BANK FOR INTERNATIONAL SETTLEMENTS

Discussion: "How banks respond to negative interest rates: Evidence from the Swiss exemption threshold"

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Research Question and Findings

How does the exposure to negative interest rates impact bank behavior?

Find

Swiss retail banks with ***higher*** SNB reserves

- ***Cut*** reserves relatively ***more***
- ***Lend*** more at ***higher*** margins
- Higher ***fee*** income

Identification

- ***Exemption*** threshold worth 20 times a bank's minimum reserve requirement
- ***Alternative*** treatment intensity
  - Exposed reserves + net interbank position
  - Deposit share
  - Rate on sight deposits-ZLB
  - LCR-exemption threshold

My Overall Impression

How does the exposure to negative interest rates impact bank behavior?

Exciting research question +highly policy ***relevant.***

Rare empirical evidence, here rich, comprehensive microdata!

But

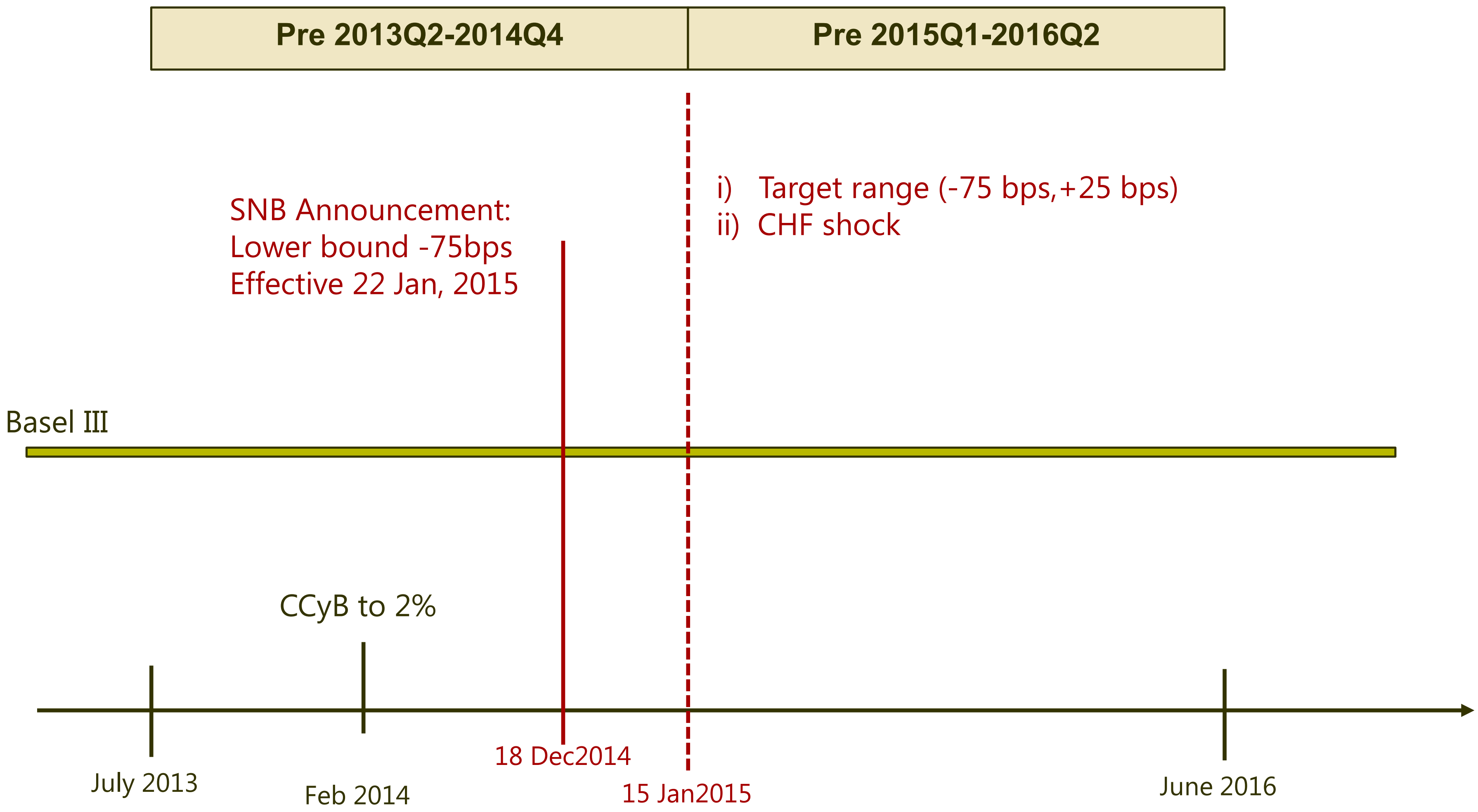
Do you actually analyze the effect of a funding subsidy on retail banks?

