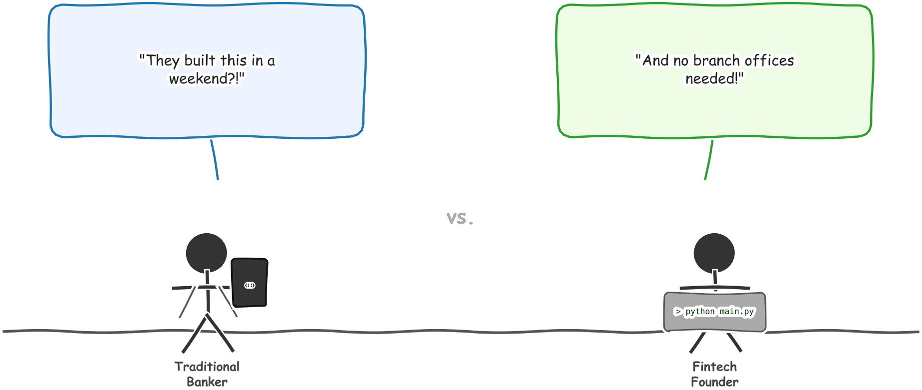
Financial Technology (FinTech) – Lecture 1

Understanding the Revolution in Financial Services

Lecture 1 of 7 · Financial Technology (FinTech) · MSc Programme · Spring 2026

The Revolution Started in a Garage



"The revolution started in a garage, not a boardroom."

Learning Objectives

1. **Describe** the defining characteristics of fintech and trace its historical evolution from early electronic banking to modern embedded finance. [Understand]
2. **Explain** how the 2008 financial crisis acted as a catalyst by eroding trust in traditional institutions. [Understand]
3. **Classify** the major collaboration models between banks and fintech companies. [Apply]
4. **Compare** the competitive advantages of incumbent banks vs. fintech startups. [Analyze]
5. **Evaluate** which collaboration model best fits a given strategic scenario. [Evaluate]

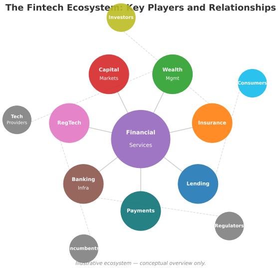
Bloom's levels covered: Understand → Apply → Analyze → Evaluate

These objectives map directly to the quiz and exercise assessments for this lecture.

Welcome to the Age of Financial Technology

What this course is about

- Technology is transforming *every corner* of financial services
- Payments, lending, insurance, wealth management, capital markets
- This lecture establishes the foundation:
  - What fintech **IS**
  - Where it **came from**
  - Why it **matters now**



Course Promise

By the end of L01 you have a framework for understanding every topic in the remaining six lectures.

The Fintech in Your Pocket

Think about the last 48 hours.

How many financial transactions did you make?
How many involved a traditional bank branch?

Now open your phone.

Quick Exercise

Count the financial apps on your phone. For each, ask:

- Is this from a **traditional bank**?
- A **fintech startup**?
- A **big tech company** (Google Pay, Apple Pay)?

Bring your count to the discussion.

Most MSc students have 5–10 financial apps – and most are NOT from their primary bank. This is the disruption.

What Is Fintech? Four Perspectives

Perspective	Definition Focus
Academic	Technology-enabled financial innovation
Industry	Companies using tech to improve financial services
Regulatory	New entrants requiring new oversight frameworks
Consumer	Faster, cheaper, more accessible financial products

Notice: every definition emphasises a different stakeholder.

- Academics see **innovation**
- Industry sees **competition**
- Regulators see **risk**
- Consumers see **convenience**

Fintech is not a product – it is a force that reshapes how financial services are created, delivered, and consumed.

The term 'fintech' was first used in the early 1990s but gained mainstream adoption only after 2010.

