

**Discussion:**  
**The Coevolution of Money Markets  
and Monetary Policy, 1815-2008**

**Norges Bank Conference  
Of the Uses of Central Banks, Lessons from History  
Oslo  
June 5-6, 2014**

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# Summary of Paper

- Main idea: monetary policy implementation depends on and affects money market structure
- Main contribution: an empirical assessment of the coevolution of markets and policy.
- Great data collection effort on CB balance sheets and money market interest rates for 200 years!

# Empirical strategy

- Composition of balance sheet: - the correlation with assets traded in the money market (structure)
- Form of operation intervention – examine assets side - share of advances or discounts to total domestic credit in the economy
- How effective: Short term interest rate spreads – if freely lends then zero or negative if limits borrowers can be positive (rationing)

# Questions that need to be addressed

- Are the money market and central banks balance sheets determined by the choice of monetary regime?
- If so, the paper mainly addresses adherence to the (exogenous) regime
- What are short term money market spreads really measuring? The effectiveness of price setting? The ability to provide liquidity in times of crisis?
- CB have two principal goals: target ‘something’ and provide liquidity. How can we empirically separate the two operations?

# Where this paper could evolve to?

- Theory: agree – no simple unified theory.
- But: paper could be better grounded in existing theory for the different monetary regimes especially useful for the study of prices and what they mean.
- CBs are managing liquidity subject to regime dependent constraint

# Where this paper could evolve to?

- Empirical: make use of your great dataset:
  - use VAR or BVAR to test the channels of transmission in the money markets and assets.  
Exogenous vs. endogenous
  - Use panel data to test for hypothesis
  - Some cases studies

# ‘Primitive’ Panel estimates

Money markets spreads tend to be higher when CB uses repo. Country fixed effects not important

	(1)	(2)
	Spread - RE	Spread- FE
gold	-0.828 (-1.12)	0.0127 (0.02)
discount	-0.221 (-0.26)	0.770 (0.77)
advances	0.659 (0.39)	1.238 (0.63)
repo	4.801** (2.61)	5.658** (3.04)
bonds	-0.0763 (-0.12)	0.730 (0.99)
securities	-1.815 (-0.84)	2.286 (0.84)
Constant	-0.411 (-0.01)	-79.24 (-1.38)
Observations	51	51
r <sup>2</sup>	.2	.123

*t* statistics in parentheses  
\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

