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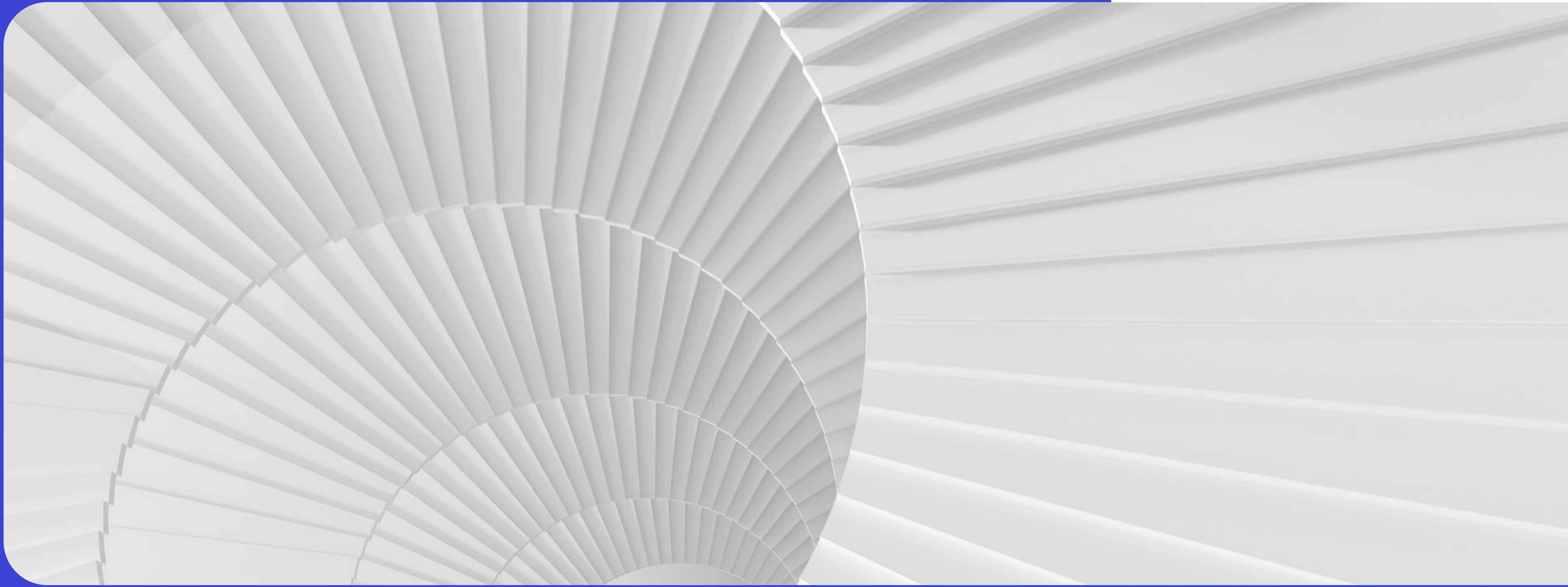

History and prospects of digital finance

Alessandra Tanda

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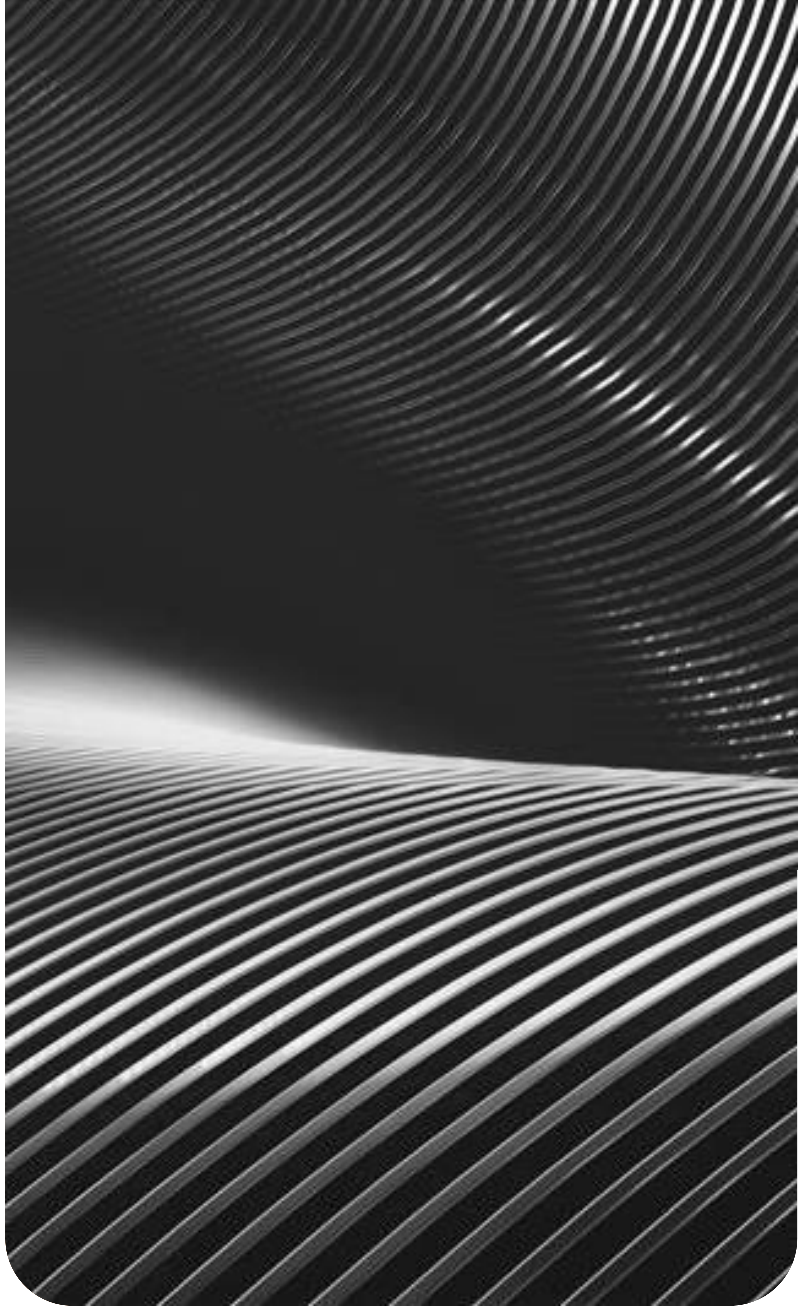

