Bank capital requirements and loan pricing: Loan-level evidence from a macro prudential within-sector policy
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Paper's departing view

- Bank capital is expensive
- Therefore, an increase in capital standards will lead to an increase in loan rates and/or a reduction in loan supply
- These effects will have an adverse effect in the economy

Paper exercise

- Use the increase (and subsequent decrease) in the capital requirement on a subset of auto loans (long-term/risky loans)
- Compare the loan spreads on new loans originated by the same bank to the same borrower before and after the regulatory change
- Control for loan-, bank-specific factors as well as time effects

Paper's findings

- An increase in the capital requirements on long-term/risky auto loans led to an increase in loan spreads
- A decrease in the capital requirements on long-term/risky auto loans led to a decrease in loan spreads
- The former effect is more pronounced than the latter effect

Comment 1: Effect of bank capital on loans rates is more complex

- Boot, Greenbaum, and Thakor (1993) argues that banks with low capital are more likely to sacrifice their reputations for honoring implicit contracts by exploiting their borrowers.
- Froot, Scharfstein, and Stein (1993) argue that costs of external finance make banks effectively risk averse, and that a bank's risk aversion decreases in its capital level.
- Diamond and Rajan (2000) bank-fragility theory argues that, relative to high-capital banks, low-capital banks should charge higher rates to those of their borrowers that have low cash flows, and lower rates to those of their borrowers who have high cash flows.

Comment 2: Available evidence does not support the claim that higher capital leads to higher rates

- Existing studies find that banks with higher capital tend to charge lower spreads on corporate loans
  - See Hubbard, Kuttner, and Palia (2002) and Santos and Winton (2012) for evidence from the U.S.
  - See Mattes, Steffen, and Wahrenburg (2013) for evidence from the U.K.

Comment 3: Was the regulatory change unexpected?

The increase in loan volume of targeted loans starting in September of 2010 (two months prior to the increase in the capital requirements) suggests it was not.

Comment 4: Some puzzling results

1. When capital standards go up; number of borrowers that switch from targeted to untargeted loans is lower than number of borrowers that switch the other way around (3,368 vs. 3,574)
2. The effect of bank capital on loan spreads is negative
3. The effect of loan amount on loan spreads is negative
4. The effect of loan maturity on loan spreads is negative
5. No clear negative impact on loan amounts
6. Increase in the capital standards does not affect untargeted loans (or has a positive effect in some specifications); the reduction in capital standards has a similar effect

Comment 5: Some inconsistencies

"Higher capital requirements increase the optimal target of banks' capital ratios….The need to constitute more capital may then be met by charging higher lending spreads."

"Finally, higher capital translates in an improved financial condition of the bank, leading to lower costs of funding, and at the same time, reduced need to build up financial capital. Both of these implications lead again to lower spreads."

Santos (2011) forces the comparison between bank-borrower loans, but it also controls for both bank and borrower-time varying factors.

Comment 6: Suggestions for additional work

1. Use bank-borrower-loan-type fixed effects
2. Investigate how the results vary across banks with different capital standards
3. How do we know these are all new loans and not renegotiations of existing loans?
4. Investigate who are the borrowers that take long-term auto loans with such a high frequency
5. Investigate the effect on loan amounts
6. Should cluster the errors by bank and by borrower