The New Macro Prudential Framework in Europe

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Conference

"New financial order in the post-crisis era"

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The views expressed are my own and should not be attributed to the ECB or its Governing Council
This presentation is based on presentations by Fahr et al (2010) and Hartmann (2010)

Outline

1 From "Great Moderation" to the Great Financial Crisis and the "Great Recession"

2 One of the most important lessons: The importance of systemic risk and the need for a macroprudential policy framework

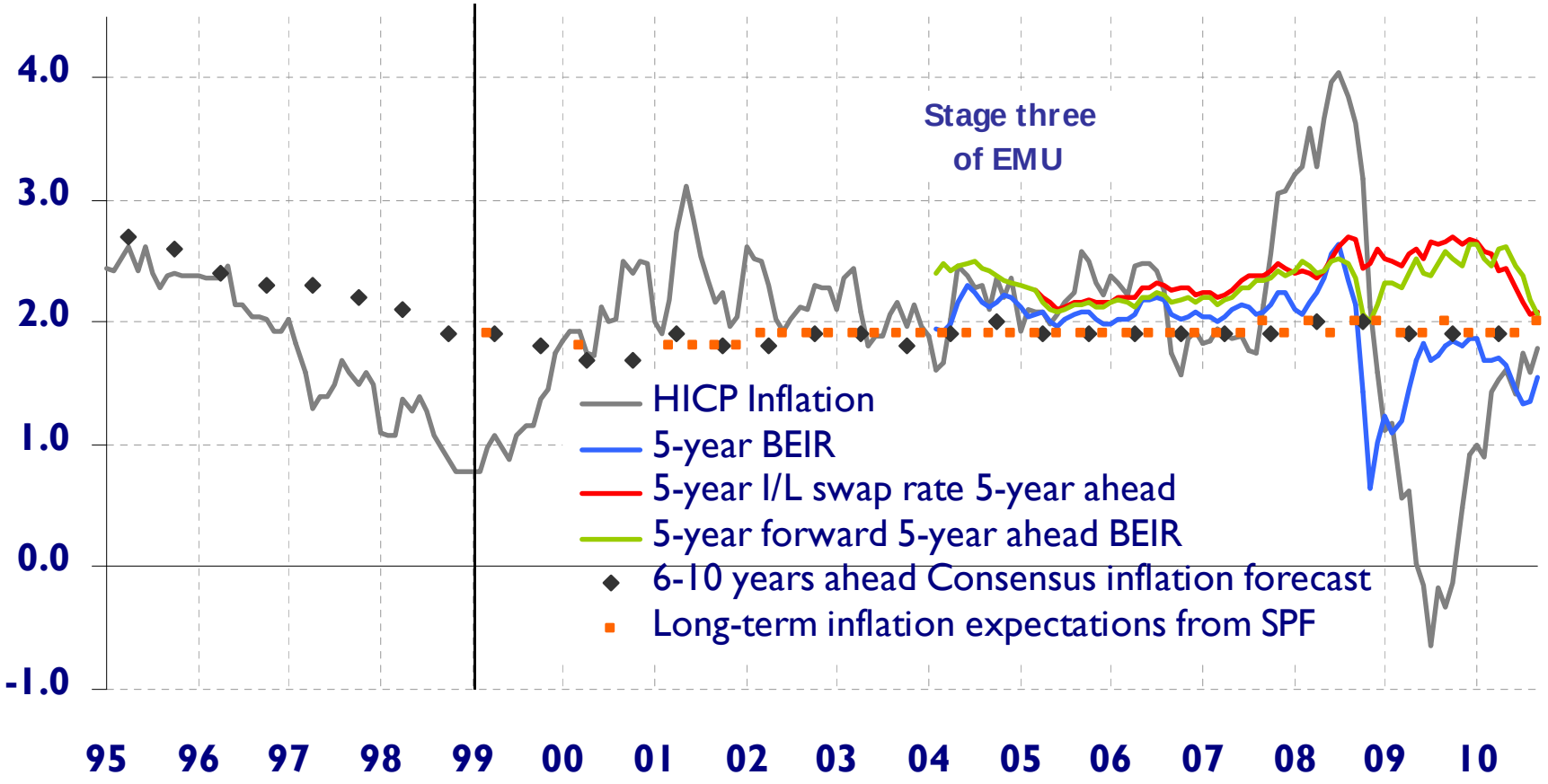
3 The new supervisory framework in the EU: Tasks, structure and policy instruments of the European Systemic Risk Board (ESRB)

