

# **Del Negro, Eggertsson, Ferrero and Kiyotaki's “The Great Escape?”**

**Diego Rodríguez Palenzuela**  
**ECB**

**Banca d'Italia – Banque de France – EIEF Conference  
“The Future of Monetary Policy”,**

**30 September - 1 October 2010**

All opinions expressed are personal and do not  
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European Central Bank

1. Summary of main results
2. Empirical results
3. Modelling issues
4. Conclusion

# 1. Summary of main results

- Develops quantitative monetary DSGE model with broad credit channel [extends Kiyotaki-Moore (2008)]
  - Does not allow for (explicit) financial intermediaries that face endogenous balance sheet constraints
- Use the model to simulate a crisis that has some of the features of the post Lehman collapse
- Assess whether unconventional monetary policy could avoid a collapse in activity
- Points to the effectiveness of unconventional monetary policy under nominal rigidities and when policy interest rate is at ZLB

## 2. Empirical results:

### Compares IRFs with “effects of Lehman’s shock”

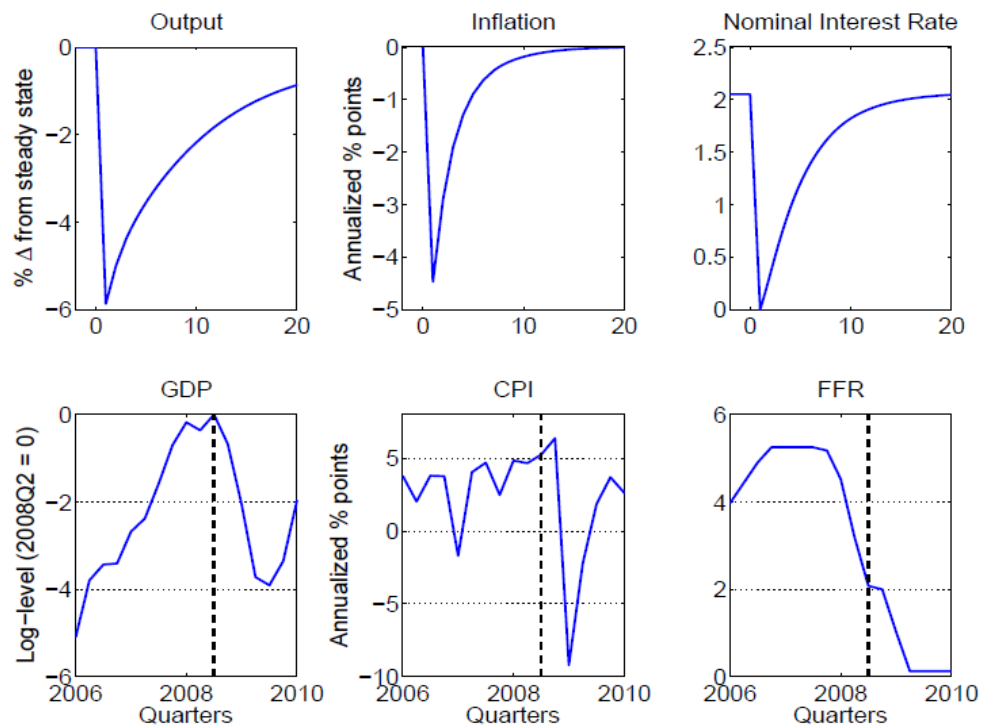
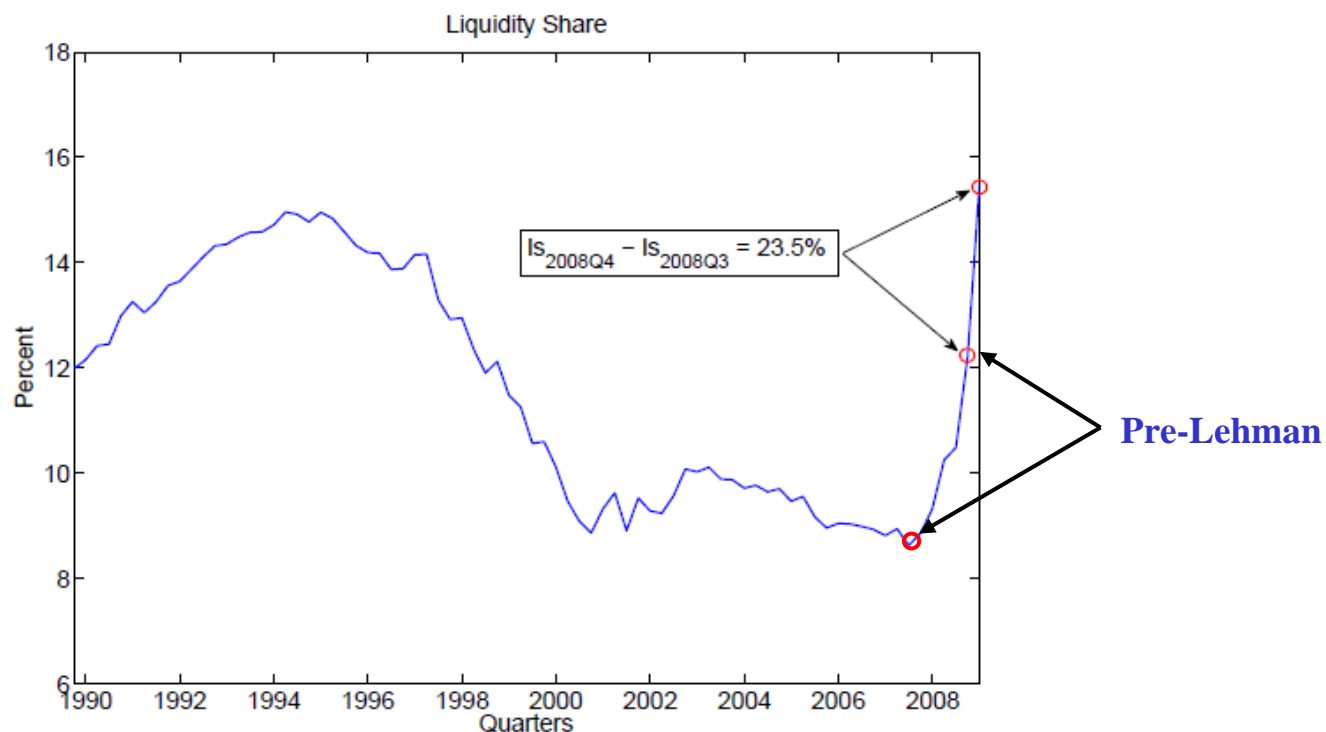


