

Non-Bank Finance and Financial Intermediation

“Fast, secure, and convenient payments for the people: will technology help us get there?”



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World Bank
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Agenda

1

General context

2

Innovations in payments

3

Role of non-banks

4

Policy considerations



Technology is transforming every industry



Always available

Where you want it

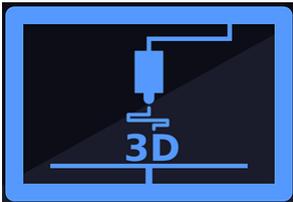


Buy only what you want

Contextualization



Asset-light business



On-demand delivery

Tailored product

Banking has lagged

NEW HOURS EFFECTIVE SEPTEMBER 1, 2017

MAIN BANK
LOBBY HOURS
 Mon-Fri: 8:30am - 5:30pm
 Sat: Closed
DRIVE UP HOURS
 Mon-Fri: 7:30am - 6:00pm
 Sat: 9:00am - 1:00pm

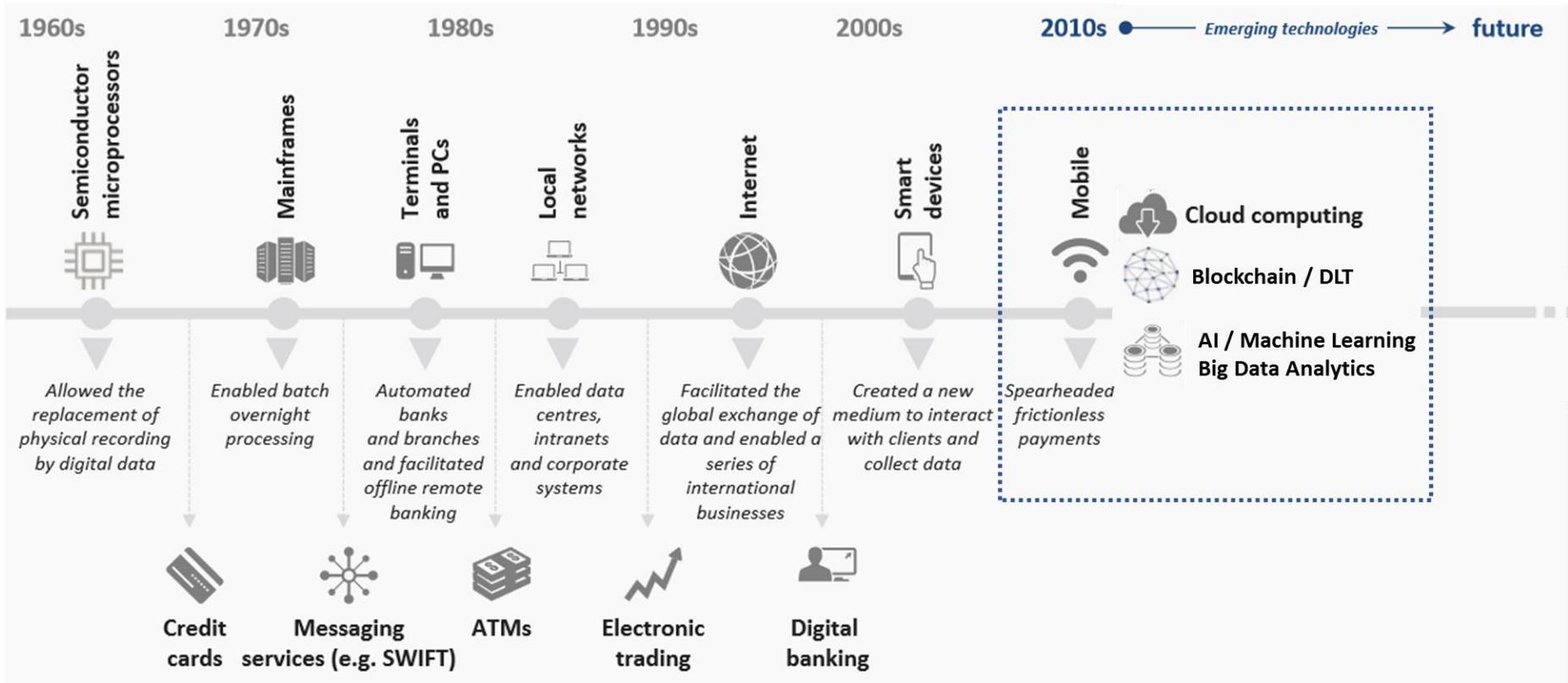
HAMBURG
LOBBY HOURS
 Mon-Fri: 8:30am - 5:30pm
 Sat: Closed
DRIVE UP HOURS
 Mon-Fri: 8:00am - 6:00pm
 Sat: 9:00am - 1:00pm

