

Designing a Framework for Digital Financial Transformation

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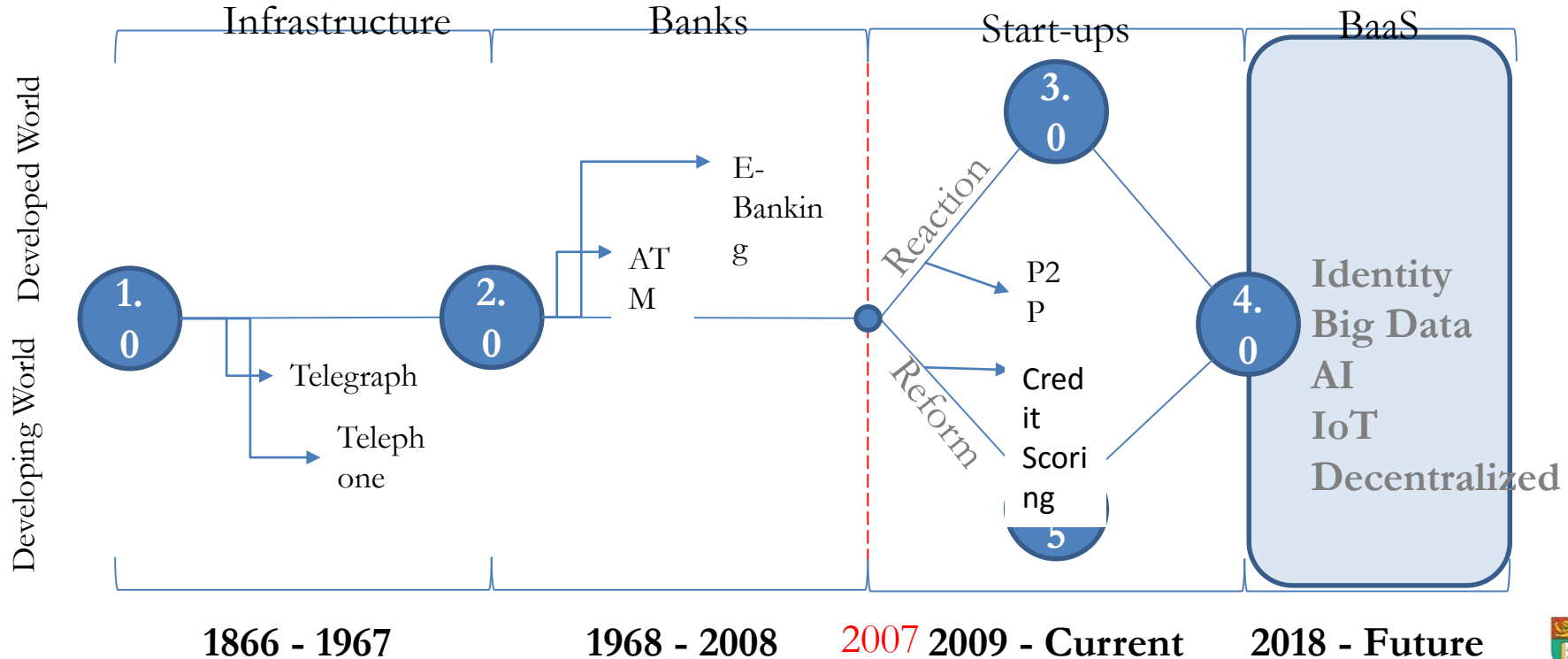
FinTech Evolution and Typology

FinTech Evolution



The Evolution of FinTech:

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2676553



Mobile vs Banking Penetration

Within developing parts of Asia, mobile phone ownership is more wide-spread than Bank account registration:



Implications

Main current concerns of policymakers and industry arise not from the technology itself but from the question of *who* is applying technology to finance along with the *speed* of development.

An evolutionary approach to create a framework of understanding is necessary to understand the implications for established financial institutions, IT companies, start-ups and regulators alike.



Regulatory challenges

New emerging FinTech companies often have limited track records regarding their business (*eg risk management, liquidity and profitability*) and difficulty identifying their obligations (*eg applicable regulations or licences*).

For regulators, these early-stage companies represent a limited prudential & consumer risk. However, exponential company growth can create “risk blind spots”. Additionally, frequent failures or fraud can impact market or investor confidence.



RegTech and the Reconceptualisation of

RegTech digital disruption is not just about greater efficiency
in existing processes
but new processes altogether.

