



EUROPEAN CENTRAL BANK

EUROSYSTEM

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Comment on: Financial crisis, unconventional monetary policy and international spillovers

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*ECB-IMF Conference on “International dimensions of
conventional and unconventional monetary policy
29-30 April 2014”*

** Views expressed are those of the presenter and not necessarily those of the ECB.*

111 pages wealth of results: three papers in one !

1 Announcement effects of UMP (event studies: 2-day window)

2 Domestic impact & “spillovers” (global VAR: 1995-2013)

3 Counterfactual: QE (CE?) via term spread, corporate spread and VIX

+ *PCT/BW(2012): A flow-of-funds perspective on UMP*

MOTIVATION

View 1: UMP neutral/benign spillovers on EME/ROW

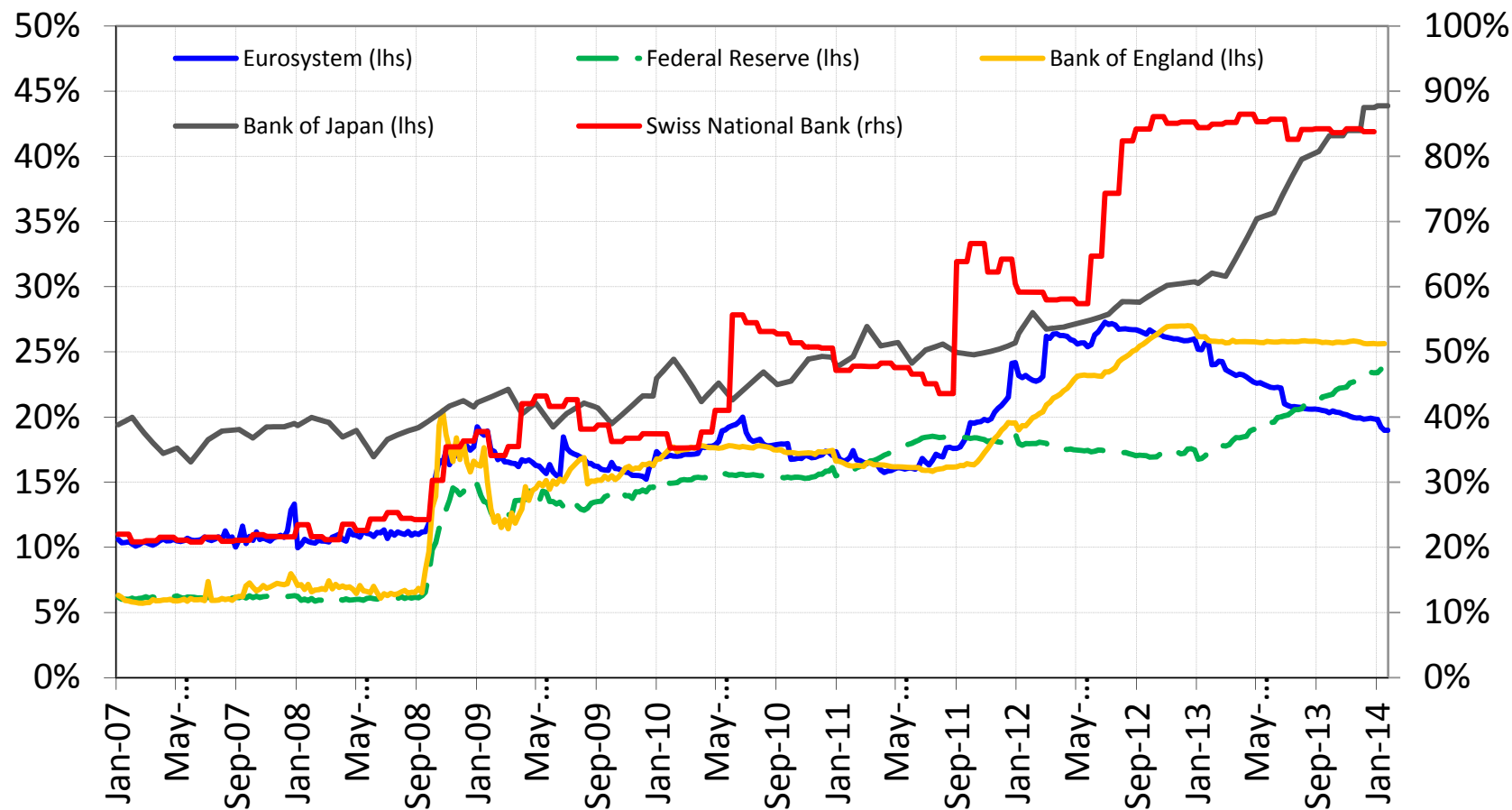
View 2: UMP with adverse spillovers (“currency war” / overheating)

⇒ **But changing transmission over time !**

- **State & time dependency of UMP:** response to different phases of crisis
- **Nature of shock** (common/synchronized vs. asymmetric)
- **Policies as strategic complements or substitutes**
Role of exchange rate regime (cf Mundell-Fleming): “beggar thy neighbour” / “flight to safety”
- Elasticity of **substitution across assets** & correlation/contagion ?
- Footnote 5 (nature of UMP): **quantitative easing** (term spread) vs. **credit easing** (VIX, corporate spreads: measures of risk & risk aversion)

Central bank balance sheet expansion

Balance sheets of major Central Banks, total assets as % of GDP



Source: ECB, Federal Reserve, Bank of England, Bank of Japan.

