

RegTech and the Reconceptualisation of Financial Regulation

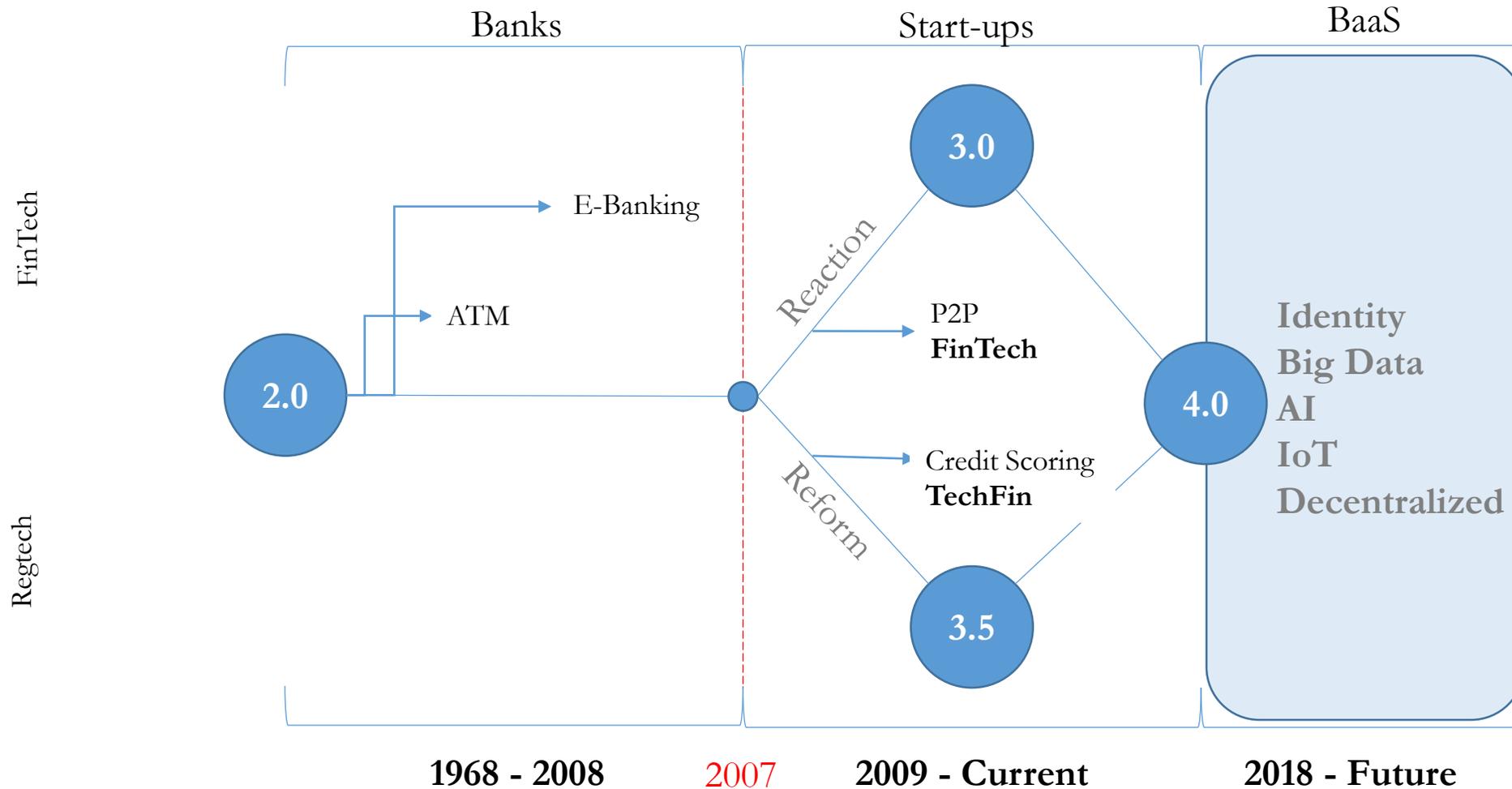
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The Evolution of FinTech:

