

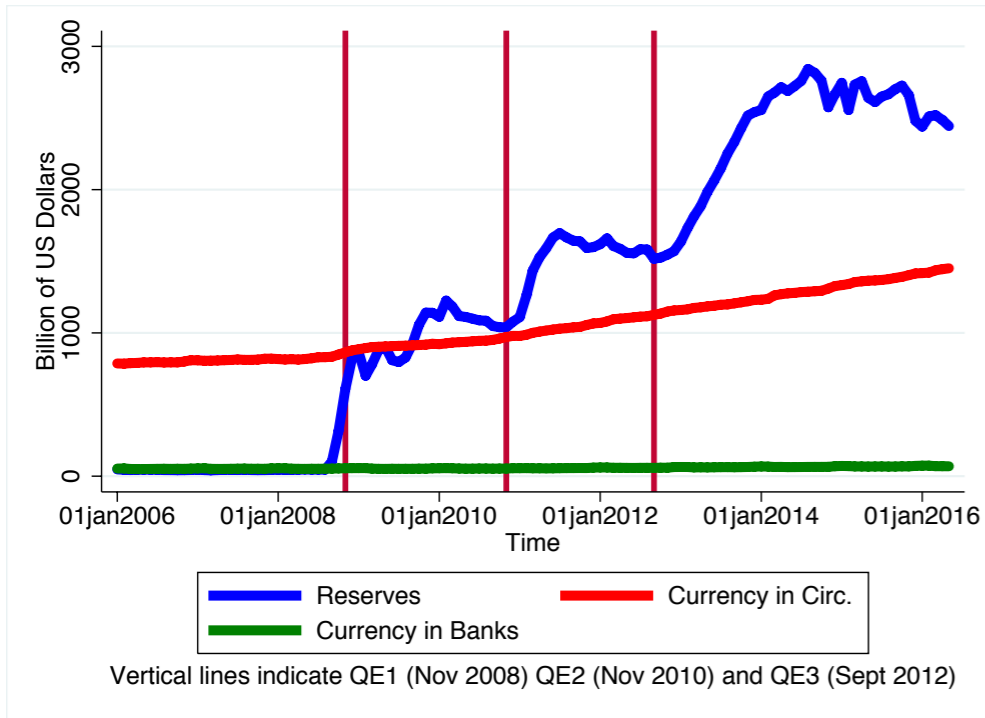
# **NEW CENTRAL BANKING TOOLS AND FINANCIAL RESILIENCE**

Ricardo Reis  
LSE

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# I. Large excess reserves

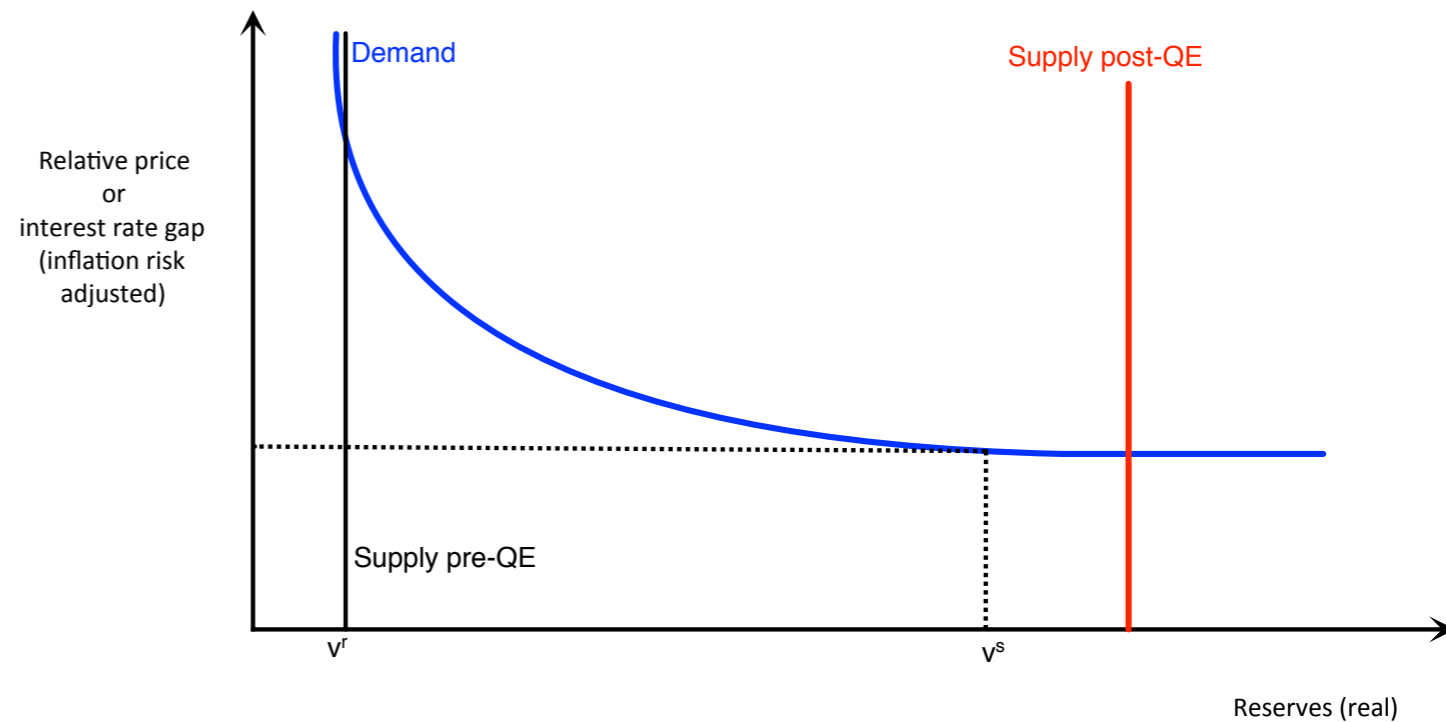
Figure 4. QE and the liabilities of the Federal Reserve



