Macroprudential Policy after the Crisis: A European Perspective

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The Bank of Korea International Conference on the "Future of the International Financial Architecture", Seoul, Korea, 26-27 May 2011

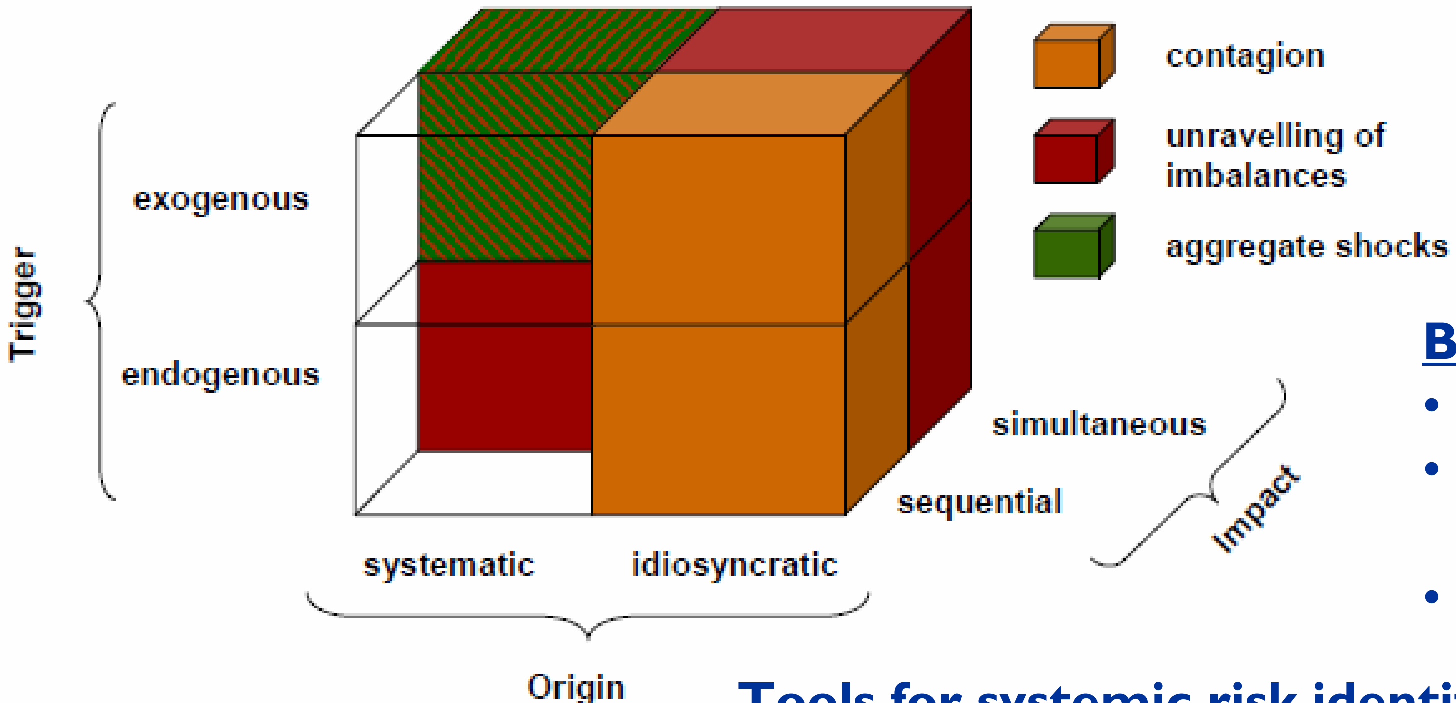
Disclaimer: Any views expressed are only the speaker's own and should not be regarded as views of the ECB, the Eurosystem or the ESCB

Introduction

- The main objective of macroprudential supervision and regulation is to contain systemic risk (mainly preventive policy)
- One definition of systemic risk (ECB 2009): Risk that financial instability becomes so widespread that it impairs the functioning of a financial system to the point where economic growth and welfare suffer materially
- Regulatory reforms created the European Systemic Risk Board (ESRB)
  - Members: ECB (chair), EU central banks, European Supervisory Authorities, European Commission and chairs of Advisory Technical and Advisory Scientific Committees
  - Tasks: 1) Identify and warn about systemic risks, 2) Make policy recommendations how to contain them
  - Part of the European System of Financial Supervision
  - Separate from monetary policy, fiscal policy etc.

