FinTech in India: present status and looming issues

A lecture for the FinTech course for the MBA program at Keio University, Tokyo

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Structure of this talk

- What is FinTech
- Governing framework: Information, Payments, Business models and the role of technology
- The FinTech industry in India
- Policy status, Looking forward

What is FinTech

Definition

- Financial Stability Board (2017):

  > *"...technologically enabled financial innovation that could result in **new** business models, applications, processes, or products with an **associated material effect** on financial markets and institutions and the provision of financial services."*

  (Emphasis added)

Same functions; New mechanisms of delivering finance.

Classifying financial functions and delivery

Traditional (FSB, 2017) –

1. payments, clearing and settlement
2. deposits, lending and capital raising
3. investment management and market support
4. insurance

FinTech (Schindler, 2017) –

1. distributed ledger technology
2. machine learning and online marketplace lending,
3. equity crowdfunding
4. insurance FinTech
5. robo-advice

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Key take-aways

- Goals of FinTech: Higher financial inclusion; competition to existing financial firms.
- How can competition make a material impact on existing financial firms?

  Through a focus on function vs. (institutional) form (Merton and Bodie, 2005)
- FinTech is about new business models that disrupt existing business models by:
  - Identifying functions in finance and
  - Uses technology to deliver functions separately

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Key take-aways: Advantages, Challenges

- Advantage #1: Delivery at lower cost, higher efficiency
- Advantage #2 (?): Higher diversification across traditional service providers $\rightarrow$ lower systemic risk.
  - Systemically important financial firm
  - Payment system capture
- Challenge #1: New sources of systemic risk
  - Lack of data protection
  - Systemic model failure $\rightarrow$ distortions in delivery (exacerbated financial exclusion)

Finance is critical to an economy.
But! Regulators worry greatly about challenges.

$\Longrightarrow$ FinTech may face higher regulatory / policy risk.

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A framework to understand function vs. form in finance

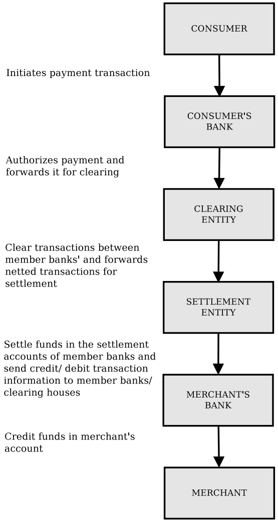
What makes FinTech work

There are three main components where FinTech has an advantage over traditional finance:

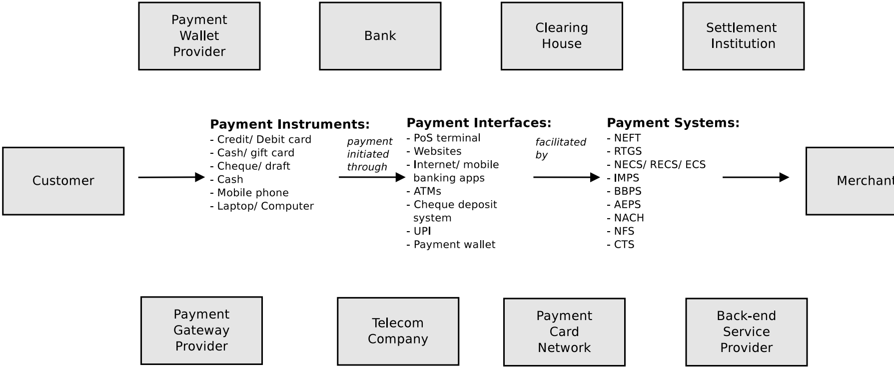
- Payments systems
- Information systems
- Business models enabling transactions

Role of payment systems

Simplistic (non-cash) transaction



Transactions today



Payment systems

Every (financial) transaction touches upon the payments system.

- First there was cash.
- Formal finance: accounts that could be debited by cheques.

  At first, only banks could issue cheques $\leftarrow$ access to payment system.
- Innovation: Credit card companies access to payment systems, Money market mutual funds issuing cheques.
- Present day: digital wallets, cellphones as payment channels.
- Important for ease of transactions: (1) access to the payments system and (2) *inter-operability* across channels.

  $\Longrightarrow$ This is where the role of the State (policy) is important.

All this facilitates transactions, but not quite FinTech.

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Role of information

Information as input to finance

- Core of finance $\rightarrow$ contracts allowing counterparties to move funds to each other at different points in time.

  Example: credit (simple). Example: insurance (less simple).
- This requires trust. Trust requires information.
- When there is *information asymmetry*, finance cannot work well.
- Systems that generate information about contract performance help finance.
- Examples in traditional finance: credit bureaus. Disclosure about firm default. Redemption on insurance.
- How does this play out for FinTech?

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FinTech and information

- Technology has helped make transaction history transparent: for individuals and firms.
- Example: Online transactions $\rightarrow$ generate transaction history.
- Example: Online transactions $\rightarrow$ machine learning $\rightarrow$ prediction about preferences.

Technology + Payments + Information = . . .

- Technology platforms $\rightarrow$ small valued transactions $\rightarrow$ learning models about credit worthiness for new borrowers / entrepreneurs.
- Traditional models exist (Joint Liability Groups in the Micro Finance Industry) but technology allows speed and scale.

Enabling credit transactions that is supported by a new way of understanding credit potential?

FinTech!

Role of business models

The business model in FinTech

FinTech happens when all three elements described previously integrally involves a financial decision (credit/investment, risk management, advice about these).

To build it requires up-front investment.

- Technology needs to be built.
  For what customer base? What scale? What is the required capability?
- Payment systems interfaces to be built and need to be licensed.
  Is direct access available? What is the cost of procuring licenses? What is the cost of interoperability?
- Information systems need to be designed and purchased.
  Is direct access available? What is the cost of procurement?