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



Mobile vs banking penetration

China

Population: 1.35bn
Formally Banked: 63%
Mobile Phone: 89%

India

Population: 1.25bn
Formally Banked: 35%
Mobile Phone: 71%

Malaysia

Population: 29.7m
Formally Banked: 66%
Mobile Phone: 131%

Australia

Population: 23.1m
Formally Banked: 99%
Mobile Phone: 107%



South Korea

Population: 50.2m
Formally Banked: 93%
Mobile Phone: 111%

Japan

Population: 127.3m
Formally Banked: 96%
Mobile Phone: 115%

Vietnam

Population: 89.7m
Formally Banked: 21%
Mobile Phone: 131%

New Zealand

Population: 4.47m
Formally Banked: 99%
Mobile Phone: 106%

Recent FinTech developments primarily prompted by pursuit of financial inclusion and economic development:

“There are two big opportunities in future financial industry. One is online banking, all financial institutions go online; the other one is internet finance, which is purely led by outsiders”

**Jack Ma
CEO, Alibaba**

From FinTech to TechFin:

SSRN: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2959925

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.



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

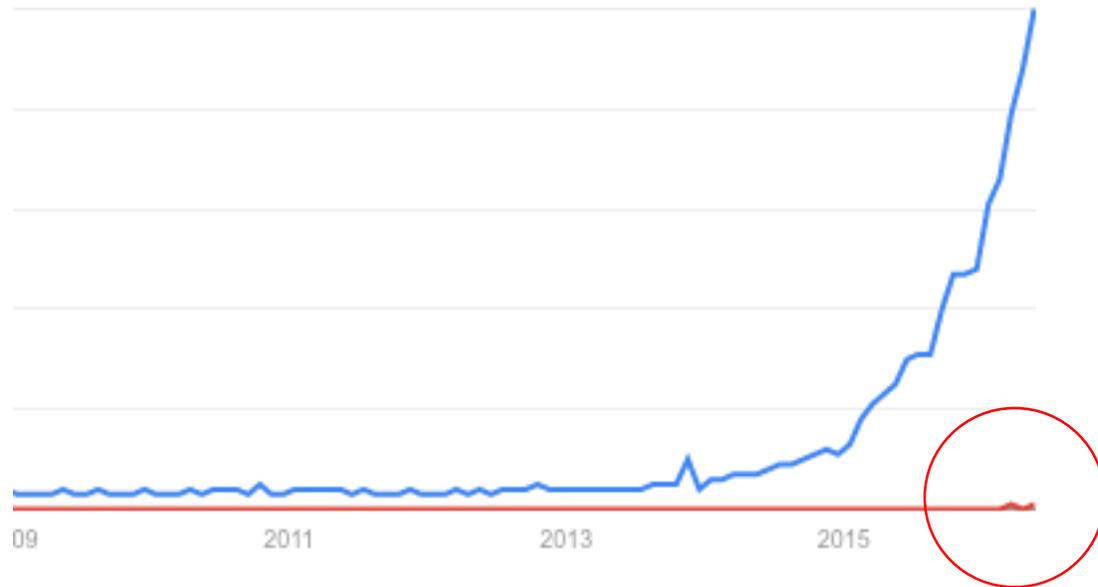
Regulation of DFS in China: <http://ssrn.com/abstract=2660050>

From Regulatory Sandboxes to Smart Regulation:
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3018534

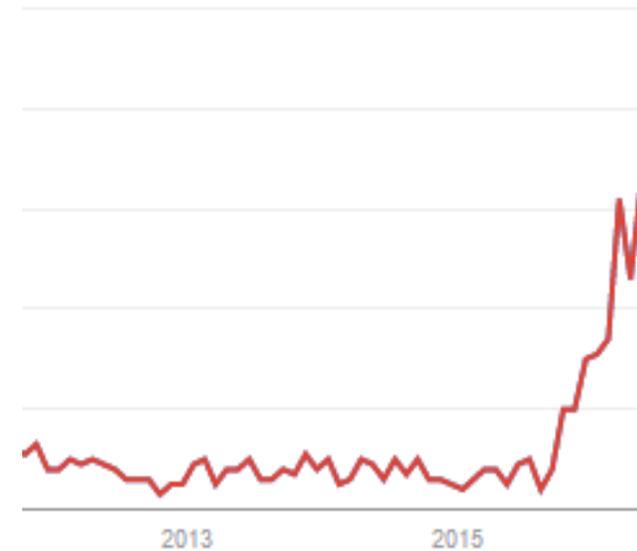
Trend

Comparatively to Fintech, RegTech has been growing very rapidly within the last 12 months raising the necessity to define the topic and its scope of applicability