Forms of systemic risk and their identification

The systemic risk cube:



Basic inputs:

- **Data**
- **Market intelligence**
- **Judgement**

Tools for systemic risk identification:

- **SR 1: Contagion – Contagion and spillover models**
- **SR 2: Endogenous build-up and unravelling of widespread imbalances – Early warning indicators and models**
- **SR 3: Aggregate shocks – Macro stress testing models**

Source: Author based on de Bandt, Hartmann and Peydró (2009) and ECB (2010a)

Macroprudential regulatory instruments I

- To contain contagion risks
  - Enhance capital for counterparty exposures, introduce capital surcharge or levy for systemic risk
  - Move derivatives trading on central clearing counterparties
  - Introduce procedures for orderly resolution (incl. living wills)
- To prevent the build-up of widespread imbalances
  - Counter-cyclical capital requirements and dynamic provisioning (Avi 3)
  - Balanced accounting approach (market prices, liquidity; Avi 1)
  - Limit leverage, maturity and currency (EMEs) mismatches (Avi 3)
  - Influence compensation practices to remove incentives for risk taking and herding (Avi 1)
  - Loan-to-value ratios and debt-to-income limits (e.g. Korean and Hong Kong experiences; Avi 3)

Macroprudential regulatory instruments 2

- Ensure resilience against unexpected aggregate shocks
  - High capital and liquidity levels (e.g. based on stress tests)
  - Additional contingent capital
  - Foreign currency lending limits (emerging economies)
- Challenges
  - Transmission channels not well understood (impact assessments)
  - Calibration of individual instruments difficult
  - Interaction of different instruments major problem
  - Level playing field across financial sub-sectors and avoidance of regulatory arbitrage (shadow banking)
  - Effects on overall economy (benefits and costs)

Main points of the paper

- Persaud: "3 essential elements in a framework for systemic risk management"
  - Avi 1: Diversity of risks is a source of systemic resilience
  - Avi 2: Encourage risks to migrate where there is the capacity to absorb their materialisation
  - Avi 3: Attention must be placed on the economic cycle
- Answers
  - Yes, but risk concentration and homogeneity happens also without regulatory mistakes. How can we correct this?
  - Yes. You need well calibrated risk weighting across different intermediaries
  - Yes, but this aspect most seriously addressed in current supervisory approaches and Basel reforms
- Moreover
  - Only broad ideas and some things not clear
  - Concrete proposals would still need to be worked out
  - Some may be difficult in practice, we can't "organise" risks

Going deeper on the risk capacity approach

- Risk capacity approach: Intermediaries need to set aside separate capital for…
  - Avi 2a…credit risks that are not diversified by uncorrelated credits
  - Avi 2b…liquidity risks that are not matched by long-term funding
  - Avi 2c…market risks that are neither diversified by uncorrelated markets or matched by long-term funding
- Questions
  - Yes, but which credits are uncorrelated when the economy turns or interest rates change significantly?
  - Yes, but the new global liquidity standard requires already that banks will have to respect a net stable funding ratio in the future
  - Yes, but will diversification of market risks work in a crisis?
- Moreover
  - These risks are highly interdependent and hard to disentangle (see e.g. Basel Committee, 2009)
  - One doesn't get around some risk weighting

Thank you for your attention!

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Annex

Ultimate sources of systemic risk

SPECIAL FEATURES OF THE FINANCIAL SYSTEM

- Information intensity of financial contracts
- Balance-sheet structures of inter-mediaries
- High degree of connected-ness

