

Geneva Report 18

What Else Can Central Banks Do?

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Available at www.icmb.org

Frequency and Cost of ZLB



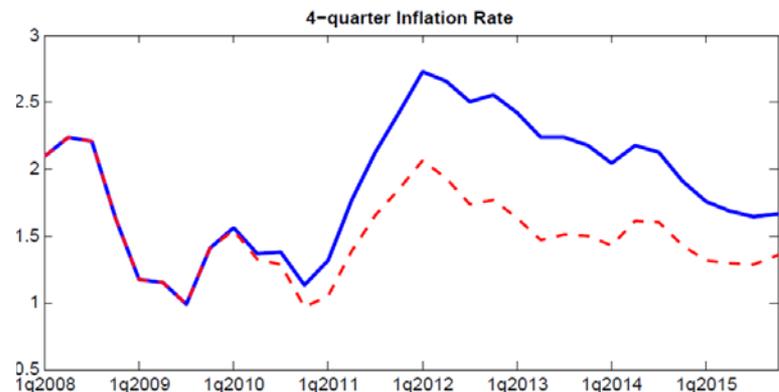
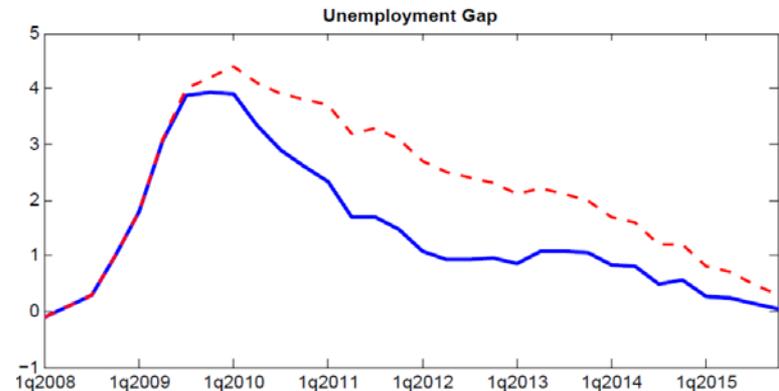
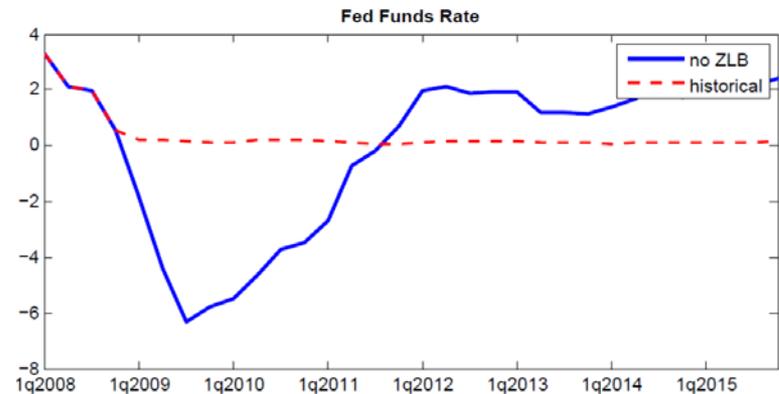
- $j^{avg} = r^* + \pi^e$
- Lower neutral real rates and lower inflation since 1980s:
The lower bound constraint has become frequent reality