Last observations: Last points in February 2014.

Size and composition of **CB** balance sheets:

- **QE**: extra **stimulus** at ZLB (size ... risk-free curve) vs.
- **CE**: repair/bypass **impaired transmission** mechanisms (composition ... address risk premia / leverage constraints / fragmentation)
- Balance sheet expansion / contraction: endogenous (ECB) versus exogenous (FED, BoE)
- **Lending** against collateral vs. **outright** purchases
- Also need to take into account **contingent commitments** (e.g. OMT or exchange rate for SNB, EMEs: boosting global “official” liquidity)
- **Direct vs. indirect** channels (across sectors and asset classes)

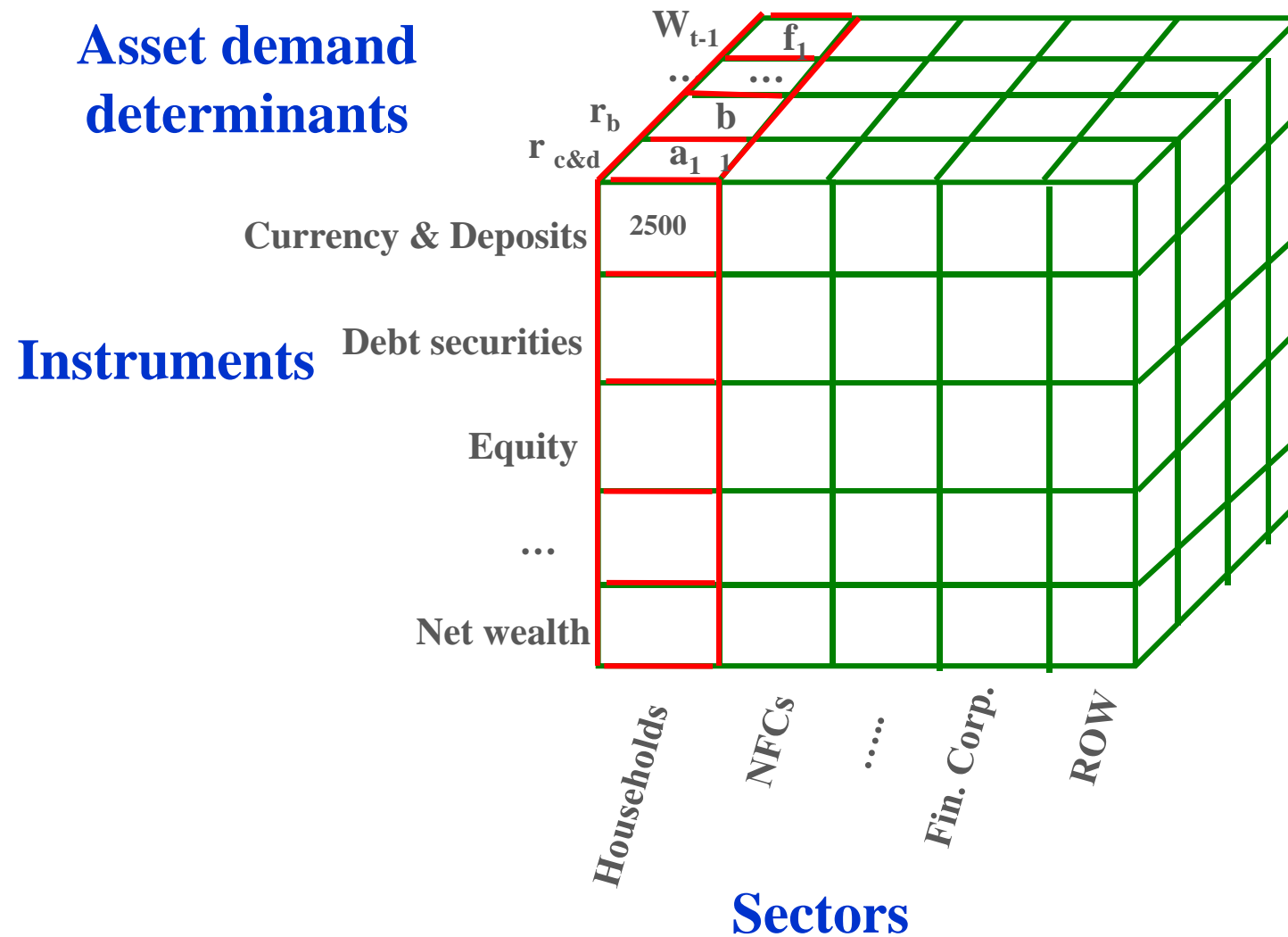
Main results/puzzles: **EVENT STUDIES**

- **US/UK: diminishing returns to QE** (LSAP/APF I strongest impact) [cf also Goodhart & Ashworth; Martin & Milas in OxREP, winter 2012]
- MEP (“twist”) opposite signs to other programmes
- **Impact on EME often stronger than on domestic economy (US):** substantial “leakage”
- *Announcement **impact on long rates** often short-lived and reversed during LSAP I-3*
- ***Explain stronger impact on EME (bonds and even more equity) by portfolio rebalancing away from US Treasuries? Search for yield/risk taking channel?***
- ***Prices vs. quantity evidence on capital flows from BoP/iip/flow of funds?***
- ***For ECB: would expect different impact of SMP waves, CBPPI and CBPP 2 (all grouped together)? Distinguish LTRO 1 (1999) vs. LTRO 2 (2011/12)?***
- ***For BoJ: role of carry trade during 2001-2006 : differences QE 1 vs QE 2?***
- ***Role of trade credit / supply chain finance (BIS-CGFS report 2014)***

Main results/puzzles: **GVECM & COUNTERFACTUALS**

- Diverse impact across countries; post crisis relation often not significant for term spread, most impact from **corporate spread** (CE? Search for yield?)
- **Change in transmission mechanism** in crisis period compared to pre-crisis (... any lessons for boom-bust financial/credit cycles ?)
- *Weights for cross country-linkages based on trade and cross-border bank lending vs. BoP/iip/IF for equity and bond exposures ?*
- *VIX and corporate spreads may reflect more financial shocks than monetary policy (less so for term spread)?*
- *Counterfactual scenarios with VIX, term or corporate spread overdone (the latter may also move in opposite directions) ? Why has term spread no impact on real GDP but big impact on inflation for US (sl 35)?*
- *Why not include money and credit variables also for advanced economies? Does credit to the private sector include corporate bonds/non-banks ?*
- *Use corporate spreads together with information on bank lending to identify credit supply shocks ?*

Bringing in the flow-of-funds dimension ...



Flows-of-funds perspective on the transmission of non-standard measures

1. **Monetary (loan-deposit) channel:** $MV = PT$ (I. Fisher)

- Via banks / reserves (narrow-broad money)

2. **Portfolio balance channel** (via asset substitution in response to central bank asset purchases/broad money)