Stay in floor system, satiate demand for central bank liquidity.

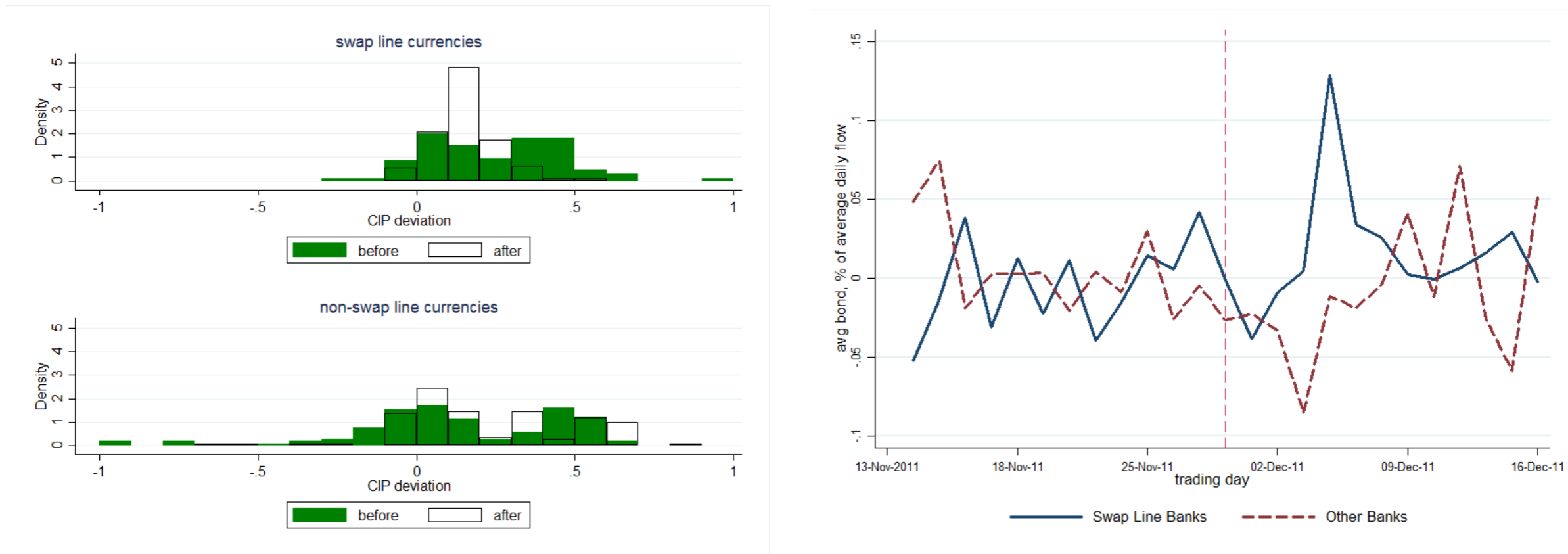
Implement Friedman rule, automatically absorb future liquidity shocks

Figure 3. Equilibrium in the market for reserves



# 2. International lender of last resort

Figure 7: Excess flows into USD bonds averaged across banks and bonds around the treatment date

