



# Financial technologies and new information needs

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## Overview

- 1. Introduction**
- 2. Fintech data issues for central banks**
- 3. Data gaps**
- 4. Users' needs in central banks**
- 5. Initiatives to close data gaps**
- 6. IFC contribution to global cooperation**

# 1. Introduction – *What is fintech?*

- Broadly defined as **technology innovation in financial services**
  - FSB: “*Technology-enabled innovation in financial services that could result in new business models, applications, processes or products with an associated material effect on the provision of financial services*”
- **Not so new...**
  - But high **scale / speed** of innovations, in **parallel**
  - **In various sectors** (eg outside traditional banking)

# 1. Introduction – *What is the impact of fintech?*

- Affect the **provision of 5 main types of financial services**
  - Payments, clearing and settlement
  - Deposits, lending and capital raising
  - Insurance
  - Investment management & investor services
  - Market support
- Impact on **market functioning**
  - New firms eg big techs, neobanks
  - New services provided by traditional players (“in-house fintech”)
  - New products eg crypto assets

# 1. Introduction – *Policy importance of fintech...*

- Increased **policy attention** among financial stability groups
  - **FSB (2019):** *FinTech and market structure in financial services: Market developments and potential financial stability implications*
  - **BCBS (2018):** *Sound Practices - Implications of fintech developments for banks and bank supervisors*
  - **CPMI / Markets Committee (2018):** *Central bank digital currencies*
  - **CGFS / FSB (2017):** *FinTech credit: Market structure, business models and financial stability implications*
  - **FSI (2018):** *Innovative technology in financial supervision (suptech) - the experience of early users*

## 1. Introduction – ... *reflecting several factors*

- Balancing **opportunities / risks** to financial stability - Examples
  - Fintech can support financial inclusion: but money laundering & consumer protection issues
  - Fintech can favour sound market competition: but risk posed by regulatory arbitrage & non-regulated entities
  - Digitalisation benefits (eg speed, efficiency) vs risks (eg system control, IT security, identity protection)
- **Need for regulatory evolution?**
  - New types of financial products
  - New actors outside regulation perimeter
  - Cross-sector and cross-border aspects

## 2. Fintech data issues – General aspects

- **“Big Data” sets**
  - Granularity, size, quality, veracity, continuity...
- **Statistical treatments**
  - Classification, harmonisation, identifiers, control relationships
- **Statistical frameworks**
  - Local vs global collection, entity- vs function-based datasets, residency- vs consolidated-reporting...
- **Information management**
  - IT systems, security protection, use of big data analytics (automation benefits vs “black box” issues)
- **Governance**
  - Data sharing, ownership, access, fundamental principles for official statistics...

## 2. Fintech data issues – Central bank statisticians' interest...

- **Information needs** associated with fintech
  - Assess (rapid) innovation trends
  - Identify data gaps and ways to close them
- Rethinking the **general statistical framework**
  - Classify new types of activities / actors, or correct current classification (eg evidence of fintechs classified in IT subsectors)
  - Need for concrete, applicable and harmonised definitions
  - Collect new datasets
- **Interaction between policy and statistics**
  - Without data difficult to regulate
  - Regulation defines what is measured



## 2. Fintech data issues – ... *depending on central banks' existing statistical infrastructures...*

- **Central banks produce various types of data**

- “Traditional” monetary aggregates
- Macro statistics (FAs, BoP, ...)
- Micro datasets (eg institution-, instrument- & transaction-level)
- Payments
- Lists of entities (eg registers)
- Financial access information
- etc.

## 2. Fintech data issues – ... *especially when dealing with financial market-related information*

- Example: **multiform information on credit provision** (a key component of fintech services)
  - Balance sheet data (positions & flows)
  - Prices (interest rates)
  - Amounts (loans granted / applications)
  - Risks (non-performing loans, defaults, credit rating)
- **Key challenges**
  - Country-specific issues but need for data harmonisation and internationally-agreed definitions
  - Need for clear, concrete definitions but rapidly evolving fintech firms & services

## 2. Fintech data issues – ... *collected by various compilers*

- **Information on fintech can be collected by various authorities**

- NSOs
- Central banks
- Regulators
- Private sector data vendors
- Market associations
- Foreign authorities
- International bodies
- etc.

### 3. Fintech data gaps: impact on central bank statistics...

- Fintech-related **data gaps can affect various statistical areas:**
  - Monetary aggregates
  - Monetary and financial institutions (eg credit, loans, securities)
  - Financial & non-financial corporations balance sheet statistics
  - Lists of financial & non-financial firms
  - Banking supervision (eg consolidated data)
  - Balance of payments, trade & external debt statistics
  - Financial accounts statistics
  - Payments
  - Household & non-financial corporations financial access surveys
  - etc.

