



EGADE Business School
Tecnológico de Monterrey

PRXX046.400: International Elective:
Digital Finance (DiFi): World Opportunities and
Trends

Professor:
Luis A. Hernández-Arámburo, Ph. D.

Course Name:	Digital Finance: World Trends and Opportunities
Location and Class Schedule:	Zoom Meetings Schedule: Monday-Wednesday 7:00-8:30 CT
Instructor:	Luis A. Hernández Arámburo, Ph.D.
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Office Hours	By appointment.
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Course Description

The international financial system is experiencing a tremendous wave of innovations. In particular, the growth of Digital Finance, the use of digital channels to provide financial services, has been so fast, and widespread that one wonders where these developments will lead to. The boundaries carefully set by type of financial intermediary are being blurred, disintermediation is rampant. Examples range from peer to peer (P2P) lending, use of blockchain in cryptocurrencies and crypto assets, Robo Advisors and Wealth Management. The main purpose of the course is to sharpen our strategic and analytical abilities to understand how business opportunities take shape and how they are framed to raise capital. Since innovations in the financial sector has the potential to unwind an economic crisis, as that of 2008, we will also learn about the role of economic policy. The course is structured to address these pressing questions:

1.- What are the driving forces behind the changes in the Financial Sector? Financial institutions are unique in its regulatory framework. This, in turn, has been shaped by successive financial crisis. On top of this layer, we see demographic, technological and social changes that interact to become disruptive factors. In particular we will look at how specific digital innovations from Blockchain to Data Science are opening up new business opportunities.

2.- Who are the players responsible for this transformation? In addition to incumbent financial institutions that are spending huge amounts on technological catchup, like JP Morgan or Goldman Sachs, we have also exchanges like the SIX in Switzerland riding the digital wave. We also observe technological companies getting a beach head in the financial sector such as Amazon, Google and Apple. Furthermore we have startups that can suddenly become multibillion dollar unicorns.



3.- What can we learn from their business strategies? Many financial companies will not succeed, but it is interesting to analyze a few cases of those who have. This will sharpen our abilities to identify and articulate the strategy and business proposition of a company. From a startups to public companies, in each case we need to assess the value proposition and the barriers to entry that each one faces. We will look at a series of cases studies on Payment Systems, Crowdfunding, Capital Markets, and Wealth Management.

4.- What opportunities can be identified across the world regions.? It for sure that the expansion of Digital Finance has not been even. It has not followed either the traditional path from developed to emerging economies either. Thanks to the diversity and international composition of our class we have an excellent opportunity to learn from each other. We can gain a direct experience of fellow classmates, and have a very exciting opportunity to develop an international network. To organize this experience we will organize presentations and have activities within the class.

This course does not have any specific requirements on Data Science, for example on programming. Nor, will it go on the details of Blockchain or Artificial Intelligence. It will concentrate on case studies and strategic business analysis. It is advisable to have a knowledge of financial markets and some concepts on strategy like Michael Porter's Strategic Forces or Alex Osterwalder's Business Model Canvas.

Requirements:

There are no requirements on programming or Data Analytics. It is useful to have some previous experience in a course on valuation, strategy or innovation.

Learning Aims:

The course participant will understand:

- the key role of the financial sector and the need for its regulation.
- the main forces affecting its change including macroeconomic, technological, demographic and social.
- the main competitive advantages of the incumbent and challengers.
- how to analyze the business models of a Digital Finance Company
- the impact of digitalization on specific industry segments such as Payment Systems, Financing, Capital Market and Wealth Management.
- the main funding mechanism used by Digital Finance Companies
- the commonalities and differences across world regions.
- how to think strategically about the Strat of a DiFi company.



Learning Tools:

Tool	% Course
Lecture (asynchronous or recorded)	15%
Lecture (synchronous or virtual live class)	30%
Projects - Experiential	25%
Students presentations	30%

Educational Model

SNOC is a program that takes a more tailored approach to the delivery of education over the internet. Besides, classes are limited to about 20-30 students.. The SNOC model is distinguished by the following:

- The student is the center of the educational model.
- Provides a means for a group of business schools to offer classes remotely to each other's MBA students within a closed online network.
- It offers a more tailored approach to the delivery of education
- The expert or instructors have more interaction with students through remote classes, video conferences and discussions.
- The model promotes dialogue and the development of collaborative projects.
- The use of online collaboration tools.
- The SNOC model has the advantage of letting consortium members share their specialist expertise.

Grading.