NORTH CROSSETT
LOBBY HOURS
 Mon-Fri: 8:30am - 5:30pm
 Sat: Closed
DRIVE UP HOURS
 Mon-Fri: 8:00am - 6:00pm
 Sat: Closed

FOUNTAIN HILL
DRIVE UP HOURS
 Mon: 10:00am - 1:00pm
 Tue: Closed
 Wed: 10:00am - 1:00pm
 Thu: 10:00am - 1:00pm
 Fri: 9:00am - 4:00pm
 Sat: Closed

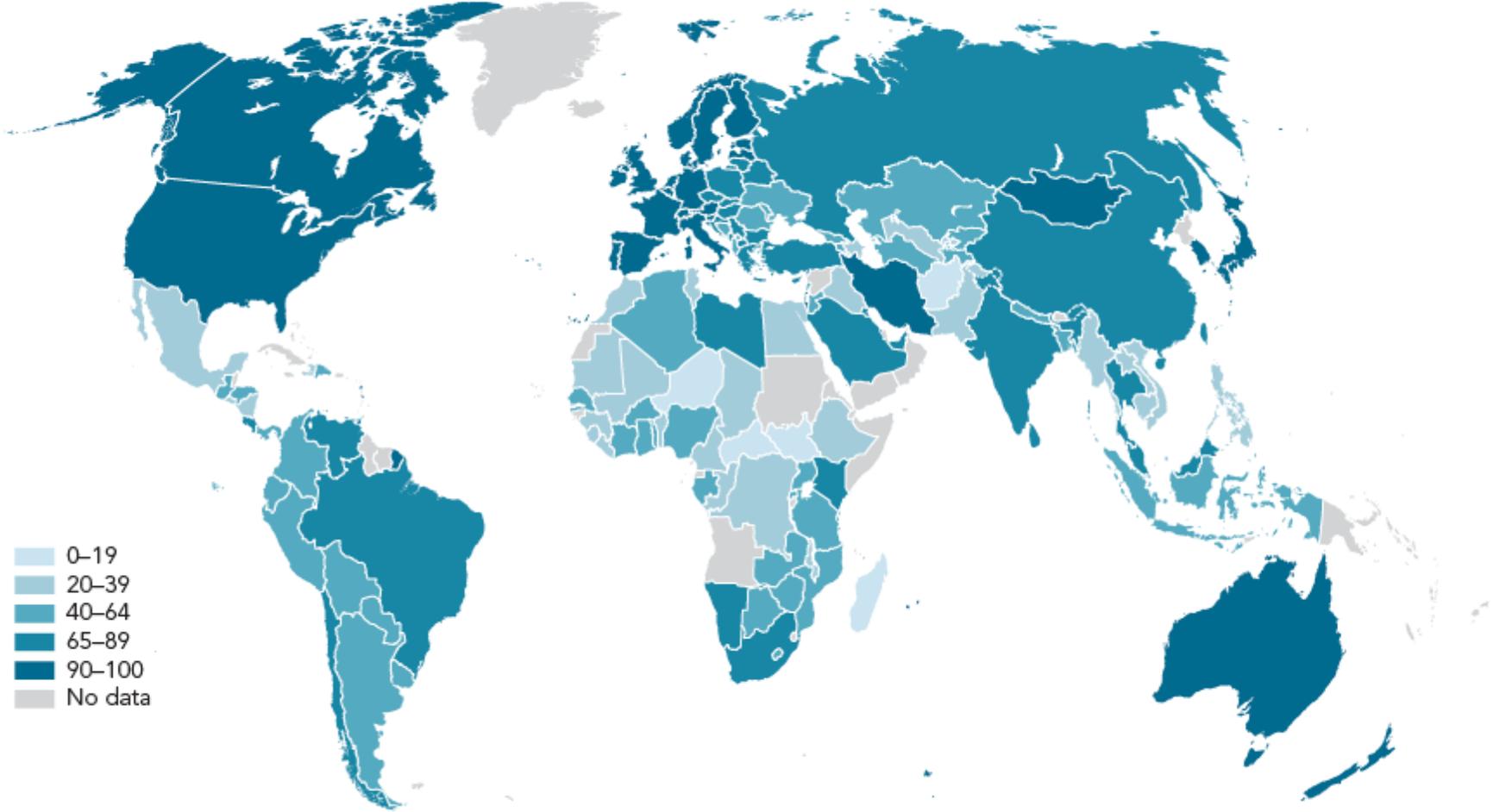


The pace of technology adoption is accelerating



Financial access gap: globally, 31 percent of adults do not have an account, down from 49 percent in 2011

