Course Outline

EE531 : Selected Topics in Monetary and Financial Economics 1

‘ Banking Management & Fintech ‘

Semester 2/2021 (January 10th – May 7th, 2022)

Number of Credit: 3

Prerequisite: FN201 Business Finance

Course Objective:

The course is designed to build your understanding on financial institution management and ‘Fintech’ (Financial Technology), the new disruptive innovations in financial services. The course is designed for students in pursuit of career in financial institutions as well as consultants or startups in financial technology industry.

Course Description:

The first part of the course will delve into financial institutions with the focus on economics of management of financial institutions. It will provide practical know-how that will be useful for the Thai context, including market landscape, practices and regulations. The topics cover 1) overview of market landscape and key products; 2) analysis of balance sheet and income statement; 3) asset-liability management and liquidity reserve; 4) interest rate risk management; 5) measurement of credit risks, economic capital, risk-adjusted loan pricing; 6) capital adequacy and Basel regulatory framework; 7) recent developments in global regulation including Basel III and macro-prudential policy; and 8) role of financial institutions in monetary policy transmissions.

The second part of the course will focus on the recent innovations in financial services of Fintech. It will cover Fintech topics: 1) current ecosystem in developed and emerging markets, 2) key Fintech solutions: payments and distributed ledger technology, crowdfunding & P2P lending and robo advisor 3) data analytics and AI, 4) blockchain and smart-contract, 5) crypto/digital-currencies and central bank digital currency (CBDC) 5) decentralized finance (Defi) and tokenization and 6) alternative credit scoring and digital lending. This part of the course will provide interactive learning experiences, which will empower you with the knowledge you need to explore and build the future of transactions and financial technology.

Class Time and Logistic

Class day: Saturday

Class time: 9.00-12.00

Teaching Materials Platform: Facebook Group 'EE531: Banking Management & Fintech'

Meeting Platform: Zoom

https://us02web.zoom.us/j/7638382399?pwd=anFFb3M0cjQzaHlDUjFnZ1d4QmZ6Zz09

Meeting ID: 763 838 2399

Passcode: pass

Instructor:

Name: Naris Sathapholdeja

Office Hours: by appointment

Email: naris.satha@gmail.com

Phone: via Course FB Group or email

Important Notes:

Materials in this course will contain some classified information. These will be revealed solely for pedagogical purposes and goodwill to students. Students must pledge to upkeep confidentiality of the contents. Distribution of materials beyond the class is strictly prohibited.

Important Dates:

- Mid-Term Examination — March 5th 2022
- Final Examination — May 21st 2022

Teaching and Assessment:

The first part of the class will be conducted through lectures. The contents are based on customized materials, beyond the textbook, all of which qualify for exams. There will be midterm and final written examinations for this part of the course.

The second part of the class will be conducted through lectures, interactive workshop, individual pitching and Hackathon. Prior to the session, there will be extensive discussions/feedbacks with the instructor. Class presentation and participation will count towards your final grade. Towards the end of the course, each team will also develop a business case for the 'Hackathon', which is counted for the final grade.

The weight distribution towards a grade is as follows:

Mid-term	25%
Final	25%
Fintech Venture Presentation*	25%
Hackathon**	25%

**** Fintech Venture Presentation:*** *Individual presentation on your selected well-established Fintech (any nationality). You will assume the role of that Fintech founders that try to pitch to VC for funding.*

***** Hackathon****: Students are expected to form a small team, develop and pitch a business plan to commercialize a compelling Fintech opportunity for the Thai market. The business plan needs to cover: 1) Strategic Analysis: show how your business model innovation has solid 1. Problem Statement 2. Solution Statement and 3. Value Proposition , 2) Feasibility: analyze customers & market landscape (banks & Fintech) to formulate success factors of the Project, 3) Market Viability: project potential market demand and share as well as propose financial model for the Project, delineating key assumptions or revenue and cost. The final pitch will have to feature Minimum Viable Product (MVP) or prototype.*

Textbooks (e-books will be provided, do not purchase)

1. Saunders, Anthony and Cornett, Marcia, ***Financial Institutions Management: A Risk Management Approach*, 10th edition**, McGraw-Hill, 2020
2. Lantz & Cowley, ***Mastering Blockchain: Unlocking the Power of Cryptocurrencies and Smart Contract***, O'Reilly 2021
3. Baxter, Hines, ***Digital Finance: Security Tokens and Unlocking the Real Potential of Blockchain***, Wiley 2021
4. King, Brett, ***Bank 4.0: Banking Everywhere, Never at a Bank***, Wiley 2019

Second Part Topics: Fintech

The following list is a preliminary list of topics for the course. This list does not infer timeline. Deviations and adjustments will occur during the course.