Figure 5: Response of key macro variables to a shock to resaleability of assets (with interventions).

## 2. Empirical results:

### 2.1 the economy was not in steady state in Q2 2008

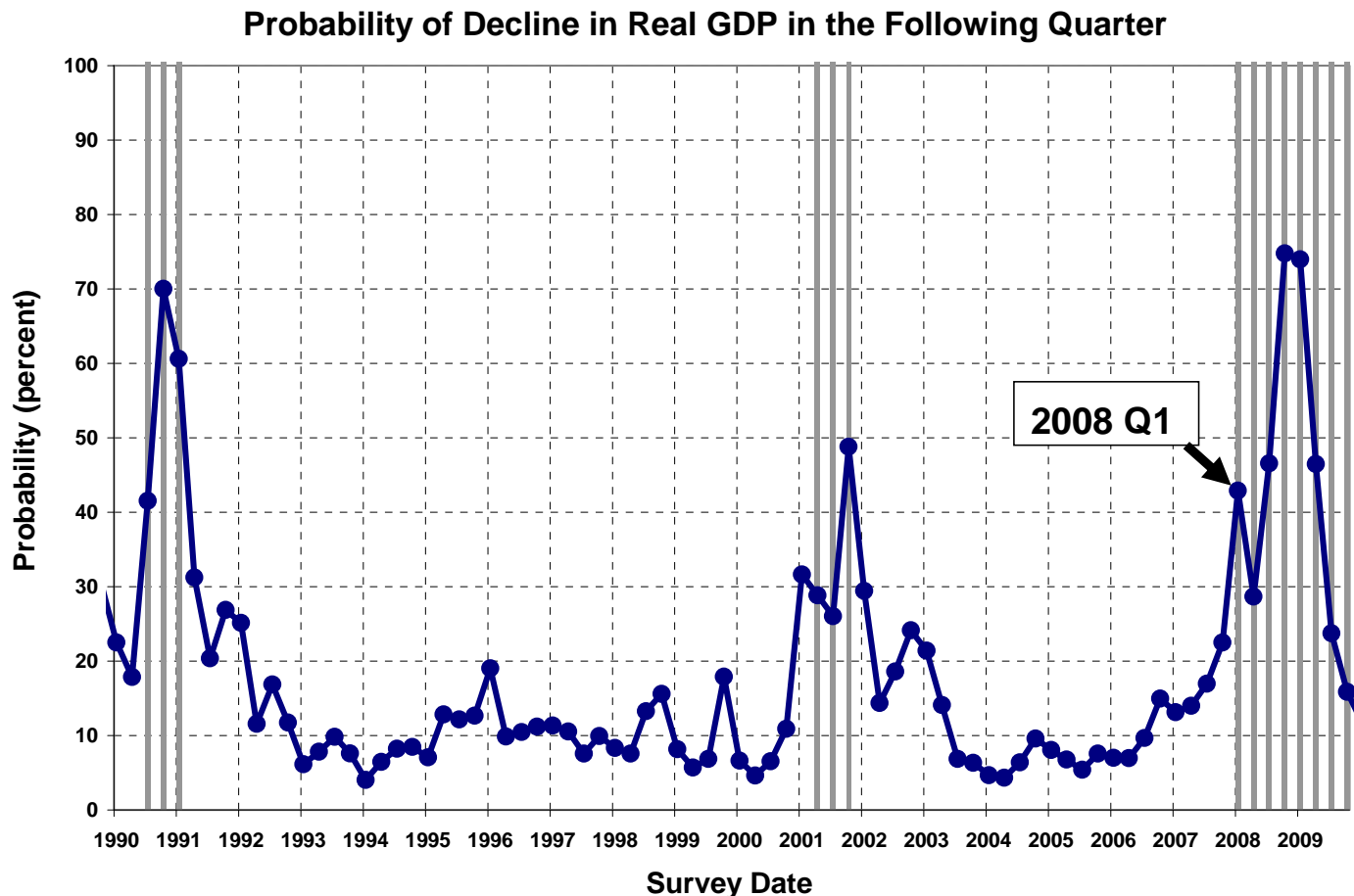
Liquidity shocks start to hit in 07 / pre-Lehman one of similar order



## 2. Empirical results:

### 2.1 the economy was not in steady state in Q2 2008

**Perceived probabilities of economic downturn rose markedly already before Lehman's default in 2008 Q3**



Source: Federal Reserve Bank of Philadelphia, Survey of Professional Forecasters

Note: Quarterly data, last data point is 2009Q4

## 2. Empirical results:

### 2.2 Construction of the liquidity share (LS) variable

Not all Treasury securities **equally liquid** [see Gagnon et al. (2010)]

How are **liabilities of non-Federal government** sector treated?

Not sure that all **private sector capital** should be always illiquid

What is the impact on LS when including **holdings by US residents of liquid and illiquid foreign assets**?



