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INNOVATIONS IN FINANCE

LECTURE 2 : THE FINTECH REVOLUTION: PAYMENTS, LENDING & NEOBANKS

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INTRODUCTION

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OUR GOAL : UNDERSTAND THE FUTURE OF FINANCE

Do you trust a bank more because it has marble floors and 200 years of history, or would you trust an app with no branches but millions of users?

LEARNING OBJECTIVES

- **Knowledge (know/understand):**
  - Understand the distinctions between banks, neobanks, and fintech players under European regulation.
  - Identify the core innovations in payments and lending disrupting traditional models.
- **Skills (be able to):**
  - Analyze how regulation influences fintech positioning and strategy.
  - Compare business models of traditional banks and fintech startups.
  - Evaluate the role of user experience and technology in fintech adoption.
  - Discuss global case studies to understand real-world fintech success factors.

➔Curiosity, creativity and critical thinking will be rewarded

SESSION 2 OBJECTIVES

- What is a bank ?
- Regulatory Landscape
- Disruptive models
- DNA of a Fintech
- Tech and UX as Differentiator
- Case Studies

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WHAT IS A BANK?

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CORE BANKING FUNCTIONS

- **Intermediation:** Collect deposits, issue loans
- **Maturity transformation:** Short-term deposits fund long-term loans
- **Credit risk transformation:** Pooling and pricing of borrower risk
- **Payment services:** Enable transactions and settlements
- **Investment product distribution:** Manage investment products and sell these to final client who needs to invest

HOW A BANK MAKES MONEY ?

Simplified Balance Sheet (in million €)

Assets		Liabilities & Equity	
Customer Loans	€800 M	Customer Deposits	€900 M
Cash & Reserves	€150 M	Borrowings	€30 M
Government Bonds	€50 M	Equity (Capital)	€70 M
Total Assets	**€1,000 M**	**Total Liabilities & Equity**	**€1,000 M**

- **Customer Loans:** The bank lends money to individuals and businesses. This is its main revenue source via interest income.
- **Deposits: The cheapest funding source.** Banks pay a lower rate on deposits and lend at a higher rate (net interest margin).
- **Government Bonds:** Safe investments that provide stable income and liquidity.
- **Reserves:** Cash or central bank reserves required for liquidity and regulatory purposes.
- **Borrowings:** Sometimes banks borrow from other banks or the central bank.
- **Equity:** The bank's own capital, required by regulators to absorb losses (Basel III rules).

- How a Bank Makes Money ? :
  - **Interest Income** from loans > **Interest Expense** on deposits = **Net Interest Margin**
  - Fees on services (payments, account management, advice)
  - Trading or investment income

FROM DEPOSIT TO HOME LOAN

🏦 **Step 1: Customer Deposit**

Anna deposits €10,000 in her savings account at the bank.

💡 **Bank's cost of funds:** 1% interest

🔁 **Step 2: Bank Pools Deposits**

The bank combines deposits from multiple customers to create a large lending pool.

🏡 **Step 3: Home Loan Issued**

The bank uses that money to give a €200,000 mortgage to Paul.