4 The role of the ECB and the ESCB: Why central banks should be involved

5 Interaction with monetary policy

Tale of the last 15 years: Price stability

Inflation

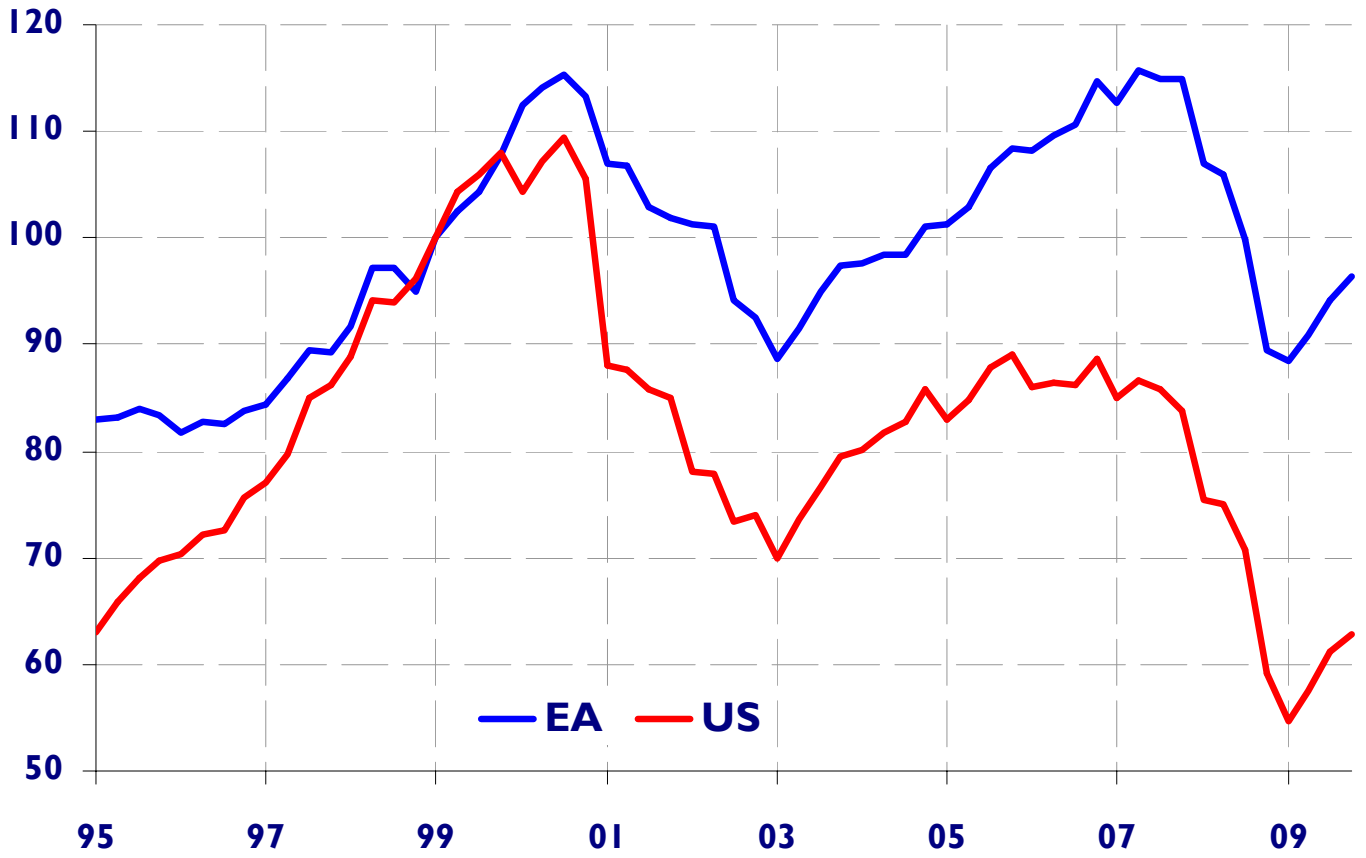


Notes: BEIR is Break-Even Inflation Rate from comparison of inflation indexed to conventional sovereign bonds. Last observation: September 2010.

Source: Source: Consensus, ECB Survey of Professional Forecasters, Eurostat, Reuters, ECB calculations.

