BANK FOR INTERNATIONAL SETTLEMENTS

Life Below Zero: Bank Lending Under Negative Policy Rates

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The paper in a nutshell

- Transmission of negative rates to the economy
  - Is the bank lending transmission channel different?
  - Why?
- Main results
  - Yes. It depends on banks' funding structure. ZLB on deposit rates
  - Banks with higher portion of **deposits over TA**: i) lend less; ii) to riskier borrowers. Net worth effect.
  - Change in bank-clients matching: safer clients – low deposit banks
- Empirical strategy
  - Diff-in-diff analysis over the period 2013-2015 (Dum r<0, July 2014)
  - Data on **syndicated loans** from DealScan

Three main comments

I. Are negative rates really special?

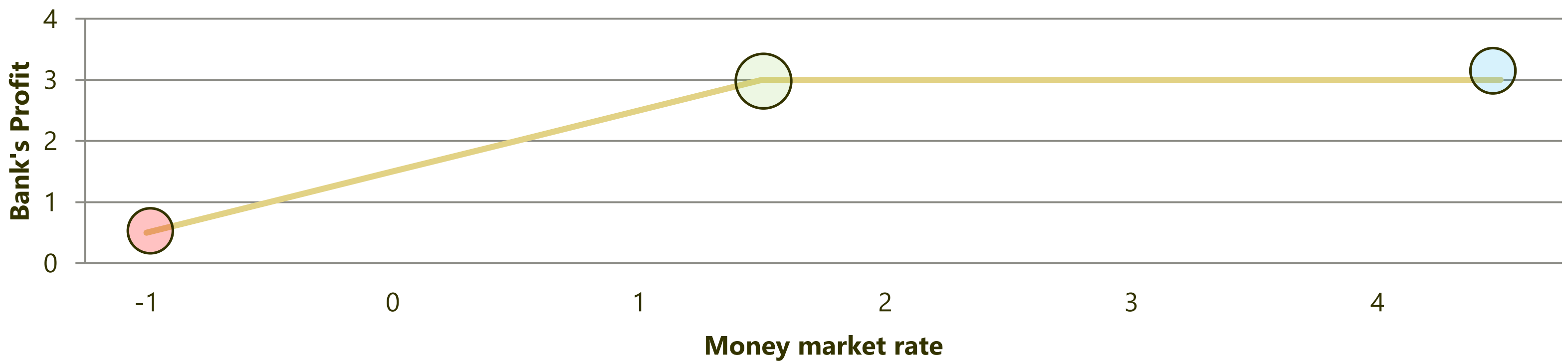
II. Is it deposit funding or equity?