Today, 69 percent of adults around the world have an account
Adults with an account (%), 2017



Source: Global Findex database.

FinTech is helping address broader inclusion, which remains a challenge even for those with access

- Inclusion Challenges**
- 1. High cost to serve small borrowers and savers, relative to revenue potential
 - 2. Risk due to lack of credit history and collateral
 - 3. Lack of skills, financial literacy, and bankability



Improved access, and automation of services, to reduce cost-to-serve



Leveraging data and connectivity of people and assets to assess and manage risks



Tailored products and non-financial services appropriate to each segment



Technologies and payments

Fintech: Technology-enabled innovation in financial services that could result in new business models, applications, processes and products with an associated material effect on the provision of financial services



Fast Payments



APIs



Tokenization



ID



Big data



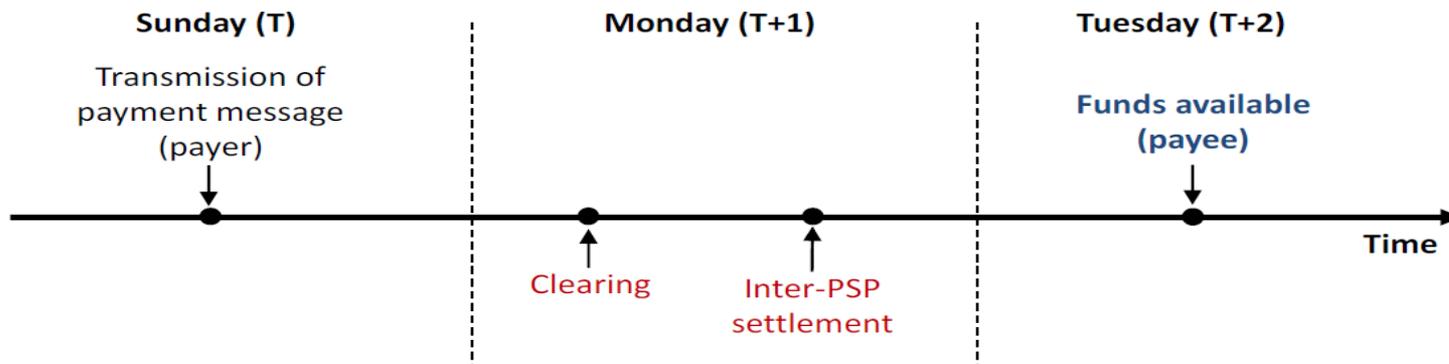
Non-banks

Clearing and settlement of fast payments compared with traditional payments

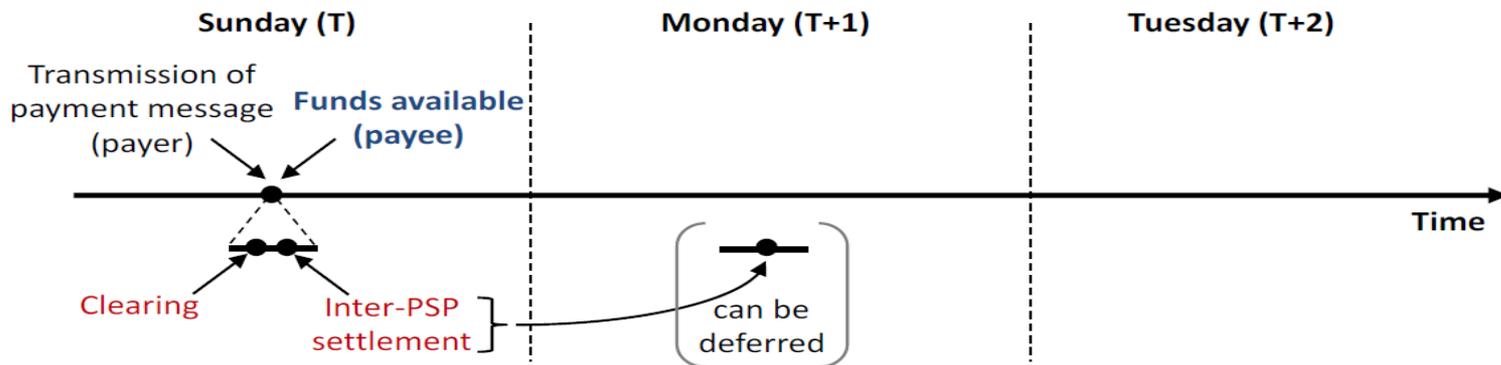
Stylised models of payment processing for traditional and fast payments