But boom-bust behaviour in asset prices

International Asset Price Cycle

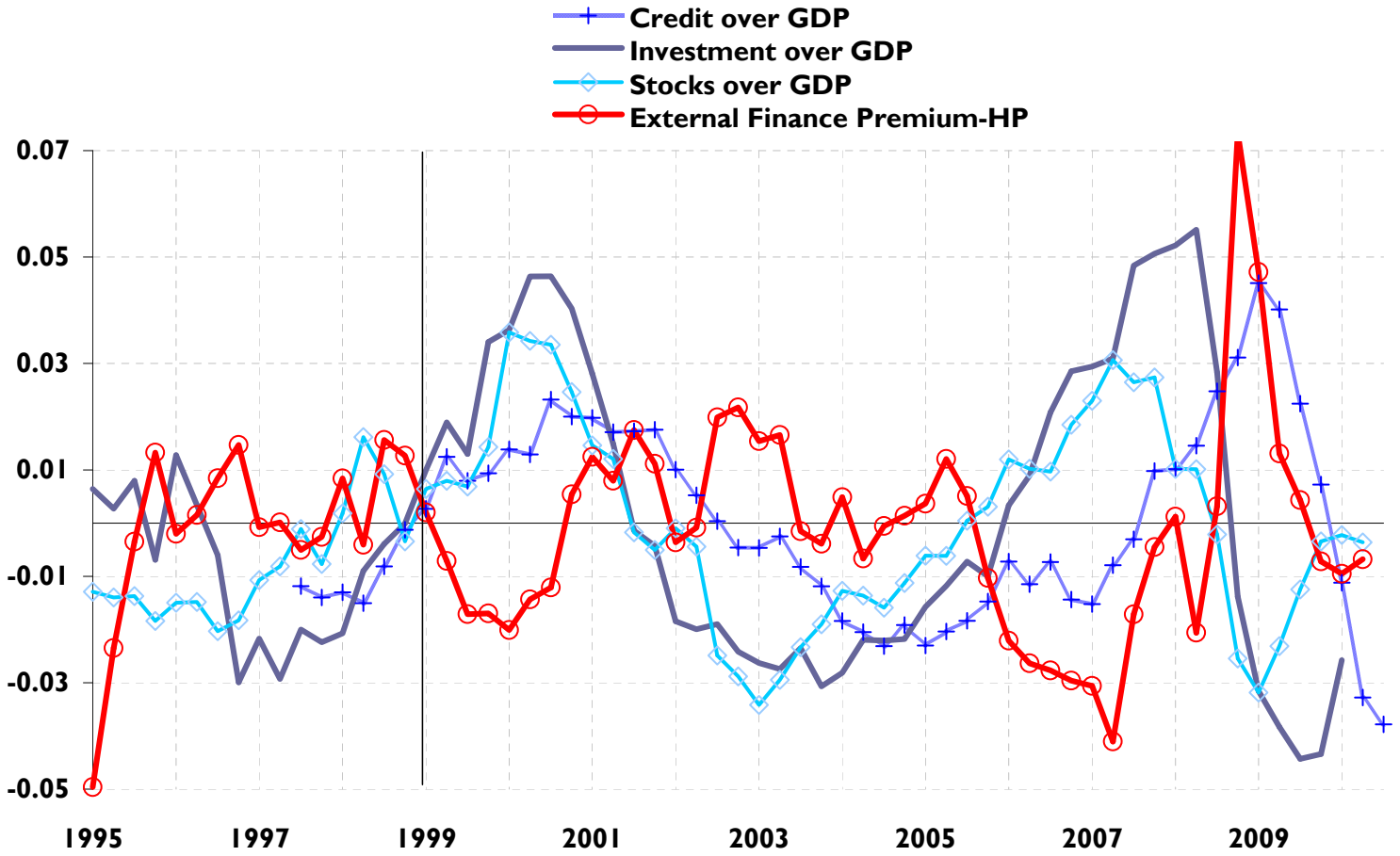


Notes: 1999Q1=100, last observation 2009Q4. The Quarterly Aggregate Asset Price Index encompasses prices for equity, residential real estate and commercial real estate. The euro area index is derived from national series of the eight largest countries (DE, FR, IT, ES, NL, BE, FI, IE) and weighted by their relative real GDP.

Source: BEA, BIS calculations based on national data, Eurostat, ECB calculations.

