

## **Getting rid of Cash? Some Monetary Policy Considerations**

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# Is cash putting a brake on monetary policy?

## Abolishing paper currency

A lot has been said already:

### Arguments in **favour** of abolishing paper currency

- Electronic deposits cannot be converted into zero-interest paper currency anymore; i.e. hoarding of paper money is not possible. ZLB in monetary policy would disappear. Discussion about raising inflation targets would be superfluous
- May help to dampen tax-evading activity

### Arguments **against** abolishing paper currency

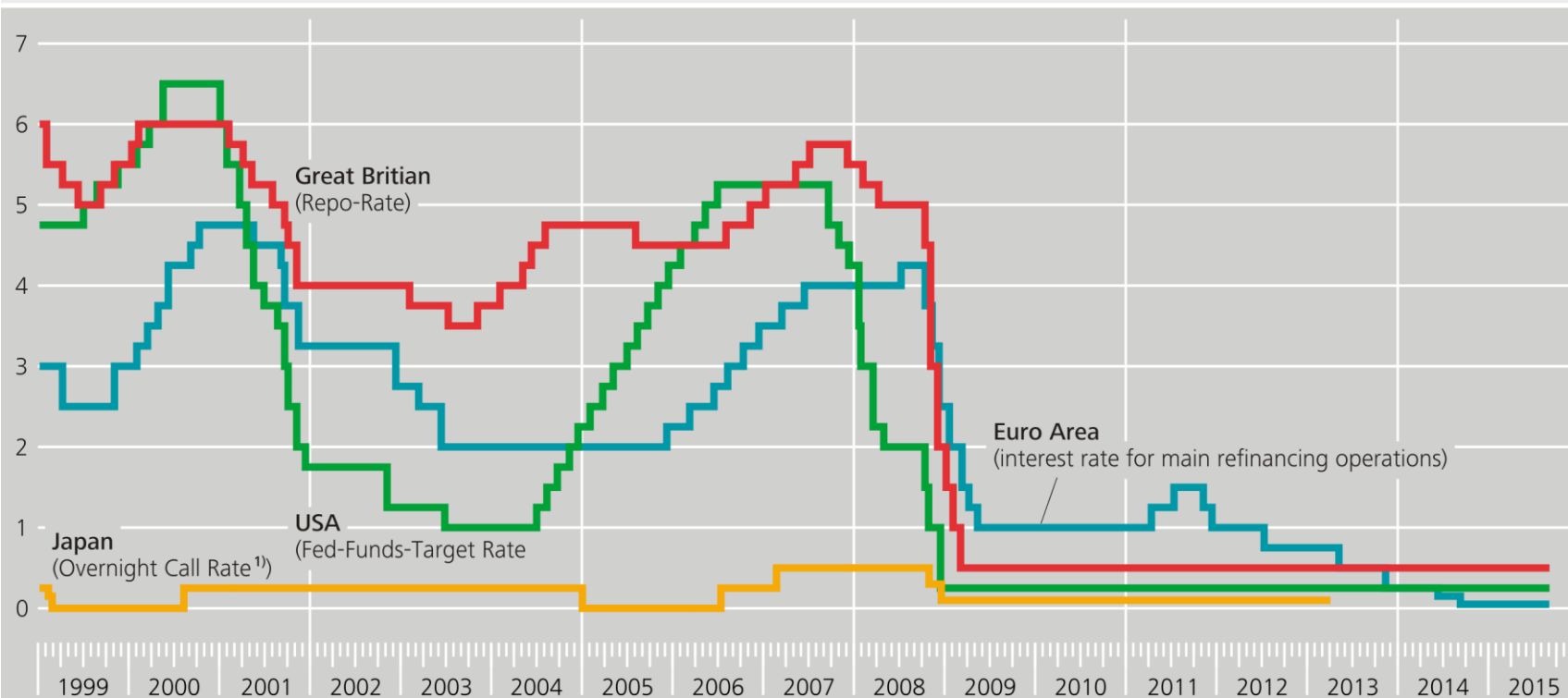
- civil liberty right, confidence in established monetary system, hurting the poor.

