

Cyclicality of Bank Liquidity Creation

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Liquidity creation is a major function of banks in the economy. Banks create liquidity by financing relatively illiquid assets with relatively liquid liabilities and thus contribute to financing the economy and facilitating transactions between economic agents. While this role has long been ignored, literature on bank liquidity creation has recently expanded following the novel approach proposed by Berger and Bouwman (2009) to measure liquidity created by banks. Several works investigate determinants of bank liquidity creation (Fungáčová, Zhou and Weill, 2015; Berger, Bouwman, Kick and Schaeck, 2016), some focus on its relation with the level of competition (Horvath, Seidler and Weill, 2016; Jiang, Levine and Lin, 2016), its connection to economic growth (Berger and Sedunov, 2015; Fidrmuc, Fungáčová and Weill, 2015) and consequences of high bank liquidity creation (Berger and Bouwman, 2012; Fungáčová, Turk and Weill, 2015).

The aim of this paper is to investigate cyclicality of bank liquidity creation. Berger and Bouwman (2015) argue that bank lending alone is not an optimal measure of bank output. In order to account for differences in loan categories and composition on the liability side, one should rather look at the bank liquidity creation. Indeed, while cyclicality of bank lending has been studied in the literature, no work has ever examined how bank core output in the form of liquidity creation

reacts to business cycle fluctuations. Given the key function of banks as liquidity creators, cyclicalities of bank liquidity creation can generate undesirable effects in the economy by amplifying recessions.

We also analyze if liquidity creation by state-owned banks is less procyclical than liquidity creation by domestic private banks and foreign banks, so that we can check if state-owned banks have a more stabilizing role than private banks as suggested by Bertay, Demirgüç-Kunt and Huizinga (2013) for bank lending.

To investigate these issues, we follow the methodology of Berger and Bouwman (2009) to measure bank liquidity creation. We classify all bank assets and liabilities based on their degree of liquidity, assign weights to each item and compute the amount of liquidity created by each bank. We consider the Russian banking system for our analysis. We use comprehensive quarterly data from financial reports of the Russian banks covering the period 2004-2015. The availability of a rich panel dataset on all Russian banks in terms of level of detail and frequency allows for the measurement of liquidity creation and for the investigation of business cycle fluctuations. The coexistence of state-owned, domestic private, and foreign banks, with significant market shares makes this country of prime interest to analyze how ownership influences cyclicalities of bank liquidity creation.

We apply the system GMM estimations in our empirical analysis. We find that liquidity creation of banks is procyclical and show that state-owned banks do not have a more or less procyclical liquidity creation behavior than domestic private banks. We find limited evidence that foreign-owned banks tend to have a lower procyclical liquidity creation than domestic private banks. Hence we support the view that liquidity creation behavior of banks can contribute to

amplify business cycle fluctuations, while ownership of banks does not significantly influence this channel.

Our paper contributes to the literature on bank liquidity creation by providing evidence on its cyclicity and therefore on its potential amplifying role in economic recessions. It also constitutes a contribution to the analysis of the impact of state ownership of banks in the economy. It is of prime interest for the analysis of banking in emerging markets given the major role of banks in the financing of these economies and the persistent influence of the state in the banking industry in many of them.

References

- Berger, A. and C. Bouwman (2009). Bank liquidity creation. *Review of Financial Studies* 22 (9), 3779-3837.
- Berger, A. and C. Bouwman (2012). Bank liquidity creation, monetary policy, and financial crises. *Working paper*.
- Berger, A. and C. Bouwman (2015). *Bank liquidity creation and financial crises*. Academic Press, Elsevier.
- Berger, A., C. Bouwman, T. Kick, K. Schaeck (2016). Bank liquidity creation following regulatory interventions and capital support. *Journal of Financial Intermediation* 26, 115-141.
- Berger, A. and J. Sedunov (2015). Bank liquidity creation and real economic output. *Working paper*.
- Bertay, A., A. Demirgüç-Kunt and H. Huizinga (2015). Bank ownership and credit over the business cycle: Is lending by state banks less procyclical? *Journal of Banking and Finance* 50, 326-339.
- Fidmuc, J., Z. Fungáčová and L. Weill (2015). Does bank liquidity creation contribute to economic growth? Evidence from Russia. *Open Economies Review* 26 (3), 479-796.
- Fungáčová, Z., R. Turk Ariss and L. Weill (2015). High liquidity creation and bank failures. *International Monetary Fund Working paper* 15/103.
- Fungáčová, Z., L. Weill, M. Zhou (2016). Bank capital, liquidity creation and deposit insurance. *Journal of Financial Services Research* (forthcoming).
- Horvath, R., J. Seidler, L. Weill (2016). How bank competition influences liquidity creation. *Economic Modelling* 52, 155-161.