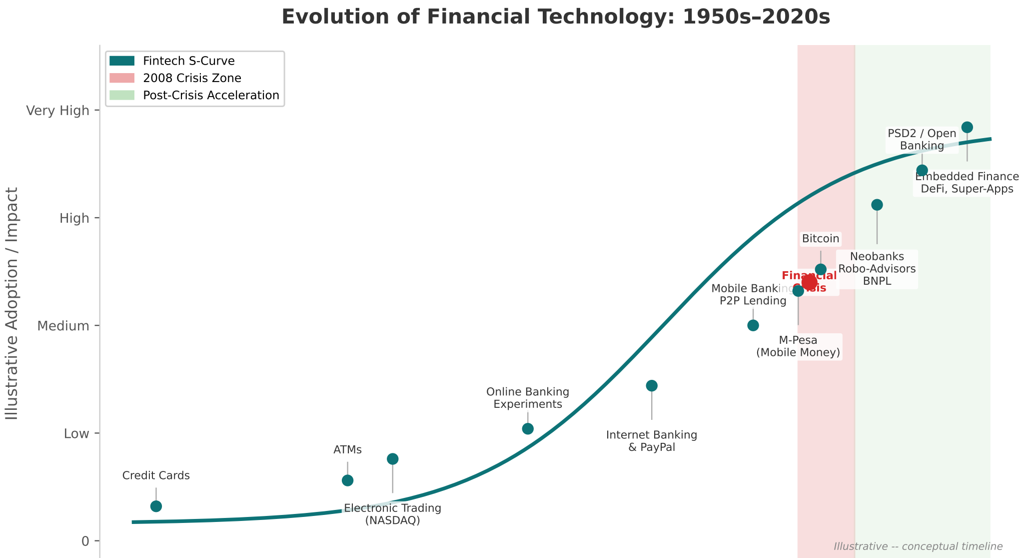
The Scope of Fintech – Seven Verticals

1. **Payments**	mobile wallets, real-time transfers, cross-border remittances
2. **Lending**	peer-to-peer, alternative credit scoring, buy-now-pay-later
3. **Insurance (Insurtech)**	on-demand, parametric, automated claims
4. **Wealth Management**	robo-advisors, micro-investing, social trading
5. **Capital Markets**	algorithmic trading, tokenisation, crowdfunding
6. **RegTech**	compliance automation, identity verification, AML
7. **Banking Infrastructure**	neobanks, Banking-as-a-Service, open banking APIs

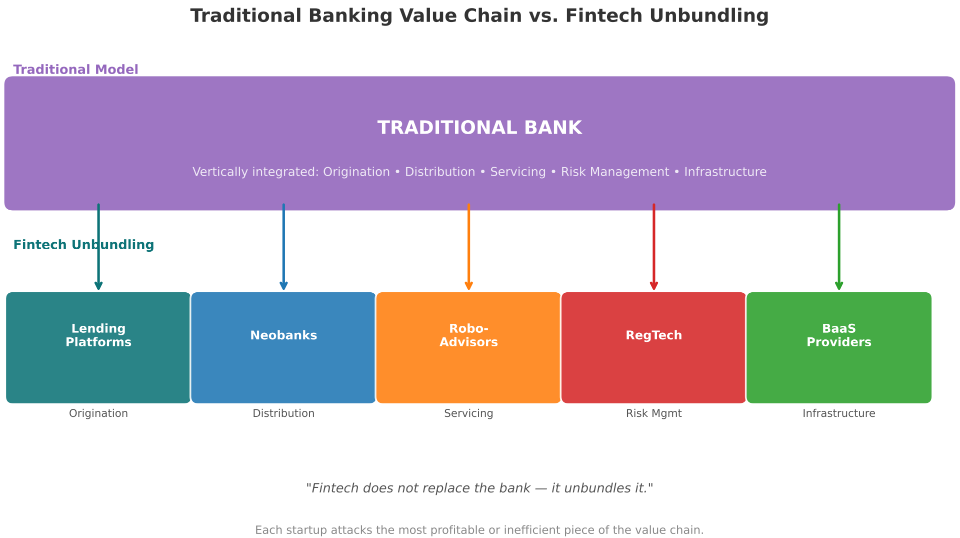
Each vertical is a lecture in this course. Today we see the **forest**; later we examine each **tree**.

Lectures 3–7 each deep-dive into one or more of these verticals. All seven connect back to today's foundational framework.