**The defense of cash is strengthened if monetary policy would not be powerless at the ZLB.**

# Can monetary policy fulfill its mandate at the effective lower bound?

## Central Banks' key interest rates

in %

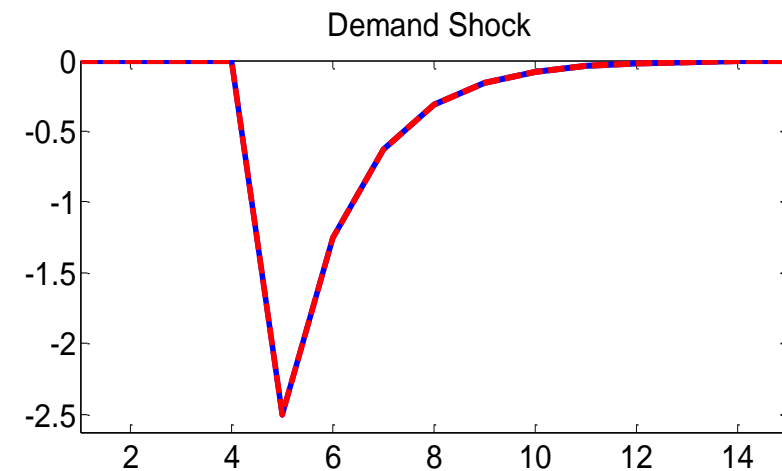
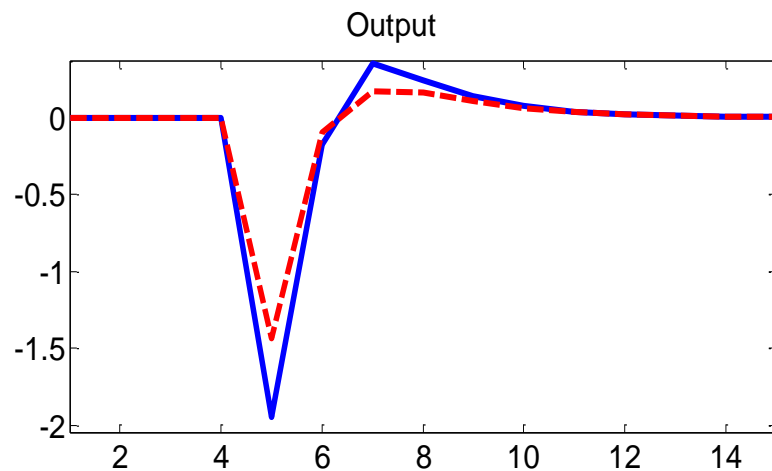
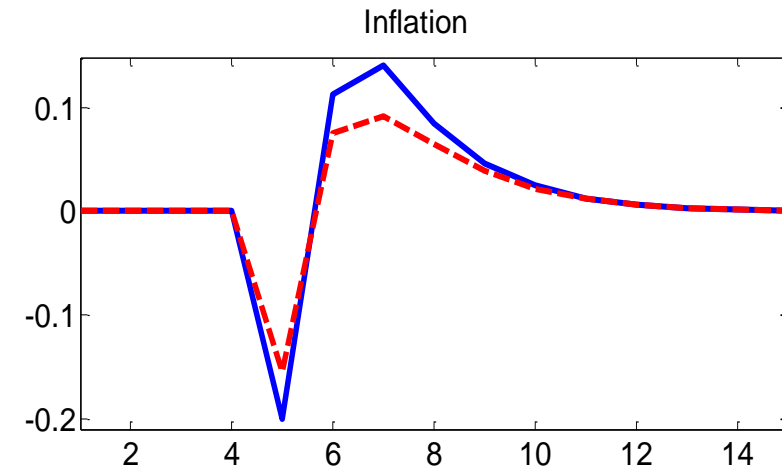
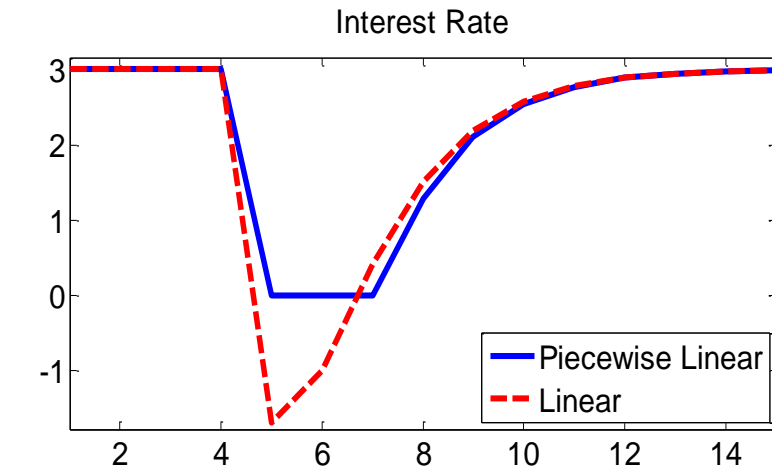


<sup>1</sup> Between 19 March 2001 and 8 March 2006 determined indirectly.

