

Artificial Intelligence in Finance: Developing Risk-based Proportional Approach

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AI and Finance

- Digitisation, storage, power, communications, analytics
- Digitisation
- Data: standardisation
- Incentives / resources
- Theory / experts
- [Artificial Intelligence in Finance: Putting the Human in the Loop by Dirk A. Zetsche, Douglas W. Arner, Ross P. Buckley, Brian Tang :: SSRN](#)

*FinTech:
Finance, Technology and Regulation*

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Looking back, looking forward

- Finance in the 2010s
 - Global Financial Crisis
 - Regulation
 - Technology
- Finance in the 2020s
 - Sustainability
 - Technology
 - Globalization vs fragmentation

Key emerging issues: 2024-2030

Cross-border Payments:

- retail, wholesale
- FPS / CBDCs/ Stablecoins etc

Data

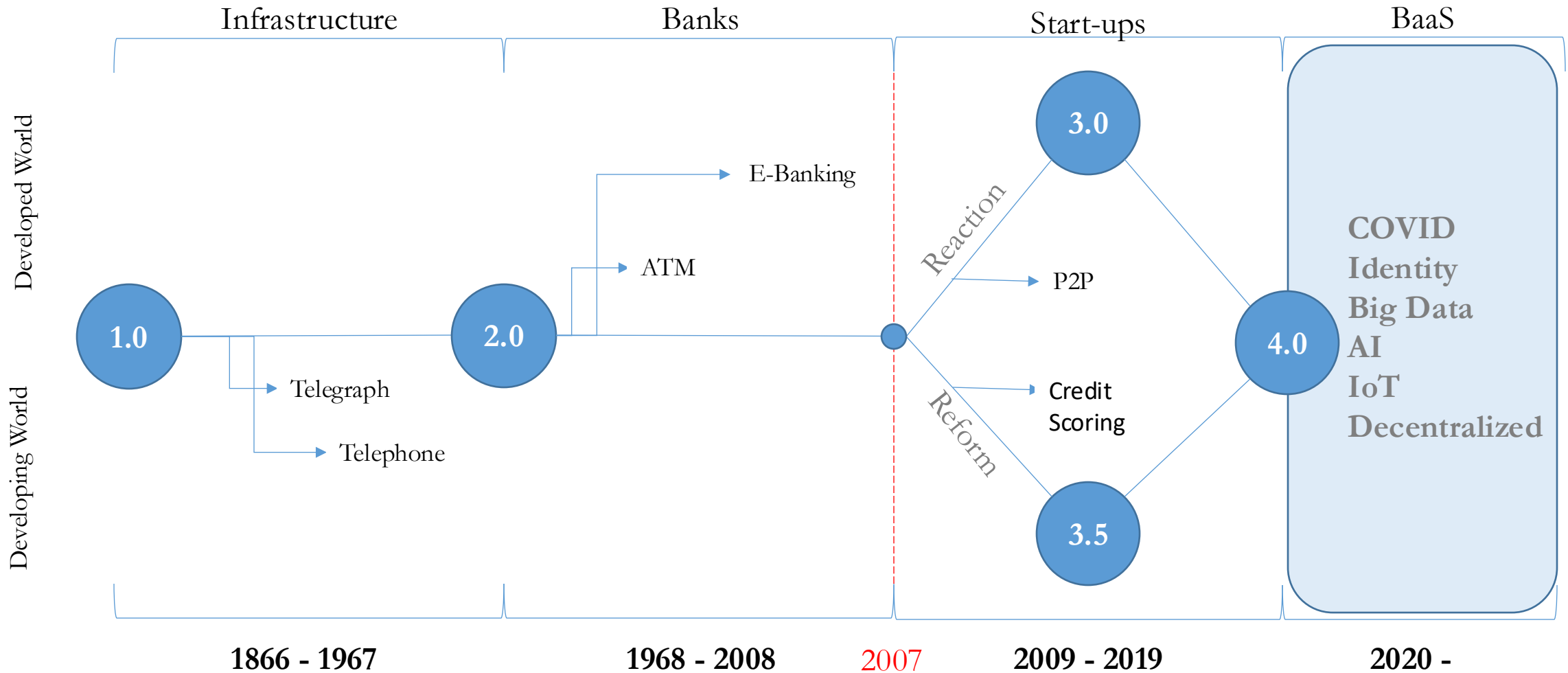
- AI
- Strategies
- Open finance

Digital assets: Future as a Regulated industry

Regtech / supotech: digital transformation

Sustainability: emerging technologies, risks, opportunities

The Evolution of FinTech



Regulatory approaches: Options

Traditional framework: permissive / restrictive, rules / principles, risk-based

Pre and Post-Crisis environment: innovation and Volcker

Doing nothing: permissive / restrictive, intentional / unintentional

Cautious exploration: forbearance / leniency

Structured experimentation: sandboxes

Regulatory design: payments, crowdfunding, digital financial institutions, digital assets, data

FinTech and new technologies: Approaches and lessons

- AI
 - DLT / Blockchain
 - DeFi
 - Data
-
- Lessons
 - Innovation hubs, sandboxes, pilots, test and learn
 - Regulatory design
 - Graduated proportional risk-based approach
 - RegTech / SupTech

AI risks and governance

- Macro
- Micro / sectoral
- Infrastructure
- Malicious actors
- Culture

Contemporary financial regulatory objectives

- Monetary stability
- Financial stability: macro and micro
- Efficiency
- Consumer / investor / depositor protection / conduct
- Market integrity
- Developmental objectives: growth, innovation, competition, capital formation, financial inclusion, sustainable development etc

Finance and Data

- Financial regulation: finance as data
 - Standardisation
 - Storage / use
 - Sharing / regulatory reporting / supervision
-
- Personal financial data vs non personal financial data
 - Client records
 - Credit information
 - Consumer financial protection
 - AML
 - Cybersecurity
 - Open Banking
-
- [Financial Data Governance: The Datafication of Finance, the Rise of Open Banking and the End of the Data Centralization Paradigm by Douglas W. Arner, Giuliano G. Castellano, Eriks Selga :: SSRN](#)

FinTech 4.0

- Network effects
- Platforms
- Datafication of finance
- Data aggregation
- [Governing FinTech 4.0: BigTech, Platform Finance and Sustainable Development by Douglas W. Arner, Ross P. Buckley, Kuzi Charamba, Artem Sergeev, Dirk A. Zetsche :: SSRN](#)

Platforms

- Economies of scope and scale of finance + network effects of technology
- Financial regulation
- Data regulation
- Competition regulation
- National security / competitiveness

TechRisk

- Speed?
- Fraud
- Cybersecurity
- Infrastructure: data / cloud

Finance and Innovation: Strategies

- Infrastructure
- Regulatory approaches
- Wider ecosystem

Infrastructure of finance: Digital Public and Digital Financial Infrastructure

- Mobile
 - Digital identification / Simplified account opening
 - Electronic payments: open access, interoperable
 - Digitisation of government payments / services
 - Financial markets infrastructure: securities settlement, secured transactions, pensions, credit registries etc
-
- SDGs

Wider ecosystem

- Legal foundations: ID
- Data framework
- Education / human capital development
- Research and development support / funding
- Innovation hub / Regulatory sandbox

Open Banking and Open Finance?

- Intersection between financial regulation and personal financial data
- Different forms: mandatory, market-led, regulator-led

Looking forward

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- www.hkufintech.com/book
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