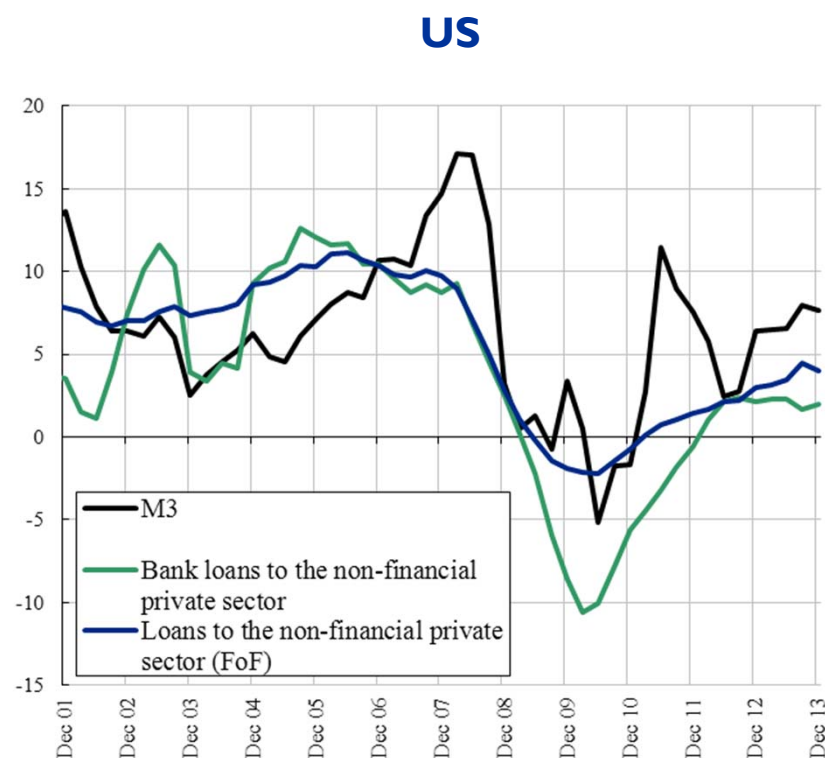
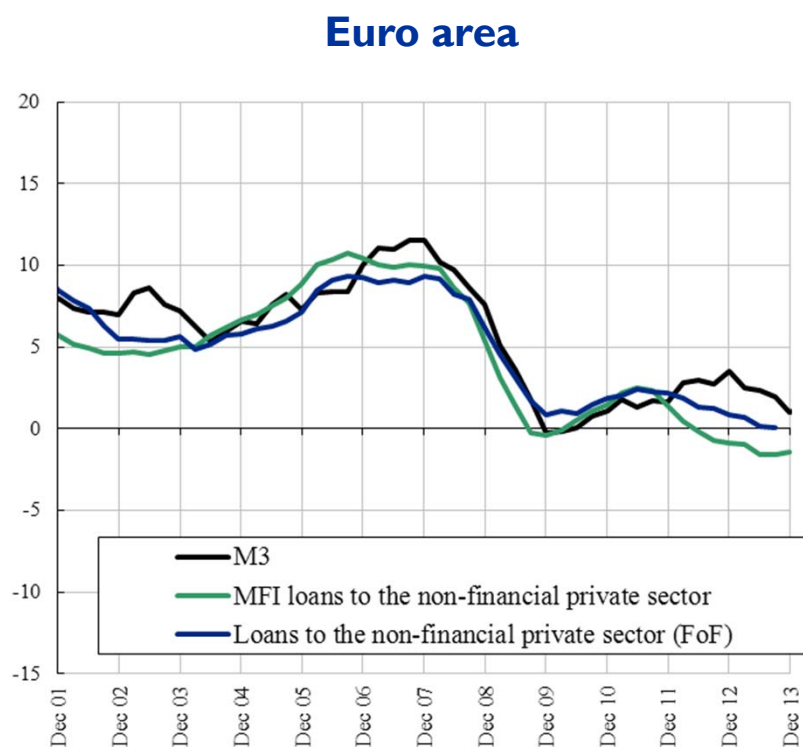
$$W = M + B + E \text{ [+housing ?]} \text{ (Tobin 1969)}$$

- Role of segmented markets / preferred habitat / institutional investors
- Flow vs stock rebalancing

3. **Sectoral counterpart view:** “debt is an asset”

- To buy vs to lend against assets ?