Deutsche Bundesbank

4 Sep 2015, 15:30:00, Vo1PR0039.Chart

# Can monetary policy fulfill its mandate at the effective lower bound? An illustration



# Is cash putting a brake on monetary policy?

**Possibility** to **lower the short-term interest rate** to fight deflation is **limited** by the zero lower bound

*Various proposals to overcome the ZLB issue:*

1. Carry tax on money (*à la Gesell*)
2. Set exchange rate between 'electronic money' (as new unit of account!) and paper currency (*à la Kimball*)
3. Abolish paper currency (*à la Rogoff*)
4. **Open market operations in long-term bonds**  
What do we know? I will stick to QE in the following ....

# Is cash putting a brake on monetary policy?

## Open market operations in long-term bonds

→ [Theories of the term structure](#)

### Monetary policy at the interest rate floor: **Quantitative Easing**

(esp. purchase of government bonds)

Goal? Stimulate economic activity through **additional** channels.

- **Signalling channel**: By implementing an asset purchase program, the central bank sets a **signal** to pursue an expansionary policy stance **for a longer period of time**.

Market participants can adjust their expectations of the future interest rate path (possibly at the zero lower bound). According to **expectations hypothesis**, this will also **reduce the long-term yields**.

Thus, the signalling channel affects the entire yield curve.

# Is cash putting a brake on monetary policy?

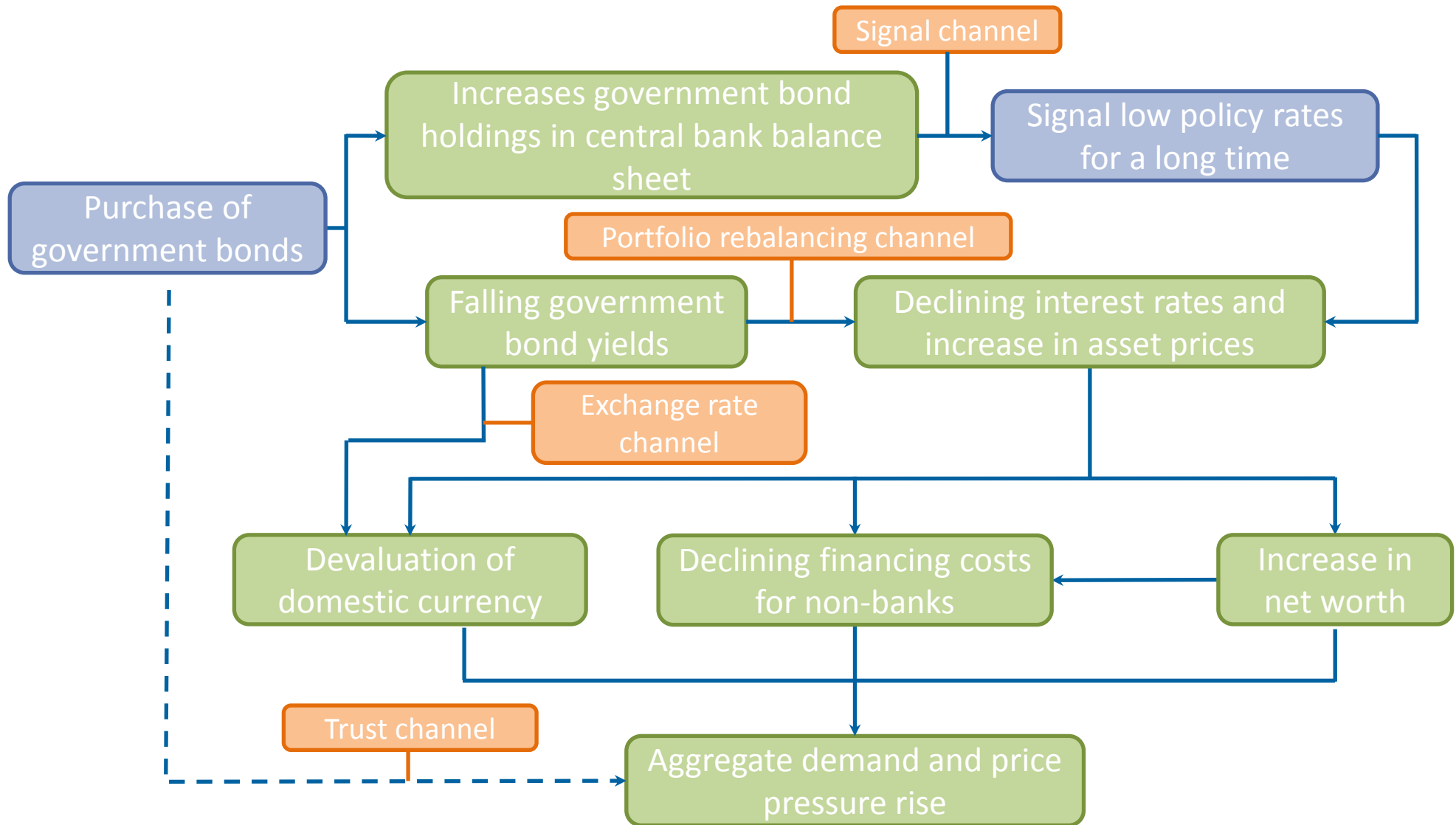
## Open market operations in long-term bonds