Concerns

1. Incomplete sample? Only ***retail*** banks?
   Representative of the Swiss banking sector?
   Interbank +***swap*** market are key, no counterparties?
2. Adjustments? treatment is totally ***static*** => maybe ***split*** SR and LR period
3. ***No*** control variables, ***no*** interaction
   Do banks manage a ***balance sheet*** or one asset class in a isolation?

=> Study in a Vacuum

Sequence of Events



Background: Exemption Threshold

Minimum reserve requirement of the reporting period 20 October 2014 to 19 November 2014 times 20 (static component).	
–/+	Increase/decrease in cash holdings resulting from comparison of cash holdings in current reporting period and corresponding reporting period in given reference period (dynamic component)
=	Exemption threshold

http://www.snb.ch/en/mmr/reference/pre_20141218/source/pre_20141218.en.pdf

$\Rightarrow$ Not static, has a dynamic component

$\Rightarrow$ Transitions/Switchers

Aren't those of interest?

- $\Rightarrow$ Adjustments … how?
- $\Rightarrow$ In new "steady state": What has changed? Who?

Data on Switzerland

FINMA Supervisory database

50 retail banks (later + 46 wealth management banks)

July 2013-Dec 2014 pre

Jan 2015-June 2016 post

- Balance sheets (monthly)
- Regulatory measures (quarterly)
- Income statements (semi-annual)

Empirical setup

$$Y_{it} = \alpha + \beta ER_{2014m11} + \gamma Post_{2015m1} + \boldsymbol{\delta(Post_{2015m1}ER_{2014m11})} + \varepsilon_{it} \qquad (1)$$

$$Y_{it} = \alpha + \boldsymbol{\gamma(Post_{2015m1}ER_{2014m11})} + {FE_b}' + {FE_m}' + \varepsilon_{it} \qquad (2)$$

Y_{it}	balance sheet ratios or log changes
$ER_{2014m12}$	excess reserves in % of TA
	$= \left({}^{Reserves_{i,2014m12} - Exemption_{i,2014m12}} / {}_{TA_{i,2014m12}} \right)$
	time-INvariant
	really 2014m12, why not 2014m11?
$Post_{2015m1}$	treatment period
${FE_b}'$	FE bank, demeaning
${FE_t}'$	FE time, demeaning

I Incomplete Sample?

Does ***any*** bank in your sample really ***pay*** negative rates to the SNB?

Banks in your sample actually ***rise*** their CB reserves and liquid assets.

=> "Do you analyze how a ***funding subsidy*** impacts retail banks."

Banks with *below* median exposure

Panel A: ER < Median	July 2013 - December 2014							January 2015 - June 2016							Diff	
	Obs	Banks	Periods	Mean	sd	Min	Max	Obs	Banks	Periods	Mean	SD	Min	Max	Post-Pre	Pval
All SNB Reserves: % of TA	450	25	18	4.06	1.90	0.05	10.79	450	25	18	9.14	3.12	0.75	16.32	5.09	0.00
Liquid Assets: % of TA	450	25	18	4.74	1.86	0.38	11.24	450	25	18	9.67	3.06	1.62	17.12	4.93	0.00
Claims on Banks: % of TA	450	25	18	3.19	2.22	0.15	9.62	450	25	18	2.23	1.60	0.09	13.96	-0.96	0.00
Net Interbank Pos: % of TA	450	25	18	-0.35	4.41	-13.53	8.64	450	25	18	-2.75	4.80	-16.92	10.07	-2.39	0.00

Banks with *above* median exposure

Panel B: ER >= Median	July 2013 - December 2014							January 2015 - June 2016							Diff	
	Obs	Banks	Periods	Mean	sd	Min	Max	Obs	Banks	Periods	Mean	SD	Min	Max	Post-Pre	Pval
All SNB Reserves: % of TA	450	25	18	8.30	4.76	0.04	27.51	450	25	18	9.59	3.79	2.27	22.06	1.29	0.00
Liquid Assets: % of TA	450	25	18	8.86	4.70	0.12	28.06	450	25	18	10.11	3.71	2.33	22.50	1.25	0.00
Claims on Banks: % of TA	450	25	18	3.29	2.66	0.30	11.52	450	25	18	3.06	2.84	0.13	14.48	-0.23	0.21
Net Interbank Pos: % of TA	450	25	18	0.16	3.74	-9.44	10.03	450	25	18	-0.51	3.94	-11.86	6.73	-0.67	0.01

=> No control group, no counterfactual?

