Business Cycles, Monetary Policy, and Bank Lending: Identifying the Bank Balance Sheet Channel with Firm-Bank Match-Level Loan Data*

January 2014

Kaoru Hosono[†] and Daisuke Miyakawa[‡] Gakushuin University and Harvard University

Abstract

This paper examines the impact of business cycles and monetary policy on bank loan supply. A unique firm-bank match-level dataset that covers listed firms in Japan allows us to control for firms' time-varying unobservable loan demand and endogenous bank-firm matching so that we can identify the effects of business cycles and monetary policy on loan supply through the bank balance sheet channel. The estimation results indicate that banks with more liquidity or capital tended to lend more to their client firms. The quantitative impact of bank liquidity and capital on loan supply was economically sizable and larger when economic growth was lower. Furthermore, the quantitative impact of bank liquidity on the growth rate of loans more than doubled when quantitative easing policy was terminated. Overall, these results imply that changes in economic growth and monetary policy significantly affected loan supply through the bank balance sheet channel. We also find evidence that fluctuations in economic growth and monetary policy are transmitted to capital investment through the bank balance sheet channel in the case of firms with high investment opportunities.

Key words: Bank Balance Sheet Channel; Monetary Policy; Time-Variant Firm Individual Effect *JEL Classification*: E44, E51, E52, G21

You can find the full paper <u>here</u>.

^{*} We would like to thank Arito Ono, Iichiro Uesugi, Hirofumi Uchida, Nobuyoshi Yamori, Xu Peng, Daisuke Tsuruta, and other participants at a seminar in RIETI for helpful suggestions. K. Hosono gratefully acknowledges financial support from Grant-in-Aid for Scientific Research No.22223004, JSPS.

[†] Professor, Department of Economics, Gakushuin University, 1-5-1 Mejiro, Toshima-ku, Tokyo 171-8588, Japan. E-mail: <u>kaoru.hosono@gakushuin.ac.jp</u>.

[‡] Research Associate, Weatherhead Center for International Affairs, Harvard University, 61 Kirkland Street, Cambridge, MA 02138, U.S.A. E-mail: <u>damiyak@gmail.com</u>.