From Abacus to Algorithm – A Timeline



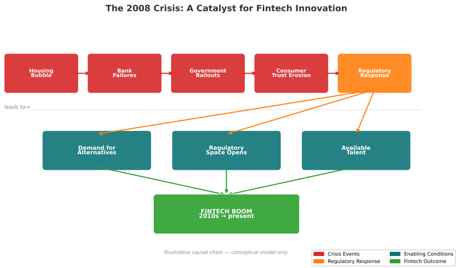
How Fintech Unbundles the Bank



Before 2008 – The Trust Assumption

The pre-crisis world:

- Banks were the *only game in town*
- Consumers trusted them by **default**
- Regulation protected incumbents from competition
- Innovation happened *inside* banks – new savings products, not new business models
- Technology companies served banks; they did not compete with them



Trust in banks was not earned – it was **assumed**.
The crisis exposed the assumption.

In 2007, over 80% of consumers in developed markets expressed high trust in their primary bank. Within two years that number had collapsed.

Three Forces That Opened the Door

Demand Shift

Consumers – especially millennials – sought alternatives.

Digital-native expectations: speed, transparency, mobile-first.

Regulatory Response

Post-crisis rules (Dodd-Frank, PSD2, Open Banking) inadvertently created space for non-bank competitors.

Regulatory sandboxes invited startups.

Technology + Talent

Cloud computing cut infrastructure costs. Smartphones created distribution channels.

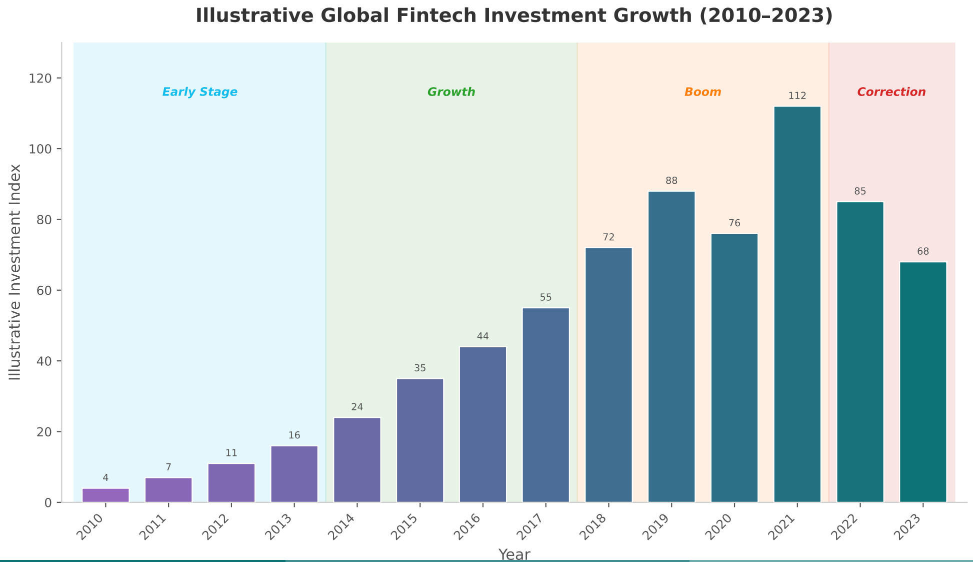
Laid-off bankers became fintech founders.

Fintech needed all three forces simultaneously.

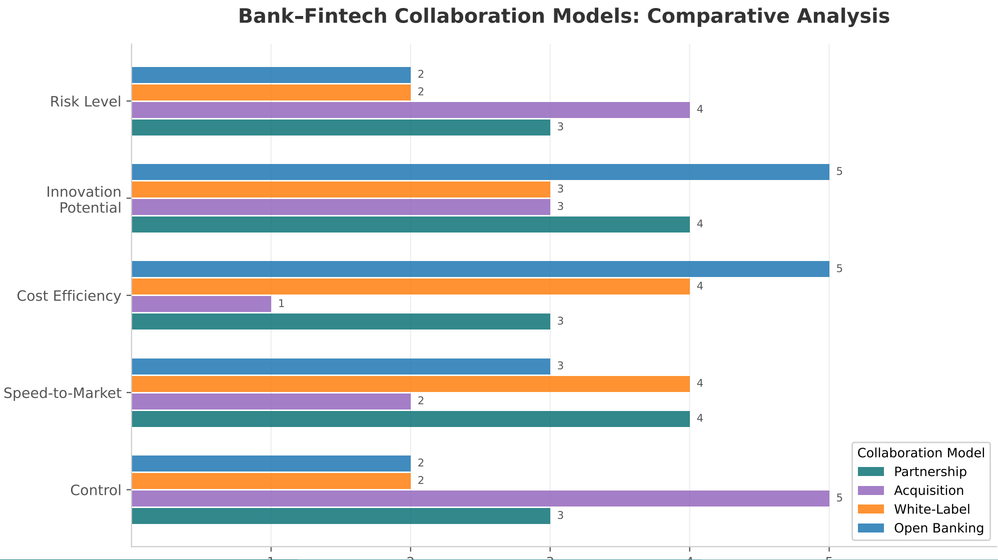
Technology alone was not enough – it needed demand and regulatory permission.