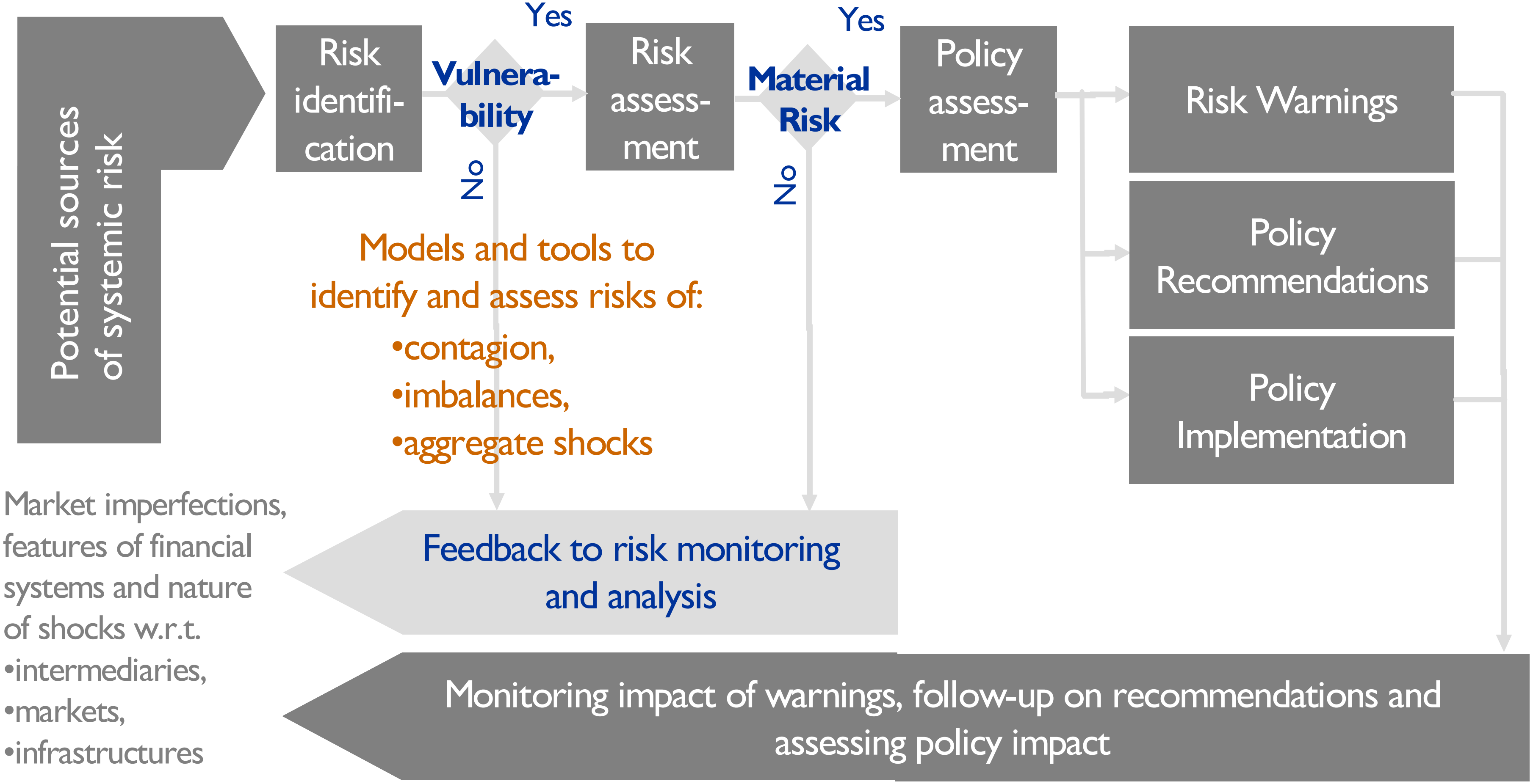
MARKET IMPERFECTIONS

- Incomplete markets
- Asymmetric and imperfect information
- Externalities
- Public good character of systemic stability
- Multiple equilibria