## 2. Empirical results:

### 2.2 Construction of the liquidity share (LS) variable

Not obvious why a **consolidated** approach for all private sector

Households' consumption not restricted by BS constraints

Liquidity of asset strongly affected by characteristics of holder

Security	April 07	August 08
US Treasuries	0.25	3
Investment grade bonds	0 – 3	8 – 12
High yield bonds	10 – 15	25 – 40
Equities	15	20
Prime MBS	2 – 4	10 – 20
ABS	3 – 5	50 – 60

Haircuts on repos (percent) (source: IMF (2008))

**Morris and Shin (2010)**

## 2. Empirical results: 2.3 Liquidity intervention

### 1 trillion expansion in FED's balance sheet

Do currency swaps affect the liquidity share as defined?

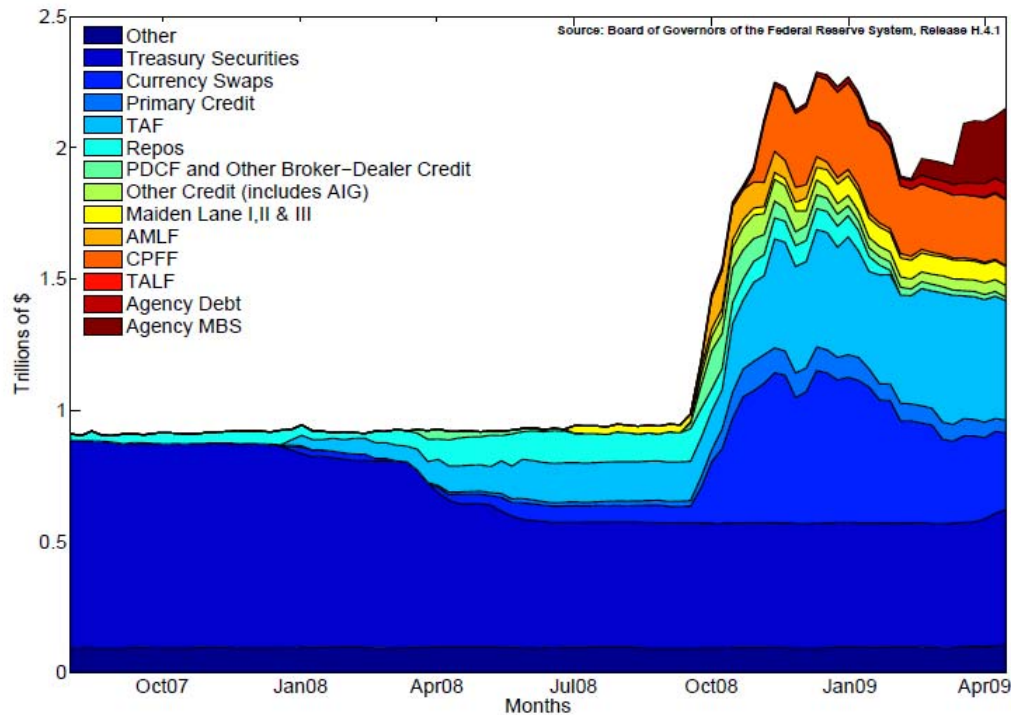


Figure 1: Asset Side of Fed's Balance Sheet

## 2. Empirical results: 2.4. Robustness

**Estimation** of the model – are (smaller) resaleability shocks recurrent?

Which **other parameter configurations** could lead to same results?

How to distinguish/choose between **competing models**?