### 3. Fintech data gaps: ... reflecting various developments

- Emergence of **new firms not or only partially covered** by the regulatory perimeter
- Emergence of new entities covered by the regulatory perimeter but that **cannot be distinguished**
- Emergence of **new products** (eg crypto-assets) / **types of services** (eg crowdfunding)
- Traditional financial service **providers using / providing fintech** services

## 4. Users' needs: various types of demands...

- Data needs **vary across central banks' areas**
  - Financial stability
  - Monetary policy
  - Payment systems
  - Banking supervision
  - Research
- Focus on a **variety of fintech-related data issues**
  - RegTech & SupTech for financial institutions and supervisors
  - Big Tech firms
  - Financial inclusion aspects
  - Etc.

## 4. Users' needs: ... but 5 areas of common interest

- **(i) Lists of fintech firms**
  - Neobanks
  - Insurance companies
  - Asset managers
  - Providers of payments, clearing of settlement services
  - Credit platforms (peer-to-peer lenders)
- **(ii) Fintech credit**
  - Stocks
  - Flows
  - Interest rates
  - Model
  - Counterparties features (eg location, SMEs)

## 4. Users' needs: ... but common areas of interest (cont'd)

- **(iii) Crypto-assets**
  - Prices and trading, market capitalisation, holdings
  - Exchanges, Block chain-based indicators
  - Exposures to crypto-assets, by sectors
- **(iv) Supply-side information on fintech services**
  - Banks' in-house use of fintech (eg Big Data analytics)
  - Banks' external use of fintech (eg outsourced BD analytics)
  - Retail fintech payments (eg digital wallets)
  - Wholesale payments (eg Distributed Ledger Technology DLT)
- **(v) Demand-side: use of fintech services (eg access surveys)**



## 5. Five main initiatives to close data gaps: (i) statistical frameworks

- (i) Actions to **enhance existing statistical frameworks**
  - Updating **lists** of fintech firms
  - **Reclassifying** firms across sectors
  - Adjusting **reporting requirements** to cover fintech firms (eg neobanks)
  - Amending financial access surveys
  - Adapting **statistical manuals** for instance to:
    - ▶ *Correctly identify fintech services providers*
    - ▶ *Separately classify these entities*
    - ▶ *Measure IT intensity in financial services provision to facilitate distinction with traditional service providers*

## 5. Five main initiatives to close data gaps: (ii) new techniques & sources

- **(ii) Use new techniques / alternative data sources**
  - Web scraping techniques & Application Programming Interfaces (APIs)
  - Data from commercial vendors
  - Business registers
  - Adjusted reporting requirements
  - Fintech industry association
  - Etc.

## 5. Five main initiatives to close data gaps: (iii) data collections

- **(iii) Launch new data collections focussed on fintech**
  - Loan (transaction)-level data from fintech credit institutions (eg fintech credit platforms)
  - Crypto-assets statistics
  - Financial statements from fintech firms
  - Government use of fintech services
  - International fintech data hub?

## 5. Five main initiatives to close data gaps: (iv) use of fintech

- (iv) Potential **role of fintech to close data gaps to**
  - Better measure **cross-border payments** (eg trade finance)
  - **Ease data collections** (eg use of supotech solutions)
  - Consider **alternative reporting entities**; for instance if it is easier to collect data from fintechs (eg credit platforms) than from traditional financial intermediaries

## 5. Five main initiatives to close data gaps: (v) enhanced cooperation

- **Various cooperation levels** can be considered to close fintech data gaps
  - **Central bank-level** (eg internal fintech hub)
  - **With other domestic authorities** (eg NSOs, supervisors)
  - **With industry associations**
  - **With other central banks**
  - **With international financial institutions**

## 6. Importance of global cooperation

- **Cooperative actions** can be envisaged at the global level, focussing on concrete deliverables
  - **Clarify statistical definitions** of fintech (firms and services)
  - Adjust **compilation guidance**
  - **Revise statistical standards** like SNA, BoP (eg to better measure intangible capital, role of data as an asset)
  - Set up a **global registry** of fintech firms
  - Foster **common identifiers** (eg LEI)
  - **Share data** across domestic authorities / jurisdictions

## 6. Role of the Irving Fisher Committee on Central Bank Statistics (IFC) in supporting global cooperative efforts

- Set up (2018) of a **Working** Group to investigate issues surrounding fintech data and work on statistical definitions (Secretary: Jose Maria Serena Garralda, BIS)
- **IFC Survey of central banks** on Fintech data issues (May-June 2019)
- **IFC-Bank Negara Malaysia satellite seminar** on “*Statistics on fintech - bringing together demand and supply to measure its impact*” at the 62<sup>nd</sup> World Statistics Congress of the International Statistical Institute (ISI), August 2019
- Working Group **IFC Report**

Thank you!!

**Questions?**

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