Powerful feedbacks and amplification: Non-linearities/ regime changes

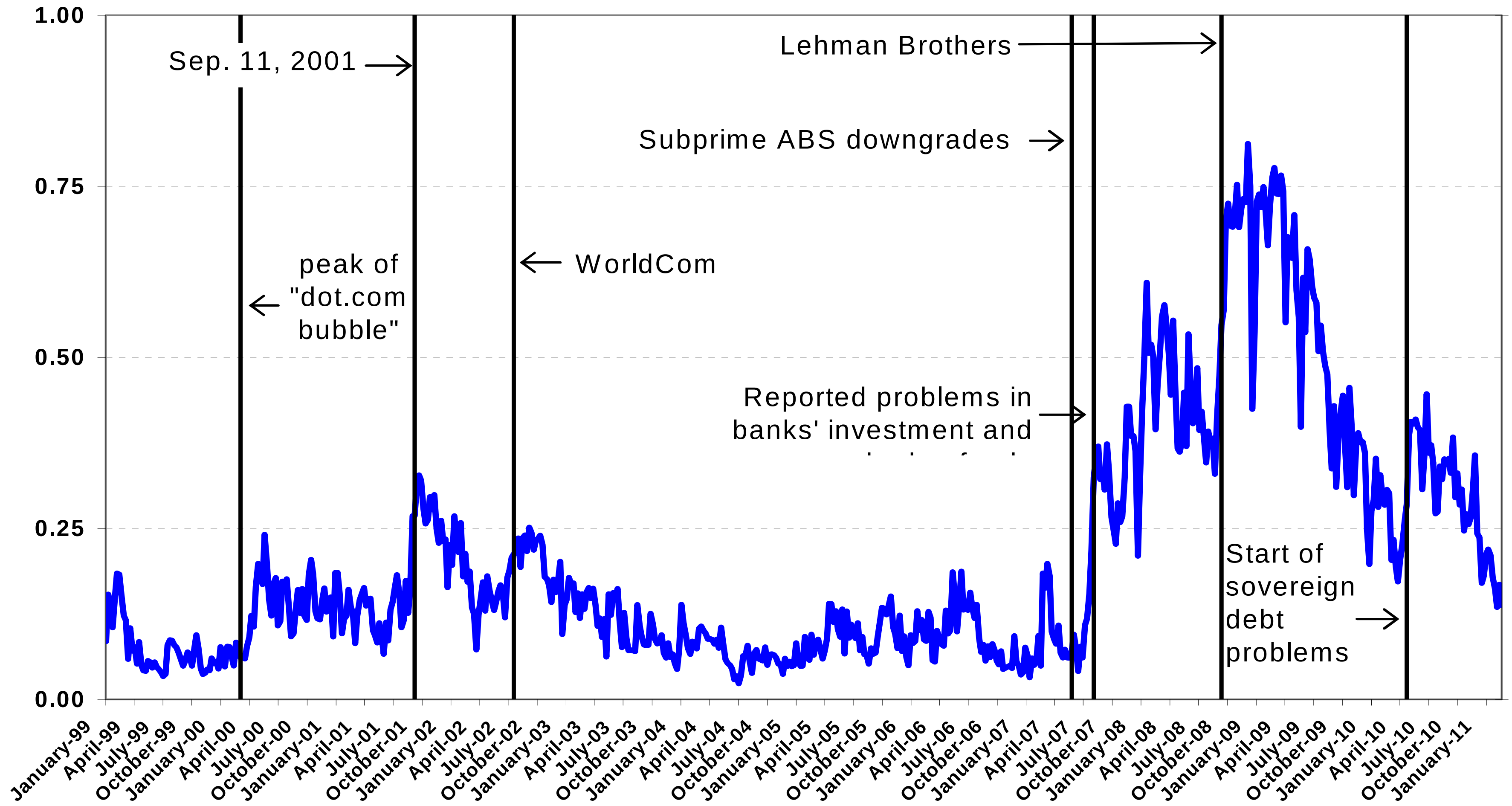
Source: Author based on de Bandt and Hartmann (2000)

Macroprudential oversight: process



Source: ECB (2010a)