Figure 1

A traditional payment initiated during the weekend



A fast payment processed during the weekend

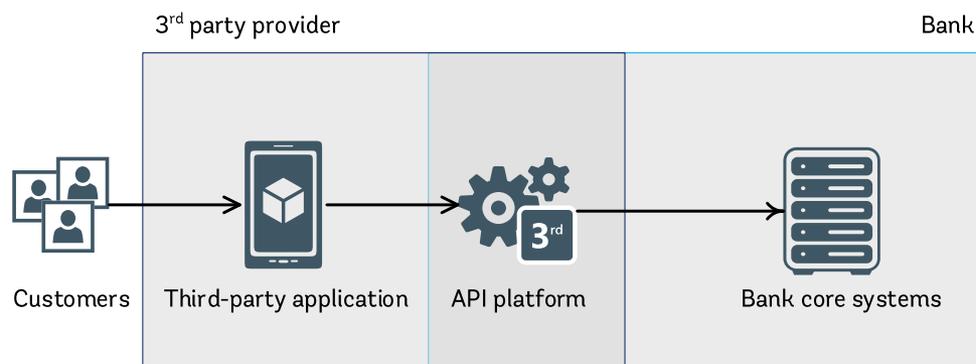


Source: *Fast payments – enhancing the speed and availability of retail payments*, CPMI, BIS, November, 2016

Application Programming Interfaces (APIs)

What are APIs?

- APIs provide machine-readable access to consumer data stored by financial institutions. They may also allow third parties to programmatically initiate transactions (e.g. payments)
- Third parties can add value to the customer by using bank account data to provide new services. Example: analyze transaction history to recommend best savings or loan products
- APIs evolved from the practice of 'screenscraping', allowing third parties to access internet banking services on behalf on their customers. Screenscraping has been considered inefficient and unsafe.



Example data/services provided through bank APIs:

“Read access”

- Access to the list of accounts held with a financial institution
- Access to account balances
- Access to transaction histories, including transaction-level data (e.g. merchant name/type)

“Write access”

- Initiation of different types of payments

APIs and Open Banking around the world



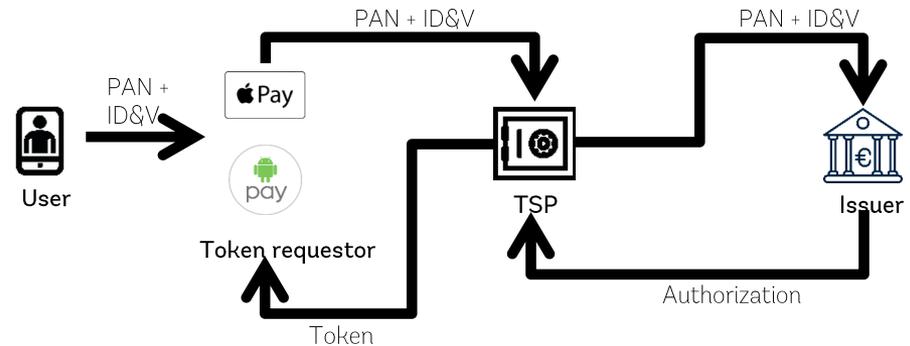
	European Union (PSD2)	United Kingdom (Open Banking UK)	India (Universal Payments Interface)	Other countries
Legal basis	Second Payment Services Directive (PSD2)	Enforcement action by the competition authority (CMA)	Regulatory action	Australia is planning to issue binding Open Banking regulations later in 2018, following the completion of public consultations. Japan, Singapore and Hong Kong are considering similar measures. Elsewhere, banks (e.g. BBVA) provide API access to selected partners.
Institutions affected	All banks	Nine largest banks	All banks	
Scope of API access	Read and write: "account information" and payment initiation	Read and write: accounts, balances, account statements, beneficiaries, standing orders, direct debits, scheduled payments, payment initiation	Read and write: access to balances, payment initiation, payment request initiation. Account address resolution service (routing the API call to an appropriate institution based on an e-mail-like account address)	
Institutional setup	The directive does not prescribe any institutional setup. Banks are free to set up their own consortia if they wish so (e.g. "The Berlin Group")	"Open Banking Implementation Entity": a utility (Open Banking UK Ltd.) created by the CMA to steward the standard and oversee its implementation. Funded by the participating banks	API service provided by a payment system operator (National Payments Corporation of India)	
Technical standards	No precise technical standards prescribed, but "strong consumer authentication" (2FA+) required	Prescribed API based on RESTful principles; where practicable, ISO 20022 field names and definitions are used	A custom messaging standard based on XML/Web Services.	

