Research session
Implications of big tech in finance

Wednesday 6 October
14:00 CEST (UTC +2)

“Big tech banking”
Jorge Padilla
Senior Managing Director
Compass Lexecon

“Platform-based business models and financial inclusion”
Karen Croxson
Head of Research
Financial Conduct Authority

Chair: Hyun Song Shin Economic Adviser and Head of Research, BIS
Platform-based business models and financial inclusion

Karen Croxson (FCA), Jon Frost (BIS), Leonardo Gambacorta (BIS) and Tommaso Valletti (Imperial College London)
BIS conference on “Regulating big tech”, 6 October 2021

*The views expressed here are those of the authors and not necessarily the Bank for International Settlements, the Financial Conduct Authority or the European Commission.
Platforms in finance
### Three types of platforms in finance: definitions and examples

<table>
<thead>
<tr>
<th>Definition</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fintech</strong></td>
<td><img src="image1" alt="Stripe" />, <img src="image2" alt="Funding Circle" />, <img src="image3" alt="Paytm" />, <img src="image4" alt="Lending Club" />, <img src="image5" alt="robinhood" />, <img src="image6" alt="Lemonade" /></td>
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<tr>
<td><strong>Big tech</strong></td>
<td><img src="image7" alt="Frost et al." />, <img src="image8" alt="BIS" /></td>
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<tr>
<td><strong>Incumbent responses</strong></td>
<td>Move to business model that brings together two or more types of economic agents and facilitates trade between them (Evans and Schmalensee, 2014)</td>
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**Definition**
- **Fintech**: Technology-enabled innovation in financial services that could result in new business models, applications, processes or products ... *(FSB, 2017)*
- **Big tech**: Large companies whose primary activity is digital services, rather than financial services *(Frost et al., 2019; BIS, 2019)*
- **Incumbent responses**: Move to business model that brings together two or more types of economic agents and facilitates trade between them (Evans and Schmalensee, 2014)
Platform economics: a simple representation
What is unique about digital platforms?

A. Perfect competition  
B. Pure monopoly  
C. Digital monopoly  
D. Preference manipulation

Source: Boissay et al (2020); authors’ elaboration.
Platforms and financial inclusion
Platforms scale fast, and big tech credit is booming

Big tech credit is overtaking fintech credit

Global lending is small, but larger in some economies

These forces also mean rising downloads of fintech and big tech payment apps.
Platforms have helped drive the rise in account access

Percentage of adults with a transaction account

In the UK, platforms have helped to close some gaps in inclusion.

Increase in share of adults who used a mobile app to undertake day-to-day banking activities

Share of adults who are digitally excluded by age and gender (April 2017/ Feb 2020)

Platforms are on a buying spree – M&A activity by global payment platforms

Purchase price in millions of US dollars, logarithmic scale

Deal characteristics: • Vertical integration    • Horizontal integration

Some incumbent banks are following suit, moving toward platform models

Income composition

<table>
<thead>
<tr>
<th>Year</th>
<th>Non-interest income: Bank with platform business model</th>
<th>Non-interest income: Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>40</td>
<td>32</td>
</tr>
<tr>
<td>2014</td>
<td>38</td>
<td>36</td>
</tr>
<tr>
<td>2015</td>
<td>40</td>
<td>34</td>
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<td>2016</td>
<td>38</td>
<td>36</td>
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<td>2017</td>
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<td>2018</td>
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<td>36</td>
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<tr>
<td>2019</td>
<td>38</td>
<td>36</td>
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<tr>
<td>2020</td>
<td>38</td>
<td>36</td>
</tr>
</tbody>
</table>

Expenditure on technology

<table>
<thead>
<tr>
<th>Year</th>
<th>Telecom's, data processing and technology expense: Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>4.2</td>
</tr>
<tr>
<td>2014</td>
<td>4.9</td>
</tr>
<tr>
<td>2015</td>
<td>5.6</td>
</tr>
<tr>
<td>2016</td>
<td>6.3</td>
</tr>
<tr>
<td>2017</td>
<td>6.3</td>
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<td>2018</td>
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<td>2020</td>
<td>6.3</td>
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</tbody>
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Sources: S&P Market Intelligence; authors’ calculations.
Public policy options
Option 1: Apply existing financial regulation, competition and data privacy rules

- Many authorities explicitly adopt a “same business, same risks, same rules” approach to providers with a platform-based business model
  - Apply existing licensing, regulatory reporting, deposit insurance, capital and liquidity requirements, etc to fintech and big tech platforms (see eg Crisanto et al, 2021)
  - Where needed, “fit” new models into existing regulatory categories
- Yet a few challenges:
  - financial regulation, competition law not always agile enough to prevent concentration
  - trade-offs between policy goals (Carrière-Swallow and Haksar, 2019; Feyen et al, 2021)
  - possible information advantages of new platforms – particularly big techs – given divergent asymmetries in data regulation (Padilla and de la Mano, 2018; Stulz, 2019)
  - potential for systemic importance of big techs (Carstens et al, 2021)
Option 2: Adapt old and adopt new policy rules

- New financial regulation and competition rules explicitly tailored to platforms:
  - new types of licenses (eg for virtual banks)
  - enhancing competition through application programming interfaces (APIs) and other tools to enhance data portability
  - developing new ex ante regimes (eg Digital Markets Unit in the UK)
- Enhancing interoperability can be particularly powerful (see telecommunications in the EU)
- Data protection rules can impact on competition and financial stability
  - EU General Data Protection Regulation (GDPR) includes data minimisation principle
  - California Consumer Protection Act (CCPA) defines sanctions for data breaches – also relevant for those concerning financial data
Option 3: Provide public infrastructures

- Private sector platform services are often built on a public sector infrastructure, eg:
  - government digital identity (ID) initiatives (eg Aadhaar in India, MyInfo in Singapore)
  - enhancements to real-time gross settlement systems (RTGS) and retail fast payment systems (FPS) (eg UPI in India, Pix in Brazil)

- Public infrastructures can facilitate entry, ensure greater competition between platforms
- Retail central bank digital currencies (CBDCs) can be seen in the same light (BIS, 2021)
Conclusion

- Platform-based business models are changing market structure in financial services
  - Fintech and big tech entrants are booming, and some incumbents are adopting a platform model
  - Platforms are highly scalable due to network effects and economies of scale and scope
- The same forces that enhance financial inclusion can also lead to “tipping” and concentration
- To capture benefits and mitigate risks, authorities are choosing among three approaches:
  - Apply existing financial regulation, competition and data protection rules
  - Adapt old and adopt new rules in these areas
  - Provide public infrastructures for digital ID, fast payments, etc.
- Important for central banks and regulators, within their legal mandate, to work closely with competition and data protection authorities, building on existing mechanisms