- Whose debt to buy (issuing sector) ?
- From from whom to buy (holding sector) ?

Money and credit growth relapsed in EA after 2010-2011 recovery; sharper decline and rebound in the US since 2008



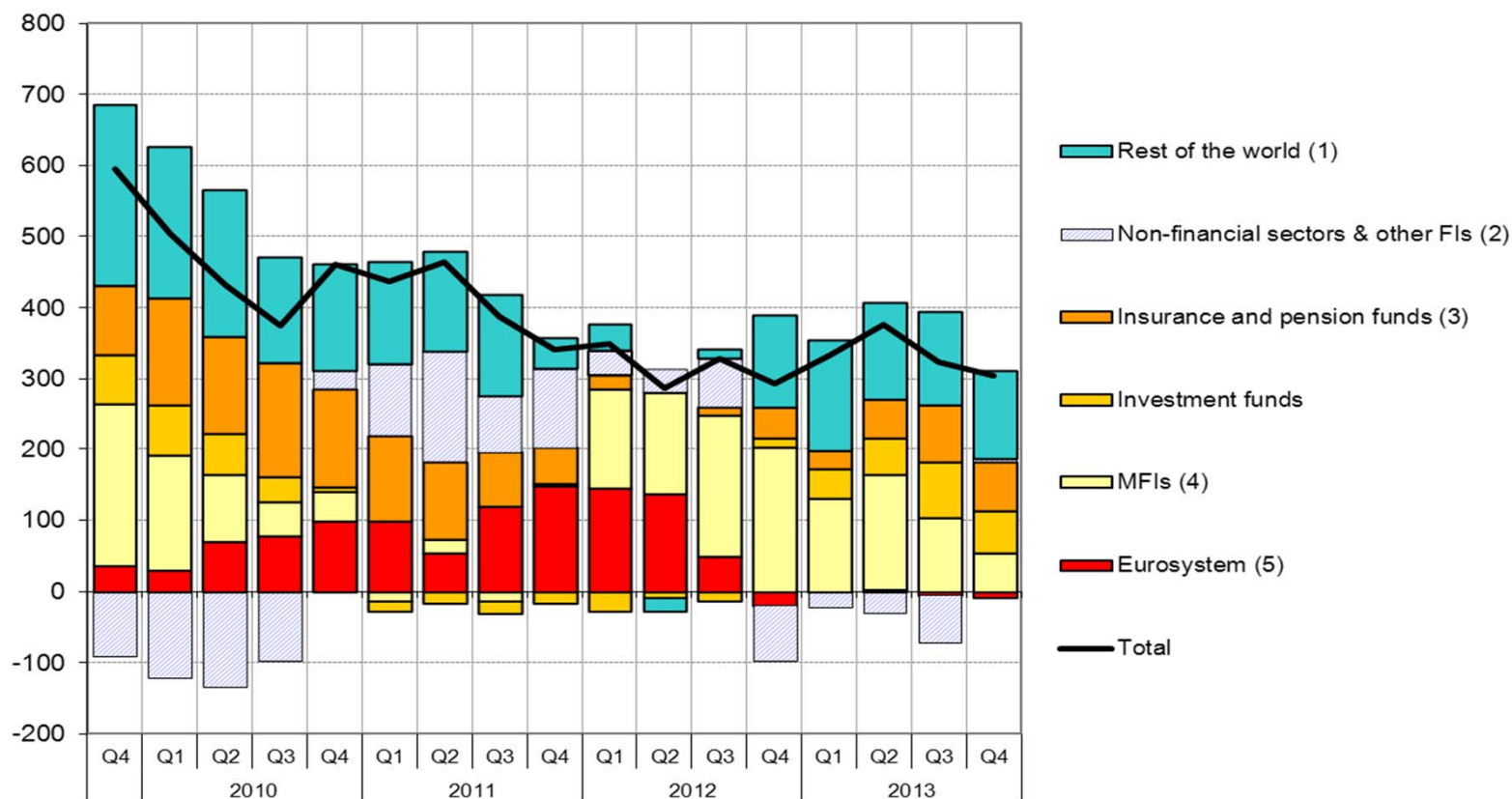
Last observation: 2013 Q4 (except for euro area accounts: 2013 Q3).