Card tokenization

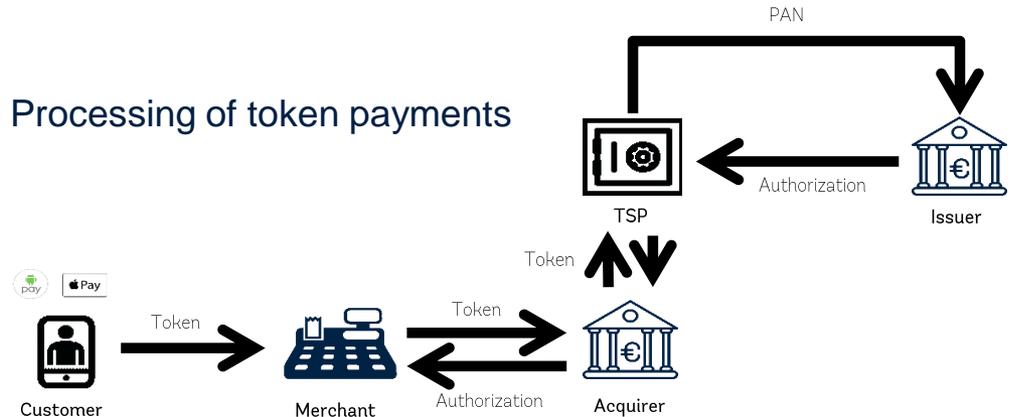
What is tokenization

- “The process of substituting a sensitive data element with a non-sensitive equivalent”
- In card payments, it refers to the replacement of the “Primary Account Number” (PAN) with another number, which uses a similar format
- Issuers do not store token/PAN pairs. Only the vault maintained by the “Token Service Provider” can convert between the two
- Tokens can be “domain-restricted”: limited to use with a single merchant or a single device
- Current use cases: ApplePay/Google Pay, card-on-file. In the future: IoT, web payments and more

