The Reserve Supply Channel of Unconventional Monetary Policy

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- Reserves created through QE must be held by banks
  - Under some circumstances, QE translates into an expansion of banks' balance sheets

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- ▶ **Question:** Does the increase in reserve supply matter for bank lending?

▶ **Main Finding:** Increase in reserve supply from 2008-2017 crowded out 19 cents of bank lending per dollar of reserves injected
  ▶ The *reserve supply channel* counteracts the stimulative impact of QE

▶ **Why:** Injection of reserves changes the cost of providing loans and other banks' services
  ▶ Effect could go in principle either way

▶ **Main Finding:** Increase in reserve supply from 2008-2017 crowded out 19 cents of bank lending per dollar of reserves injected
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▶ **Why:** Injection of reserves changes the cost of providing loans and other banks' services
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▶ **Methodology:** Structural model of loan demand and supply of bank services estimated using instrumental variables
  ▶ Estimate demand for loans using natural disasters as instrument
  ▶ Estimate banks' cost of providing loans, mortgage and deposits and measure how marginal costs changes with a reserve injection
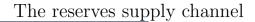
► Intriguing and policy relevant paper
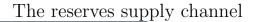 ► Potentially controversial result (Kandrac and Schlusche, 2021 find the opposite)

► Very challenging and sophisticated estimation strategy

► **Discussion:** I will focus on the mechanism behind the result
  ► Under which circumstances does the reserve supply channel emerge?

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- **What is needed:**
  - ▶ Banks are not the ultimate seller of the securities $\iff$ banks' balance sheet expand
  - ▶ Banks are facing a binding constraint **and** reserves and loans are substitutes in that constraint
    - ▶ Holding more reserves makes lending more costly

▶ Hardly a risk-weighted constraint $\rightarrow$ reserves and loans are not substitutes

▶ Leverage constraint (i.e., SLR)?
  ▶ SLR only became a requirement in 2018 (end of the sample period)

▶ Tightness in regulatory constraints for banks may have changed over time during the sample period
  ▶ Impact of increased reserves on the cost of providing loans may have been different across the three QE waves (2008, 2010, 2012)

▶ Increased reserves have been funded through deposits
  ▶ **Both** reserves and deposits have increased **and** both affect the marginal cost of lending (in opposite directions)

▶ Do the increase in deposits **and** the type of deposits matter for the effect of reserves on bank lending?
  ▶ Increase in reserves has been funded predominantly by wholesale funding

- ▶ Formatting of Figure 1

- ▶ Consistency of numbers concerning time frame and size throughout the paper (page 2 vs page 4 vs conclusions)

- ▶ A few typos (e.g., page 21, page 25)

- ▶ Elaborate on policy implications (e.g., clarify role of CBDC)

- ▶ Why does sample period starts in 2001?

► Interesting paper with very relevant policy implications

► Avenues to expand/deepen the analysis (not necessarily for this paper) could be:
    ► Interaction between QE and bank regulation
    ► Policy implications