TEAM GENEVA REPORT 22

Annual Series since 1999

Led by Ugo Panizza (ICMB Geneva) with support from CEPR

Collective work with Kathryn Petralia, Thomas Philippon, Tara Rice

... with generous help from Sam Taussig
Over the years, the banking industry has exhibited remarkable adaptability to changing conditions. Its fate is seldom as bad as the figures indicated it should be.

Banking Magazine (January 1960, p. 39)

1. Introduction: The death of banking?
2. Banking deconstructed
3. Banks competition from Big Tech and FinTech
   - Advantages & disadvantages of banks v. FinTech & Big Tech
   - Survey results
4. Public policy changes
   - A trilogy of policy imperatives
   - Big Tech and the prospects for a global currency
   - Financial authorities must adapt
WHY DO WE HAVE BIG BANKS?

- Banks are “special” – they mitigate problems that would prevent funds from flowing from savers to borrowers
- “Modern banks” – privately owned joint stock companies with government charters – have existed since at least 1600s
- Size & scope enable big banks to engage in large scale, international transactions, such as the financing of international trade
- They have also historically been tightly linked to a sovereign

Royal Bank of Scotland, Banking Magazine, April 1925
WHAT BIG BANKS DO

- Engage in the facilitation of international financing (in syndicates), cross-border payments (correspondent banking) and international trade (trade finance)
- Provide services such as investment banking, securities brokerage, insurance agency and underwriting, and asset management
- Despite advances in technology and financial innovation, constantly evolving regulation...
- **Banks’ core business of taking deposits and making loans has remained central to their business**
BIG BANKS ARE...

Ratios to assets (percent)

Source: authors’ calculations using data from S&P Global. Based on a sample of roughly 2200 banks. The 10th and the 90th percentiles are based on total assets, where the 10th percentile represents the smallest banks by total assets in the sample and the 90th percentile, the largest banks.
STILL BANKS

Ratios to total revenue

<table>
<thead>
<tr>
<th>Interest income</th>
<th>Non-interest income</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.89</td>
<td>0.40</td>
</tr>
<tr>
<td>0.80</td>
<td>0.30</td>
</tr>
<tr>
<td>0.71</td>
<td>0.20</td>
</tr>
<tr>
<td>0.62</td>
<td>0.10</td>
</tr>
<tr>
<td>0.53</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Source: authors’ calculations using data from S&P Global. Based on a sample of roughly 2200 banks. The 10th and the 90th percentiles are based on total assets, where the 10th percentile represents the smallest banks by total assets in the sample and the 90th percentile, the largest banks.
**TRADITIONAL BANKING = EIGHTY PERCENT OF REVENUES**

Annual revenue in 2017, % share of total - $ billion
Total annual revenue of financial intermediation is ~$5 trillion

<table>
<thead>
<tr>
<th>Service</th>
<th>Revenue</th>
<th>Share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer finance</td>
<td>730</td>
<td>15%</td>
</tr>
<tr>
<td>Retail deposits</td>
<td>545</td>
<td>11%</td>
</tr>
<tr>
<td>Mortgage</td>
<td>470</td>
<td>9%</td>
</tr>
<tr>
<td>Lending</td>
<td>965</td>
<td>19%</td>
</tr>
<tr>
<td>Deposits</td>
<td>560</td>
<td>11%</td>
</tr>
<tr>
<td>B2B</td>
<td>445</td>
<td>9%</td>
</tr>
<tr>
<td>B2C</td>
<td>270</td>
<td>5%</td>
</tr>
<tr>
<td>Market infrastructure</td>
<td>140</td>
<td>3%</td>
</tr>
<tr>
<td>Retail asset manag.</td>
<td>175</td>
<td>4%</td>
</tr>
<tr>
<td>Institutional asset manag.</td>
<td>150</td>
<td>3%</td>
</tr>
<tr>
<td>Wealth manag.</td>
<td>150</td>
<td>3%</td>
</tr>
<tr>
<td>Retail brokerage</td>
<td>100</td>
<td>2%</td>
</tr>
<tr>
<td>Private capital (PE, PD)</td>
<td>45</td>
<td>1%</td>
</tr>
<tr>
<td>Bancassurance</td>
<td>40</td>
<td>1%</td>
</tr>
<tr>
<td>Sales &amp; trading</td>
<td>150</td>
<td>3%</td>
</tr>
<tr>
<td>Origin. (ECM, DCM)</td>
<td>40</td>
<td>1%</td>
</tr>
<tr>
<td>M&amp;A advisory</td>
<td>25</td>
<td>1%</td>
</tr>
</tbody>
</table>