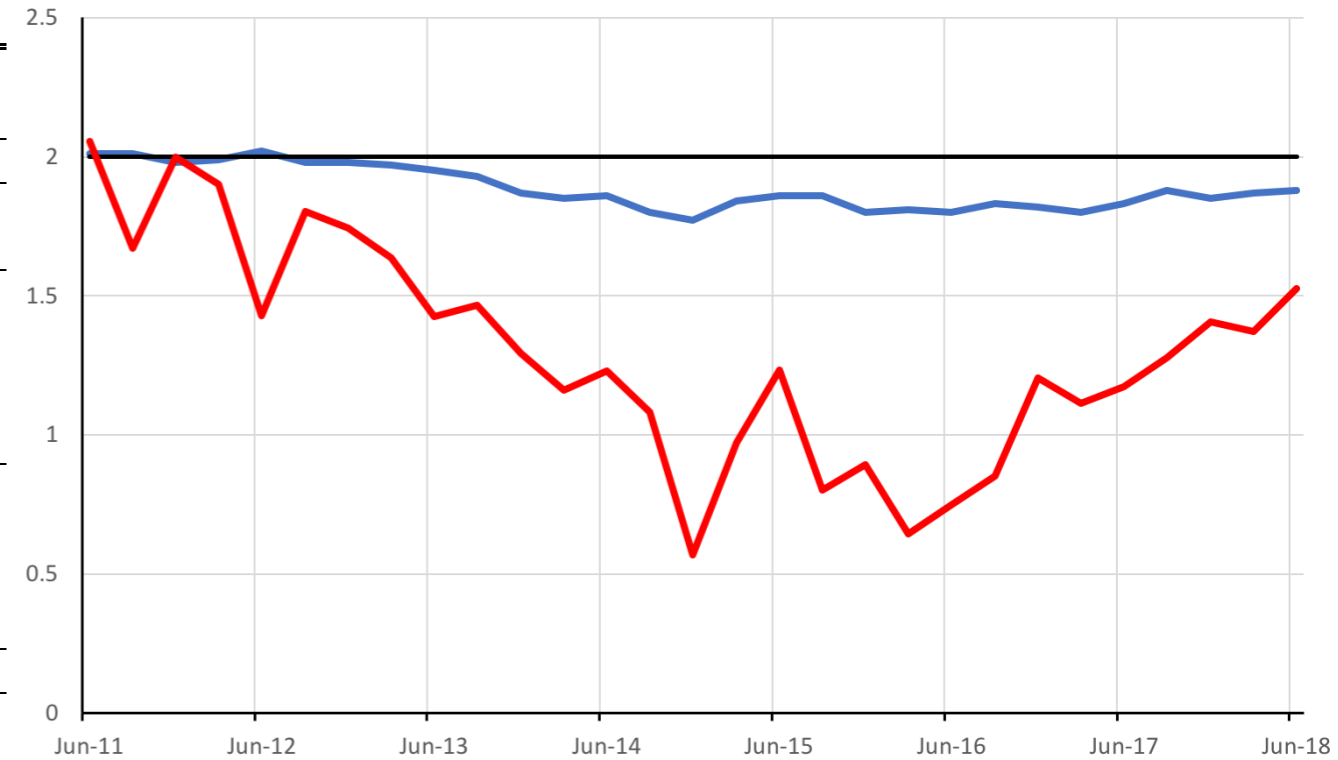


Global banks need lending facilities in multiple currencies.

Bilateral network or multilateral arrangement?

# 3. Longer-terms rates and inflation

5-year inflation expectations, SPF and swaps, Eurozone



Policy	Ann. date	ITALY					SPAIN				
		Avg. yield	6mo	2yr	5yr	10yr	Avg. yield	6mo	2yr	5yr	10yr
SMP	May 10, 2010	-47	-15	-80	-55	-31	-62	ND	-87	-75	-51
	Aug 7, 2011	-84	-26	-103	-107	-92	-92	ND	-115	-112	-98
	Total	-131	-41	-183	-162	-123	-154	ND	-202	-187	-149
OMT	Jul 26, 2012	-72	-48	-116	-77	-48	-89	-69	-113	-89	-63
	Aug 2, 2012	-23	-30	-64	-29	11	-41	-37	-98	-36	12
	Sep 6, 2012	-31	-15	-21	-42	-46	-54	-7	-37	-67	-78
	Total	-126	-93	-201	-148	-83	-184	-113	-248	-192	-129
3-year LTROs	Dec 1, 2011	-46	-25	-46	-69	-34	-61	-19	-79	-72	-58
	Dec 8, 2011	35	10	30	47	35	30	36	28	34	32
	Total	-11	-15	-16	-22	1	-31	17	-51	-38	-26

Going long when at ZLB, but with limits.

Respond in order to lead markets.

# Conclusion

1. Large excess reserves
2. International lender of last resort
3. Longer-term rates and inflation control

Resilience to liquidity needs of the markets,  
resilience of inflation target to the markets