💡 **Loan interest rate:** 4%

📈 **Step 4: Bank Earns the Spread**

Net Interest Margin = 4% (loan) – 1% (deposit) = 3% profit

✅ **This is the bank's core business model.**

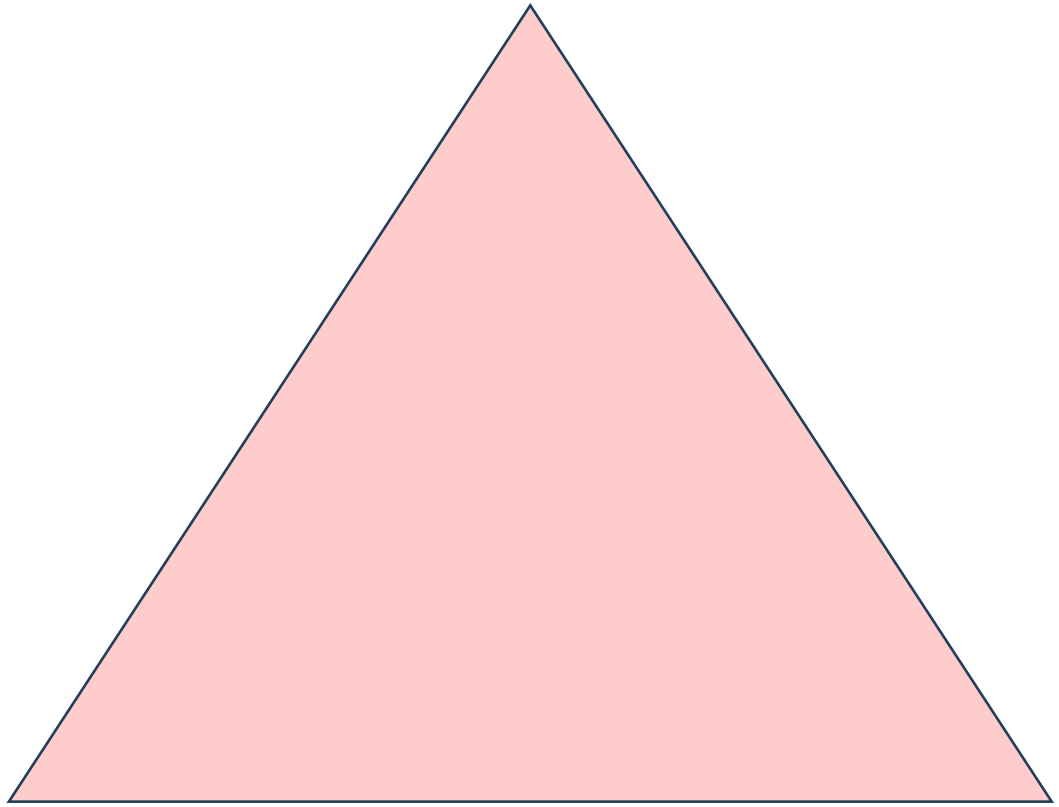
- Risks :
  - What happens if too many customers ask for their deposits back at once? Liquidity Risk
  - What happens if too many loans go bad? Credit Risk
- A bank is a risk taker : One of its core function is to manage this risk

WHY BANKS ARE REGULATED ?

- Banks create systemic risk:
  - Failure = broad contagion
  - September 2008 : Lehman Brothers
  - March 2023 : Silicon Valley Bank (and Silvergate Bank and Signature Bank)

- Regulation protects depositors & ensures solvency
  - Protect depositors
  - Prevent systemic risks
  - Harmonise standards
  - Enhance resilience and transparency
- Key regulators:
  - European Central Bank (Single Supervisory Mechanism)
  - European Banking Authority
  - National authorities : AMF and ACPR in France
- Basel III sets global risk & capital requirements

BASEL III: RISK CONTROL FOR BANKS



- **Pillar 3 :** Market Discipline
  - Banks must **publicly disclose** their risk profile and capital adequacy.
  - Improves **market discipline** by empowering investors and stakeholders.

- **Pillar 2 :** Supervisory Review
  - Regulators assess each bank's internal risk processes.
  - Ensures banks hold capital commensurate to their unique risk profile.
  - Includes stress testing and risk governance reviews

- **Pillar 1 :** Minimum Capital Requirements

Ratio	Meaning	Minimum Required
CET1 (Common Equity Tier 1)	Strongest capital (e.g., shareholders' equity)	**4.5%** of risk-weighted assets
Tier 1 Capital Ratio	CET1 + some other instruments	**6.0%**
Total Capital Ratio	Tier 1 + Tier 2 capital	**8.0%**

- Pillar 1 ensures that :
  - Banks always keep a **minimum amount of capital.**
  - This capital is **proportional to the risk** they take.
  - It helps banks stay solvent and protects depositors during crises.

LOAN DISTRIBUTION CHALLENGES FOR BANKS

- Lengthy and complex loan approval processes
- Rigid credit scoring models excluding many SMEs and individuals
- High operational costs due to manual underwriting
- Limited transparency and customer communication
- Slow decision-making impacting business growth opportunities

INVESTMENT PRODUCT DISTRIBUTION ISSUES

- High minimum investment thresholds limiting access for retail investors
- Complex fee structures and lack of transparency
- Limited customization and personalization of products
- Reliance on human advisors increases costs and biases
- Low financial literacy barriers reduce investor engagement

PAYMENTS BEFORE FINTECH

- Slow international transfers (SWIFT delays)
- High fees for both sender and receiver
- Low financial inclusion in emerging markets
- Poor user experience (paperwork, errors)

WHAT MAKES A BANK… A TARGET?