FinTech vs RegTech



RegTech



Definitions

RegTech (contraction of ‘regulatory’ and ‘technology’): the use of technology to address regulatory and compliance requirements more effectively and efficiently

Examples:

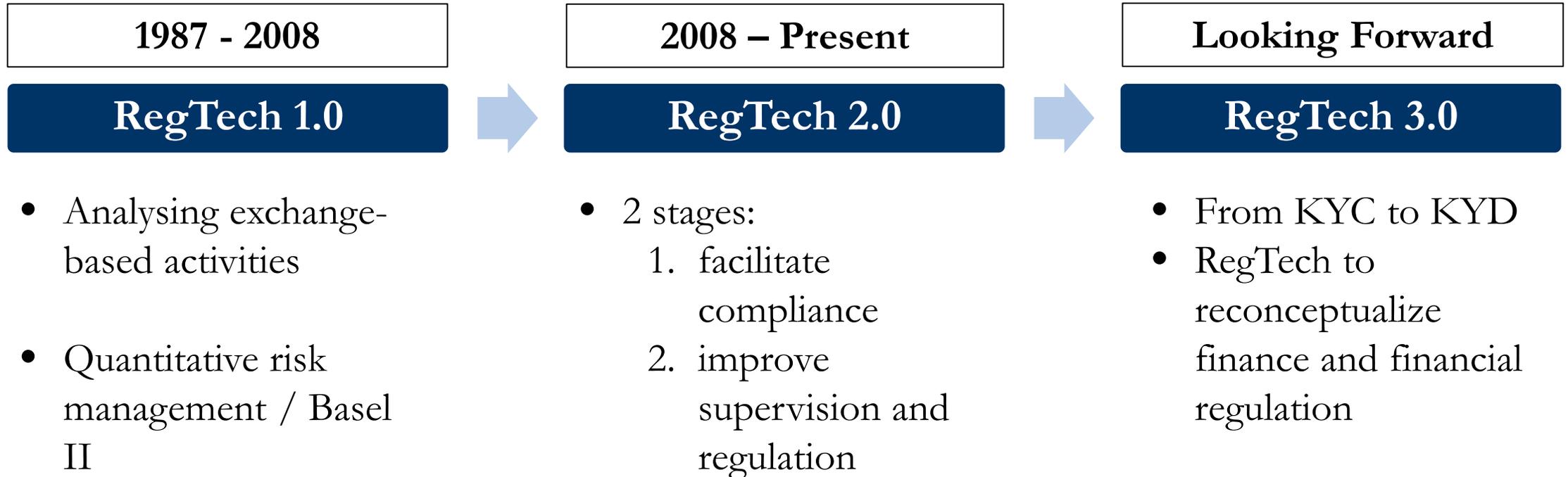
- Electronic KYC
- Fraud monitoring
- Automatic Clearing Registry

RegTech and the Reconceptualisation of Financial Regulation

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

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

Evolution of RegTech



The financial system is on the edge of moving from being based on Know-Your-Customer (KYC) principles to a Know-Your-Data (KYD) approach.

