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Discussant comments on
The bank lending channel in Peru: evidence and transmission mechanism

César Carrera

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"Monetary policy, financial stability and the business cycle"

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* These comments reflect the views of the author and not necessarily those of the BIS or of central banks participating in the meeting.

Comments on César Carrera Yalán, “The Bank Lending Channel in Peru”

James D. Hamilton

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Credit channel:

Banks special not just in terms of liabilities they create (money) but also in terms of their assets (loans)

Conventional monetary transmission:

↓ reserves

⇨ ↓ M1

⇨ ↑ risk-free interest rate

Credit view:

↓ reserves

⇨ ↓ lending

⇨ ↑ risky interest rate

How distinguish empirically?

(1) panel data on individual banks

large, financially secure banks can raise capital by other means (commercial paper, certificates of deposit) when central bank drains reserves

smaller banks must contract loans

y_{kt} = growth of consumer loans for bank k (percentage points)

i_t = interbank rate (percentage points)

q_{kt} = liquidity measure for bank k

s_{kt} = size measure for bank k

c_{kt} = capitalization measure for bank k

x_{kt} = vector of other variables

$$y_{kt} = x'_{kt}\beta - \underset{(0.033)}{0.191}\ i_t + \underset{(0.460)}{0.503}\ i_t q_{kt}$$

$$+ \underset{(0.124)}{0.372}\ i_t s_{kt} - \underset{(6.82)}{8.14}\ i_t c_{kt} + e_{kt}$$

e.g., if i_t goes from 3% to 4%,

then loan growth slows by 0.19%

$$y_{kt} = x'_{kt}\beta - \underset{(0.033)}{0.191}\ i_t + \underset{(0.460)}{0.503}\ i_t q_{kt}$$

$$+ \underset{(0.124)}{0.372}\ i_t s_{kt} - \underset{(6.82)}{8.14}\ i_t c_{kt} + e_{kt}$$

median bank has

$$q_{kt} = 0.253,\ s_{kt} = 0.0267,\ c_{kt} = 0.0906$$

coefficient on i_t:

$$-0.191 + (0.503)(0.253)$$

$$+ (0.372)(0.0267) - (8.142)(0.0906)$$

$$= -0.601$$

$$y_{kt} = x'_{kt}\beta - \underset{(0.033)}{0.191}\ i_t + \underset{(0.460)}{0.503}\ i_t q_{kt}$$

$$+ \underset{(0.124)}{0.372}\ i_t s_{kt} - \underset{(6.82)}{8.14}\ i_t c_{kt} + e_{kt}$$

if set coeffs on $i_t q_{kt}$ and $i_t c_{kt}$ to zero:

$$-0.191 + (0.372)(0.0267) = -0.181$$

effect if in the 75th percentile for size:

$$-0.191 + (0.372)(0.0950) = -0.155$$

How distinguish empirically?

(1) panel data on individual banks

(2) aggregate VAR

Endogenous:

GDP, CPI, interbank rate, real exchange rate, credit quality ratio

(consumption loans + small company loans)/(commercial loans)

Exogenous:

terms of trade, objective inflation, external inflation, trend

Approach:

- Estimate VAR with and without credit quality ratio to see if impulse-response of output to interest rate is different

Concern:

- Not best way to test for either statistical or economic significance

Statistical significance:

IRF for output unrelated to credit quality variation if and only if all coefficients on credit quality are zero in output regression

Economic significance:

If truth is

$$i_t \uparrow \Rightarrow q_{t+k} \uparrow \Rightarrow y_{t+m} \downarrow$$

then conditional expectation

$$E(y_{t+m} | i_t)$$

incorporates this effect

Better way to assess economic significance (Bernanke, Gertler, Watson, BPEA 1997):

Use estimates from model that includes q_{t-k} and simulate it with coefficients on q_{t-k} set to zero