Core Weaknesses of Traditional Banks:

- 🐢 Slow Innovation
- 💸 High Fees
- 🧱 Legacy IT Systems
- 🚪 Poor Customer Experience
- 🕳️ Slow Decision-Making

Fintech Attack Vectors:

- 📱 Mobile-first UX
- ⚡ Real-time onboarding
- 🤖 AI-driven credit scoring
- 📃 Fee transparency

Outcomes of Fintech Disruption:

- 🏦 Unbundling of bank services
- 🌎 New players reaching underserved users
- 📉 Margin compression on traditional products
- 🧩 Embedded finance integrated into daily apps

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THE REGULATORY LANDSCAPE

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REGULATORY ENTITIES IN FINANCIAL SERVICES

- **Etablissement de crédit (Credit institution):** Full banking license, deposit-taking, lending, payments
- **Etablissement de paiement (Payment institution):** Can execute payment services but no deposit-taking
- **Etablissement de monnaie électronique (E-money institution):** Issues electronic money, limited lending powers
- **CIF (Conseiller en investissement financier):** Licensed investment advisors, no custody of funds
- **Non-regulated startups:** Operate outside ACPR/AMF supervision, limited scope

HOW REGULATION SHAPES PRODUCT OFFERINGS

- Credit institutions have broad service offerings: **deposits, loans, payments**
- Payment institutions focus on **money transfers and payment processing**
- E-money institutions provide **electronic wallets** but cannot lend directly
- CIFs **give advice** but do not manage or hold client funds

- Non-regulated startups face limits on product offerings and trust-building

CENTRAL BANK ACCESS AND CUSTOMER SAFEGUARDS

- Credit institutions have direct access to central bank facilities and deposit insurance
- Payment & e-money institutions often rely on safeguarding client funds
- CIFs must comply with conduct rules but don’t hold funds
- Non-regulated startups lack formal consumer protections, increasing risk
- Regulations ensure transparency, anti-money laundering (AML), and dispute resolution

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DISRUPTIVE MODELS

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MOBILE WALLETS: BANKING WITHOUT BANKS

- Apple Pay & Google Pay allow users to pay, store cards, and manage transactions—without traditional bank interfaces
- Use tokenization for security—no card details shared at checkout
- Seamless integration with devices: biometrics, NFC, wearable compatibility
- Expand financial inclusion in regions with high smartphone use but low bank penetration
- Challenge to banks: disintermediation from daily financial habits

Apple Pay G Pay

- **No physical card necessary:** store cards in digital wallet
- **Contactless payments** at point of sale terminals
- **Low-cost transfers between users** ('peer-to-peer')

RETHINKING CREDIT: P2P & BUY NOW PAY LATER

- BNPL lets users split payments into installments—often interest-free
- Klarna partners directly with merchants, bypassing credit cards
- Fast credit decisioning with minimal friction at checkout
- Appeals to Gen Z and Millennials wary of traditional debt
- Regulatory challenges: over-indebtedness, transparency, consumer protection

YOUNITED

Klarna.

open pay

affirm

splitit

EMBEDDED FINANCE: BANKING WHERE YOU DON'T EXPECT IT

- **Definition:** Integration of financial services (lending, payments, insurance) into non-financial platforms
- Shopify Capital: Offers working capital loans to merchants based on sales data—no bank needed
- Amazon Lending: Provides credit to high-performing sellers directly through its platform
- Enables data-driven underwriting and instant access to capital
- Blurs the line between tech companies and financial institutions

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THE DNA OF A FINTECH STARTUP

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FINTECH CULTURE: FAST, FOCUSED, AND USER-CENTRIC

- **Agile methodology:**
  - Quick iterations, constant feedback
- **MVP approach:**
  - Build fast → test → improve
- **Product-first mindset:**
  - UX/UI and customer pain points drive design
- **Cross-functional teams:**
  - engineers, designers, product managers
- **Strong customer focus** → faster adaptation to market needs

FROM GARAGE TO UNICORN: FINTECH BUSINESS MODELS

- Venture capital–backed startups aiming for scale
- Typical models:
  - SaaS (Software as a Service)
  - Marketplace (lenders/investors)
  - API-driven platforms (e.g., Stripe, Plaid)
- Focus on growth over short-term profitability
- Monetization: subscriptions, transaction fees, data services