Notes: In annual percentage changes. FoF = Flows of funds from the euro area (respectively US) accounts.

Non-banks buffered the drop in bank loans to the private sector, mainly in the US.

Who bought government bonds?

Sector holdings of euro area government securities (EUR billions in 4-quarter moving sums)

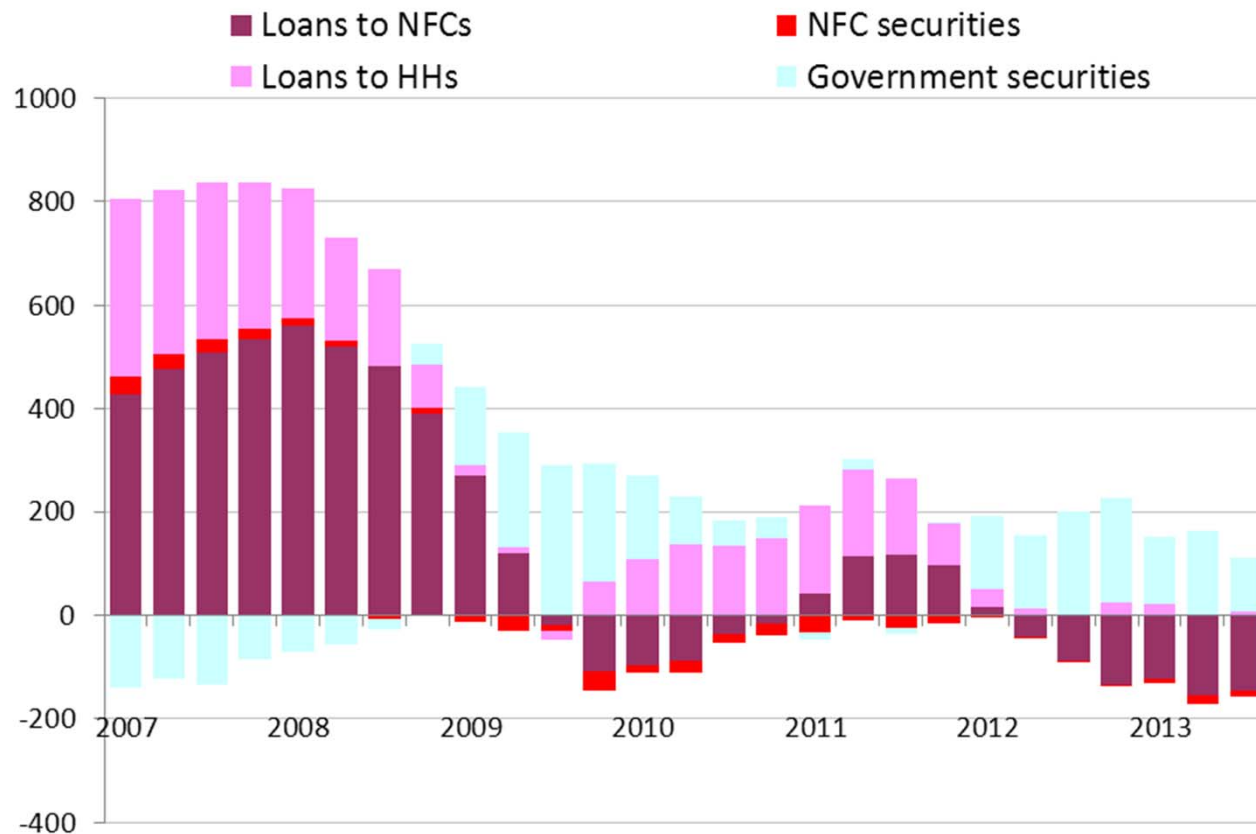


Source: ECB.