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Australia	11.1	13.5	15.8	12.1	12.0	16.0	16.9	15.0	13.2	17.2	12.6	8.5	5.8	4.8	7.1	7.5	6.2	5.0	4.8	5.0	6.3	4.3	4.8	5.2	5.3	5.5	6.3	6.7	4.3	3.7	4.8	4.3	3.0	2.5	2.5	2.0
Canada													6.8	4.0	5.7	5.8	3.0	4.3	5.0	4.8	5.8	2.3	2.8	2.8	2.5	3.3	4.3	4.3	1.5	0.3	1.0	1.0	1.3	1.3	1.3	0.8
Denmark	11.0	11.0	10.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	8.5	9.5	9.5	6.3	5.0	4.3	3.3	3.5	3.5	3.0	4.8	3.3	2.9	2.0	2.0	2.3	3.5	4.0	3.5	1.0	0.8	0.8	0.0	0.0	0.0	0.0
Euro Area	7.5	7.5	5.0	4.0	4.5	4.0	3.5	2.5	3.5	6.0	6.0	8.0	8.3	5.8	4.5	3.0	2.5	2.5	2.5	3.0	4.8	3.3	2.8	2.0	2.0	2.3	3.5	4.0	2.5	1.0	1.0	1.0	0.8	0.3	0.1	0.1
Japan	7.3	3.5	3.5	5.0	5.0	5.0	3.0	2.5	2.5	4.3	6.0	4.5	3.3	1.8	1.8	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.1	0.1	0.1	0.1	0.4	0.8	0.3	0.3	0.3	0.3	0.3	0.1	0.1	0.1
Sweden	10.0	11.0	10.0	8.5	9.5	10.5	7.5	7.5	8.5	10.5	11.5	8.0	10.0	5.0	7.0	7.0	6.0	4.5	4.5	3.2	4.0	4.5	4.5	3.0	2.0	1.5	2.5	3.5	2.0	0.5	0.5	1.9	1.1	0.8	0.0	-0.4
Switzerland	3.0	6.0	4.5	4.0	4.0	4.0	4.0	2.5	3.5	6.0	6.0	7.0	6.0	4.0	3.5	1.5	1.0	1.0	1.0	0.5	3.5	1.8	0.8	0.3	0.8	1.0	2.0	2.8	0.5	0.3	0.3	0.0	0.0	0.0	0.0	-0.8
United Kingdom	14.0	14.4	10.0	9.1	9.5	11.4	10.9	8.4	12.9	14.9	13.9	10.4	6.9	5.4	6.1	6.4	5.9	7.3	6.3	5.5	6.0	4.0	4.0	3.8	4.8	4.5	5.0	5.5	2.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
United States	12.9	12.1	8.5	9.4	8.1	7.8	5.9	6.8	8.7	8.3	7.0	4.0	3.0	3.0	5.5	5.5	5.5	5.5	4.8	5.5	6.5	1.8	1.3	1.0	2.3	4.3	5.3	4.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4

Cost of ZLB

Simple macro model gives quantification for the US:

- $r^* = 1\%$ and $\pi^e = 2\%$:
- i will hit zero often - whenever unemployment exceeds NAIRU by 1.1pp
- Figure: The severe recession of 2008, $i^* = -6\%$





Policy Implications / Structure of Report

- Focus of Report: What can central banks do to meet their mandates when constrained by ZLB?
- Unconventional monetary policy necessary in future
 - Negative interest rates (NIR)
 - Quantitative easing (QE) (incl. helicopter money)
 - Forward guidance on policy or inflation
- Policies to reduce the incidence of the ZLB
 - Raising the inflation target
 - Periodic re-examination of inflation targets
- Long view: Monetary policy in post-cash economies

Negative Interest Rates (NIR)



- Recent experiences in five countries suggest:
- NIR transmits largely as expected (anomalies in banking)
- Rates can be cut further below zero
- Side effects tend to be overstated

