FinTech versus Banking in the Post-Covid-19 World

Allen N. Berger
University of South Carolina
Wharton Financial Institutions Center
European Banking Center

World Bank WebEx Presentation, July 9, 2020

Thanks!

- Thanks to Stijn for presenting and thanks to the team of Elena, Stijn, Antonio, and Xavier for setting us up for what the future may hold for banking during and after the Covid-19 crisis.
  - They have provided an excellent reference document for future banking research.
  - The Global Financial Crisis gave us unforseeable research challenges and opportunities, and we had no document to help prepare us in advance.
  - We will now all be ahead of the game for studying the current crisis and its aftermath.
- Thanks also to Asli for this opportunity to share a few thoughts on the topic.

Special Issue of the JBF on the Topic

The Way Forward for Banks during the Covid-19 Crisis and Beyond: Government and Central Bank Responses and Threats to the Global Banking Industry

Guest Editors:
Allen N. Berger
Asli Demirguc-Kunt
Fariborz Moshirian
Anthony Saunders

Submit papers by August 31, 2020.

https://www.journals.elsevier.com/journal-of-banking-and-finance/call-for-papers/way-forward-for-banks-during-the-covid-19-crisis-and-beyond

Conference associated with this special issue: 15 to 17 December, 2020

Topic of the Talk

- Focus on one issue – the advance of FinTech – and how it may compete more successfully and partially replace banks in the post-Covid-19 world.
  - The word “FinTech” is derived from “financial" and “technology.”
  - No single definition, but it generally describes products and intermediaries that use sophisticated financial and information technologies that deliver a wide array of financial services outputs and inputs online.
  - May be thought of in some cases as high-tech shadow banks.

Topic of the Talk (2)

- A consequence of the pandemic is that the population is getting more adept and comfortable with using remote technologies.
  - May enable FinTech firms to compete more forcefully against banks than in the past, accelerating existing trends.
  - For example, people may be more willing and able to apply for mortgages, consumer loans, and small business loans online using FinTech platforms, creating more competition for banks.

Topic of the Talk (3)

- For simplicity, I cast the discussion mostly in terms of head-to-head competition between FinTech lending platforms and banks.

- In reality, there is both competition and cooperation between FinTech and banks in providing outputs and inputs along the entire financial intermediation value chain.
  - FinTech can partially replace banks in many different places along this chain.
  - Boot, Arnoud W. A., Peter Hoffmann, Luc Laeven, and Lev Ratnovski, 2020, Financial Intermediation and Technology: What's Old, What's New? Working paper.

    https://www.ecb.europa.eu/pub/pdf/scpwps/ecb.wp2438~d0d447b9b6.en.pdf

Topic of the Talk (4)

- I briefly discuss findings from three relevant papers.
  - Theory paper about external competition for banks that precedes FinTech.
  - Survey of FinTech and banking.
  - One of my recent papers with an “intuitive model” and empirical analysis of small business lending by FinTech lending platforms and banks.
- I extrapolate the results of all three papers to the post-Covid-19 world, finding consistent conclusions from all three.

Boot and Thakor (2000)

- Boot, Arnoud W. A., and Anjan V. Thakor. 2000. Can Relationship Banking Survive Competition? *Journal of Finance* 55 (2), 679–713.
- The authors theoretically model the effects of competition from capital markets on banks.
- Find that an increase in competition from outside of banking would cause banks to shift toward relationship lending, where banks have comparative advantages over the outsiders.
  - An extrapolation of the model from capital markets to FinTech predicts that FinTech would primarily replace transaction lending.
  - Put more in today's terms, FinTech would more often displace lending of banks using hard information lending technologies than those using soft information lending technologies.

Thakor (2020)

- Thakor, Anjan V. 2020. Fintech and Banking: What Do We Know?, *Journal of Financial Intermediation*, 41.
- Survey article on the literature on FinTech competing with banks.
- Concludes that FinTech loans are more like transaction loans and that FinTech platforms will be less competitive vis-à-vis banks in relationship lending.
- Again suggests that FinTech would more often replace bank lending that uses hard information lending technologies than uses soft information technologies.

Balyuk, Berger, and Hackney (2020)

- Balyuk, Tetyana, Allen N. Berger, and John Hackney. 2020. What is Fueling FinTech Lending? The Role of Banking Market Structure, working paper.
- https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3633907
  - Has an “intuitive model” of small business lending of banks of different types as well as FinTech lending platforms.
  - Empirically tests the extent to which FinTech replaces small business lending by banks that use hard versus soft information lending technologies.

Three Main Functions Performed in Small Business Lending

- Screening.
  - Gathering and analyzing information about the borrowers' abilities and willingness to repay before a loan is granted.
  - Reduces adverse selection problems.
- Monitoring.
  - On-going information collection after loans are issued to increase investment returns.
  - Mitigates moral hazard and shirking problems.
- Funding.
  - Procuring liquid funds to finance the loans.
- "Intuitive model" shows how different banks and FinTech lending platforms do these functions in their own ways, using different lending technologies and resources.

BBH Figure 1: Small Business Lending Functions of Different Lenders

Function	Small/In-Market Banks	Large/Out-of-Market Banks	FinTech Lending Platforms
Screening	✓	✓	✓
	Soft-info technologies	Hard-info technologies	Hard-info technologies
	Based on relationships, judgment	Based on credit scores, financial statements, collateral	Based on machine learning, algorithms, big data, alternative data
Monitoring	✓	✓	✗
	Active, based on site visits, changes in deposit account flows, loan repayments	Active, based on changes in scores, financial statements, deposit account flows, loan repayments	Passive, based on loan repayments
	Renegotiation possible	Renegotiation possible	Little to no renegotiation
Funding	✓	✓	✗
	Bank funds from core deposits	Bank funds from core deposits and purchased funds	Funds from investors

Conclusions from BBH Figure 1

- FinTech lending platforms may sometimes replace banks in the screening function, and investors may replace banks in the funding function, but banks are likely to keep the advantage in loans that need a lot of monitoring.

- FinTech platforms may more often replace either:
  - Large/Out-of-Market Banks (Megabanks) because machine learning and algorithmic hard information technologies are more efficient at processing hard information, or
  - Small/In-Market Banks (Community Banks) because FinTech technologies may effectively harden some of the soft information used by community banks.

- Empirical analyses in the paper test between these two alternative hypotheses and the results are quite clear.

Balyuk, Berger, and Hackney (2020) Empirical Results

- Data from two large U.S. FinTech marketplace lenders – Prosper Marketplace and Funding Circle – and data on the presence and small business lending of banks for over 3,000 U.S. counties over a 13-year period.
- Findings strongly suggest that FinTech tends to replace loans by large/out-of-market banks more than small/in-market banks.
  - Consistent with FinTech advantages in more efficient processing of hard information than large/out-of-market banks, rather than hardening of soft information that would otherwise be collected by small/in-market banks.
  - Could also reflect that FinTech lenders are weak in monitoring, which may be more needed for soft information loans by small/in-market banks.
- Conclusion for the post-Covid world – FinTech is more likely to outcompete and replace lending by large/out-of-market banks than by small/in-market banks.
  - Consistent with theoretical predictions in Boot and Thakor (2000) and Thakor (2020).

Balyuk, Berger, and Hackney (2020) Empirical Results (2)

- Additional empirical results suggest that:
  - FinTech loans are relatively risky, but become safer after replacing bank loans.
  - Both FinTech and bank loans are found to benefit the real economy.
- Conclusion for the post-Covid-19 world – future FinTech replacement of bank lending may not be a bad thing.

Thank You for Listening and
I Look Forward to Your Questions