, except for students who complete an optional assignment; those students will be graded on the assignment instead.

Textbook

No textbook purchase is required.

Major Themes

1. Introduction — Crypto basics I: blockchain technology
2. Crypto basics II: the concept of cryptocurrency
3. Cryptocurrency taxonomy: coins, tokens, stablecoins, DeFi, NFTs
4. Market structure & trends: institutions, liquidity, fees, arbitrage
5. Regulating crypto I: global approaches & international trends
6. Regulating crypto II: the EU (MiCA)
7. Regulating crypto III: the political economy of crypto regulation
8. Sociology I: ideology and cultures of crypto
9. Sociology II: cryptocurrency markets & retail investors
10. Crime I: cryptocurrencies as payment/asset-transfer tools linked to other crimes
11. Crime II: market manipulation and investment fraud
12. Crime III: social-engineering frauds and consumer protection

Literature

Theme 1 — Blockchain technology

- Narayanan, A., Bonneau, J., Felten, E., Miller, A., & Goldfeder, S. (2016). *Bitcoin and Cryptocurrency Technologies.* Princeton University Press.
- Bonneau, J., Miller, A., Clark, J., Narayanan, A., Kroll, J., & Felten, E. (2015). "SoK: Research Perspectives and Challenges for Bitcoin and Cryptocurrencies." *IEEE Symposium on Security and Privacy.* https://www.ieee-security.org/TC/SP2015/papers-archived/6949a104.pdf
-

Theme 2 — The Concept of Cryptocurrency

- Böhme, R., Christin, N., Edelman, B., & Moore, T. (2015). "Bitcoin: Economics, Technology, and Governance." *Journal of Economic Perspectives, 29*(2). https://www.aeaweb.org/articles?id=10.1257/jep.29.2.213
- Yermack, D. (2015). "Is Bitcoin a Real Currency? An Economic Appraisal." In *Handbook of Digital Currency.*

Theme 3 — Asset Types And DeFi

- Schär, F. (2021). "Decentralized Finance: On Blockchain- and Smart-Contract-Based Financial Markets." *Federal Reserve Bank of St. Louis Review, 103*(2). https://www.stlouisfed.org/publications/review/2021/02/05/decentralized-finance-on-blockchain-and-smart-contract-based-financial-markets
- Catalini, C., & Gans, J. S. (2020). "Some Simple Economics of the Blockchain." *Management Science, 66*(10). https://doi.org/10.1287/mnsc.2018.3255

Theme 4 — Market Structure and Trends

- Makarov, I., & Schoar, A. (2020). "Trading and Arbitrage in Cryptocurrency Markets." *Journal of Financial Economics, 135*(2). https://www.sciencedirect.com/science/article/pii/S0304405X19301746
- Easley, D., O'Hara, M., & Basu, S. (2019). "From Mining to Markets: The Evolution of Bitcoin Transaction Fees." *Journal of Financial Economics, 134*(1). https://www.sciencedirect.com/science/article/pii/S0304405X19300583

Theme 5 — Regulation (Global Perspectives)

- Brummer, C. (Ed.). (2019). *Cryptoassets: Legal, Regulatory, and Monetary Perspectives.* Oxford University Press.
- Zetzsche, D. A., Buckley, R. P., Arner, D. W., & Föhr, L. (2019). "The ICO Gold Rush: It's a Scam, It's a Bubble, It's a Super Challenge for Regulators." *Harvard International Law Journal Online, 60*(2). https://journals.law.harvard.edu/ilj/wp-content/uploads/sites/84/3_ICO_60.2.pdf

Theme 6 — Regulation (EU)

- De Filippi, P., & Wright, A. (2018). *Blockchain and the Law: The Rule of Code.* Harvard University Press.

Theme 7 — The Political Economy of Regulation

- Campbell-Verduyn, M. (Ed.). (2018). *Bitcoin and Beyond: Cryptocurrencies, Blockchains and Global Governance.* Routledge.
- de Vries, A. (2018). "Bitcoin's Growing Energy Problem." *Joule, 2*(5). https://www.sciencedirect.com/science/article/pii/S2542435118301776

Theme 8 — Ideological Underpinnings of Crypto. Crypto Cultures

- Golumbia, D. (2016). *The Politics of Bitcoin: Software as Right-Wing Extremism.* University of Minnesota Press.
- Maurer, B., Nelms, T. C., & Swartz, L. (2013). "When Perhaps the Real Problem Is Money Itself!: The Practical Materiality of Bitcoin." *Social Semiotics, 23*(2). (open-access author version) https://escholarship.org/content/qt7w616491/qt7w616491.pdf

Theme 9 — Market Structure and Investors

- Hasso, T., Pelster, M., & Breitmayer, B. (2019). "Who Trades Cryptocurrencies, How Do They Trade It, and How Do They Perform? Evidence from Brokerage Accounts." *Journal of Behavioral and Experimental Finance, 23*, 64–74. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3386901
- Auer, R., & Tercero-Lucas, D. (2021). "Distrust or Speculation? The Socioeconomic Drivers of U.S. Cryptocurrency Investments." *BIS Working Paper No. 951.* https://ideas.repec.org/p/bis/biswps/951.html
- (Extra) Glaser, F., Zimmermann, K., Haferkorn, M., Weber, M. C., & Siering, M. (2014). "Bitcoin—Asset or Currency? Revealing Users' Hidden Intentions." *ECIS 2014.* https://aisel.aisnet.org/cgi/viewcontent.cgi?article=1131&context=ecis2014

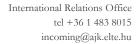### Theme 10 — Crime I: Payments, Money Laundering, Illicit markets, Sanction Evasion

- Foley, S., Karlsen, J. R., & Putniņš, T. J. (2019). "Sex, Drugs, and Bitcoin: How Much Illegal Activity Is Financed Through Cryptocurrencies?" *Review of Financial Studies, 32*(5). https://academic.oup.com/rfs/article/32/5/1798/5427781
- Meiklejohn, S., et al. (2013). "A Fistful of Bitcoins: Characterizing Payments Among Men with No Names." *IMC 2013.* https://cseweb.ucsd.edu/~smeiklejohn/files/imc13.pdf
- Ron, D., & Shamir, A. (2013). "Quantitative Analysis of the Full Bitcoin Transaction Graph." In *Financial Cryptography and Data Security.*

Theme 11 — Crime II: Market Manipulation and Investment Fraud

- Gandal, N., Hamrick, J. T., Moore, T., & Oberman, T. (2018). "Price Manipulation in the Bitcoin Ecosystem." *Journal of Monetary Economics, 95*, 86–96. https://www.sciencedirect.com/science/article/pii/S0304393217301666
- Moore, T., & Christin, N. (2013). "Beware the Middleman: Empirical Analysis of Bitcoin-Exchange Risk." In *Financial Cryptography and Data Security.* (open-access author version) https://www.andrew.cmu.edu/user/nicolasc/publications/MC-FC13.pdf

Theme 12 — Crime III: Social Engineering Type Cybercrimes in Crpyto

- Vasek, M., & Moore, T. (2015). "There's No Free Lunch, Even Using Bitcoin: Tracking the Popularity and Profits of Virtual Currency Scams." *Financial Cryptography and Data Security Workshops.* https://www.ifca.ai/pub/fc15/89750038.pdf

- Bartoletti, M., Carta, S., Cimoli, T., & Saia, R. (2020). "Dissecting Ponzi Schemes on Ethereum: Identification, Analysis, and Impact." *Future Generation Computer Systems, 102*, 259–277.
https://www.sciencedirect.com/science/article/pii/S0167739X18301407