

Discussion of “Capital Controls, Domestic
Macroprudential Policy and the Bank
Lending Channel of Monetary Policy”
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Empirical: Does Capital Controls (CC) and Reserve Requirements (RR) amplify the effect of interest rates

- Very nice empirical paper
- Very rich dataset
- Limited time. I focus on nerdy stuff about regression specifications.

Econometric issues

- Impressive firm-bank dataset, but the main regressor only take 5 observations (quarters after CC/RR imposed).
- Note simple OLS fact: Regression $y_{it} = \beta X_t + e_{it}$ for demeaned variables gives

$$\hat{\beta} = \frac{\sum_t \sum_i x_{it} y_{it}}{\sum_t \sum_i x_{it}^2} = \frac{\sum_t x_t (\sum_i y_{it})}{N \sum_t x_t^2} = \frac{\sum_t x_t (\frac{1}{N} \sum_i y_{it})}{\sum_t x_t^2},$$

which is a regression with T observations. T is very short. 5 quarters past tightening.

Standard errors not quite believable to me

- OLS works fine in this situation (by LLN $\frac{1}{N}\sum_i y_{it}$ will be right on true regression line if N large, errors i.d.).
- But that independence assumption is shaky here. Acknowledge by using clustered standard errors.
- Cluster by firm and by bank-industry. Why would shocks/noise not be by bank? Argues, number of bank too low (40). Rule of thumb is 50, but not set in stone.
- At very least show cluster by bank. Maybe only do this.
- Could model the correlation parametrically using few degrees of freedom. (Or e.g. aggregate to bank-level.)

Controls

- Many controls, so by Frisch-Waugh theorem, de facto regressor will be “ i, t ” because the coefficient are determined by residuals from regressing on controls. Controls should be discussed.
- regressions have form (simplified)

$$loans_{f,b,t} = controls + \beta_1 * i_t + \beta_2 * Post * i_t + error .$$

A negative significant coefficient is interpreted as interest rate (“monetary policy”) is now effective. But β_1 is impact before tightening and $\beta_1 + \beta_2$ is impact after tightening.

- Actually interest rate lagged one period, why? (slow moving variable).

More on specification

- Strange that in many specifications β_1 is positive.
 - Reverse causality? Omitted variable? Can we ignore this?
More worrisome? In many specifications the estimated value of $\beta_1 + \beta_2 \approx 0$. No effect?
 - Higher interest rate leads to higher lending before tightening? I assume this is due to omitted variables.
But then do those become non-omitted after tightening?
- Discuss main result a lot more before moving to potential mechanism.

Mechanism

- Regressions of bank-firm lending over time as function of $\text{FX-funds}_{b,t-1} * \text{Interest Spread}_{t-1}$ (to U.S.).
- As before, the post effect is the sum of coefficients that will not be significant. Strange?
 - Why switch from interest to spread if testing mechanism from previous (can control for U.S. rate).

Mechanism 2

- Does $\text{FX-funds}_t \times \text{interest rate}_t$ capture role of interest for given FX-funds?
 - Maybe captures role of FX-funds for given rate of interest? (If subtract aggregate level from bank FX-funds before interacting, then that is unlikely.)
 - In general, interpretation easier if demean variables before interacting (Ozer-Balli and Sørensen, “Interaction Effects in Econometrics.” *Empirical Economics*, 2013).
 - Can think of each panel variable as the sum of an aggregate component and an agent specific component. Which matters?
 - Are FX-funds randomly assigned to banks? Worry? Why not use start of sample pre-determined values?

More on macro controls

- OK to include Δi_t and $\Delta^2 i_t$ when i_t is regressor of interest?
 - The logic of the discussion, as I read it, is that it this about the effect of Δi_t pre- and post- tightening. i_t is good if it is stationary, not very persistent, so it moves about. But that is not the case, the interest rate hardly changes.
 - Should Post be interacted with change in interest rate?
 - Can hardly-changing interest rate after tightening capturing efficiency of interest rate policy?

Mechanism

- Regressions with large number of interactions. Some terms get hard to interpret.
- Main: Regressions of bank-firm lending over time as function of FX-funds*Interest Spread (to U.S.).
 - FX normalized by assets. Pick up variation in denominator? Use average or initial assets?

Banks with more deposits affected more post tightening?

- Interact deposits with Post variable.
 - Are these variables correlated with FX? (Correlation matrix would be good. Esp. correlations after fixed effects removed).
 - Role of aggregate component as before (demean FX level each period)?

“Horse Race” between RR and CC

- One regression with Post interaction with 1) FX, 2) Savings Deposits, and 3) Checking Deposits
- FX wins.
- Splitting deposits into two parts that are highly correlated(?) is unfair to RR?
 - Again: FX_t , $Deposits_t$ exogenous? Bank vs. aggregate component in interaction.

Stronger lending contraction for risky firms

- Regressions separately for firms sorted into quarters by risk measure.
- Stronger contractions/interest rate effect for more risky firms.
- Somewhat hard to know what is going on.
 - All fixed effects etc. re-estimated by risk group.
 - What if this is pooled?
- What about heterogeneity by bank in terms of risk portfolio?

Conclusions

- Interesting paper. Rich data. Some of the many results may be a bit hard to interpret.
- I would do different types of robustness tests.
- A bit overwhelming number of numbers in main text. Maybe use appendix for some.
- Some more theoretical background, maybe in form of a “toy-model” would help to fix ideas.