1. Current Global Fintech Landscape and Ecosystem

- ***Fintech: On the Brink of Further Disruption***, Deloitte Financial Advisory Netherlands, 2020
- ***World Fintech Report***, Cappegemini Research Institute, 2020
- ***Beyond Fintech: A Pragmatic Assessment of Disruptive Potential in Financial Services,*** World Economic Forum 2018

2. Data Analytics and AI

- ***The New Physics of Financial Services: Understanding How Artificial Intelligence is Transforming the Financial System***, World Economic Forum, 2018
- ***Bank 4.0: Banking Everywhere, Never At A Bank***, King Brett, Wiley, 2019

3. Key Fintech Solutions: Payments & Distributed Ledger Technology, Crowdfunding & P2P Lending, and Robo Advisor

- ***The Future of Financial Infrastructure: How Blockchain Can Reshape Financial Services,*** World Economic Forum, 2016
- ***Lending Crowdfunding: Principles and Market Development***, Ziegler & Shneor, Cambridge Centre for Alternative Finance, 2020
- ***The Business Models and Economics of Peer-to-Peer Lending,*** Milne & Parboteeah, European Credit Research Institute, 2016
- ***China's Fintech Explosion: Disruption, Innovation and Survival,*** Hsu & Li, Columbia University Press, 2020

4. Blockchain and Smart Contract

- ***Digital Finance: Security Tokens and Unlocking the Real Potential of Blockchain***, Hines Baxter, Wiley, 2021
- ***Mastering Blockchain: A Deep Dive into Distributed Ledgers, Consensus Protocols, and Smart Contracts***, Bashir Imran, Packt Publishing, 2020
- ***Blockchain and Corporates: Transparency in the New Making***, Deutsche Bank Research, 2020
- ***The Real Business of Blockchain***, Harvard Business Review, 2020

5. Crypto/ Digital currency

- ***Mastering Blockchain: Unlocking the Power of Cryptocurrencies and Smart Contracts***, Lantz & Cowley, O'Reilly, 2021
- ***Investing in Cryptocurrency***, Morgan Stanley Wealth Management, 2021
- ***Crypto: A New Asset Class***, Goldman Sachs, 2021

6. Central Bank Digital Currency (CBDC)

- ***The Macroeconomics of Central Bank Issued Digital Currencies***, Barrdear & Kumhof, Bank of England, 2021
- ***Central Bank Digital Currencies: Putting A Big Idea into Practice***, Carsten Agustin, Bank of International Settlement, 2021
- ***The Way Forward for Retail Central Bank Digital Currency in Thailand,*** Bank of Thailand, 2021
- ***International Implications of China's Central Bank Digital Currency***, Duffie Darrell, Stanford University, 2021

7. Decentralized Finance (DEFI)

- ***Decentralized Finance: On Blockchain and Smart Contract-based Financial Markets***, Schar Fabian, 2020
- ***Mastering Defi***, Mihajlovic Marko, 2021
- ***Decentralized Finance Policymaker Toolkit***, the Wharton Blockchain and Digital Asset Project, 2021
- ***Financial Contagion***, Allen and Gale, Journal of Political Economy, 2000
- ***Liquidity Shortages and Banking Crises***, Diamond & Rajan, NBER, 2002
- ***A Defi Bank Run: Iron Finance, IRON Stablecoin and the Fall of Titan***, Saengchote Kanis, Chulalongkorn Business School, 2021

8. Alternative Credit Scoring and Digital Lending

- ***The Global Covid-19 Fintech Market Rapid Assessment Study***, Cambridge Centre for Alternative Finance, 2021
- **The 2nd Global Alternative Finance Market Benchmarking Report**, Cambridge Centre for Alternative Finance, 2021
- ***Digital Lending: A $1 Trillion Opportunity Over The Next 5 Years***, The Boston Consulting Group, 2018
- ***Fintech and Big Tech Credit: A New Database***, Cornelli et al., Bank of International Settlement, 2020

First Part Topics: Understanding Financial Institutions

The following list is a preliminary list of topics for the course. **Will not be able to cover all topics, should interest of the class is veered towards more of the Fintech part.**

1. Introduction (SC 1, 2, 7)
- Roles and importance of commercial banks
- Putting banks in context of global financial crises

2. Getting to Know Thai Banks
- Thai banking landscape and major players
- Organization, structure, regulations
- Key products/services

3. Understanding Banks via Financial Statements
- Analysis of banks' balance sheets and income statements
- Measuring and evaluating performance of banks

4. Typology of Risks in Commercial Banks (SC 7, 13)
- Introduction to credit, market & operational risks
- Off-balance sheet risks (e.g. pre-settlement risk)

5. Asset-Liability Management & Interest Rate Risk (SC 8, 9)
- Term structure, yield curve & duration of assets and liabilities
- Strategic management of balance sheet via gap analysis
- Hedging interest rate risk using derivatives

6. Measuring Credit Risk (SC 11)
- Lending processes and policies, basic credit analysis
- Probability of default measurement: credit scoring, Moody's KMV
- Economic capital framework: loan loss provision, unexpected loss
- Loan pricing via risk adjusted return on capital (RAROC)

7. Liquidity and Source of Fund Management (SC 12, 18, 19)
- Measuring liquidity risk
- Case Study on Bank Run: Northern Rock during 2008 credit crisis
- Bank runs, BOT's standing facilities, DPA (deposit insurance)
- Managing liquid assets & risk-return tradeoff for liquid assets
- Choices of liability structure & source of funds
- Thai banks' practices: liquidity reserve and source of fund

8. Capital Adequacy: Regulatory & Internal Model (SC 20)
- Roles of capital as buffer to insolvency risk
- Regulatory approach to capital requirement: Basel I, Basel II
- Internal risk based approach to capital: a reprise on economic capital
- Raising capital to meet requirement from internal and external sources.

9. Recent development in global regulatory framework (referred readings)
- Basel III on liquidity risk, capital requirement, counterparty credit risk
- Macroprudential policy as a new tool of central banks

10. Systemic Risk and Financial Interconnectedness (referred readings)
- Understanding global financial institutions' interconnectedness
- Implication of interconnectedness on systemic risk and contagion in recent crises

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