RegTech and the Reconceptualization of Regulation

SSRN: <http://ssrn.com/abstract=2847806>

RegTech Reconceptualization



RegTech encompasses industry and regulators

Financial institutions and industry

- Major drivers of RegTech development
- Demand efficient tools to deal with regulatory and compliance demands
- Global firms developing centralized risk management

Regulators

- Lag in regulator adoption relative to private sector
- Yet need to develop systems to deal with rivers of new data and cybersecurity

Start-ups

- Incentives to trade off-data for faster market entry
- Automation of reporting and compliance more aligned with lean business model



RegTech+ : Smart Regulation

Information and monitoring – FSB (2017)

Systems design

Digitisation

Datification

Regulatory Sandboxes



Designing a framework for digital financial transformation

- Objectives: financial inclusion, economic growth, financial stability, market integrity
- Pillar I: Empowering Access Digital ID / eKYC / simplified account opening
- Pillar II: Enabling use: Digital payments infrastructure and open electronic payments systems
- Pillar III: Scaling use – digitisation of government payments and provision of services
- Pillar IV: Expanding the quality and range of services: Designing financial systems and structures

India Stack

VISION

Presence-Less

Unique digital biometric identity

Paper-Less

Electronic documentation protected by digital signature and storage

Cash-Less

Single interface to all interconnected payments platform

Consent

Consent-enabled data sharing framework

IMPACT

1,000% Efficiency Gain for end-to-end account creation

	Bank	Prepaid Card Issuer
Days	14- 30 days	1 – 2 days
Time	70 – 91 min	6 – 20 min
Costs (USD)	US\$ 5.2 – 8.7	US\$ 0.34 – 1.6

Re-aligns economic viability of financial inclusion delivery

Pillar I: Empowering Access Digital ID / eKYC / simplified account opening

- Base ID
- KYC
- Suitability?

- Local / foreign / non-physically present
- Individual / corporate

- Challenges: domestic context, security

- Structures: Sovereign / Monopoly / Open

Pillar II:

Enabling use: Digital payments infrastructure
and open electronic payments systems

- Traditional
- New entrants / technologies
- Regulation
- Related benefits: ecommerce, empowerment / entrepreneurship

Pillar III: Scaling use – digitisation of government payments and provision of services

- Pillar I / II
 - Strategy: access + savings + efficiencies
 - Government salaries / benefits / pensions
 - Requirement?
-
- Related benefits: leakage / taxation / formalisation / market integrity

Pillar IV: Expanding the quality and range of services: Designing financial systems and structures

- Pillar I, II, III: Payments, transactions, savings
- Infrastructure for traditional and non-traditional access to finance
- Credit: credit analysis, cashflow (SMEs)
- Investment: clearing / settlement / trading, national pensions, debt markets, equity markets, roboadvisory
- Insurance
- Early stage and other financing: building better systems?

Designing markets and systems

- Clearing / settlement
- Registration / ownership
- Trade / finance
- Data storage / transfer / protection
- Finance

Case study: EU Big Bang II

- PSD 2: Payment Services Directive 2 – open API banking
- MiFID 2: Markets in Financial Instruments Directive 2 – transparency across markets
- GDPR: General Data Protection Regulation

Blockchain: DLT + cryptography + smart contracts

- Centralised / networked / distributed
- Permissioned / permissionless
- Trust solution: security / transparency / permanence

Distributed Ledger Technology and Distributed Liability:

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3018214

Looking Forward

- Cybersecurity / technological risk
- Data security / protection
- Interoperability / connectivity
- TechFin
- Last mile
- International / regional cooperation

Human Capital



Being “technologically neutral” has lead regulators to distance themselves from the necessity to understand new technological innovation.

Creates a knowledge gap in the consequences in the use of new processes & algorithms

FICO Score => Regulated

Alternative Credit Score => Unregulated

Risk mispricing of credit or loan origination

FinTech Evolution

<https://ssrn.com/abstract=2676553>



TechFin

<https://ssrn.com/abstract=2959925>



DFS in China

<http://ssrn.com/abstract=2660050>



RegTech

<https://ssrn.com/abstract=2847806>



Sandboxes

<https://ssrn.com/abstract=3018534>



DLT liability

<https://ssrn.com/abstract=3018214>



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<https://www.edx.org/course/introduction-to-fintech>