→ [Theories of the term structure](#)

- **Portfolio adjustment channel:** based on the "preferred habitat" hypothesis:
  - Investors have **heterogeneous preferences** for bonds with different characteristics (e.g. different maturities)
- Different bonds are therefore only partly substitutable. Purchase of bonds will **affect long-term returns** (more precisely the term premium) via two channels
- Investors with special preference for these long-term bonds will be willing to pay a higher price. This lowers both the yield on this class of bonds as well as the return on close substitutes (**scarcity channel**)
  - Purchases of bonds will reduce the average maturity of investors' portfolios. As a consequence, the interest rate risk tends to decrease (**duration channel**)

# Is cash putting a brake on monetary policy?

## Open market operations in long-term bonds





# Estimates of QE effects in UK and US

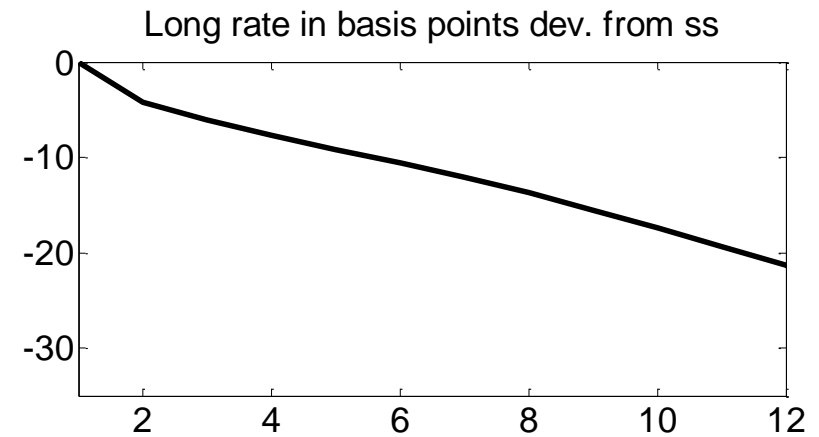
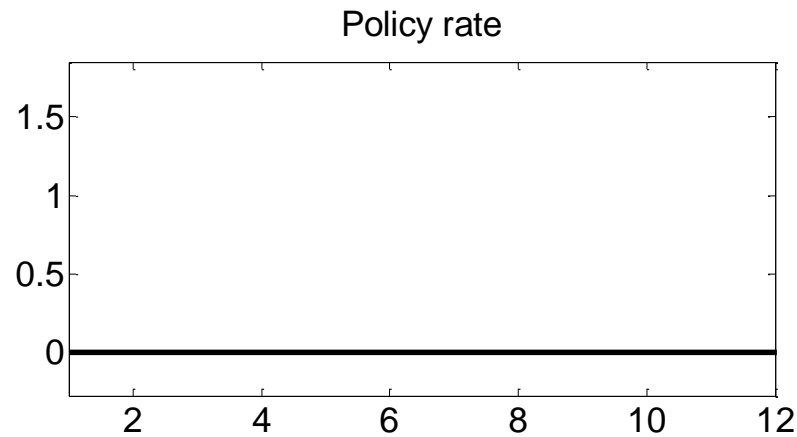
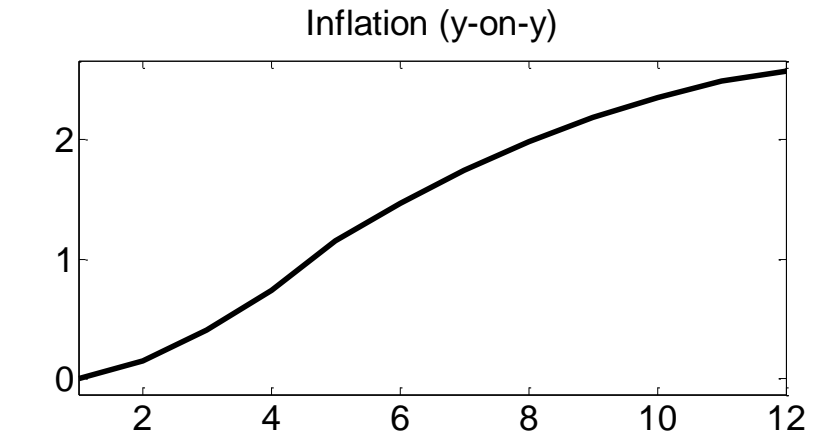
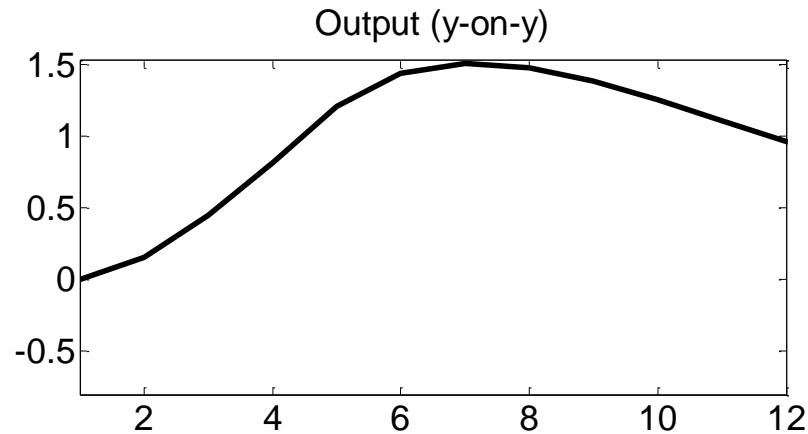
...taken from Haldane (2015)

Study	Episode	Real GDP	CPI
Baumeister and Benati (2012)	UK/US QE1	1.8% / 1.08%	1.5% / 0.84%
Kapetanios et al. (2012)	UK QE1	2.5%	1.5%
Weale and Wieladek (2015)	UK/US QE1	3.08% / 1.12%	4.2% / 1.2%
Schenkelberg and Watzka (2013)	Japan QE1	0.5% in IP	No impact
Bank of Japan (2015)	Japan QE2	1-3%	0.6-1%