# Monetary regime fixed effects are important

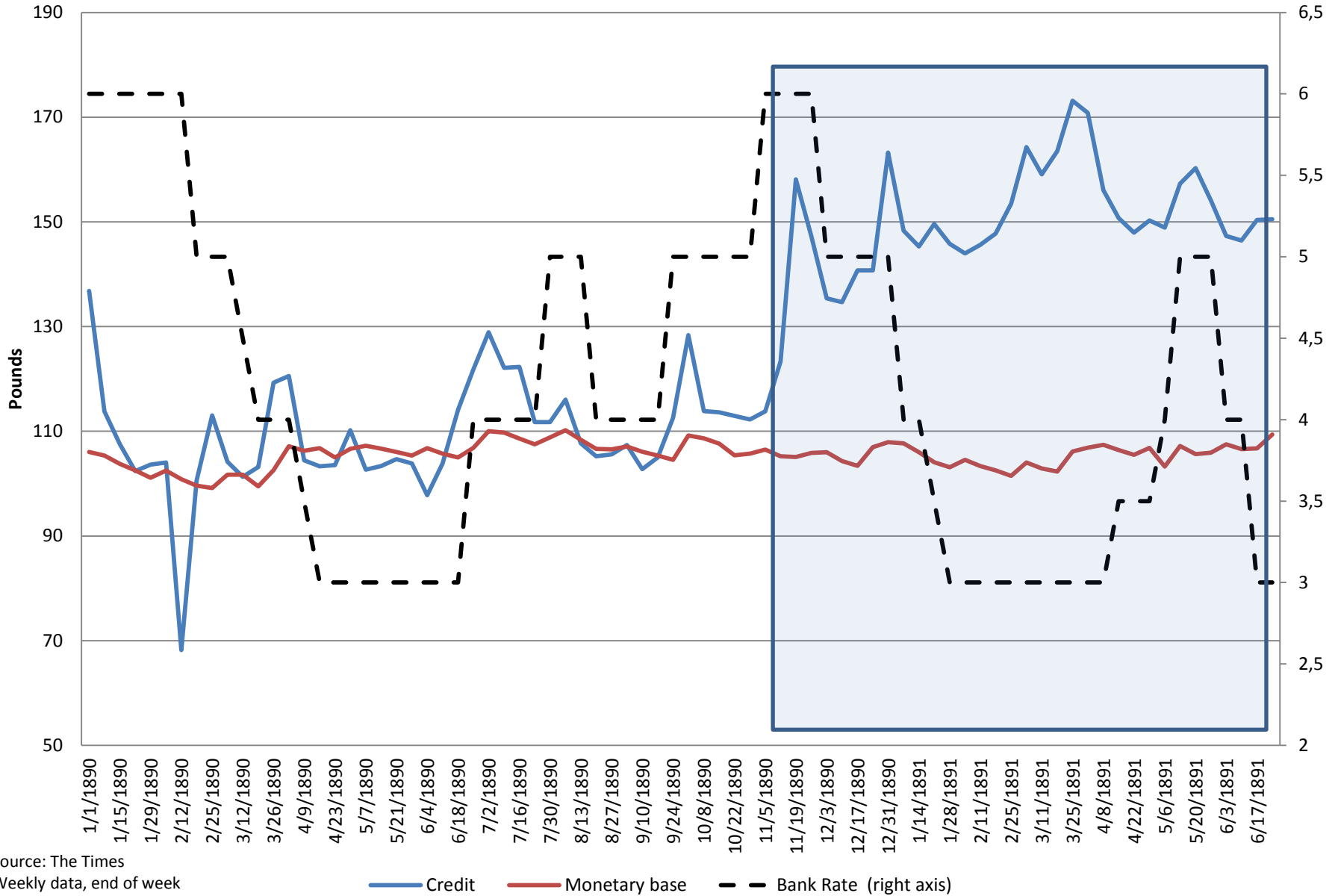
	(1)
	<b>spread</b>
<b>gold</b>	<b>0.0246</b> <b>(0.03)</b>
<b>discount</b>	<b>1.062</b> <b>(0.90)</b>
<b>advances</b>	<b>1.053</b> <b>(0.57)</b>
<b>repo</b>	<b>3.175</b> <b>(1.67)</b>
<b>bonds</b>	<b>0.528</b> <b>(0.70)</b>
<b>securities</b>	<b>-2.014</b> <b>(-0.91)</b>
<b>d_gold</b>	<b>-71.03</b> <b>(-1.64)</b>
<b>d_fx</b>	<b>-90.86*</b> <b>(-2.41)</b>
<b>d_bw</b>	<b>-65.41</b> <b>(-1.58)</b>
<b>Constant</b>	<b>-8.452</b> <b>(-0.16)</b>
<b>Observations</b>	<b>51</b>
<b>r<sup>2</sup></b>	<b>.304</b>



Case studies: Providing liquidity under monetary regime constraints: Baring (1891) vs Lehman (2008)

- BoE operating under gold standard – can't change monetary base for given gold reserves. Liquidity crisis: market rates go up. To provide liquidity has to **raise bank rate** operate on the **liability** side (borrow) and lend. lending lower market and bank rate
- Fed operating under inflation target regime – **lower Fed rate increase monetary base.**