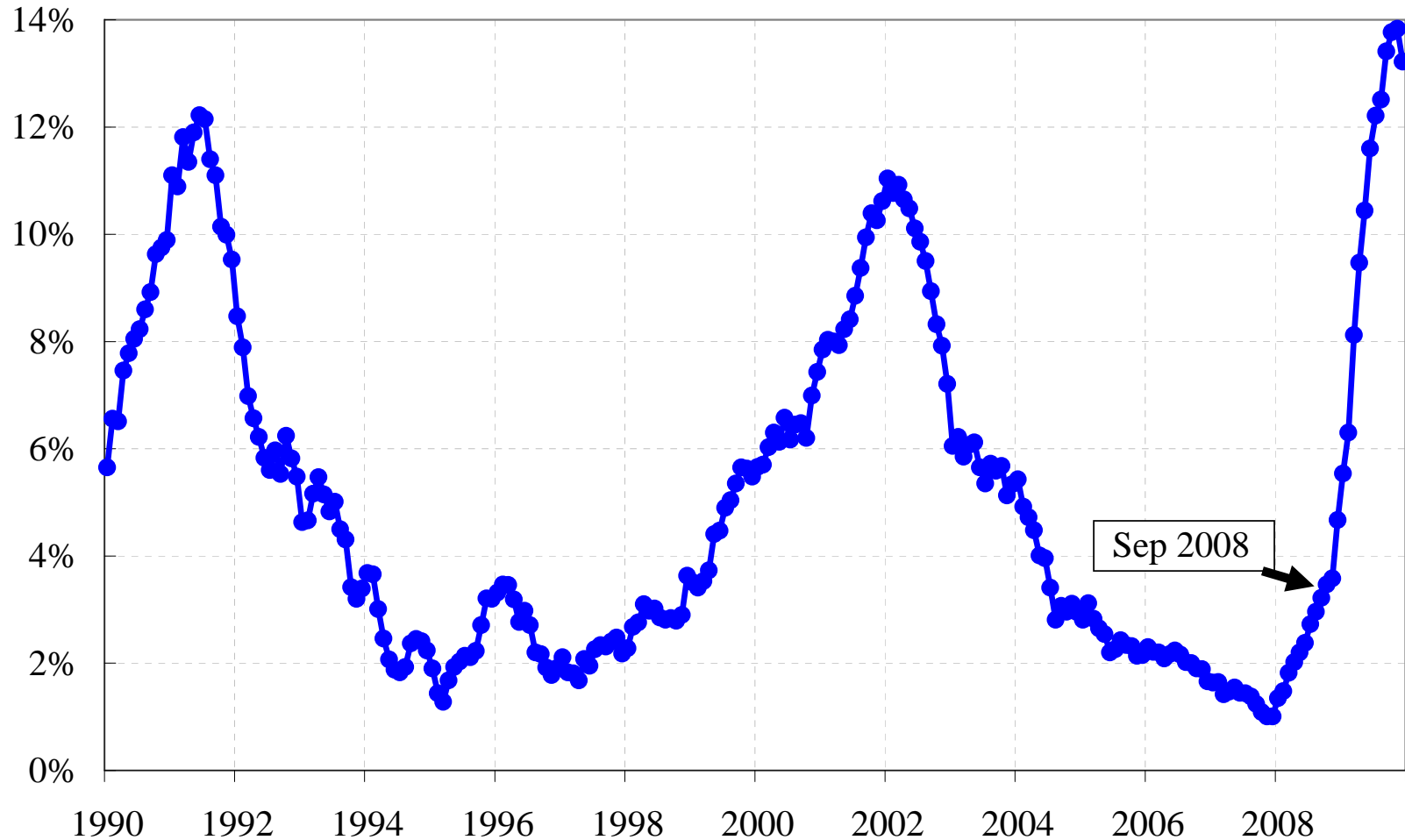
[Gertler-Karadi (2009), Curdia-Woodford (2009)]

Announcement effects: model predicts no effects (?)

Introducing additional financial variables, e.g. default rates

## 2. Empirical results: 2.4. Robustness

US speculative-grade default surging – in contrast with no-default



Source: Moody's; Note: US trailing 12-month issuer-weighted spec-grade default rates, monthly data, until Dec. 2009

### 3. Modelling issues: 3.1. Costs of intervention

Central bank should **substitute for private credit market** altogether

Assumption of **unconditional liquidity** of Treasuries may be extreme

Fed intermediation means absorbing **credit risk** in its BS

Could eventually jeopardise **creditworthiness** and liquidity of Treasuries (potentially Fed's independence)

Risks for de-anchoring of **inflation expectations** (especially if intermediating long-term assets)