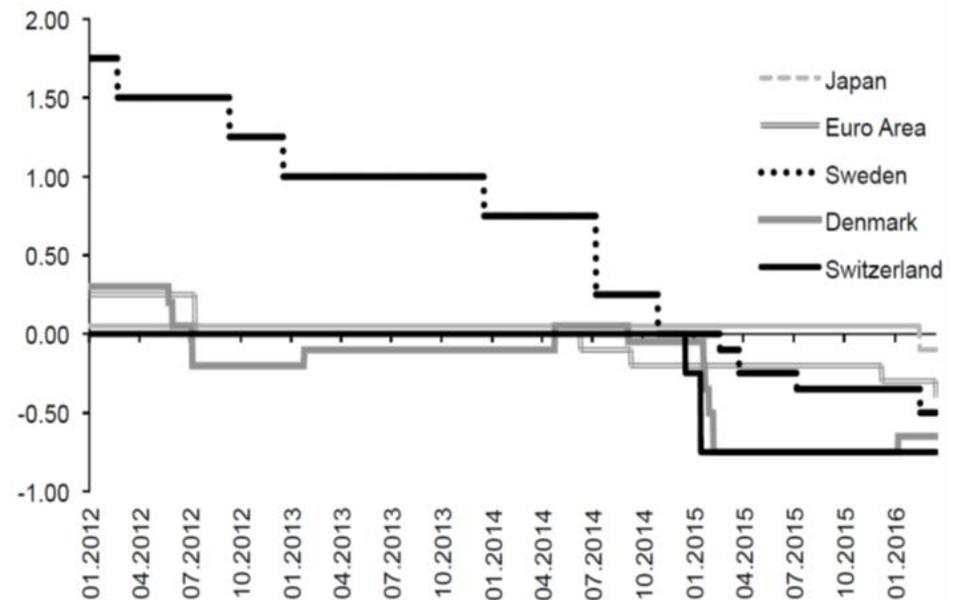


Figure 3.1. Monetary policy interest rates in negative interest rate countries



Quantitative Easing (QE)

- Literature unambiguously shows QE lowers bond yields.
- Adverse side effects tend to be overstated.
 - Notably, fiscal implications are benign.
- Previous programs had stimulus equivalent to cut in short rate of 2 or 3%...
- .. and scope for more in many countries.
- Assets other than government bonds can be brought into the mix.



Quantitative Easing (QE)

Table 3.2 Scope for quantitative easing in major advanced economies (2015Q4, percent of GDP)

	Central bank assets	Total securities	Domestic bonds and international bonds in local currency			Stock market
			Financial corporations	Non-financial corporations	Government	
Australia	9	202	58	3	44	97
Canada	5	200	22	14	61	103
Eurozone	26	182	47	9	74	53
Japan	77	382	51	13	202	115
Korea	30	194	32	36	36	90
Sweden	16	341	54	2	27	257
Switzerland	98	261	15	3	14	229
United Kingdom	22	275	36	11	92	136
United States	25	300	81	30	90	99