Business models to achieve scale and permanence in FinTech.

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Business model concerns

Business model viability: what is the expected demand? what is the expected profit? under what conditions? what is the investment required? over what horizon? when can it become profitable? under what conditions – what are the business model risks?

who is the team?

Regulatory concerns: Is this business model possible under the laws and regulations? What systemic risks can it pose? Will this change? How to manage business risk when regulations change?

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FinTech in India

Indian payments systems

- Combination of a monopoly payment system provider and payment gateways.
  - PSP – National Payments Corporation of India (NPCI) regulated by the Central Bank (RBI).
  - Payment gateway providers – multiple firms adhering to in the Payments Card Industry Data Security Standards (PCI DSS).
- NPCI supports
  - *Digital payments* through two types of channels called Unique Payment Interface (UPI) and Immediate Payment Service (IMPS), and
  - *Mobile banking* transactions.

  This allows for digital wallets like PAYTM.
- Examples of some payment gateways include RAZORPAY, PAYYOUBIZ.

Information for finance in India

- A single unique nation-wide ID, ADHAAR.

  This is linked to all bank accounts today and can help as the unique identifier for all persons across all important transactions.
- Credit bureaus: Credit Information Bureau of India, Ltd. (CIBIL) to which all banks are required to report defaults above a threshold.

  Several smaller firms tracking credit information of the customers of micro-finance firms.
- Information utilities (new structure created under the Insolvency and Bankruptcy Code, 2016).

The Indian FinTech business ecosystem

- deposits, lending and capital raising:
  - P2P Lending Platforms: Faircent, LendBox
  - Alternative Lenders: LendingKart
  - Alternative credit-risk modelers, credit enablers: Algo360, CreditMantri
  - Credit Products Comparators: BankBazaar, Paisabazaar
  - Crowdfunding: Let's Venture, 1Growth, Milaap
- investment management and market support
  - Robo Advisory: OroWealth, FundsIndia
  - Mutual Funds Aggregators: BharosaClub, Zerodha Coin
  - Personal Finance Management: Walnut
  - Hybrid Platforms: Paisabazaar
- insurance
  - Aggregators: Policy Bazaar, EasyPolicy
  - Insurancetech: Bajaj Allianz, Videocon Liberty

Source: *Financial Regulation of Consumer-facing Fintech in India: Status Quo and Emerging Concerns*, Beni Chugh, Dvara Research, September 2019.

Challenges ahead for FinTech in India

FinTech for financial inclusion

- Financial inclusion: stated policy in India as far back as 2000.
- Several policy initiatives in the last five years to increase number of bank accounts opened (2015) and to move to a cashless economy (demonetisation, 2016).
- Number of bank accounts have increased.

  Yet, digital payments still remains to be sought by policy.

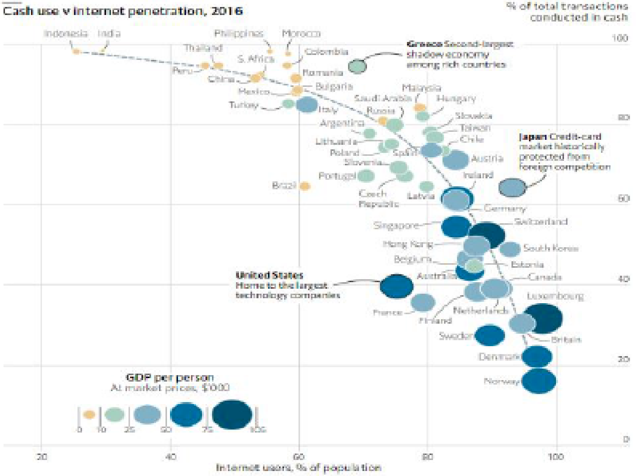
  Source: *Report of the High level committee on the deepening of digital payments*, RBI, March 2019.
- Information systems have been built.

  But these need to be readily accessible to undertake investment decisions by debt or equity.

  Data privacy laws can be a challenge in accessing information to build targetted financial products and services.

Cash vs. digital transactions, cross-country comparisons

Even within the rich world, the most digitised societies use cash least oft



Source: *The Economist*

Inherent challenges of India

- Large geography, large population.
- More important, *heterogenous* population $\rightarrow$ this requires different business models.

  The same business model will not work in different regions in India.
- Solution?

  More competition in the financial sector.

FinTech is the more cost-effective way to create competition, particularly in an emerging economy.

Trouble on building competitive finance

- Indian policy has been pro-control and anti-competition.

  Example: Banking sector licenses are difficult to get, even with the mandate of financial inclusion.
- Dominated by monopolies in the payment systems (by law) and monopolies in the information space.

  Example: CIBIL, NPCI, RBI's recent announcement of a single national *public credit registry*.
- Traditionally, in India financial business models cannot operate unless explicitly permitted.
- Licensing criteria for non-bank financial firms are similar to criteria for banks, without the benefit of deposit-taking.

  Licensing criteria must be risk-based.
- Frequent, sudden changes in the regulations on requirements and access.

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Way forward?

- Measurement systems: to capture the extent of financial inclusion beyond the number of bank accounts.
- Better regulatory governance: regulators must adhere to better processes when making regulations to eliminate regulatory risk and uncertainty for FinTech firms.
- Policy must shift to more competition and innovation and less central planning.
- Policy must have a holistic perspective and not try to develop FinTech in isolation.

  Without a well-developed overall financial market with well functioning bond, equity and derivatives markets, FinTech will not be able to raise finances to grow.

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Thank you.

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Comments / Questions?