# 3. Modelling issues: 3.1. Costs of intervention

## Sovereign and bank CDS in the euro area and the US

Euro area (basis points)

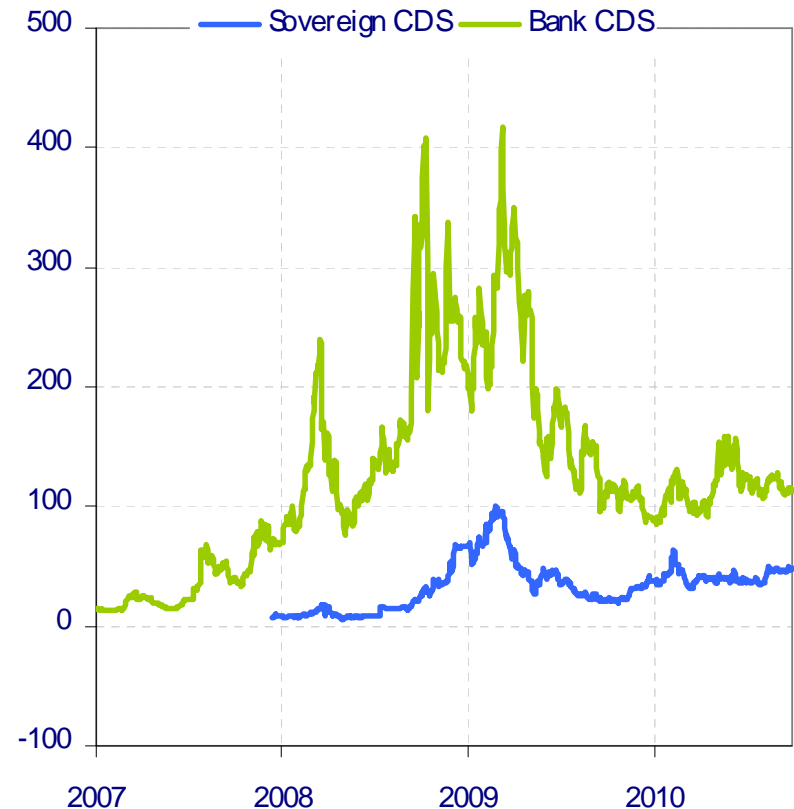


Latest observation: 28 Sep. 10

Source: Datastream and ECB calculations

Note: 5-year CDS. Sovereign CDS is computed as the weighted average of individual sovereign CDS according to the capital key at the ECB. For bank CDS, median of the senior CDS of 10 largest euro area banks is reported

US (basis points)