III. Why a new bank-client matching?

I. Are negative rates really special?

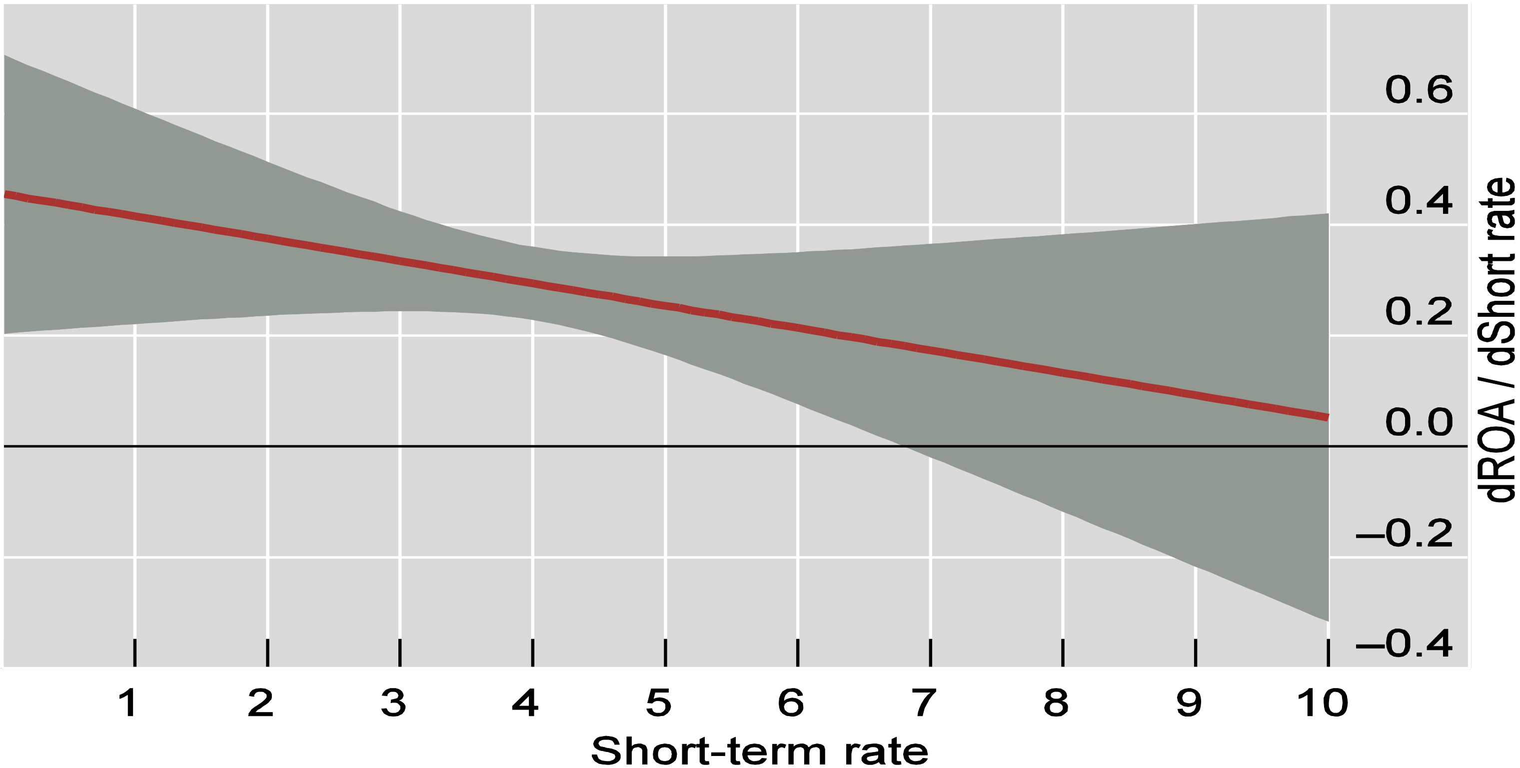
"3-6-3" rule and the "deposit endowment effect"
A bank with Loan=Deposits=100

Deposit rate	Money rate	Lending rate	Profit
0	-1	0.5	0.5
0	-0.5	1	1
0	0	1.5	1.5
0	0.5	2	2
0	1	2.5	2.5
0	1.5	3	3
0.5	2	3.5	3
1	2.5	4	3
1.5	3	4.5	3
2	3.5	5	3
2.5	4	5.5	3
3	4.5	6	3



⇒ The relationship between money interest rate and profits is concave

Effects of changes in money market rate on ROA (dROA/dr)

