TechFin in China:
Credit Market Completion and its Growth Effect

Harald Hau
University of Geneva, CEPR and Swiss Finance Institute

Yi Huang
Graduate Institute of International and Development Studies

Hongzhe Shan
University of Geneva and Swiss Finance Institute

Zixia Sheng
Ant Financial Group

April 3, 2017

Abstract
Ant Financial provides automated credit lines to more than a million firms trading on Alibaba’s Taobao e-commerce platform. Monthly credit records show how TechFin mitigates local credit supply frictions in China’s segmented credit market and extends the “frontier” of credit availability to firms with a low credit score. We use a discontinuity in the credit decision algorithm to document that a firm’s credit approval and first-time online credit use boosts firm development in terms of sales and transaction growth. These findings reveal the scope of China’s credit market frictions and the benefits of new credit technologies in completing credit markets.

JEL Classification: G20, G21, O43
Keywords: TechFin, credit constraints, micro credit, entrepreneurship

2 Graduate Institute of International and Development Studies, Maison de la paix, Chemin Eugène-Rigot 2, 1202 Genève, Switzerland. E-mail: yi.huang@graduateinstitute.ch.
3 Geneva Financial Research Institute, 42 Bd du Pont d’Arve, 1211 Genève 4, Switzerland. E-mail: Hongzhe.Shan@unige.ch.
4 Director of AI Decision Science.
Acknowledgment and Disclaimer

We thank seminar participants at Ant Financials, the Brookings Institute, the European Winter Finance Summit, the Federal Reserve Board of Governors, the Geneva Finance Research Institute, the Geneva International Macroeconomics and Financial Workshop, the Graduate Institute-Geneva, Harvard University, the International Monetary Fund, London Business School, London School of Economics, the NBER Chinese Economy Working Group Meeting, the World Bank, Stanford Graduate School of Business, and Tsinghua University for their comments. We thank Richard Baldwin, Tony Berrada, Ata Can Bertay, Nick Bloom, Hui Chen, Geng Li, Rajna Gibson Brandon, Emily Breza, Stijn Claessens, Long Chen, Hanming Fan, Hongbin Gao, Giacomo De Giorgi, Ayhan Kose, Alex Xi He, Sabrina Howell, Ye Li, Dong Lou, Ergys Islamaj, Christopher Malloy, Marcelo Olarreaga, Cheng Ouyang, Ugo Panizza, Eswar Prasad, Richard Portes, Jun "QJ" Qian, Wenlan Qian, Hélène Rey, Jean-Charles Rochet, Hong Ru, Maury Obstfeld, Stephen Schaefer, Piao Shi, Hyun Song Shin, Kjetil Storesletten, Tao Sun, Fabio Trojani, Alexander Wagner, Vikrant Vig, Shang-Jin Wei and Hao Zhou for their comments. A special thanks goes to Franklin Allen, Patrick Bolton, Darrell Duffie, Zhiguo He, Bengt Holmström, and Wei Xiong and for their feedback on an earlier draft. We are grateful to colleagues at Ant Financial and AliResearch for their support, and Sibo Liu at Hong Kong University for generously sharing his GPS data on Chinese bank branches. This research project benefited from a research grant from the Graduate Institute and a Sinergia Research Grant from the Swiss National Science Foundation (SNSF).

The authors highlight that the data and analytics reported in this paper may contain errors and are not suited for the purpose of company valuation or to deduce conclusions about the business success and/or commercial strategy of Ant Financial. All statements made reflect the private opinions of the authors and do not express any official position of Ant Financial and its management. The analysis was undertaken in strict observance of the Chinese law on privacy.