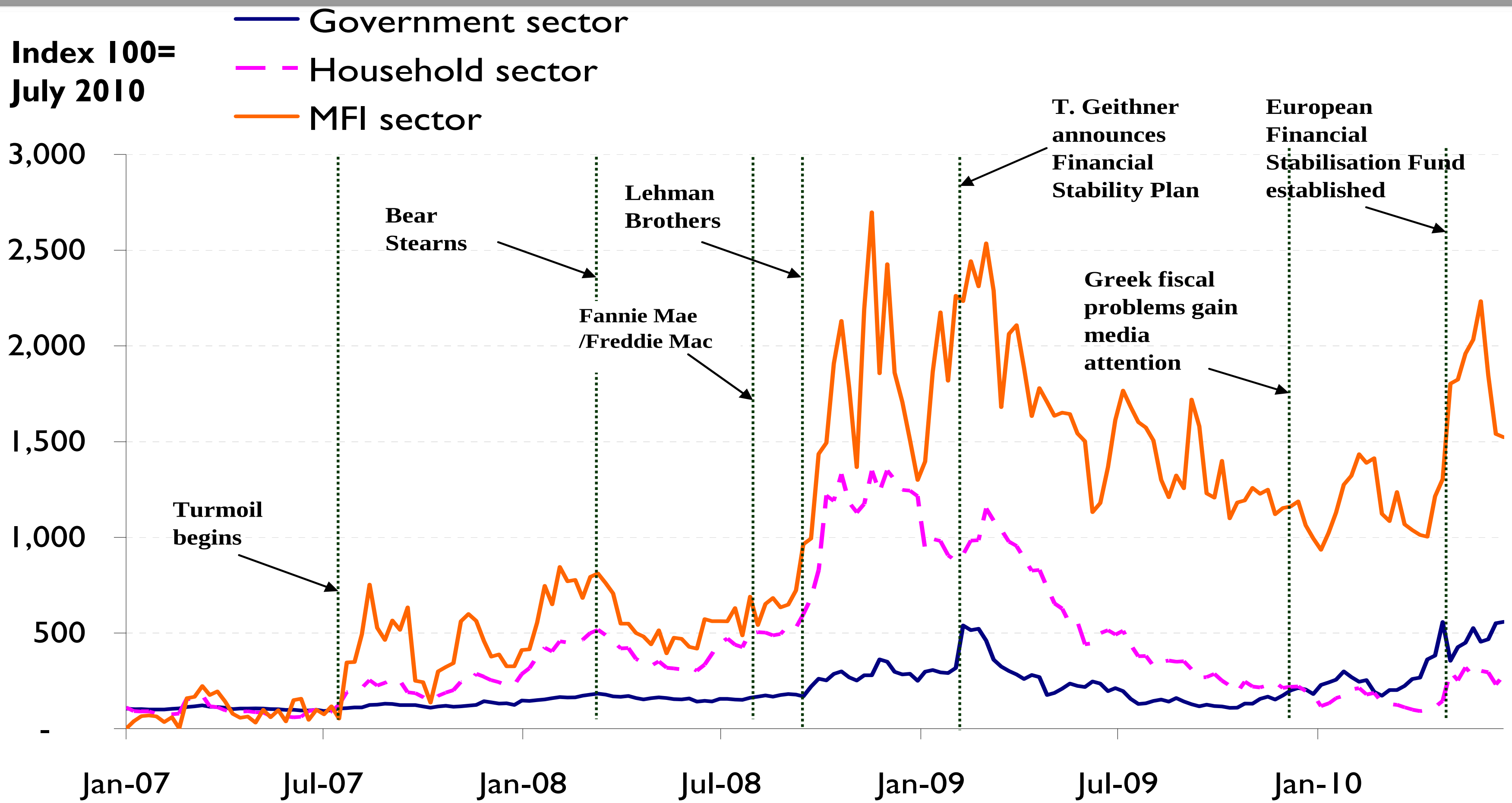
Composite indicator of systemic stress ("CISS")



- Scope: Equity, bond, money and FX markets plus banking (various sub-items) - real time
- Basic sub-measures include volatilities, trends, spreads, recourse to marginal lending (weekly data)
- Normalisation between 0 and 1 and aggregation weighted with correlations ("systemic")

Source: Hollo, Kremer and Lo Duca (2010)