I Incomplete Sample? Only retail banks?

Comprehensive analysis needs to incorporate ***all banking groups***! Why?

a) Banks ***counterparties*** on interbank market

- Repo market
- Swap market

- Are your banks only ***benefitting*** from it, absorbing liquidity on repo market?
  But who ***pays***?

b) Inherent heterogeneity

- Cantonal banks included? All? => some with government guarantee?
- Raiffeisen: legal structure, common clearing bank …

What is the ***market share*** of all banks you analyze?

Suggestion:

- Just control for fx exposure.
- Big banks, Raiffeisen, Wealth Managers, Cantonal Banks
  => all key for financial stability and MP transmission.

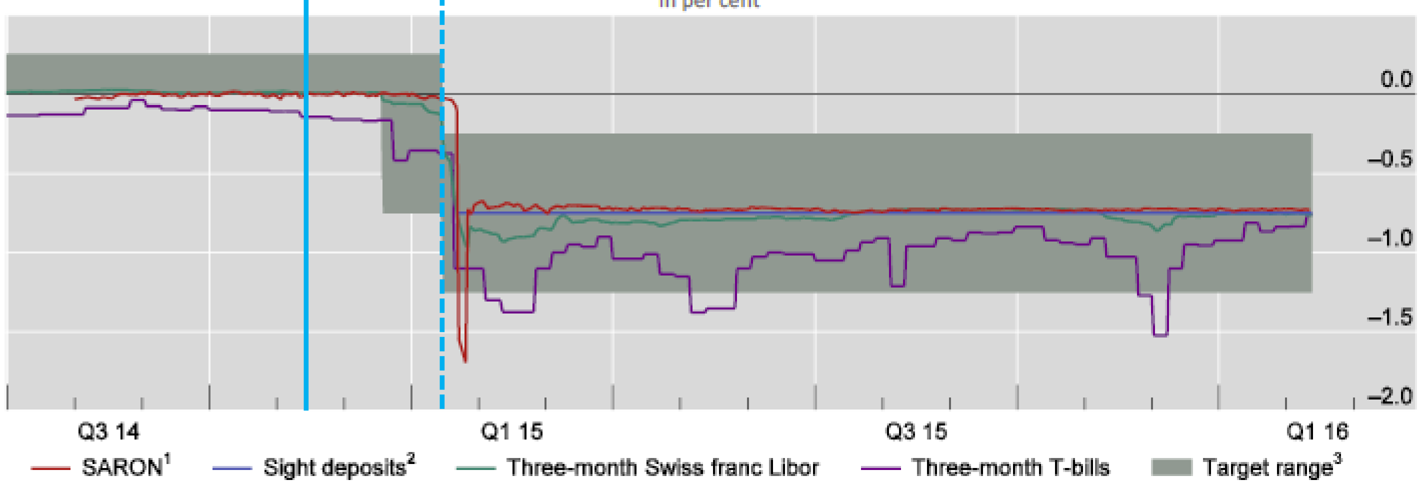
2 No Dynamic Adjustment

Pre 2013/Q2-2014Q4	Pre 2015/Q1-2016Q2

i) Implementation neg rates
ii) CHF shock

Announcement

Figure 4 - Key policy rates and money market rates



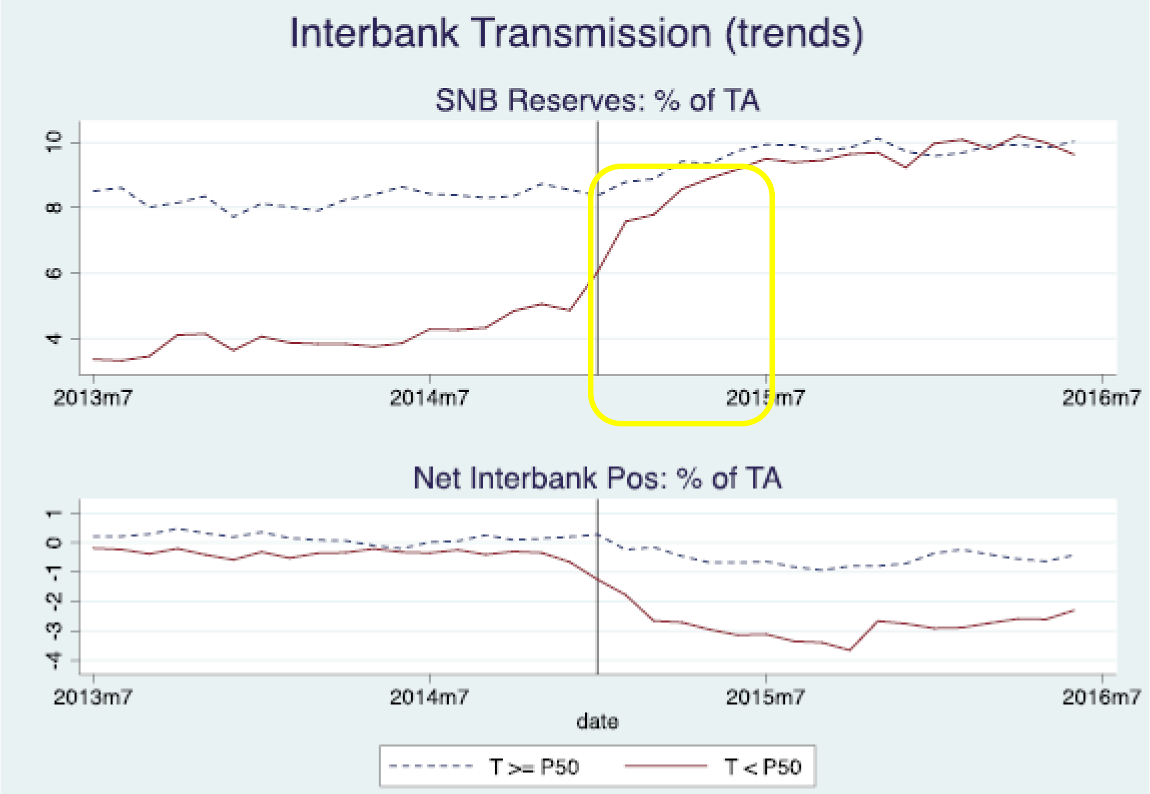
[1] The overnight Swiss average rate (SARON) replaced the repo overnight index (SNB) in August 2009. [2] Charged on the portion of sight deposits exceeding the exemption threshold. [3] Shaded corridor represents the SNB target range for the three-month Libor rate.

Sources: Bech and Malkhozov (2016)/ Bloomberg; national data.

2 No Dynamic Adjustment (Fig 9, your sample)

- In 2015q3 reserves have adjusted, => interbank market mechanisms.

- Do your regressions capture this?



- SR: How to banks ***adjust*** to the new environment? Transitions => interbank market