The smartphone was necessary but not sufficient. The 2008 crisis provided the push; technology provided the path.

The Post-Crisis Fintech Boom



The Collaboration Spectrum



Two More Paths: Acquisition and White-Label

Acquisition

- Bank buys the fintech outright
- Gains technology and talent
- Risk: culture clash kills innovation – the acquired team leaves
- Expensive and slow to integrate

White-Label / BaaS

- Fintech builds the infrastructure
- Bank puts its brand on top
- Consumer never sees the fintech
- Fastest-growing model today

Acquisition buys the **past**. White-label rents the **present**. Partnership builds the **future**.

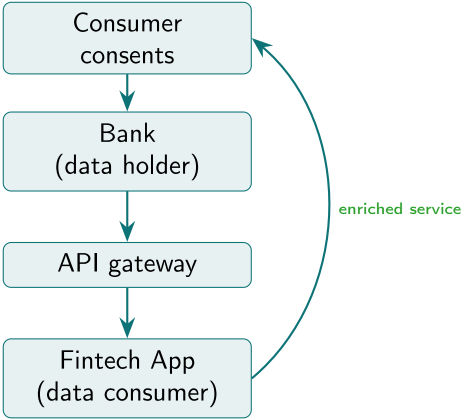
BaaS lets banks innovate without building, and fintechs scale without a banking licence. This is why it is growing fastest.

Open Banking – The Regulatory Path

What is open banking?

- Regulatory mandate requiring banks to share customer data via **APIs** with authorised third parties
- PSD2 (EU, 2018) was the first major open banking mandate
- Similar frameworks: UK Open Banking, Brazil PIX, India Account Aggregator
- Turns the bank's greatest asset – *customer data* – into a shared resource

The bank that adapts fastest to open banking wins – those that resist risk becoming invisible infrastructure.



When Fintech Fails – Four Failure Modes

1. **Regulatory risk**
   Operating without adequate licences; crossing jurisdictional boundaries without compliance

2. **Trust risk**
   Data breaches; lack of deposit insurance; unclear complaint resolution pathways
3. **Scalability risk**
   Customer acquisition costs exceed lifetime value; unit economics that never work at scale
4. **Systemic risk**
   Fintech becomes "too connected to fail"; concentration in a small number of cloud providers

Fintech disruption is not risk-free. The question is whether fintech creates **new risks** or merely **redistributes old ones**.

See L04 (RegTech & Regulation) for detailed analysis of regulatory failure modes and consumer protection frameworks.

The Consumer Protection Challenge

The regulatory gap:

Traditional banks are **regulated, insured, and supervised**. Fintech companies often operate between banking law and technology law – in the gaps that regulators have not yet filled.

