

Discussion of:

**“The Transmission of Monetary Policy
Within Banks: Evidence from India”**

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This paper (1)

- Very interesting, data rich, nicely-written paper on the bank lending channel in India.
- Key contributions:
 - Focus on transmission within banks, rather than across banks like in Kashyap and Stein (2000).
 - Focus on branches allows the use of *bank-time FE* to control for time-varying bank characteristics, and of *district-time FE* to control for demand.
 - Focus on changes in the Cash Reserve Ratio (CRR) rather than the key policy interest rate (repo rate).
 - Insight on monetary policy transmission in India, using a very rich dataset on bank branches.

This paper (2)

- Dataset:
 - RBI's Basic Statistical Returns 1 (BSR1).
 - Annual data, March 31, 1996 – March 31, 2013.
 - 36 states, 630 districts.
 - 150 banks, 126,873 branches, 128 million loans.
 - Aggregated into about 1 million observations of bank-branch-year loans.
 - Reminds of Kashyap and Stein's 2000 AER:
"What do a million observations on banks say about the transmission of monetary policy"

This paper (3)

- The banking system in India:
 - 1969 nationalization.
 - 1969-90, incentives for rural branch networks.
 - 1991: economic and financial liberalization.
 - Sample covers the period 1995-2012 (fiscal year t ending March 31 of the following year).
- From 1995 to 2012, the number of banks fell 50%, the number of branches rose 150%, the average credit per branch rose 13 times.
- Today, banks = 40% of equity, bank credit, and bonds in India (vs. 20% in the US and 60% in Germany).
- Public (3/4 of market share), private dom.(1/5), private foreign.
- State Bank of India (almost $\frac{1}{4}$ of market share; >20k branches).

This paper (4)

- Findings: GREEN: branch characteristics that enhance loan response to monetary policy actions; RED: dampen or reverse them.

	Baseline
<i>Bank organization</i>	
High ticket size loans	RED
High share of LT loans	RED
High credit/deposits ratio	GREEN
High number of officers	GREEN
<i>Local funds</i>	
Low deposits	RED
<i>Geography</i>	
Rural branch	GREEN
<i>Riskiness</i>	
High interest rate spreads	RED
High share of NPLs	RED

Comment 1: Econometric specification

$$\ln L_{ijt} = \alpha + \beta B_{ijt-1} + \delta CRR_t * B_{ijt-1} + FE_{it} + FE_{dt} + \varepsilon_{ijt}$$

- i = bank, j = branch, t = year, d = district.
- CRR by itself is not included, collinear with FE.
- Without CRR , δ may be hard to interpret:
 - $\delta < 0$ is clear, shows greater responsiveness, assuming that $d \ln L / d CRR < 0$.
 - $\delta > 0$ may be unclear; sluggish response or reverse direction?

Comment 1: Econometric specification

$$\ln L_{ijt} = \alpha + \beta B_{ijt-1} + (\delta_1 + \delta_2 B_{ijt-1}) * CRR_t + \varepsilon_{ijt}$$

- If CRR is included,
- ... the relative magnitudes of δ_1 and δ_2 matter.
- Compute total responsiveness by branch type or continuous characteristics, $(\delta_1 + \delta_2 B_{ijt-1})$.
- B is a dummy variable (i.e. =1 if branch characteristics are above the median); can it be made continuous?
- FE_{dt} as a control for demand: do branches lend mostly in the same district?

Comment 2: Internal capital markets

- With branches, the results are an indirect statement about the role of internal capital markets.
 - Kashyap and Stein (2000): bank characteristics explain the differentiated response; liquid assets allow banks to protect their loan portfolio during monetary tightening;
 - With branches, bank characteristics are captured by FE, branch characteristics guide internal transfers in response to monetary policy shocks.
- Can you directly measure the “net due to position” of branches relative to related offices, use it as dependent variable?
- Can you measure a branch’s investment vs. funding roles (loans/assets, deposits/assets) and use them as explanatory variables, like in Cetorelli and Goldberg (2012)?

Comment 3: Intuition behind results

	Baseline	CRR included	Bank ownership		Mon policy change	
			State-owned	Private	Tightening	Loosening
Bank organization						
High ticket size loans	Red	Red	Red	Red	Green	Red
High share of LT loans	Red	Red	Red	Red	Green	Red
High credit/deposits ratio	Green	Green	Green	Green	Red	Green
High number of officers	Green	Green	Green	Green	Red	Green
Local funds						
Low deposits	Red	Red	Red	Grey	Green	Red
Geography						
Rural branch	Green	Green	Green	Red	Grey	Green
Riskiness						
High interest rate spreads	Red	Red	Red	Red	Green	Grey
Nigh share of NPLs	Red	Red	Grey	Red	Green	Green

- For state-owned vs. private banks, the size and sign of coefficients matter: e.g., the coefficients for state-owned banks are smaller, turn positive for the rural branches of private banks.
- For tightening vs. loosening, there are some interesting asymmetries, the coefficients for reach for yield flip sign.

Comment 4: Monetary policy actions

- Aside from CRR, can you examine responsiveness to changes in the policy rate (repo rate) and the statutory liquidity ratio (SLR)?
- The CRR and the policy rate moved in opposite directions in 2011-12, was that a tightening or loosening?
- Which monetary policy tool is more potent?

Conclusion

- Very nice paper!
- Uses a very rich dataset of bank loans in India to measure the transmission of monetary policy across branches, while controlling for demand and bank characteristics.
- Compute the total responsiveness, explore more branch characteristics, explore the other monetary policy tools.
- I look forward to next draft!
- Thank you!