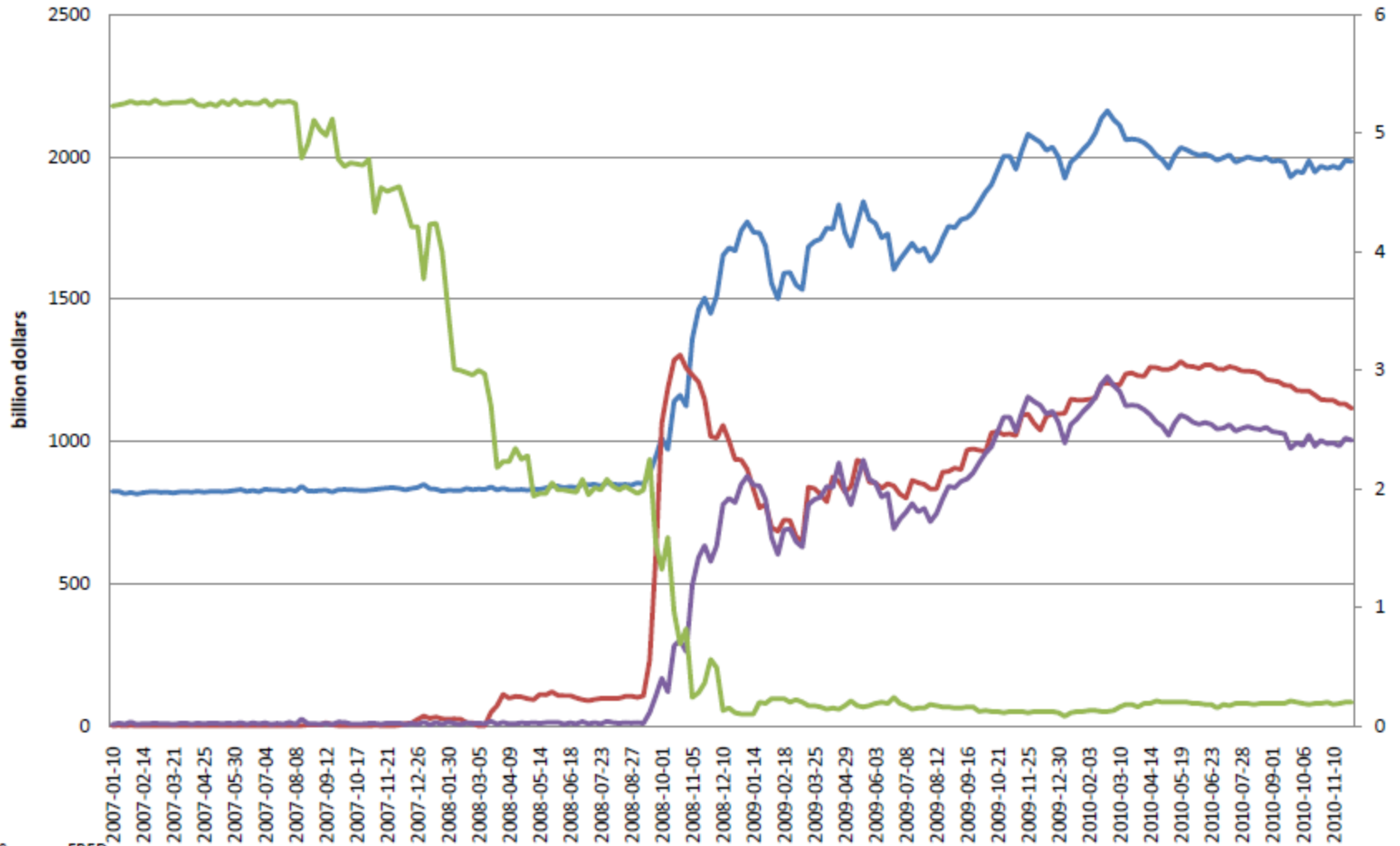
# Bank of England intervention - During the Baring Crisis



Source: The Times  
Weekly data, end of week

— Credit — Monetary base — Bank Rate (right axis)

### Chart 9 Federal Reserve Bank Actions during the Lehman Brothers Crisis



Sources: FRED

Weekly Data; end of week

— Monetary base   
 — total "credits"   
 — Reserves of depository institutions   
 — Fed Rate (right axis)