Notes: 1) For the observation of 2013 Q4, acquisitions of non-MFI debt securities by non-residents, (2) Households, non-financial corporations, government and OFI other than investment funds. For 2013 Q4, it also includes ICPFs and investment funds. Given its residual nature, it also covers valuation differences, estimation errors and statistical discrepancies, (3) For 2013 Q4, included together with the non-financial sectors residually, (4) MFIs (including MMFs) other than Eurosystem, 5) 2012 Q4 include government bonds received by the Irish central bank as a result of the liquidation of Irish Resolution Corporation.

What did euro area banks invest in?

Net acquisitions of loans and debt securities of the non-financial sector by MFIs (4-quarter sums)

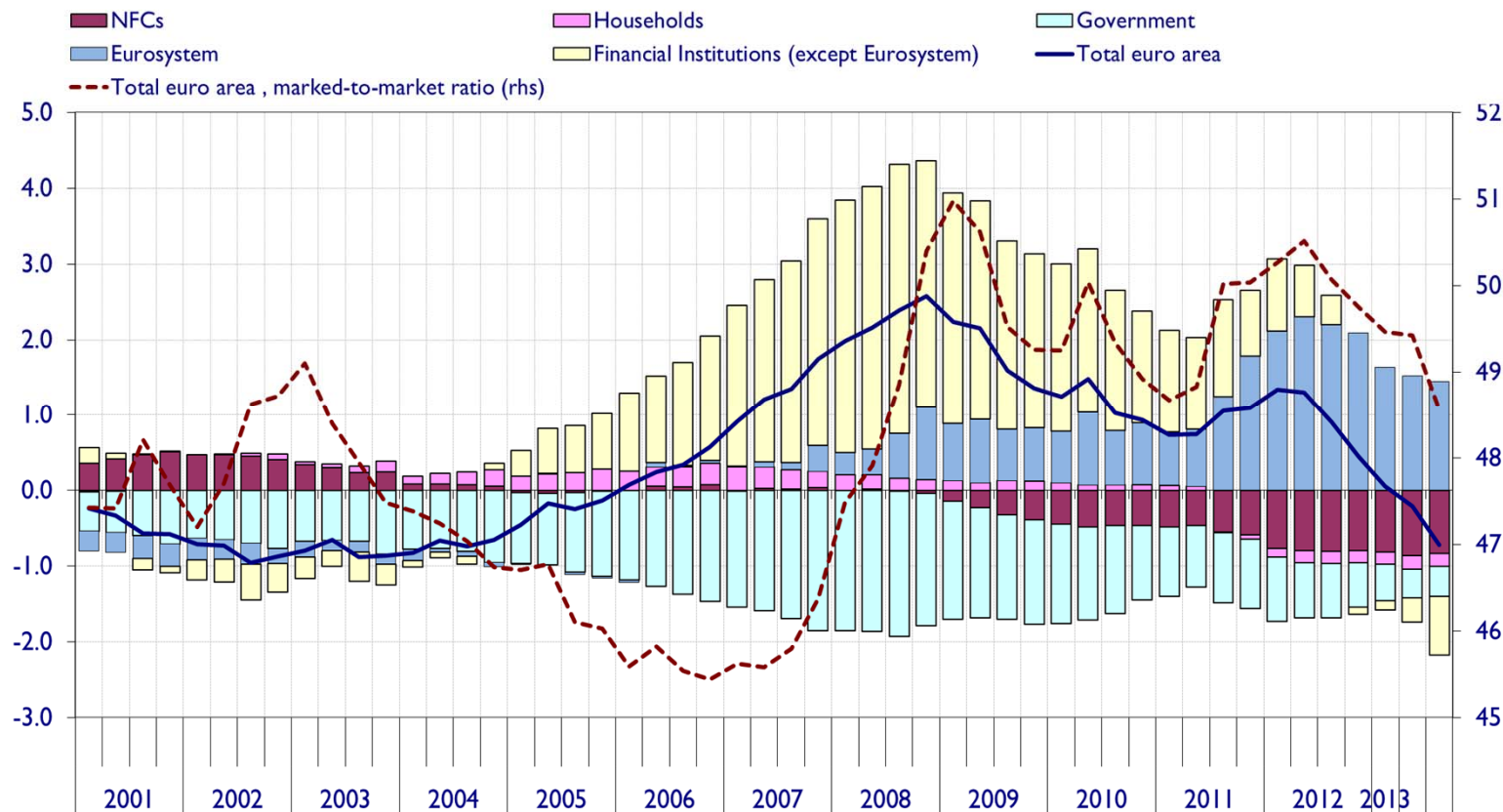


Last observations: 2013 Q3.