- LR: How did banks behave ***after*** changing their status? Switchers? How do banks behave still ***paying*** for negative rates? (Business models? Lending? Risk?)

3 No Control Variables

- Aren't balance sheet measures are interconnected? Interactions? Do banks manage a balance sheet or one item in isolation?

- Control variables should ***absorb*** changes ***unrelated*** to your negative rates.

- ***Regulatory*** measures also have a more ***holistic*** view.

- Phase-in period of Basel III
  => changes in regulatory standards?

Open issues: …sample, ..missing controls, dynamics, interactions … or new puzzles?

“Banks’ ***profitability*** has thus ***suffered*** in the period after Jan 2015, but less so for banks with relatively ***higher*** levels of exposed reserves.”

Intuitive?

“banks have shortened balance sheet …. Through relatively larger ***reductions*** in ***wholesale*** funding than through reduction in deposit funding”

Does this contrasts with the traditional “bank-lending channel”?

Open issues: …missing controls, dynamics, interactions … or new puzzles?

Concentration

"Banks focused on ***more concentrated*** mortgage markets have managed to ***increase*** their interest ***earned*** relatively more …

… Model 2 with fixed effects suggests just the ***opposite***…"

How do you get the ***market shares*** for big banks, Raiffeisen etc?

Based on different ***samples***?