BANKS SCALE AND SCOPE

- Mixed evidence of scale and scope economies
- Pre-2000 studies: Banks exhaust scale economies at low levels of input
- 2000+ studies: stronger evidence esp in terms of costs
- But TBTF reforms could create incentives to downsize (e.g. G-SIB surcharge)

We are witnessing some of the most outstanding developments and important changes in banking industry. During the past year there have been upward of one thousand bank consolidations which represented, to a large extent, the results of economic forces, which requires great economies of scale in banking, more complete facilities, and larger reservoirs of capital.

President of the ABA (Banker, 1929)

Assets of top 10 banks to global GDP, 1970-2018
MARKET SHARES: FINANCE VS OTHER SECTORS

- Finance is characterized by concentrated shares and relatively low turnover of industry leaders.
- Europe has caught up with US post crisis
- Market shares have become more persistent
- But global leaders have changed over time

Global Banking Assets: Geography

Aggregate Assets of Global Top 200 Banks by Home Jurisdiction

Source: The Banker Database, a service from The Financial Times Limited, 2019; authors’ calculations. “Next 5” = AU, CA, CH, IN, KR; RoW = rest of world
“BANK-HEAVY” VS “BANK-LIGHT” JURISDICTIONS

Share of top 200 bank assets to share of global GDP

Source: The Banker Database, a service from The Financial Times Limited, 2019; authors’ calculations. “Next 5” = AU, CA, CH, IN, KR; RoW = rest of world
COMPETITION

- **What products & services are:**
  - Most affected by technological developments?
  - Most affected by competition?
  - Likely to be affected by tech over next 5 years?
Europe's fintechs emerge from first brush with scandal

Facebook's Libra will be disruptive, says ECB's Coeure

How Monzo, Revolut, Starling and N26 plan to topple legacy banks

The new wave of challenger banks are taking on traditional financial groups in a big way. These are the new products and features to expect throughout the months to

Tencent, Alibaba, Xiaomi units win Hong Kong online banking license

The industry has been lobbying financial regulators to hold their new tech competitors to the same data protection, cyber security and capital standards, arguing that supervisors have not moved fast enough and the playing field has been left uneven.

HSBC and StanChart under attack from China tech

This branch has now closed.
WHAT FINTECH OFFERS

- FinTechs offer speed & customization that banks can’t offer:
  - “Instant” (<10 minute) bank onboarding
  - “Instant” loan decisioning and cash disbursement
  - Custom views of historical spend and expected future spend

- What enables FinTechs to do this:
  - Iterative, customer-backed product development
  - No slow-to-update legacy technology
  - Focus on automated, data-driven decisions
  - Ability to serve early adopters & early majority; does not have to contend with technology adoption laggards
WHAT BIG TECH OFFERS

- Big Techs’ scale and scope enables them to:
  - Reach a wide group of potential customers
  - Leverage the trust of their users and aggregate data
  - Offer a broad suite of financial services potentially cheaper and more quickly than a bank

- What enables Big Techs to do this:
  - Very large networks (established through e-commerce platforms or messaging services)
  - Big Data & cutting edge technology

The scale of the Big Tech firms and the speed of adoption across borders in the digital era – suggest that developments in the provision of financial services could accelerate at a pace not seen before.
(DIS)ADVANTAGES OF BANKS VS COMPETITORS

- **Technology** and Customer experience
- **Size (scale & scope)**
  - Cost of funding
  - Network effects
- **Policy-based**
  - Prudential regulation
  - Data privacy / protection
  - Political / lobby power

New entrants into the financial services space, including FinTech firms and large, established technology companies (‘BigTech’), could materially alter the universe of financial services providers.