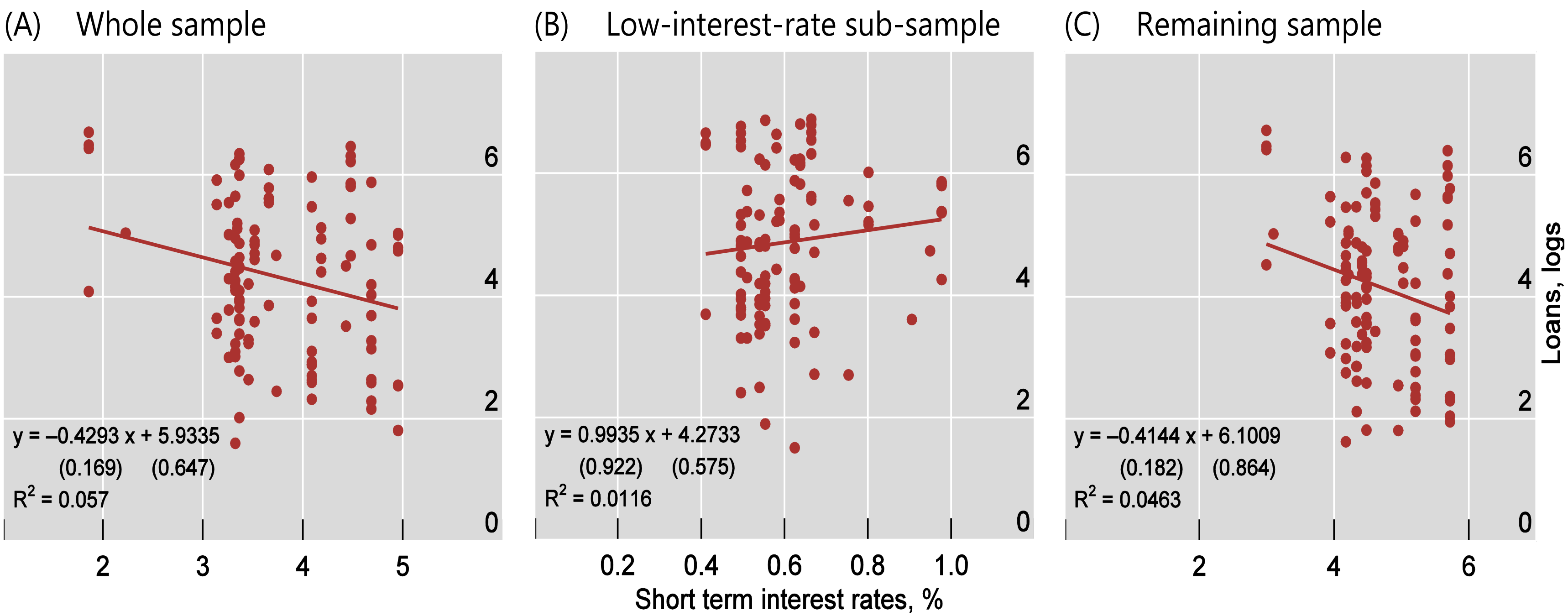


Note: The horizontal axis shows the nominal level of the money market rate (r). The vertical axis shows the derivative of the ROA with respect to the short-term rate, in percentage points. The shaded area indicates 95% confidence bands.

Source: Borio, Gambacorta and Hofmann (2016)

At very low rates easing loses effectiveness in boosting lending

Semi elasticity between bank lending and short term interest rates[1]



[1] Scatter plots of the average level of lending (in logs) against the level of the short-term interest rate for a group of 108 international banks the interest rate is the average for the jurisdictions in which each bank obtains funding. The dots thus refer to semi-elasticities. The left-hand panel covers the whole sample (1995-2014); the middle panel only periods in which the average interest was very low (last quartile of the distribution, below 1.25 percentage points); and the right-hand panel the rest of the sample. Standard errors are shown in brackets.

Sources: Borio and Gambacorta (2017).