About your lecturer (me)

Alessandra Tanda

- Associate professor of banking and finance at the Department of Economics and Management – University of Pavia
- Teaching undergrad and graduate courses in Banking, Corporate finance and sustainable finance
- Main current research interests: fintech & sustainable finance

About this course

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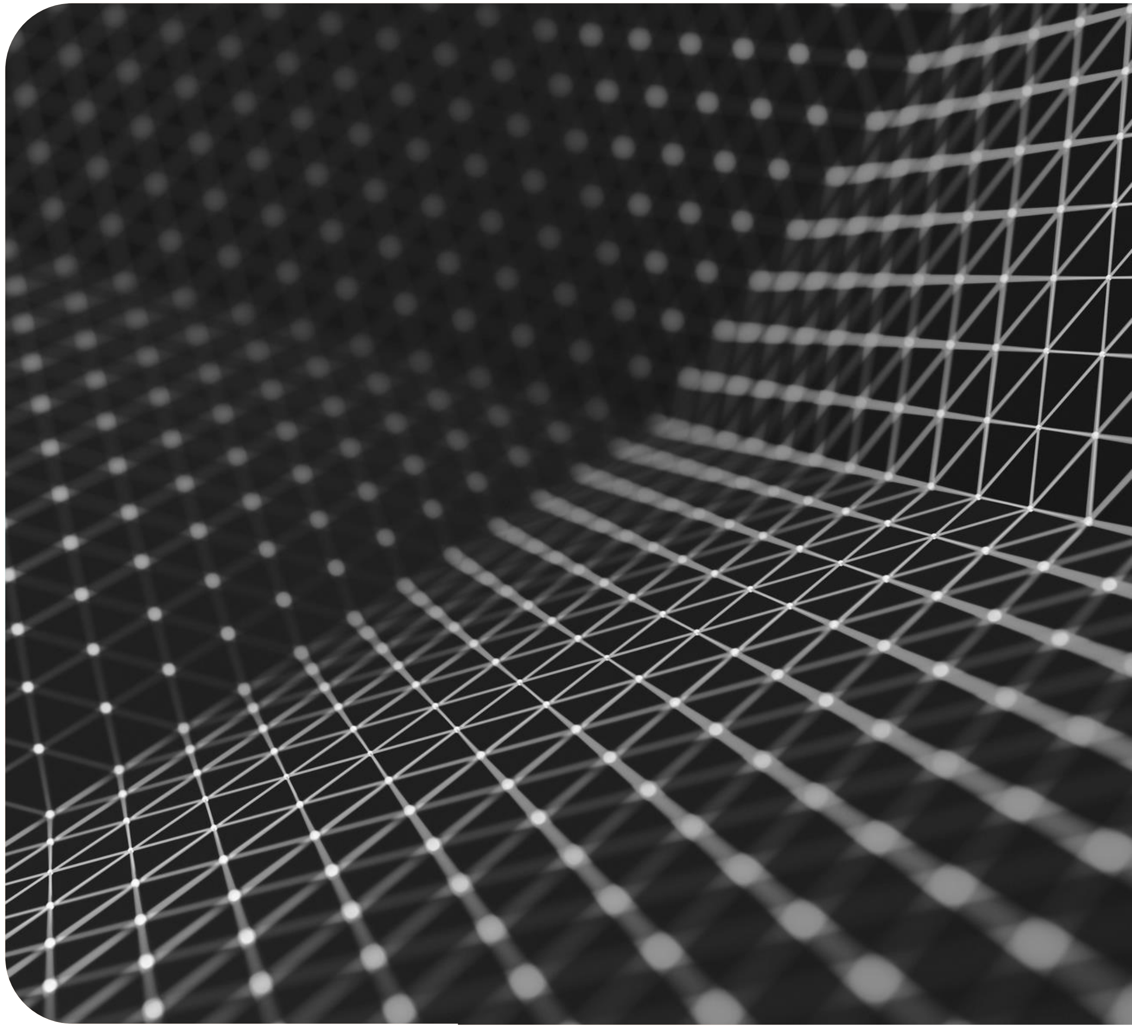
About this course

