Does Mobile Communication Technology Have Capital Market Consequences? Evidence from Worldwide Launches of 3G Networks

Jinshuai Hu
Xiamen University
hujs@xmu.edu.cn

Yongtae Kim
Santa Clara University
y1kim@scu.edu

Siqi Li
Santa Clara University
sli3@scu.edu

Yibing Wu
Xiamen University
ybwu@xmu.edu.cn

ABSTRACT

Exploiting the staggered launches of third-generation mobile broadband (3G) networks across a sample of 40 economies between 1999 and 2012, we examine the capital market consequences of advances in mobile communication technology. Using a composite measure of market liquidity and a welfare-based measure of price informativeness, we find that the 3G introduction is followed by a significant increase in market liquidity and price informativeness. Importantly, the 3G effects are evident only for firms in economies that have characteristics of a well-functioning market: transparent accounting information, a large base of investors participating in the market, and strong legal protection of shareholder rights. We also find a stronger 3G effect in economies where more investors access and use mobile broadband internet. There is, however, no evidence of post-3G increases in noise trading, price bubbles, or mispricing. Collectively, our findings are consistent with worldwide 3G introduction improving the overall economic welfare of market participants.

Keywords: 3G, mobile communication, information technology, information dissemination, market liquidity, price informativeness

Acknowledgments: We thank Ye Cai, Matthew Cedergren, Young Jun Cho, Jaewoo Kim, Kevin Li, Jamie Tong, and Albert Tsang for their constructive comments. We appreciate the helpful conversations with Kenneth Gibson at Collins Bartholomew, the feedback from the 2023 ESADE Spring Workshop and the workshop participants at The Hong Kong Polytechnic University and Xiamen University, and the excellent research assistance by Zhuoying Niu. We acknowledge financial support from the National Social Science Foundation of China (22BGL084).