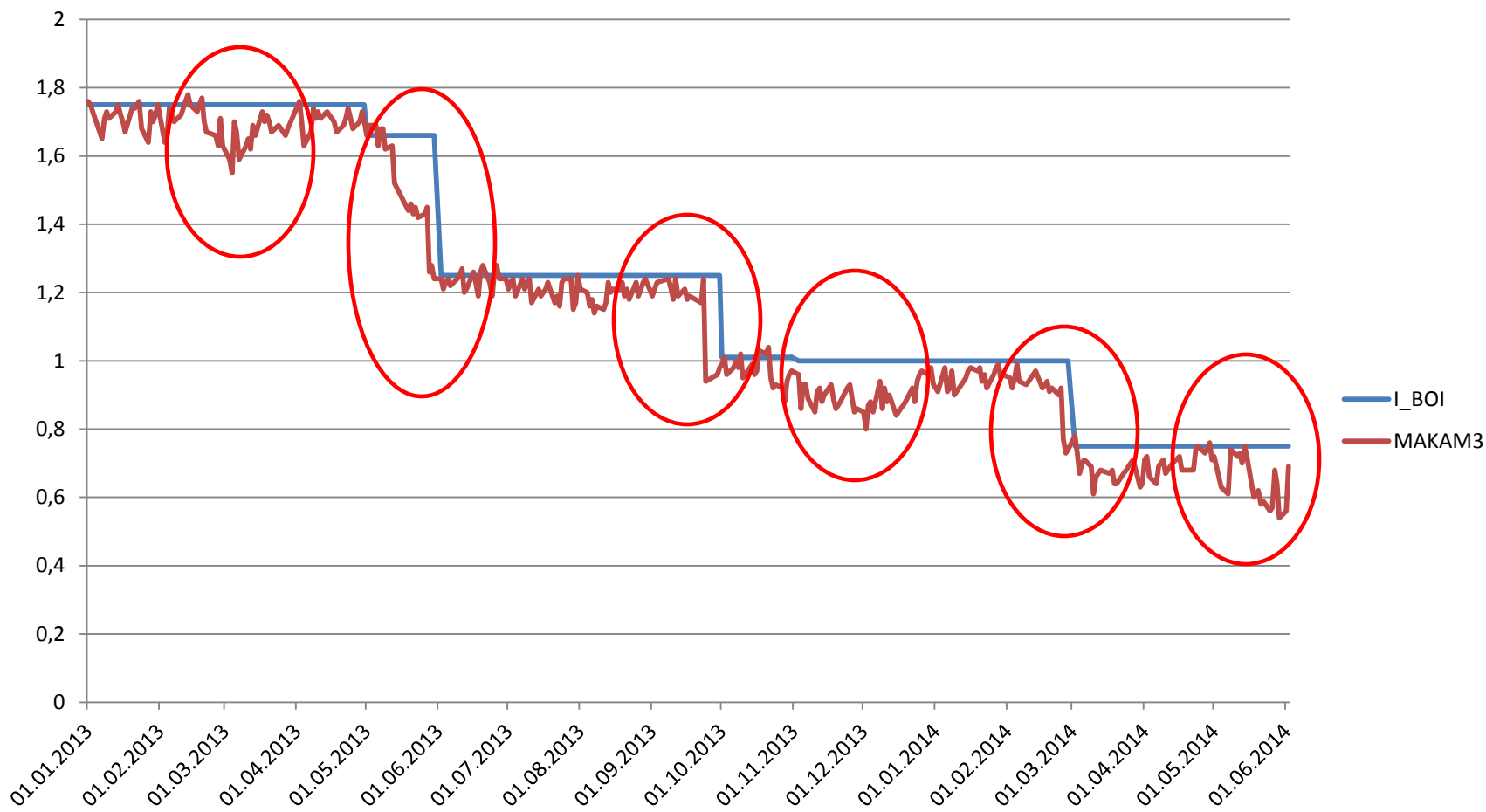
# Case study: Closer to my home

- Bank of Israel uses Makam: short term securities issued by central bank to affect the money market rates – **liability side** main asset  
FX reserves – **asset side**
- Objective: Manage money market conditions given the policy rate subject to constraint of FX intervention for exports support objective.
- Looking at **asset** side tells very little about managing the money market.

# Case study: Closer to my home

- What do short term money market spreads tell us?
- Spreads are affected by central bank actions in the short term debt market
- **But** spreads also convey expectations of market participants on the bank of Israel's policy rate
- On average the median spread 2004-2014 is zero

# The BOI rate and short term BOI bond rate – the liquidity versus expectations



# Summary

- Important research agenda
- So much more to do