Latest observation: 28 Sep. 10

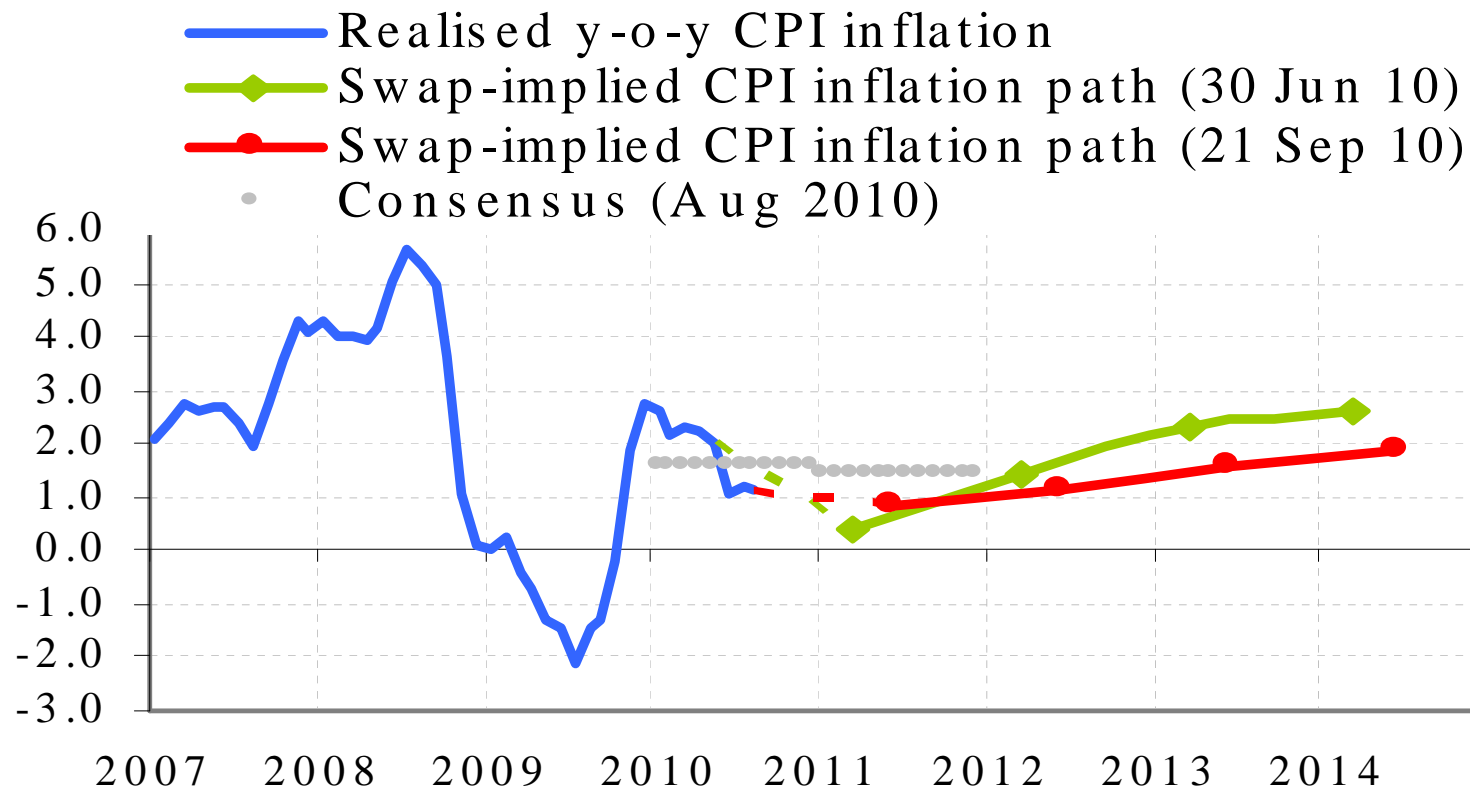
Source: Datastream and ECB calculations

Note: 5-year CDS. Bank CDS is computed as the median of 5-year senior CDS for 10 largest US banks.

### 3. Modelling issues: 3.1. Costs of intervention

#### US swap-implied inflation path (% p.a.)

Long term inflation expectations have been volatile since Sept. 08



### 3. Modelling issues: 3.2. Structural interpretation of $\phi_t, \zeta_{ZB}$

Not intuitive that both *Borrowing* and *Resaleability constraints* and transition probability of shock are **fully independent** of:

State of liquidity share,

Non-standard policy rule, or even

Level of policy interest rates (e.g. risk taking channel)

Different micro-foundation options for borrowing and resaleability constraints could lead to **different positive results**

[ e.g. could capture “contagious adverse selection” – Morris-Shin 2010]

[ Smaller interventions *at the margin* to restore market functioning? ]



### 3. Modelling issues: 3.3. FED's credit policy rule

Not intuitive that credit policy rule **does not weigh**:

State of liquidity share,

Liquidity premium

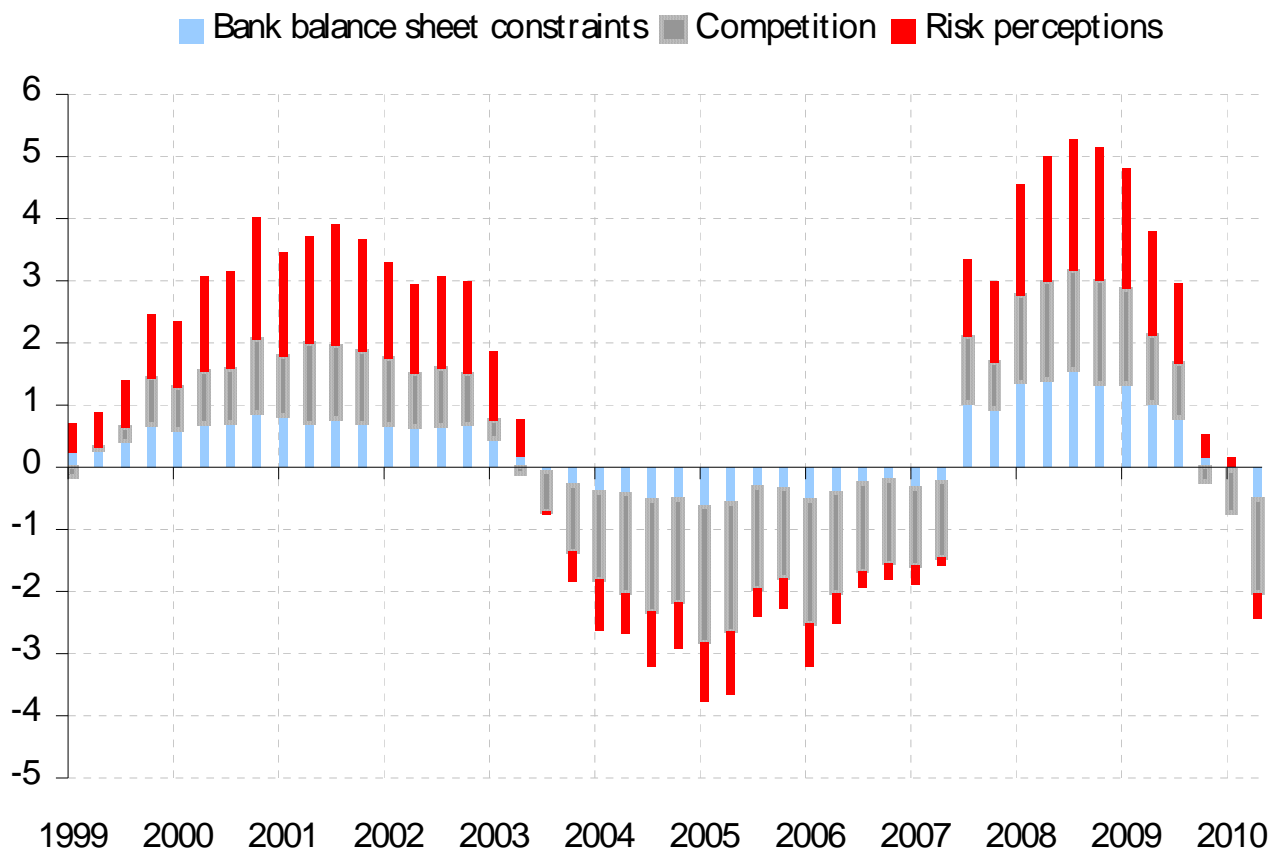
Indicators of balance sheet illiquidity, overall financing conditions

# Conclusion

- Important contribution to emerging **new consensus** on quantitative effects of non-standard measures (with a structural model)  
Framework cannot address **optimal set up of non-standard measures**
- Points to strong role for non-standard policies **when at ZLB**  
Implicitly, this role is restricted to **extreme liquidity shocks**
- Points to non-standard policy **activism** (*entry* more than *exit* model)  
Extend framework: include impact of **new regulations & interaction with MP**
- Very useful framework that can be **extended** in several directions

# Role of intermediaries

**Chart. Factors underlying the changes in credit standards and terms for C&I loans or credit lines in the United States (*diffusion index*)**



Source: Board of Governors of the Federal Reserve System and ECB calculations.

# Background Slides