Token issuance process

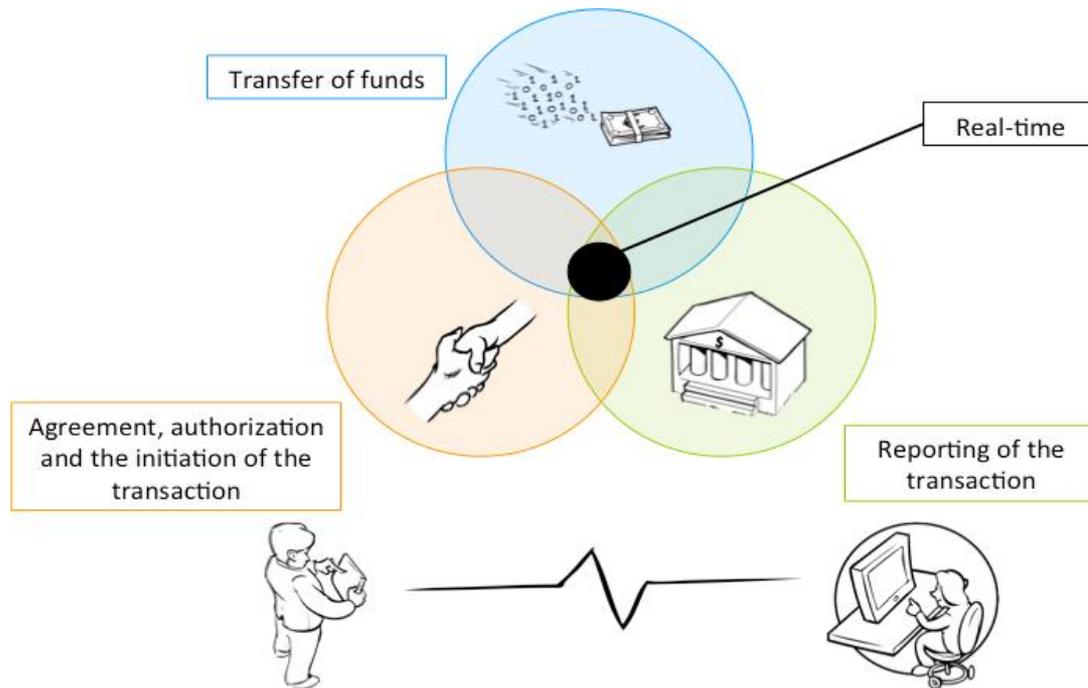


Processing of token payments



Identity at the heart of payments

- Trust and security are extremely important for a well-functioning payment infrastructure
- In physical contexts, the agreement, the payment and the delivery happen all at the same time
- In a remote context, these three processes can take place in three different moments in time and without face-to-face interaction between payer and payee



Identity at the heart of payments – illustrative examples



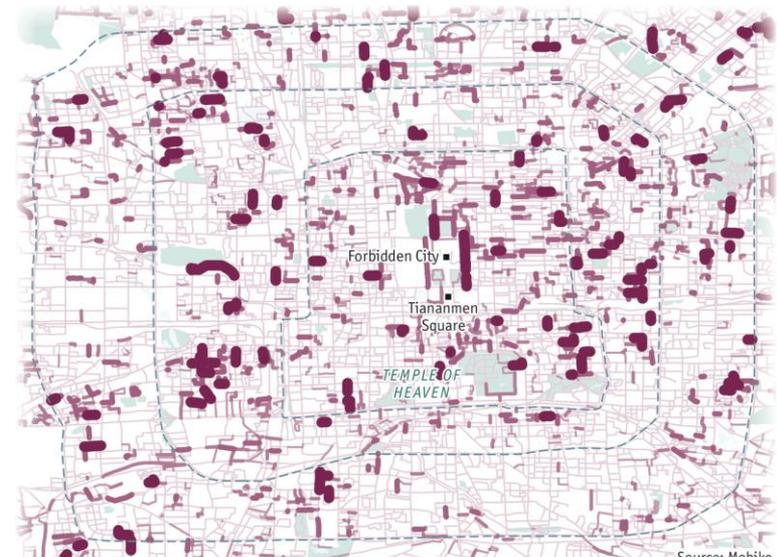
Aadhaar: India

Bank ID: Sweden

Fido: Worldspread

Big Data

Retail payments, because of their important positions in the life of all citizens, form a rich source of information. With the reduction of data storage costs, increased processing speed and the development of smart algorithms, more and more data is aggregated and used for a variety of purposes.



Source: Mobike
Beijing, dockless bike-sharing trips
Mobike only, September 5th 2017
Economist.com

Classification of non-banks

Front-End Service Provider

- Provides services to Payers or Payees in association with / On Behalf of Payment Service Provider (PSP)
- Examples: Agents, Payment Gateways

Back-End Service Provider

- Provides services to the PSP
- Examples: Operation of IT infrastructure, Customer service Center

Payment System Operator

- Operates a payment system for participating payment service provider
- Examples: Operator of Card Switch, ACH

