Non-Bank Finance and Financial Intermediation

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

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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

MAINT 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 CROSSET
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

Potential Fintech-enabled Solutions
- 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

A traditional payment initiated during the weekend

**Sunday (T)**
Transmission of payment message (payer)

**Monday (T+1)**
Clearing

**Tuesday (T+2)**
Funds available (payee)

A fast payment processed during the weekend

**Sunday (T)**
Transmission of payment message (payer)

**Monday (T+1)**
Funds available (payee)
Clearing
Inter-PSP settlement

**Tuesday (T+2)**
Inter-PSP settlement (can be deferred)

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

<table>
<thead>
<tr>
<th></th>
<th>European Union (PSD2)</th>
<th>United Kingdom (Open Banking UK)</th>
<th>India (Universal Payments Interface)</th>
<th>Other countries</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Legal basis</strong></td>
<td>Second Payment Services Directive (PSD2)</td>
<td>Enforcement action by the competition authority (CMA)</td>
<td>Regulatory action</td>
<td>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.</td>
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<td><strong>Institutions affected</strong></td>
<td>All banks</td>
<td>Nine largest banks</td>
<td>All banks</td>
<td></td>
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<td><strong>Scope of API access</strong></td>
<td>Read and write: “account information” and payment initiation</td>
<td>Read and write: accounts, balances, account statements, beneficiaries, standing orders, direct debits, scheduled payments, payment initiation</td>
<td>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)</td>
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<td><strong>Institutional setup</strong></td>
<td>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”)</td>
<td>“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</td>
<td>API service provided by a payment system operator (National Payments Corporation of India)</td>
<td></td>
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<tr>
<td><strong>Technical standards</strong></td>
<td>No precise technical standards prescribed, but “strong consumer authentication” (2FA+) required</td>
<td>Prescribed API based on RESTful principles; where practicable, ISO 20022 field names and definitions are used</td>
<td>A custom messaging standard based on XML/Web Services.</td>
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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
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
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.
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

- IT security/fraud
- Reliability and business continuity
- Use of third parties as agents, and the outsourcing of back office and IT operations
- Data privacy
- Business risk
- Consumer protection: transparency, liability, customer support, dispute resolution

- ✓ risk-based,
- ✓ provider- and instrument-neutral
- ✓ forward-looking

Credit and liquidity risks - safeguarding users’ funds
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.

https://remittanceprices.worldbank.org/en

Thank you!

Questions?