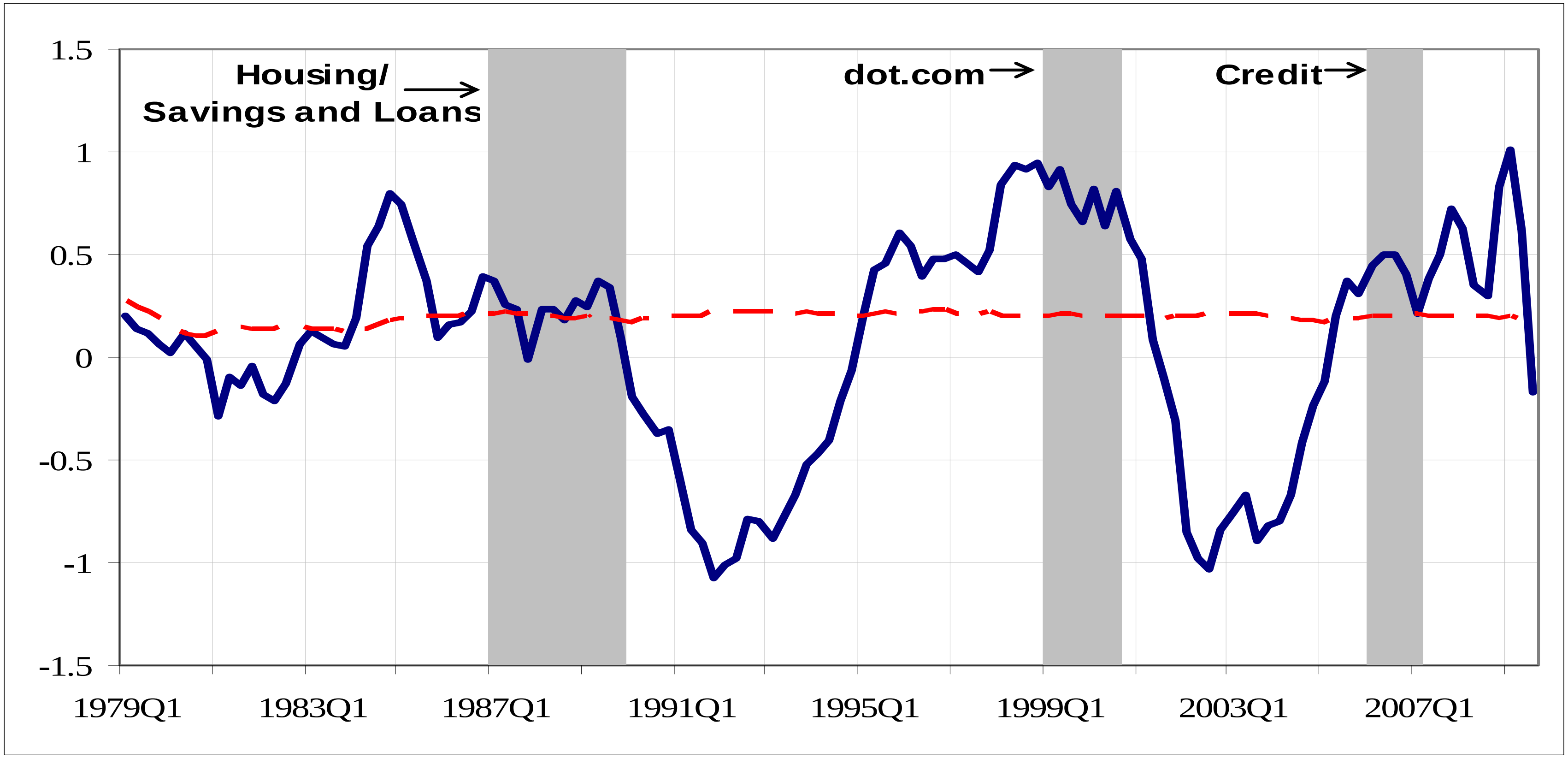
Sector-level aggregate spillover measure



- Contribution of a given sector to the overall risk of all sectors in the euro area economy (ΔCoVaR)
- Sector and total system asset values derived from Merton credit risk model using financial accounts
- CoVaR measure inspired by Adrian and Brunnermeier (2010) for individual banks

Source: Castrén and Sydow (2010)

"Global" credit gap as EWI for asset bubbles



- —— De-trended private credit to GDP ratio (GDP-weighted average across countries)
- – – "Optimal" signal threshold (each time 70th percentile – "quasi" real time)
- Widespread mortgage/equity bubble episode (≥8 countries 1.75 SD above trend)
- "Costly" bubbles (followed by 3 years of GDP growth 3 p.p. below potential)

Source: Alessi and Detken (2009)

EU-wide stress testing exercise (2010)

- Stress test: *Assessment of the resilience of a financial intermediary against aggregate shocks* (micro versus macro)
- Modules: Macro scenario – returns, PDs, LGDs – P&L, capital
- CEBS in collaboration with ECB, Commission and national supervisory authorities (published July 2010)
- 91 banks representing 65% of European bank assets and at least half of each country's banking system
- Positions end 2009, horizon 2 years (2010/11)
- "Adverse" scenario: est. 5% probability event for GDP (ca. -2 p.p.) and an additional increase of long-term interest rates by similar amounts as in early May 2010 (ca. 145 b.p.)
- Aggregate losses of EUR 566bn, with aggregate tier-1 ratio decreasing from 10.3% to 9.2% (continued reliance on public support for 38 institutions)
- 7 banks would see tier-1 capital ratios fall below 6% (regulatory minimum is 4%)