Independent provision of payment Service

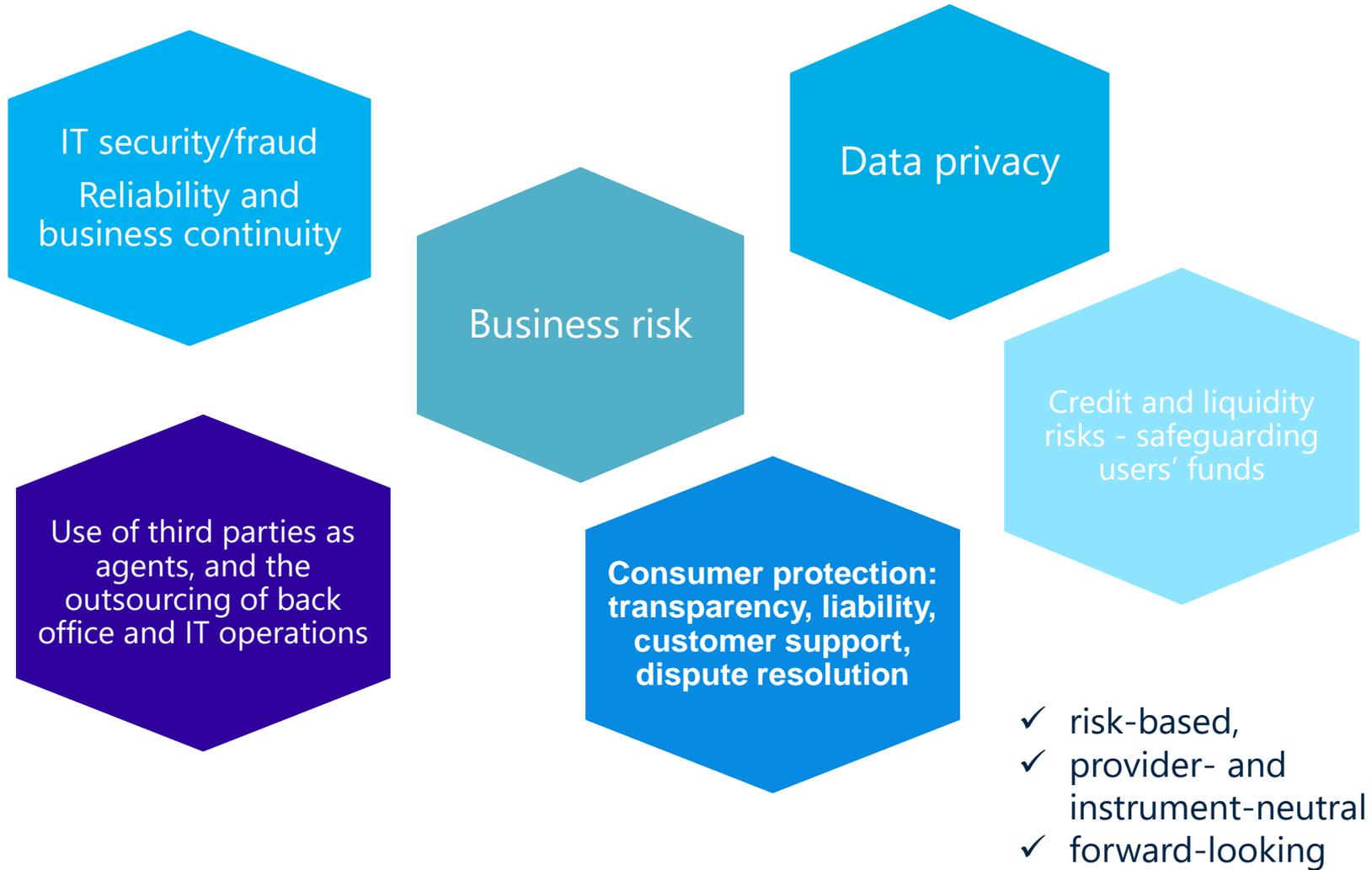
- Offers services to payers and payees independently
- Examples: Mobile Money, Remittance Service Provider