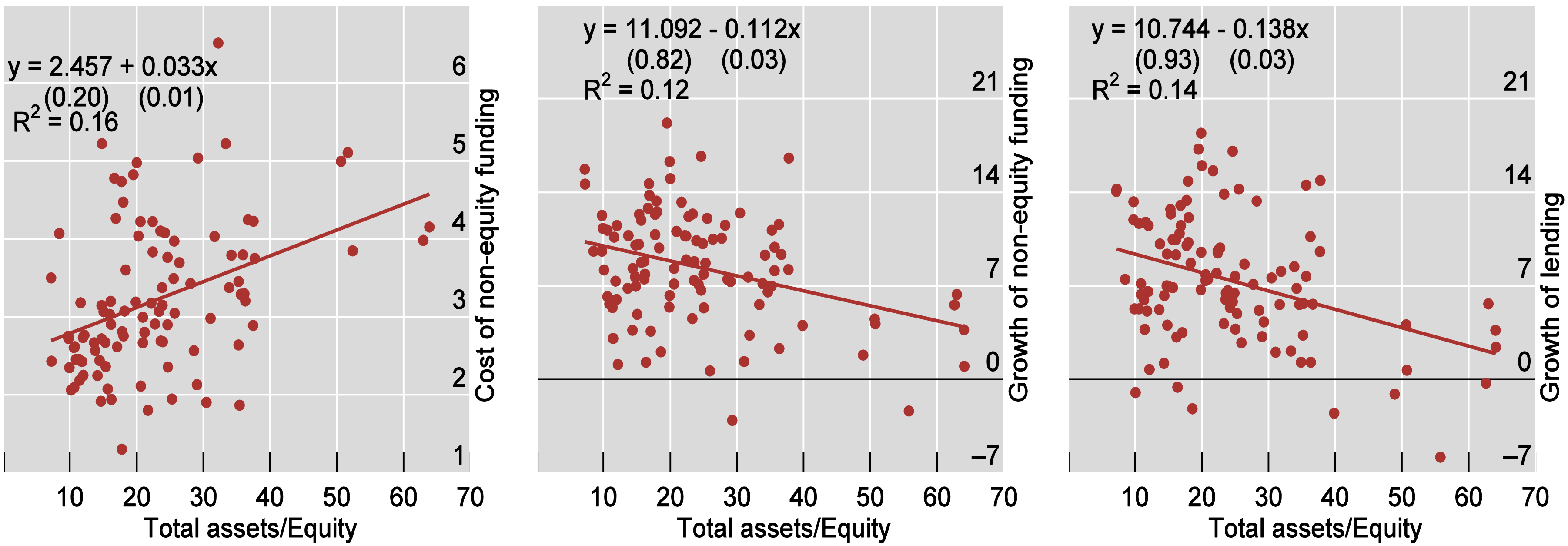
II. Is it deposit funding or equity?

Bank capital is essential for the functioning of the bank lending channel

- Loans = Deposits + Equity
- High Deposit/TA → Low Equity/TA
- A different story:
  - Low-capitalised banks supply less loans and take on more risk
  - Low-capitalised banks are perceived as “more risky” by depositors and investors and have more difficult/costly access to other forms of funding