Source: ECB.

Through its balance sheet expansion, the Eurosystem leveraged up as private sectors deleveraged, but not recently

Cumulated change of debt-to-assets ratio and sectoral contributions



Source: ECB Euro Area Accounts. Last observations: 2013Q3. Extension from P. Cour-Thimann and B. Winkler (2012), "The ECB's non-standard monetary policy measures: the role of institutional factors and financial structure", Oxford Review of Economic Policy, Vol. 28, N. 4.

Notes: A sector's contribution to euro area leverage is given by the ratio of its debt (liabilities) over total notional assets. It is expressed in percentages and in notional terms. For comparison, the dashed red line shows the marked-to market debt-to-asset ratio. The marked-to market developments are those of relevance for the discussion on the role of central banks in supporting asset price inflation. www.ecb.europa.eu

Summary / suggestions for further work

- **Very important and comprehensive paper !**
 - **Distinguish QE vs CE transmission**
 - **Changing role of CB in crisis as LOLR, issuer of ultimate safe asset, intermediary and balance sheet of last resort (Bindseil and A. Winkler/Jablecki 2012, 2013; Cour-Thimann & Winkler, 2012)**
- **For interpretation of transmission**
 - **BoE: Sectoral VECM on QE (Bridges & Thomas 2012, Clyne et al 2014)**
 - **Complement with FoF / BoP information on portfolio flows ?
Fed: Bertaut et al (2011, 2013), Carpenter et al (2013), Thornton (2012)**
 - **Global FoF ? (IMF WP 14/10 Errico,, Shin)**
- **Link to BIS view on financial cycles (money/credit and asset markets), “leaning against the wind” and “exit” ?**

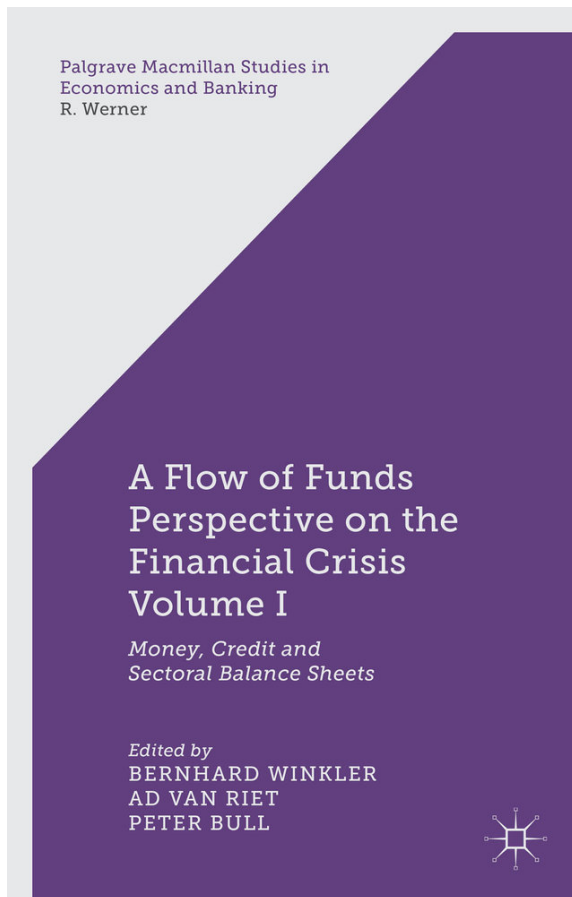


Background

Useful references

- **ECB Working Paper No. 1528 (April 2013)** by Cour-Thimann and Winkler on ECB non-standard measures (OxREP 2012)
- **October 2011 ECB Monthly Bulletin** article on flow-of-funds perspective on the financial crisis
- **2012 & 2013 ECB Financial Integration Reports: Special Features on sectoral balances, December 2013 MB Box 4**
- **ECB Working Paper No. 1402 (2011)** by Riccardo Bonci on transmission of monetary policy via FoF
- **Bindseil and Winkler (2012) ECB WP 1478**
- **Bindseil and Jablecki (2013) ECB WP 1542**
- **Chapter 7 on cross-checking and the flow-of-funds, in Papademos and Stark (eds.): Enhancing Monetary Analysis, ECB October 2010**
- **Winkler, van Ried and Bull (eds): A flow-of-funds Perspective on the Financial Crisis, Vol. I and II, Palgrave Macmillan, 2013**