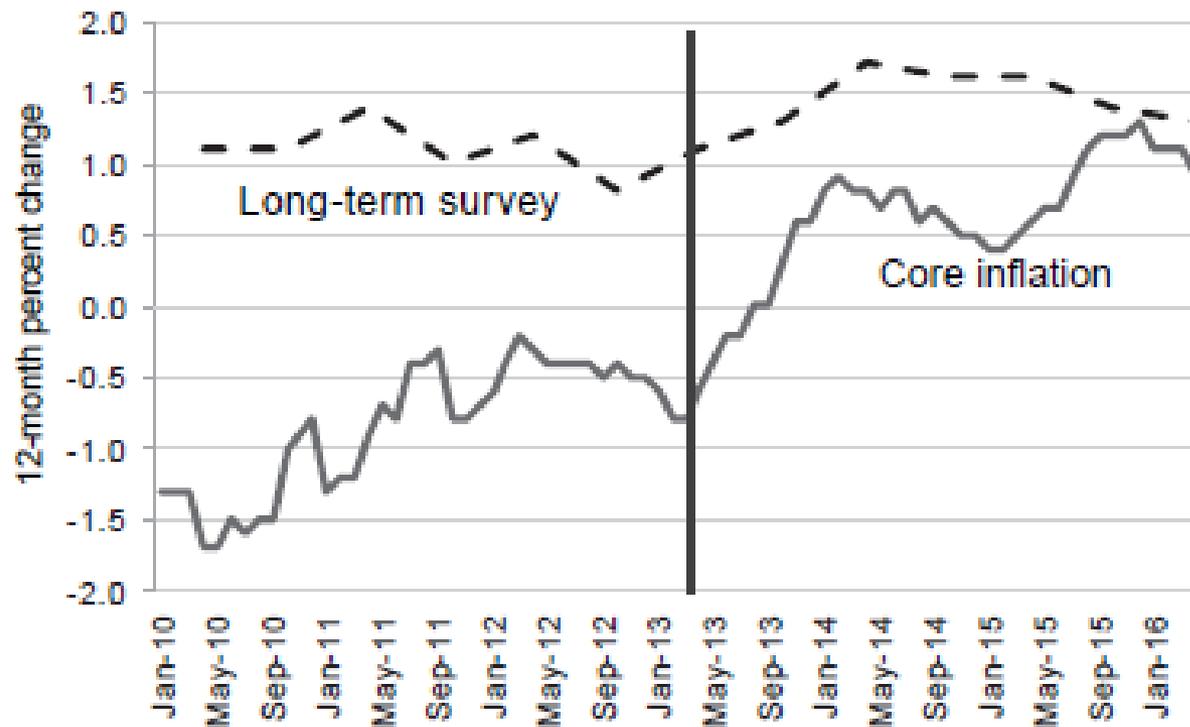
Forward Guidance on Inflation

- A credible promise of higher future inflation can reduce current real interest rates.
- Forward guidance has worked, within limits.
- A higher inflation target can be a powerful commitment device for raising inflation expectations.
- Forceful communication, credible supporting policies and continued policy adjustment needed to convince markets.



Abenomics

Figure 3.14 Inflation and inflation expectations in Japan



Note: Core inflation is based on consumer prices excluding fresh food, energy, and consumption taxes. Long-term survey is six- to ten-year ahead inflation expectations of professional forecasters (April and October). The vertical line is at April 2013. Data are for January 2010 through April 2016.

Sources: Bank of Japan and Consensus Forecasts.

Monetary Stimulus and Financial Stability



- Risk of exuberance similar for conventional and unconventional monetary easing
- Search for yield, excess leverage
- Macropru tools are best for financial stability, but questions as to effectiveness
- Monetary policy blunt instrument
- ZLB more likely to occur in conditions of low exuberance.



Raising the Inflation Target

- Limits to QE, NIR and forward guidance are suggestive of benefits to preempting the liquidity trap.
- Low targets reduce normal nominal interest rates, increase the ZLB incidence and target undershooting.
- Low targets may have become inconsistent with central banks' macro stability mandates.
- Inconsistency is likely to persist or worsen, unless neutral real interest rate reverses downward trend.



Target Credibility

- The most credible target is the one most consistent with the mandate.
- Link inflation target to the mandate. Analysis should factor in risks and costs of liquidity trap.
- Targets should not be fixed forever. Cost and benefits change over time and across countries.
 - For example, the neutral real interest rate may change.
- Periodic re-examination of inflation targets ensures continued consistency with mandates.