The Economist, 2 May 2019
Table 4   Banks versus their partners and competitors

<table>
<thead>
<tr>
<th>Banks vs competitors</th>
<th>Big banks</th>
<th>FinTech</th>
<th>Big Tech</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology</td>
<td>×</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Customer experience</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Size (scale &amp; scope)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of funding</td>
<td>✓</td>
<td>×</td>
<td>×</td>
</tr>
<tr>
<td>Network effects</td>
<td>✓</td>
<td>×</td>
<td>✓ ✓</td>
</tr>
<tr>
<td><strong>Policy-based</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prudential regulation</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Data privacy/protection</td>
<td>✓</td>
<td></td>
<td>×</td>
</tr>
<tr>
<td>Political/lobby power</td>
<td>✓</td>
<td></td>
<td>×</td>
</tr>
</tbody>
</table>

*Note: Red crosses are disadvantages, the blue ticks are advantages, and the black empty squares are neutral or in the midst of change.*
PROSPECTS & POLICY CHOICES

- The current state of tech environment and financial system development in individual jurisdictions
- How banks adapt to customers changing demand & technological innovation
- How the competition (FinTech, Big Tech) chooses to interact with the banks
- How the customers decide on their experience
- How regulators and policymakers across the globe respond
IS THIS TIME DIFFERENT?

Banks have survived many evolutions
Online banking and challenger banks in the 1990s
Example of Wingspan Bank
- Much hope, much disappointment
- A bit ahead of its time
- A lot of misunderstanding of consumer demand

However, this time might be different
- Big banks are in check due to post crisis regulations
- Consumers are keen for better experience
- Big Tech are big
RECOVERY OF PRICE / BOOK

Finally some sign that finance is getting cheaper and better

Market capitalisation of Big Tech firms and major financial groups ($B) as of 18 Jan 2019.

Big Tech in Finance & Banking

- Big Tech have banking licenses in China, not in other large jurisdictions
  - But a number of e-money licenses and virtual banking licenses

Separation of banking and commerce still relevant
- US: Walmart was denied (ILC) banking license in 2005
- Europe: less settled separation principle, but more concerns about “GAFAM”

Policy areas to watch: open banking, data portability
LIBRA: WAKE-UP CALL

- June Proposal: Potential to become globally adopted, raises concerns of global currency / monetary policy transmission mechanism, financial stability

- Additional risks: AML/CFT compliance, data protection, consumer and investor protection, fair competition, tax compliance, market integrity

- Authorities highlighted need for globally consistent view on how Big Tech, FinTech, banks compete, exchange data & protect consumers

Significant work...and further engagement with the public and authorities will be required before they can expect approval by relevant authorities

Benoît Cœuré (2019)
IS THE GLOBAL ARCHITECTURE UP TO THE TASK?

- Powerful pressures towards jurisdictional fragmentation
  - Could cripple otherwise desirable global data-driven models
  - Inevitable vs unnecessary fragmentation

- Supranational supervision?
  - Not for banks
  - Conceivably for some infrastructures
  - Possibly for information / data intermediaries

- Case for institutional experimentation
WRAP-UP

- Momentous transformation, still at early stage
- Disruption likely to fall short of mass extinction of banks
- Public policy choices will be critical
  - Financial authorities must embrace new technologies
  - Different preferences in different jurisdictions

- New modes of financial oversight
  - Cooperation between authorities in charge of financial stability, competition, and data
  - Supranational experimentation, beyond ongoing in EU
THANK YOU!