The course grading is orientated to perspiration rather than inspiration. This basically means a lot of work that accrues to the total grade rather than rely on an all-or nothing final exam :

Cases and Assignments	30%
Cases	30%
Project	30%
Project	30%
Case participation:	10%
Final Exam:	30%



Total

100%

Rating scale

Grading Scale

A = 90-100%

B = 80-89%

C = 70-79%

D = 60-69%

F = Less than 60%

Methodology

Class discussion, Experiential learning, Collaborative learning.

Activities

In each topic are grouped weekly activities you will have to do. In each activity you will find detailed instructions on how to perform it, delivery specifications and evaluation criteria. Within each topic page you will find all the resources and materials needed to understand the theoretical concepts you should apply, so you can develop your activities.

Media

The interaction with the professor is done through:

- E-mail
- Zoom

Student responsibilities:

Class preparation:

. Students are required to come to class well prepared, having done the required readings and willing to participate in respectful and curious way.

Homeworks:

There will be weekly analysis of cases and homework assignments.

Final Project

Present the business case of a company on the Digital Finance within your region. We will detail in class the aspects that need to be covered,



Assistance :

You are required to assist to the lectures. Kindly inform if you will not be able to attend. I do cold calls to ask for your opinion.

For the zoom lectures: preferably leave your camera open, if you decide to close it, please put a background with your photo.

Class Behavior:**Policies:**

Academic regulations The academic guidelines under which this course is governed are those established in the Tec de Monterrey academic regulations.

Additionally it is important that you know the General Regulations for Students of the Tecnológico de Monterrey, which indicates what is expected of you, both academically and in your behavior inside and outside the classroom.

Team work

The number of members in the teams is established by the head teacher according to the content of the course and the learning strategy established for it.

In the participation of students in collaborative activities, it is the responsibility of each member:

- Maintain an attitude of collaboration and willingness to teach and learn from others.
- Ensure that your contribution is active, critical, analytical and reflective. What is exposed within each contribution goes beyond a superficial comment. You should seek to emphasize the key concepts of the course and base your arguments with relevant readings or sources of information making a correct reference to them.
- Avoid basing the foundation of your work or contributions only on the material consulted from external sources. The essential requirement is to base with the readings of the course and make use of external sources to enrich your contributions and / or activities

Values and attitudes.

In this course all students are expected to monitor and strengthen the following values and attitudes both inside and outside the classroom:

- Tolerance for the opinions of others.
- Responsibility
- Respect for human dignity.
- Honesty, and respect for copyright and third-party work. Likewise, it is important in the course:
- Maintain an interest in constant research on the topics and concepts of the course.



Academic Honesty:

Without limitation, academic dishonesty will be understood as any action or omission made directly or indirectly by any person in order to obtain or facilitate that another person obtain an academic result different from that which would be obtained, if the action had not been taken or omission considered dishonest. This is a very serious matter in this course. The effects or consequences that the student has when obtaining a grade of academic dishonesty will be determined by the academic regulations of the Campus to which the student belong

Reference Material

There is burgeoning material about our subject. Most likely new and interesting material will come during the course. Here is just a sample of the recommended reading material. In general we have books, specialized reports by consulting companies and official agencies, and articles. The required reading materials and cases will be timely announced.

Global Digital Finance Trends:

- Gomber et al (2017) Digital Finance and FinTech: current research and future research directions. Journal of Business Economics.
- Kaufer, K., L. Steponatis (2021). Just Money. Mission-driven Banks and the Future of Finance. MIT Press.
- Pedersen, N (2021). *Financial Technology: Case Studies in Fintech Innovation*. KoganPage

Technological Trends:

Blockchain:

- Hines, B. (2021) *Digital Finance*. Wiley.
- Hougant Matt, Lawant David (2021) *Cryptoassets: The Guide to Bitcoin, Blockchain, and Cryptocurrencies for Investment Professionals*. CFA Institute.
- Evaluating Blockchain Projects With Token Economy Canvas <https://pstehlik.medium.com/evaluating-blockchain-projects-with-token-economy-canvas-908bc1bab6>

Artificial Intelligence:

- Agrawal, A. et al (2018) *Prediction Machines: The simple Economics of Artificial Intelligence*. Harvard Business Review Press.
- Iansti, M., K. Lakhani (2020) *Competing in the Age of AI*. Harvard Business Review Press.
- Cao, L. (2019) *AI Pioneers in Investment management* CFA Institute
- CFA Foundation (2020). *Fintech Survey 2.0: Has AI and Machine Learning Adoption Advanced?*. CFA Institute

Strategy:



- Davenport (2018). Big Companies are Embracing Analytics, but most still do not have a Data Driven Culture.
- Reyes-Mercado (2021) *Fintech Strategy: Linking Entrepreneurship, Finance and Technology*. Palgrave
- Ericson, L., T. Koller (2020). *Why Digital is no different when it comes to Valuation*. McKinsey
- McKinsey (2021). *McKinsey Special Collection on Digital Strategy*.