What you should learn:

1. Explain the **historical evolution** of financial technology and of the interconnection between financial products and services and technological developments;
2. Understand and explain the **regulatory and supervisory implications of digitalization** of financial markets and institutions;
3. Understand and distinguish the **different strategies** implemented by the financial institutions using real examples;
4. Explain the **drivers of digitalization** of financial institutions;
5. Identify and provide an **evaluation of the benefits and risks** deriving from digital finance diffusion on the market.



About this course: plan

Core lectures

Review of FI theories and concepts

A History of Technology and Finance

The actors: financial institutions, Fintech companies and Bigtech companies

Evolution of the national and international regulatory framework on digital finance

Focus lectures

AI in the Financial Sector: A Strategic Approach (Sergio Spaccavento)

Digitalisation of the insurance sector (Eleonora Isaia)

Innovation in banking: adoption of blockchain technologies (Tim King)

P2P lending platforms (Luisa Anderloni)

Digital transformation and bank profitability (Alberto Citterio)

Before we start…

Review of the basics of financial intermediation theory
and regulatory provisions in the financial markets

Can you name some financial intermediaries?
What do they do?
Why are they on the market?

Financial intermediaries (FIs)

Companies that produce and offer financial services

- Financial services issued by FIs (debtor/creditor) → deposit/loan
- Financial services not related to the issuance/circulation of financial instruments → advisory services for investors and/or businesses

Traditionally divided into:

- Credit FIs
- Market FIs
- Insurance FIs

The role of FIs (What do they do?)

Together with financial markets and financial instruments, FIs perform these functions:

- The supply of payment instruments (monetary economy → the role of money, as a good suitable for measuring the value of exchanged goods and widely accepted as the settlement of a transaction)
- Savings accumulation and investment financing: decisions and processes of savings accumulation and allocation
- The transfer of financial resources
  - Savings decisions (subjects with a surplus)
  - Savings investment decisions (technical methods/forms)
  - Financing decisions (subjects with a deficit)
- Risk management

Why are they on the market?

The primary purpose of the financial system is to streamline the process of transferring resources between economic units. The activities of markets and intermediaries facilitate capital mobility by positively impacting:

- the availability of information,
- the liquidity and tradability of instruments,
- the ability of all operators to find the desired risk/return balance.

Why are they on the market?

- In classical economic theory, the assumption of market perfection does not justify either the presence or the convenience of intermediaries' activities.
- The inevitable presence of limits and constraints on direct transfers has, however, gradually highlighted the economic convenience of intermediaries' intervention, whose ability to reduce imperfections should significantly increase the quality and scale of exchanges.
- The need for entities responsible for collecting savings on the one hand and allocating financial resources to deserving economic units on the other stems, first and foremost, from the dissociation between savings and investment.

Why are they on the market?

- Theoretical approaches that explain the existence of intermediaries and their essential function attribute a fundamental role to the presence of imperfections in the functioning of capital markets.

- These "imperfections" relate to:
  - transaction costs;
  - uncertainty and risks inherent in credit exchanges;
  - characteristics (typically asymmetric) of the information available to borrowers and lenders;
  - agency conflicts between lenders and intermediaries.

Regulation & Supervision

Because of their nature and because of the role they have in the modern economies, FIs (and the financial system) are regulated and supervised

- The monetary function and the "monetary" governance of the economy
- Savings protection and saver protection
- Negative externalities (banking crises and contagion risk, too big to fail)
- Additional regulatory measures aimed at reducing the likelihood and severity of problems arising from the failure of global systemically important financial institutions (G-SIFIs)
- Information asymmetries (incomplete information), market failure, and adverse selection

Regulation & Supervision

The limitations of so-called "free banking": financial contracts are highly uncertain; they immediately transfer wealth in exchange for an uncertain future performance, resulting in a structural information asymmetry.

A crisis at an intermediary can have negative "domino" consequences:

- It harms counterparties in interbank transactions
- It causes panic and bank runs
- It compromises the stability and functioning of payments.

Control and supervision are particularly important for banks whose liabilities are monetary in nature.

Why are we reviewing these issues?

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