Potential approach to regulation of non-banks

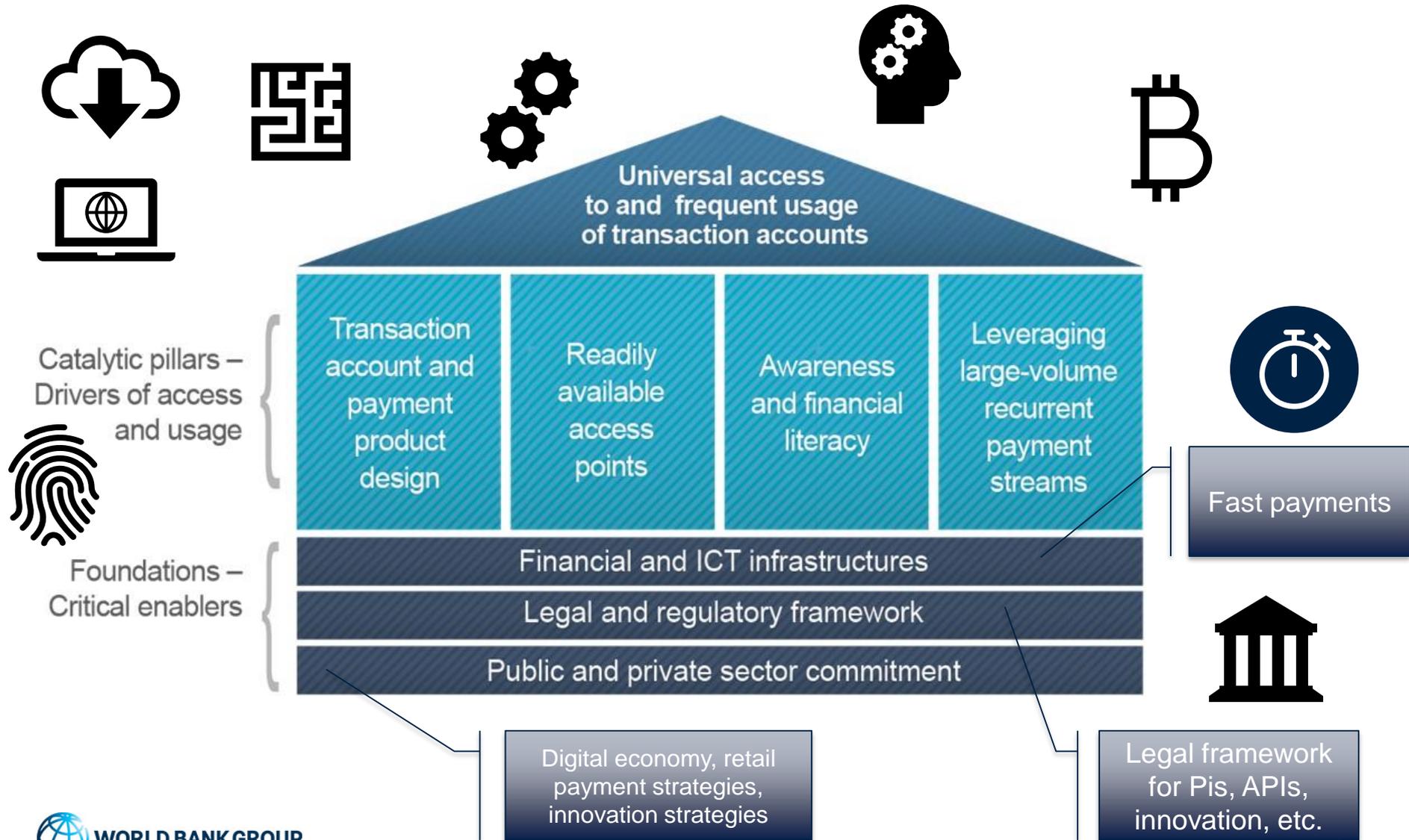
- **Establish a regulatory framework**
 - **Approach:** functional; activity-based
 - **Objectives** – Safety, Efficiency, Affordability
 - **Market-entry requirements:** variations by type of non-bank
 - Registration <<Front-End Services>>
 - Licensing <<Payment System Operator and Independent service provider>>
 - Making Licensed Entity responsible for non-banks outsourced, establish reporting and minimum requirements for monitoring. <<Back-end Services>>
 - Powers to audit <<All>>
 - Data collection and Analysis <<All, with differing levels>>
- **Establish Oversight Framework**
 - Which entities to oversee ?
 - **Tools:**
 - Establish standards as part of licensing or independently
 - Data collection and analysis
 - Ongoing discussions through forums like National Payments Council

Regulations on the provision of payment services, including mobile payments

Key areas



Policy considerations – PAFI framework and innovation



Policy considerations

Overall safety and efficiency

- Oversight regimes will have to be expanded to include new players and new technologies will have to be monitored to ensure continued safety, reliability and efficiency of the NPS.
- Security of payments and consumer protection have to consider new environment and new ways of managing and using payment data.

Affordability and ease-of-access to payment services

- Potential to increase access to transaction accounts
- Authorities have to be vigilant to avoid the dominance of single entities and lock-in of customers

Availability of an efficient processing infrastructure

- Need for interoperable solutions on two levels: interoperability between the same type of service providers (e.g. different MNOs) and between the “old” and the “new” world (e.g. banks and new service providers)

Availability of a socially optimal mix of payment instruments

- Need to monitor overall benefit of the new payment mechanisms that are being introduced.

<http://www.worldbank.org/en/topic/paymentsystemsremittances>

<https://remittanceprices.worldbank.org/en>

Thank you!

Questions?