Regional Trends.

- McKinsey (2021) Lessons from the Rapidly Evolving Regulation of Digital Banking. McKinsey (2021) Emerging markets leap forward in Digital Banking innovation and adoption.
- European Banking Authority (2021) . Report on the Use of Digital Platforms in the EU Banking and Payment Sector.
- Standard and Poor's (2021) *Latin American Fintech is paving a road to Securitization's future*. SandP.

Cases :

Case are available at HBUP website with a special link to the course. Note that purchase must be done individually. The following cases are used as representative cases since the material is updated

- Allayanis, Y (2019). *A Global Fintech Overview*. UV7736-PDF-ENG
- Di Maggio (2021) *Awakening the Blockchain: An Overview of DeFi*: 222001-PDF-ENG
- Markovich S.(2021) *Changing Banking DNA's: The Impact of Fintechs on Small Business Lending*. KE1186-PDF-ENG.
- Tuli, K. (2020). *Visa Adapting to a World of Fintechs*. SMU908-PDF-ENG
- Chen, G. (2020): *Ant Financial and Tencent :A tale of Two Fintech Unicorns in China*. IN1667-PDF-ENG..

Articles and web material

- This material is continuously updated. Exact references will be posted in Canvas

Webpages related to the course:

- Canvas: : <https://experiencia21.tec.mx>

Course Structure

This course is organized for you to be the main character of your learning and build your knowledge from the development of your ability to learn on your own. Lecture topics may change due to the availability of new material, participación of a guest lecturer or holidays. Please consult Canvas for the most recent updates.

I. The Setting:

Week 1: Financial Sector

1. The Uniqueness of Financial Intermediaries
2. Financial Crisis and Regulation
3. Globalization and Innovation

Week 2: Disruptive Trends

4. Digital Technology 1: Blockchain: From Bitcoin to STOs
5. Digital Technology 2: Data Analytics: AI and Big Data
6. ESG and Demographic Transition.

Week 3: The Players

7. Financial Institutions
8. Technology Companies
9. Startups and Unicorns

II. The Strategies:

Week 4: Understanding Strategy

10. Porter and Industry Analysis
11. Business Model Canvas and Value Proposition

Week 5: Case1: New Payment Channels

12. Industry Background
13. Case Study 1

Week 6: Case 2: New Financing Schemes

14. Industry Background
15. Case Study 2/ Guest

Week 7: Case 3: Wealth Management

16. Industry Background
17. Case Study 3/ Guest



Week 8: Case 4: Capital Markets

- 18. Industry Background
- 19. Case Study 4/ Guest

Week 9: Case 5: Financing New Ventures

- 20. Industry Background
- 21. Case Study 5/ Guest

III. Regional Applications:

Week 10: Class Presentation 1

- 22. Presentation 1
- 23. Presentation 2

Week 11: Class Presentation 2

- 24. Presentation 3
- 25. Presentation 4

Week 12: Recap

- 26. Group Discussion

Instructor Profile:

Luis A. Hernández-Arámburo

Luis has worked for more than 30 years in the finance industry. In addition to his academic position at EGADE Business School, he is the CFO of Flatstone Capital Market. A Fintech company based in Canada focused on financing natural resource companies through an STO platform. Previously, he was a Director at HSBC Global Markets responsible for advising corporates in Derivatives Product. He also worked at Citigroup in Mexico and New York City in the areas of Debt Capital Markets and Asset Backed Securities. He has served as an independent board member at CFE Generación I, the Mexican Utility Company, and participated as an independent member in the Investment Committees of two Funds dedicated to Energy and Infrastructure Projects. He has chaired the Risk Management Committee of Fifomi (Mexican Mining Development Bank) and of Fovissste (Mortgage Agency for public sector employees).



In the academia, Luis Hernandez is a Consulting Professor at the Master in Finance in EGADE Business School of Tec de Monterrey. At EGADE, he also acted as the Director of the Energy



Management Program. He was also invited as a Research Fellow at the former Deutsche Bundesbank in Frankfurt. Luis holds a Ph. D. in Economics from the University of California Los Angeles (UCLA) and a B.A in Economics from the University of the Americas Puebla.