BigTech and the changing structure of financial intermediation

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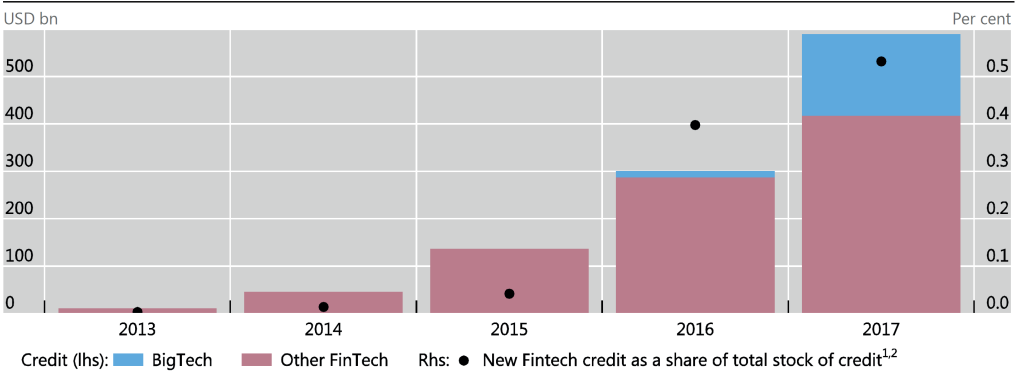
Interesting and timely paper

Figure 3. Global volume of new FinTech credit



Knowing the creditworthiness of the customer

TRADITIONAL BANK LENDING

TECHNOLOGY-BASED LENDING

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Who provides tech-based lending?

- Financial institutions?
- Technology firms?

Large or small? Entrants or incumbents?

This paper

- Empirical investigation on the drivers of BigTech credit and how it compares to Fintech credit more generally
- Macro-level (cross-country) analysis:
  - More BigTech credit in countries with: higher GDP per capita, less competition in banking sector, lower density of branches, (less stringent banking regulation). Qualitatively similar, but different magnitudes compared to FinTech credit (which includes BigTech).
- Micro-level analysis (Mercado Libre and Ant Financial)
  - Evidence of better screening.
  - Firms that used BigTech credit offer a greater number of products, sell more products (compared to the control groups that did not use BigTech credit; all or eligible only).

Comments and questions: Macro-level evidence

- GDP per capita and new sources of credit. Two opposite possible priors:
  - **Negative correlation** - new technologies enhance access to credit - countries with low GDP per capita have more individuals and firms who are excluded from financial systems, hence alternative financing sources could have a bigger marginal effect in these countries.
  - **Positive correlation** - BigTech and Fintech lenders are more efficient - credit worthy projects are better financed via institutions that adopt new technologies (quality of screening, preferences,...). In countries with higher GDP per capita, there are more investment projects worth pursuing.
- This paper's findings point towards the second interpretation. More discussion? Further robustness? (could it be the case that the BigTech/FinTech data is "censored"? could further controls for the market size be added?)

Comments and questions: Macro-level evidence

- Is there a way to disentangle the role of market power and credit-worthiness assessment technology?
  - The paper provides evidence that higher concentration of banking increases the value of alternative sources of financing - we could view FinTechs to include big and small technology firms (BigTech and "SmallTech"), and new and possible small finance firms
  - Does the data allow cross-country credit breakdown by more nuanced categories: 1) large techology firms, 2) large finance firms, 3) small technology firms, 4) small finance firms?
  - Is there a trade-off between competition and economies of scope? Is there an advantage based on the type of data used: banks and Fintechs accessing banks' data (open banking) may know better past credit and spending records; technology firms may know more about the customers of the firms, social media behavior or even devices used by the borrowers that may be correlated with credit worthiness (see Berg, Burg, Puri, Vanjak RFS2019).

Comments and questions: Macro-level evidence

- Is BigTech credit a substitute or complement to bank credit at the aggregate level?
  - When BigTech firms credit assessment and supply technology is always superior: substitute.
  - When BigTech firms are better able to assess risky projects, while traditional banks are better able to assess less risky projects: possibly complement (see e.g. Babyuk 2018 for micro level evidence of complementarity)
- Perhaps too early to tell - more time series data needed. However, perhaps more can be learned also from comparing the determinants of traditional bank credit and BigTech (FinTech) in cross country analysis.

Comments and questions: Micro-level evidence

- The paper finds that firms with BigTech credit sell more product and product varieties. Evidence of positive effect on return on investment and quality or bundling?
  - Ideal test for complementarities from bundling: compare firms that are similar, but some borrowed from technology (e-commerce) firms and some borrowed from finance firms.
  - While the ideal test may be difficult, does the data include information about whether firms that did not use BigTech credit used bank or another source of credit?

Comments and questions: Network effects

- Beyond possible different data and data analysis capabilities, a key difference between lending by technology firms and financial firms are different cross-side network effects and different complementarities.
  - M-Pesa example: complementarities between Finance and Telecom business. If finance products increase telecom users, it is not necessarily important for M-Pesa to earn enough spreads on lending (or from providing payment services)
  - The paper discusses such complementarities, but can it be tested at macro or micro level? - e.g., can BigTechs be further categorized based on the type of services they provide (e-commerce, communication services etc.)

Minor comments

- Page 4 suggests that bundling has undesirable welfare effects due to market power and network effects. Is it obvious? Perhaps bundling allows financing with more risk tolerance, cross subsidies, and marketing or most promising products?
- Page 5 suggests that fewer bank branches correlate with more greater share of unbanked population. Is it obvious? Countries with well educated and tech-savvy population, and good online services by traditional banks could have few branches and low share of unbanked.
- Regression with BigTech dummy (Column (1) in Table 3): why not Probit or Logit?

The contribution of this paper

- Great paper documenting important and interesting empirical facts. Rich in providing both macro and micro level analysis
- Many intriguing further questions.
- Suggest to read!