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

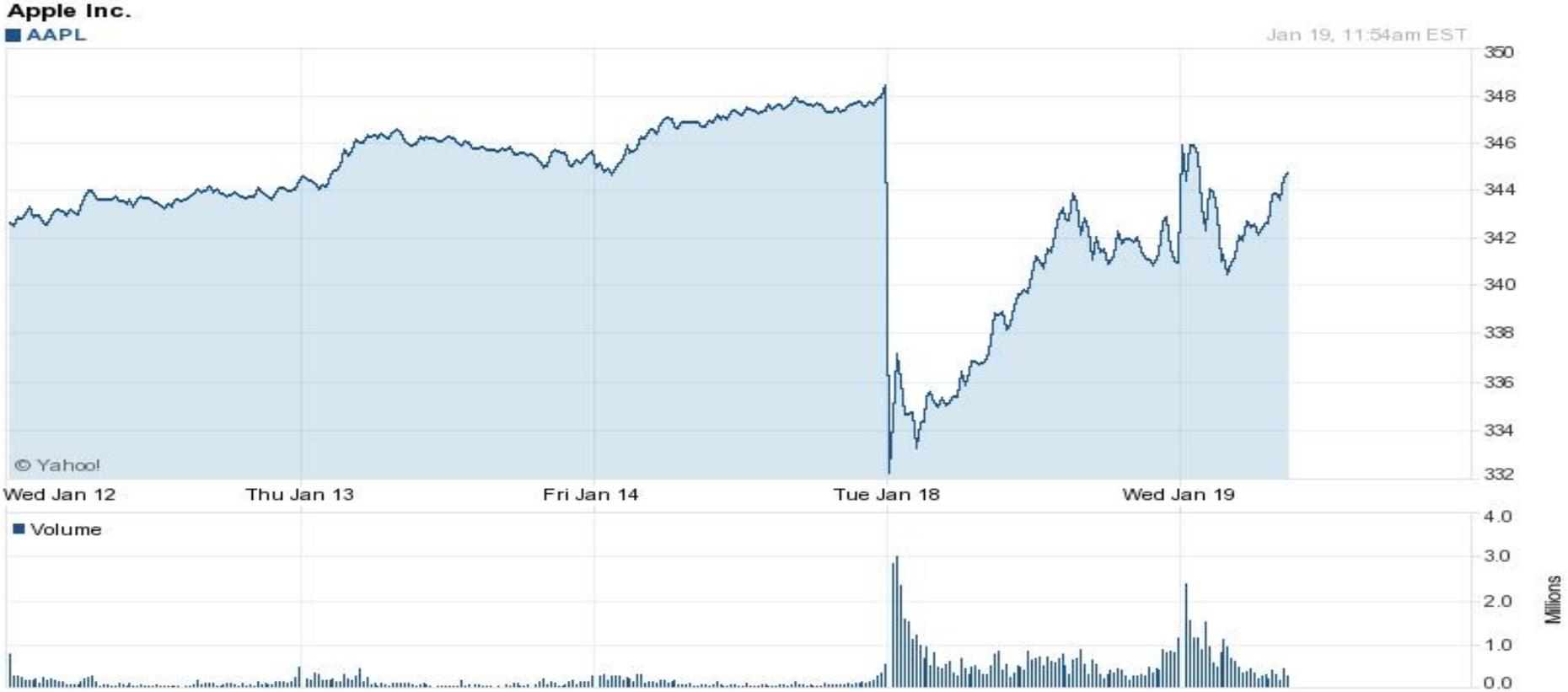
Start-ups

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

Application : For Banks – MFID II



Application: For Regulators – Stock Prices



Regulators in detail

Big Data

- Need to develop IT capabilities and systems to monitor and analyze new regulatory datasets
- Opportunity for collaboration between regulators and academia

Cybersecurity

- Digital transformation of finance industry has made it more vulnerable to attack, theft and fraud
- Data abundance may not create the right incentive for firms to enhance their cybersecurity
- Clear example of how FinTech demands RegTech

Macroprudential policy

- Seeks to use massive amounts of data to identify patterns and reduce severity of financial cycle
- Greatest potential for RegTech

Moving towards a paradigm shift

Over the past 50 years the application of technology within regulation has changed dramatically. The transformative potential of technology will only be fully captured by a **new and different regulatory framework**.

We argue that RegTech:

- Cannot be seen as a mere subset of FinTech – as broader than finance
- Is more than an efficiency tool
- Will play a critical role in the impending paradigm shift in regulation
- Has potential for application in a wide range of contexts, such as environmental compliance, in oyster farming for example.