Market Power

"… the fact that the bank could not set lower deposit rates … may signal ***limited market power*** in the ***deposit*** market"

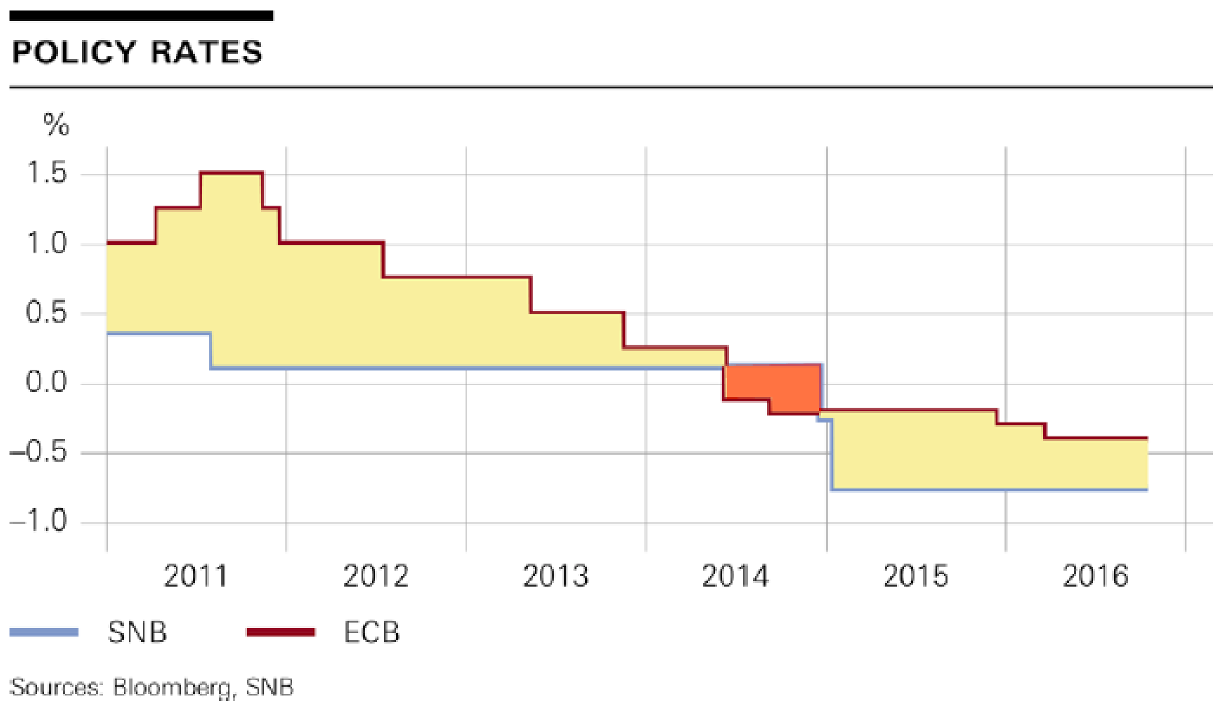
But at the same time market power in the ***mortgage market***?

Open issues

FX Effect

"***Partial substitution*** of liquid assets in CHF with those denominated in other currencies may have contributed to the SNB's objective of weakening the Swiss Franc"

- Into which currencies?
- Why? ***Cash-in*** the fx jump?
- Carry trades, expecting further appreciation? … but why EUR



Other (minor) issues

- ***Different Samples*** from risk-taking analysis, the interbank market study, market power
- You do ***not*** have any bank with ***zero exposure*** (constant and FE).

Additional Suggestions

- Compare to ***IOER*** in US!
- Include ***seasonal*** dummies to address ***window*** dressing
- Try some ***placebo*** dates
- Drop 2014m12 and 2015m1?

Conclusions

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Find: Swiss retail banks with ***higher*** SNB reserves

- ***Cut*** reserves relatively ***more***
- ***Lend*** more at ***higher*** margins
- ***Higher*** fee income

Identification

- ***Exemption*** threshold worth 20 times a bank's minimum reserve requirement and alternatives

But ***Do you actually analyze the effect of a funding subsidy on retail banks!***

Concerns:

1. Only ***retail*** banks? Representative?
   Counterparties on the ***interbank*** +***swap*** market key
2. ***No*** adjustments?
3. ***No*** control variables, no interaction. Don't banks manage a balance sheet?

=> Analysis in a vacuum?

Thank you