Money, Credit and Sectoral Balance Sheets



Foreword Peter Praet

Money, Credit and the Flow of Funds in Monetary Policy;
Bernhard Winkler, Ad van Riet and Peter Bull

PART I: MONEY, CREDIT AND LIQUIDITY IN THE FLOW OF FUNDS

2. The Quantity Theory of Money and the Flow of Funds; Carmelo Salleo

3. The Quantity Theory of Credit and Some of its Policy Implications; Richard Werner

4. Euro Area Money Demand and International Portfolio Allocation; Roberto A. De Santis, Carlo A. Favero and Barbara Roffia

5. Global Liquidity and Credit Booms; Claudio Borio, Robert McCauley and Patrick McGuire

6. Dual Liquidity Crises; Ulrich Bindseil and Adalbert Winkler

7. Determinants and Consequences of Credit Tightening; Riccardo De Bonis, Luigi Infante and Francesco Paternò

PART II: SECTORAL ANALYSIS OF THE FLOW OF FUNDS

8. Financial Intermediary Balance Sheet Management; Tobias Adrian and Hyun Song Shin

9. Bank Leverage and the Credit Cycle in the Euro Area; Celestino Gíron and Silvia Mongelluzzo

10. Households' Financial Portfolio Choices; S. Avouyi Dovi, Vladimir Borgy, Christian Pfister, Michael Scharnagl and Frank Sédillot

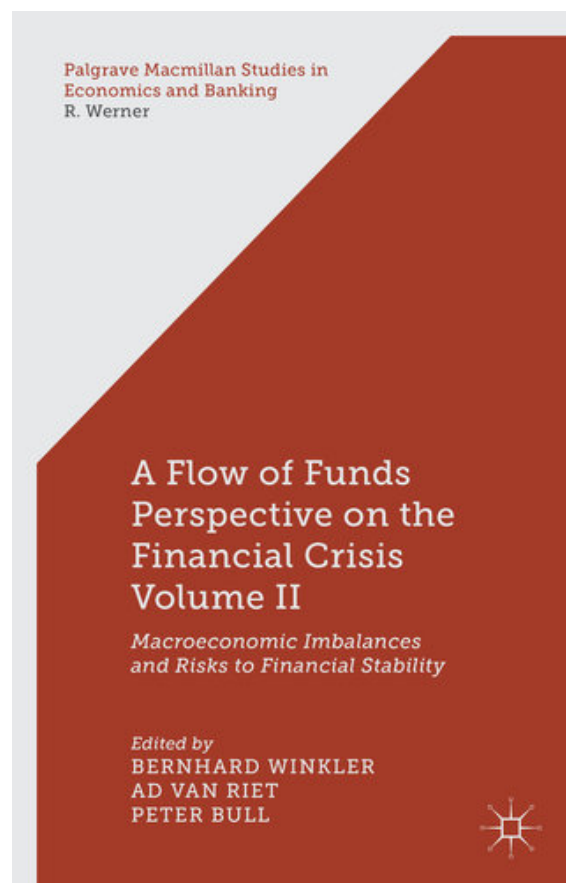
11. Household Balance Sheets and Debt; Jacob Isaksen, Paul Lassenius Kramp, Louise Funch Sørensen and Søren Vester Sørensen

12. Analysing Recent Developments in the Financing of Euro Area Non-Financial Corporations; Laurent Maurin

13. Monetary Policy and the Flow of Funds in the Euro Area; Riccardo Bonci

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Macroeconomic Imbalances and Risks to Financial Stability



Foreword Vítor Constâncio

Introduction and Overview; Bernhard Winkler, Ad van Riet and Peter Bull

PART I: FLOW OF FUNDS AND MACROFINANCIAL ANALYSIS

2. Tobin LIVES; John Duca and John Muellbauer
3. Balance sheets in The Great Moderation; Richard Barwell and Oliver Burrows
4. Japan's Flow of Funds Accounts; Shuji Kobayakawa and Ryoichi Okuma
5. Financial Accounts - the Case of Slovenia; Janez Fabijan

PART II: FLOW OF FUNDS AND MACROECONOMIC IMBALANCES IN EUROPE

6. The Financial Crisis in the Light of Euro Area Accounts; Philippe de Rougemont and Bernhard Winkler
7. The Surveillance of Macroeconomic Imbalances in the EU; Carlos Cuerpo and Alexandr Hobza
8. Debt, Assets and Imbalances in the Euro Area; Christophe Van Nieuwenhuys

PART III: FLOW OF FUNDS AND FINANCIAL STABILITY

9. Systemic Risk Contingent Claims Analysis; Nuno Silva, Nuno Ribeiro and António Antunes
10. Financial Accounts and Financial Stability in Lithuania; Virgilijus Rutkauskas
11. Financial Linkages of the Financial Sector in Austria; Michael Andreasch