Bank capital and loan growth

Cost of debt funding | Debt funding | Lending

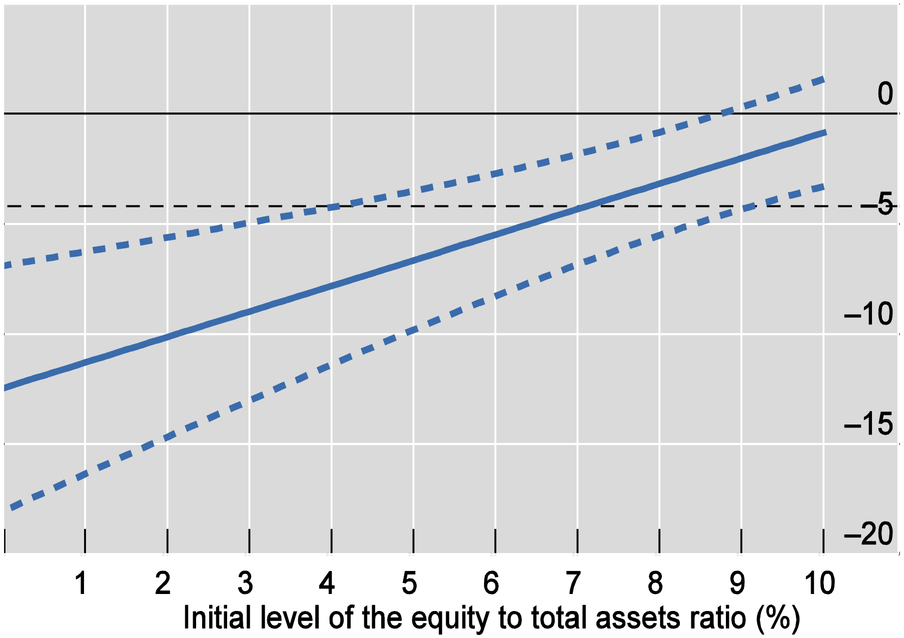


1 The panels represent scatter plots between the average level of leverage for a group of 105 international banks (details to be given below) and some bank-specific indicators: average cost of funding, average growth rate of non-equity financing; average annual growth rate of lending. Standard errors are shown in brackets.

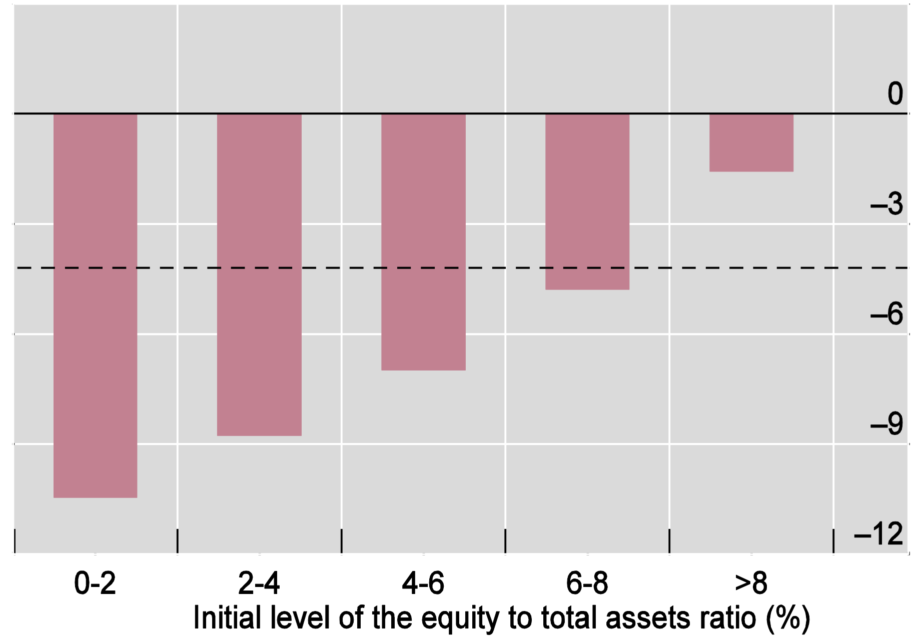
Sources: Gambacorta and Shin (2016).

Non-linear effect of higher bank capital on the cost of funding

Reduction in the costs of funding



Reduction in the costs of funding



Source: Gambacorta and Shin (2016).

A 1 percentage point increase in the Equity/TA is associated with a 4 bp average reduction in the cost of non-equity financing. Effect is non-linear

III. Why a new bank-client matching?

Different possible stories with alternative policy implications

- Change in the matching between bank-clients:
  - Banks with higher portion of deposits lend less; but more to riskier borrowers.
  - Safe borrowers switch to low-deposit banks
- Why?
  - Low-deposit banks (more capitalized) are also less risky?
  - Syndicated loans (transactional type), are less affected during crisis for safer borrowers (Bolton et al, 2016)
- Evergreening? What is the impact on relationship lending? What are welfare effects?

Conclusions

- Paper is well developed
- Some alternative stories are possible
- Further effort to evaluate policy implications and effects for the real economy

Very interesting paper!