Core Tension

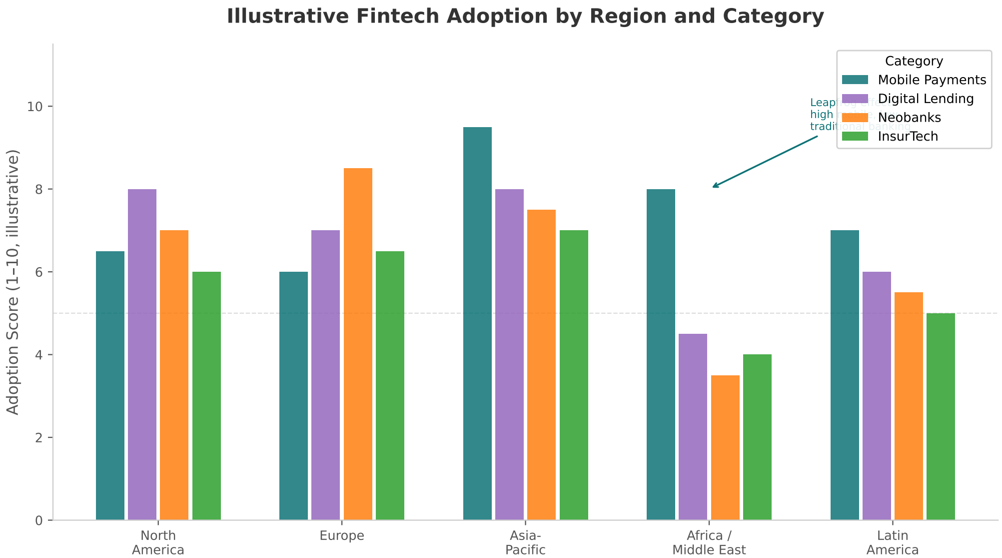
Innovation without consumer protection is not progress – it is risk transfer from institutions to individuals.

Key consumer concerns:

- Deposit insurance gaps for neobank customers
- Data privacy vulnerabilities via third-party APIs
- Algorithmic bias in lending and credit scoring
- Cross-border enforcement difficulties
- Lack of clear recourse when things go wrong

This tension between innovation and protection is the central theme of L04 (Fintech Security and Regulation).

Fintech Around the World – Regional Patterns



Five Trends Reshaping Fintech Today

1. **Embedded finance**
   Financial services integrated into non-financial platforms – ride-sharing with payments, e-commerce with lending
2. **Neobanks**
   Digital-only banks challenging incumbents on user experience and fees, without branches
3. **Decentralised finance (DeFi)**
   Financial services built on blockchain, removing traditional intermediaries
4. **Super-apps**
   Single platforms combining messaging, payments, shopping, and banking (WeChat, Grab, Gojek)
5. **Sustainable fintech**
   Green bonds, ESG scoring engines, carbon-tracking financial products

Each of these trends is both an opportunity and a threat. Lectures 3–7 examine them in depth. Today we establish the landscape.

Who Wins and Who Loses? Stakeholder Analysis

Potential winners:

- **Consumers** – more choice, lower fees, mobile-first access
- **Fintech startups** – growth opportunity in large addressable markets
- **Regulators** – better data via APIs; RegTech improves compliance
- **Unbanked populations** – mobile money, micro-lending, remittances

Potential losers:

- **Incumbent banks** – margin compression, forced technology investment
- **Bank employees** – automation of routine tasks
- **Consumers (risk)** – less protection in unregulated gaps
- **Society** – digital divide; those without smartphones excluded

Fintech is not zero-sum. Both consumers and institutions can benefit – but the benefits are not evenly distributed.

Financial inclusion – serving the unbanked and underbanked – is examined in detail in L02 (Fintech Ecosystem).

The Financial Inclusion Promise

The scale of the problem:

Over 1.7 billion adults globally lack access to formal financial services. They cannot save securely, borrow affordably, or send money cheaply.

How fintech helps:

- **Mobile money** serving unbanked populations (M-Pesa model)
- **Alternative credit scoring** using non-traditional data
- **Micro-investing** lowering entry barriers to wealth-building
- **Remittance cost reduction** for migrant workers

The Inclusion Test

If fintech only serves the *already-served*, it is **optimisation**, not **transformation**.

Inclusion is the test of genuine impact.

M-Pesa (Kenya, 2007) remains the canonical example. It brought formal financial services to millions who had never had a bank account – using mobile phones, not branches.

M-Pesa is the most studied case of fintech-driven financial inclusion. See L02 for the full discussion of the leapfrog effect in developing markets.

Five Questions That Reveal Any Fintech's True Strategy

1. **Who is the customer?**
   Consumer, SME, enterprise, or another fintech?
2. **What part of the value chain does it attack?**
   Origination, distribution, servicing, or infrastructure?
3. **How does it make money?**
   Transaction fees, subscription, data monetisation, or float?
4. **What is its regulatory position?**
   Licensed, partnered, or operating in a gap?
5. **Does it create or capture value?**
   Building new markets, or taking share from incumbents?