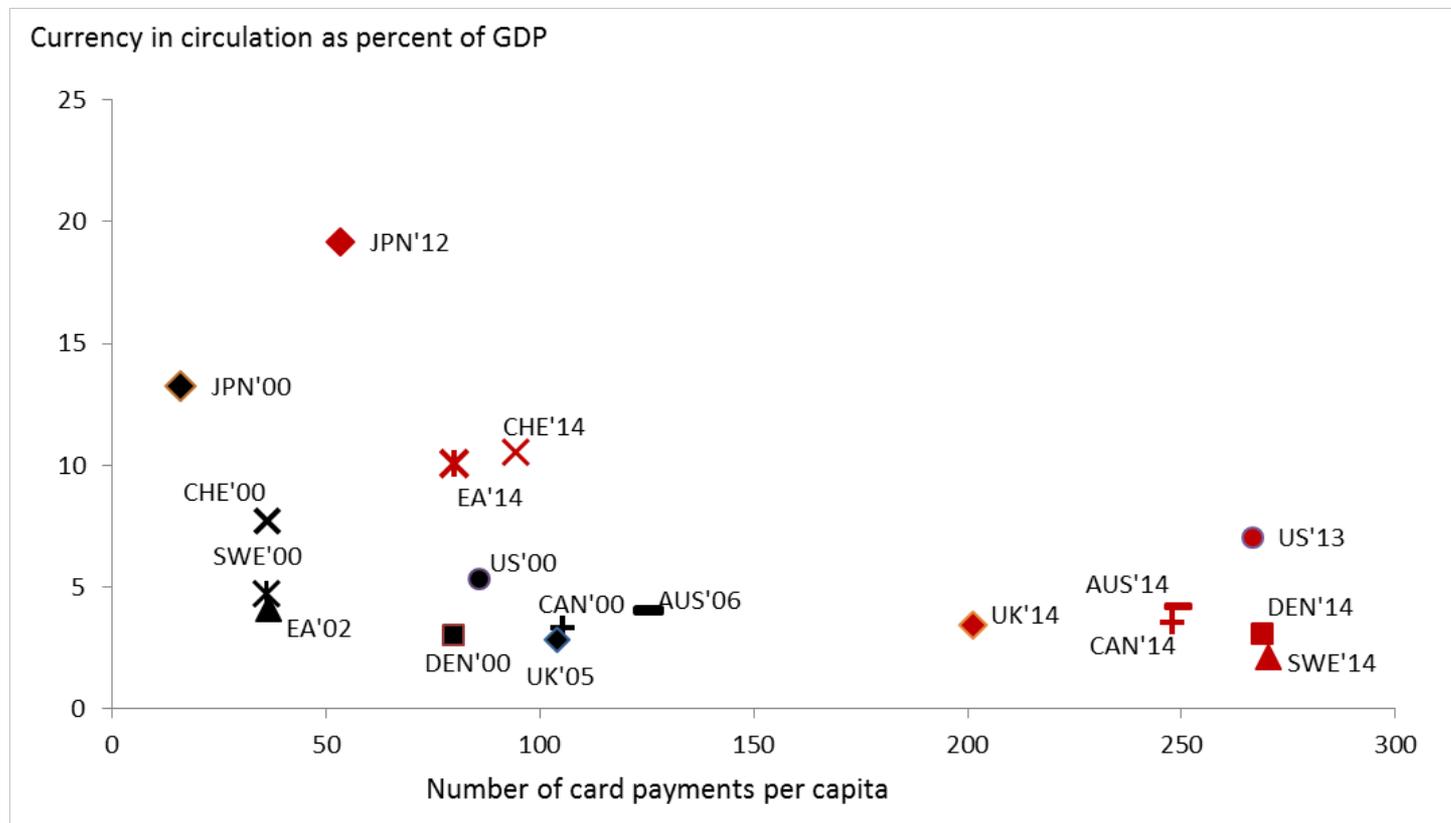
The Post-cash Economy

- The liquidity trap is created by the availability of cash.
- Cash is needed as a means of payment.
- New payments technologies reduce the need for cash.
- If cash can be phased out, liquidity traps will be obsolete, and optimal inflation targets will likely be lower.
- Diminished use of cash raises issues of social inclusion, privacy of payments and digital security.



The Post-cash Economy

- Some countries' payments systems are quickly becoming cashless.





Conclusions

1. Recovery was too slow, needed more or faster stimulus
2. Central banks have firepower in a liquidity trap
 - Reduce policy rates below zero
 - Expand scale and scope of QE
 - Commit to higher future inflation if credible
3. Raise inflation targets and introduce recurrent reviews
 - Current low targets may be inconsistent with CB mandates
4. Long view: ZLB obsolete in Post-cash economies