Chen, Curdia and Ferrero (2012)	US QE2	0.39%	0.12%
Del Negro et al. (2015)	Fed MBS + Liquidity policies	5%	3%
Gertler and Karadi (2013)	QE1 – Sovereign Purchases	2.2%	3%

# Selected BUBA estimates of QE for Eurosystem

## QE in an extended NK model (Carlstrom, Fuerst, Paustian, 2014)

..... one of the model variants with large effects



# Possible risks of QE

... at least in long-term perspective

- Possible **disincentives** for governments:
  - **Very low interest rates** (in particular long-term) induce excessive borrowing
  - The pressure to implement necessary **structural reforms** decreases
- Reinforced "**search for yield**" could pose risks to financial stability:
  - Willingness to take risks could increase excessively
  - Risk bubbles in private / individual asset markets
- Possible **problems** of a long-lasting period of **low interest rates**:
  - Business models (e.g. insurance companies, ...) and pension funds may come under increased pressure

# To sum up

- **Monetary policy is not powerless at the ZLB**
  - Forward Guidance at the short end and QE at the long end of the yield curve have provided additional stimulus.
  - QE for all central banks more terra incognita.
  - Some side effects, especially in a monetary union.
- **But case for abolishing cash for monetary policy reasons can not assume a binding ZLB.**
- **This adds to the other costs of a cashless economy.**