FINTECH VS. BANK: A STRUCTURAL SHOWDOWN

	Fintech Startups	Legacy Banks
Team focus	Engineers, product teams	Compliance, operations
Tech architecture	Cloud-native, modular	Legacy core systems
Speed to market	Weeks to months	Months to years
Cost structure	Low fixed costs, scalable	High fixed costs
Customer acquisition	Digital, viral, low customer acquisition cost	Branch-based, costly ads

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TECHNOLOGY & UX

KEY DIFFERIENTOR

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MOBILE-FIRST, API-POWERED, REAL-TIME

- **Mobile UX:** Fast, intuitive, personalized experience
- **Real-time payments:** Instant transfers
- **Open APIs:** Seamless integration across services (banking, lending, KYC)
- **API-first strategies:** Stripe simplified payments for developers

- **Tech is not a support tool — it’s core to the customer experience**

ONBOARDING & UX: WINNING CUSTOMERS IN SECONDS

- **First impressions matter: account setup in <5 minutes**

- **Legacy banks:** Complex menus, outdated visuals, slow KYC
- **Fintech approach:** Clean UI, transparency, push notifications

- Case study: Revolut vs. Société Générale onboarding

Revolut

Full account in under 10 min

SG

Manual forms, long wait, branch validation

- **UX = competitive edge → drives acquisition & retention**

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GLOBAL CASE STUDIES

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KLARNA: MAKING SHOPPING FRICTIONLESS

- **Launched in 2005 for to make online shopping safer and smoother**
- One of the leader of BNPL
- Banking Licence in Europe
- Focus on **user experience**: clean design, in-app everything
- Revenue from merchant fees, loan streams and advertising
- Expansion into US despite regulatory hurdles

Klarna.

STRIPE: THE INTERNET'S PAYMENT INFRASTRUCTURE

- Developer-first payments API launched in 2010
- B2B focus: e-commerce, SaaS, marketplaces (e.g., Shopify, Amazon)
- Regulatory model: licensed as a PSP (Payment Service Provider)
- Scalable: Used by startups and tech giants alike
- Revenue from transaction fees, enterprise packages, and embedded services
- Strength: APIs + onboarding + security + scale

stripe

ANT GROUP: BEYOND PAYMENTS, INTO ECOSYSTEMS

- Originated as Alipay (2004), and later part of Alibaba ecosystem (until 2021)
- Offers payments, lending, insurance, wealth management, credit scoring
- Used AI underwriting and data from Alibaba/Alipay behavior
- Tech stack allows instant decisions for SME loans, micro-investments
- IPO blocked by Chinese regulators in 2020 — risk of systemic impact : (USD 34,5 billions of raise potential)
- Regulated as a tech company, in April 2021, Ant Group applied to become a financial holding company under the direction of the Peoples' Bank of China.

ANT GROUP

Alipay

largest mobile and online payments platform

余额宝

Yu'e Bao, formerly the world's largest money-market fund

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WRAP-UP

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KEY TAKEAWAYS FROM TODAY

- **Fintechs reimagine business models:** platform-first, niche-focused
- Regulation remains a key constraint and competitive advantage
- Strong user experience (UX) is often a differentiator, not just a bonus
- Winning fintechs leverage technology stacks: APIs, AI, cloud-native
- **Fintech ≠ "just apps**"—they rethink the framework of finance

➔ *Could a neobank become a systemically important player in the global financial system?*

FINTECH OR BANK?

Which of the following is *not* a core function of a traditional bank?

A. Accepting deposits
B. Issuing insurance policies
C. Providing loans
D. Managing liquidity risk

FINTECH OR BANK?

What key pain point did M-Pesa solve?

A. High credit card fees
B. Complex investment products
C. Financial exclusion & lack of bank access
D. Corporate treasury inefficiencies

FINTECH OR BANK?

A fintech that holds client money but doesn’t lend it out is most likely regulated as a:

A. Credit institution
B. Investment fund
C. E-money institution
D. Non-regulated startup

FINTECH OR BANK?

Which feature is commonly associated with fintech UX design?

A. Physical branches for client onboarding
B. Paper-based KYC
C. Real-time feedback and intuitive flows
D. Complex multi-page forms

FINTECH OR BANK?

Stripe’s success is largely attributed to its:

A. Banking license and deposit rates
B. Developer-first API approach
C. High-yield savings accounts
D. Mobile retail interface

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