Dream

“I have a dream. It is futuristic, but realistic. It involves a Star Trek chair and a bank of monitors. It would involve tracking the global flow of funds in close to real time (from a Star Trek chair using a bank of monitors), in much the same way as happens with global weather systems and global internet traffic. Its centerpiece would be a global map of financial flows, charting spill-overs and correlations.”

Andy Haldane. Chief Economist Bank of England

FinTech requires RegTech

- Digitisation and datafication of compliance, risk management and regulation
- Building a new framework requires a sequenced approach:
 1. Focus on building 21st century **infrastructure** to support market functions
 2. Develop **appropriate regulatory responses** to FinTech innovation
 - Need to apply graduated regulatory requirements to firms based on their level of risk
 3. Consider **regulatory sandboxes** as an opportunity to test new approaches

Challenges: **Distributed Ledger Technology and Distributed Liability:**

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

Case Study: 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

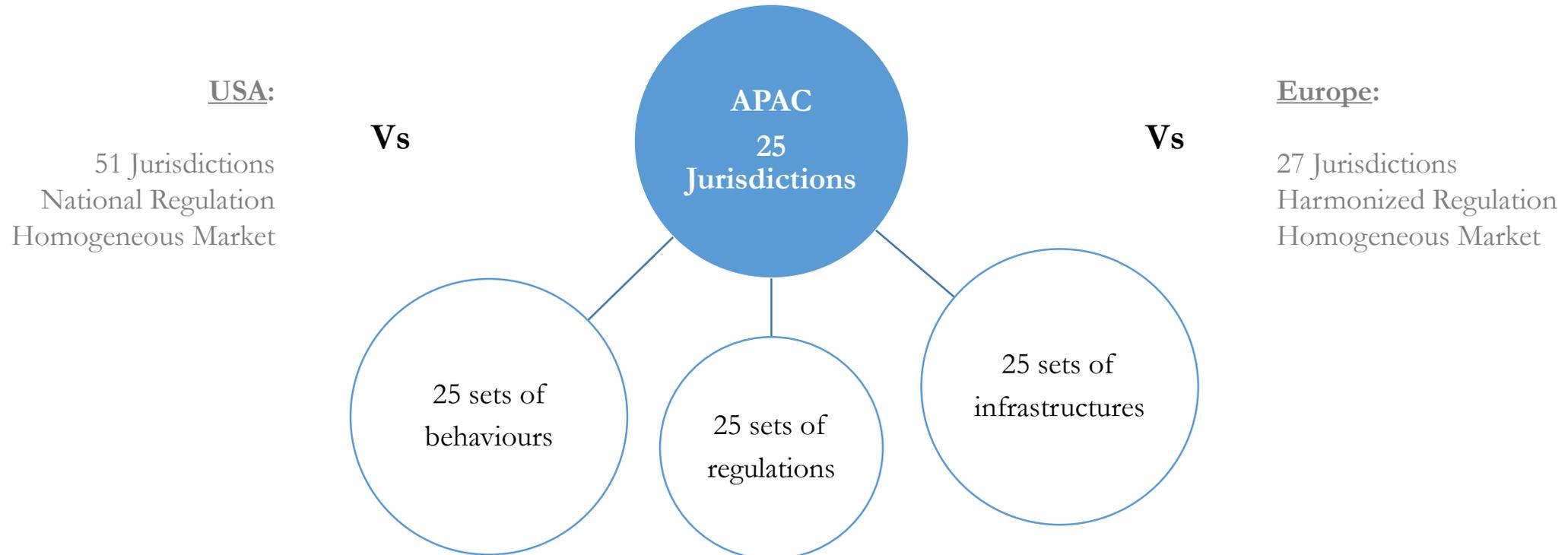
1,000% Efficiency Gain for end-to-end account creation :

	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

Asian fragmentation

Unlike the US and EU markets that are more homogeneous in their composition, the Asian market remains fragmented, limiting the rapid scalability of certain FinTech businesses (*eg cross-border payments*).



Looking forward

- Information and monitoring – FSB (2017)
- Systems design
- Digitisation
- Datification

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