These five questions work for **any** fintech company you encounter – in this course, in the news, or in your career.

Apply these questions to a fintech you use. You will use this framework in the Workshop C evaluation exercise on Day 5.

The Central Tension Revisited

"Technology is reshaping finance – but the outcome depends on design choices."

- Will fintech **replace institutions** or strengthen them?
- Will it **include the excluded** or serve only the already-served?
- Will it create **resilience** or fragility?

These are not technology questions. They are governance, regulation, and strategy questions. This course gives you the tools to answer them.

Fintech is not a technology story. It is a governance story told in the language of technology.

This course covers: Ecosystem (L02), Payments (L03), Regulation (L04), Wealth Management (L05), Insurance (L06), and Technology (L07).

What Comes Next

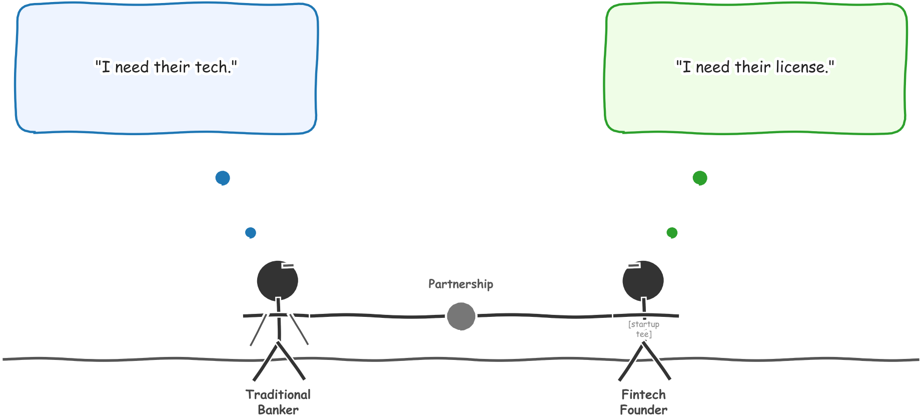
- **Next: L02 (Fintech Ecosystem)**
  Growth drivers, financial inclusion, trust in fintech, and behavioral dimensions of digital financial services
- **This afternoon:** L02 begins at 11:30 after the break
- **Before L02, reflect:**
  - What fintech services do you trust *more* than your bank? Why?
  - What fintech services do you trust *less*? Why?

The Rest of the Course

L01 gave you the **map**. Starting with L02, we explore each **territory** – in greater depth, with case studies and live examples.

If you want to read ahead, the course website has all lecture slides and materials available for download.

The Partnership Imperative



"And that's how partnerships are born."

Key Takeaways

1. **Fintech defined:** Technology-enabled innovation that creates new financial products, processes, or business models
2. **Historical arc:** From credit cards (1950s) through online banking (1990s) to embedded finance (2020s) – each wave built on the last
3. **Crisis catalyst:** The 2008 crisis eroded trust, opened regulatory space, and released talent – creating the conditions for fintech's growth
4. **Unbundling:** Fintech companies attack specific layers of the banking value chain, not the entire bank
5. **Collaboration spectrum:** Partnership, acquisition, white-label, and open banking each carry distinct trade-offs
6. **Global variation:** Adoption is highest where traditional infrastructure is weakest – the leapfrog effect
7. **Evaluation tool:** Five questions (customer, value chain, revenue, regulation, value creation) reveal any fintech's true strategy

Review question: Which collaboration model would you recommend for a mid-sized European bank entering mobile payments? Why?

Summary and Key Vocabulary

Lecture Summary

Fintech is the application of technology to financial services, driven by the convergence of eroded trust, enabling technology, and regulatory change after 2008. Banks and fintech companies are increasingly choosing **collaboration over competition**, through models ranging from partnerships to open banking APIs. The key question is not whether fintech will transform finance, but how the benefits and risks will be distributed across stakeholders.

- **Fintech**
- **Neobank**
- **Open Banking**
- **Embedded Finance**
- **Unbundling**
- **Banking-as-a-Service (BaaS)**
- **RegTech**
- **Financial Inclusion**

Next lecture: Fintech Ecosystem – growth drivers, financial inclusion, trust, and behavioural economics. L02 begins this afternoon at 11:30.