With implications for the real economy

Pro-Cyclical Credit Markets

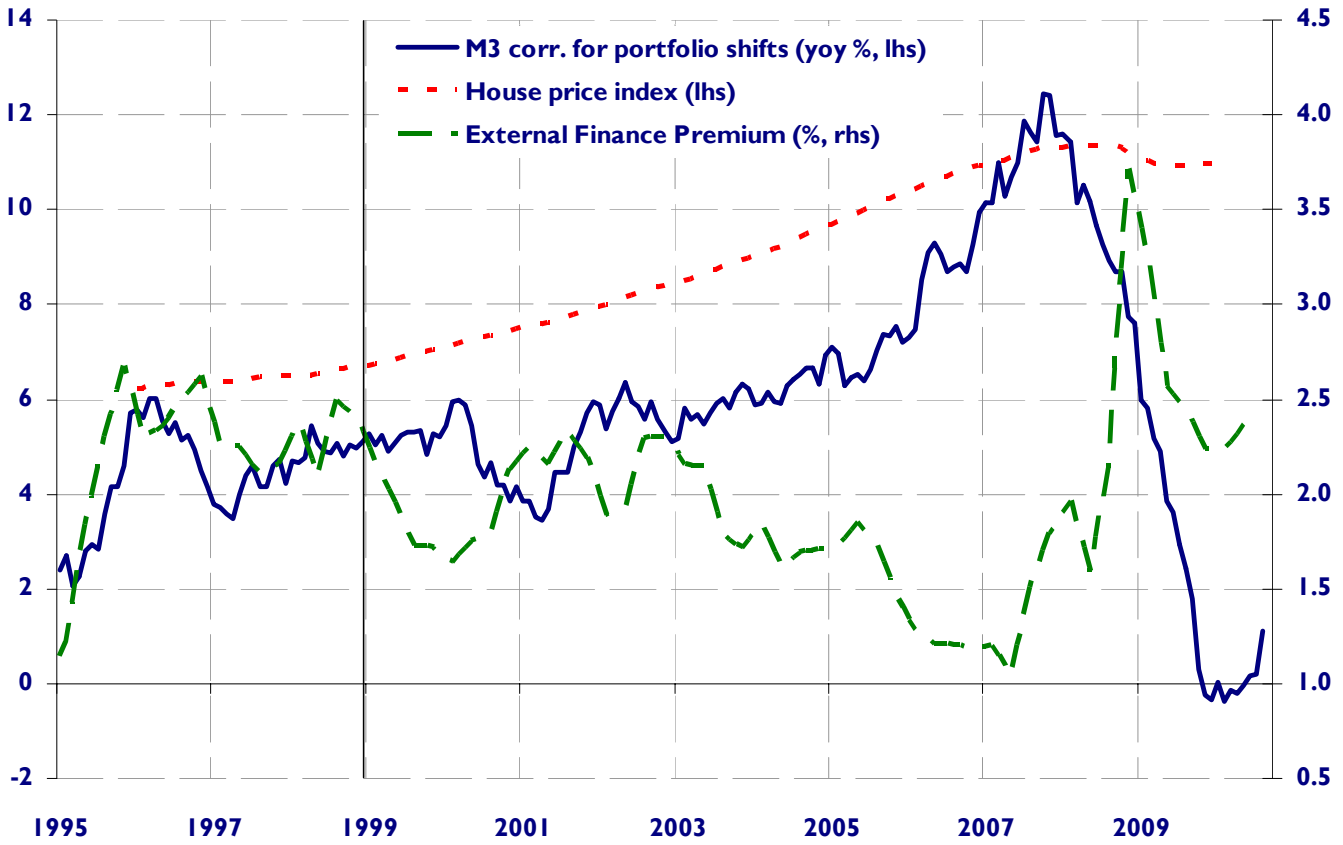


Note: All series in deviations from HP(1600)-trend (stocks/GDP by 10). Credit defined as total MFI loans and securities to NFCs, investment is private non-residential investment, stocks is DJ Euro Stoxx 600. The external finance premium is aggregated from spreads of MFI loans and securities yields over sovereign bond yields of similar maturity, weighted by outstanding amounts.

Source: BSI, Dow Jones, Eurostat, own calculations.

and growing monetary and financial imbalances

Signals from Money



Notes: M3 is corrected for portfolio shifts, Total MFI credit consists of loans and securities to private sector, house prices are reseidential property prices.

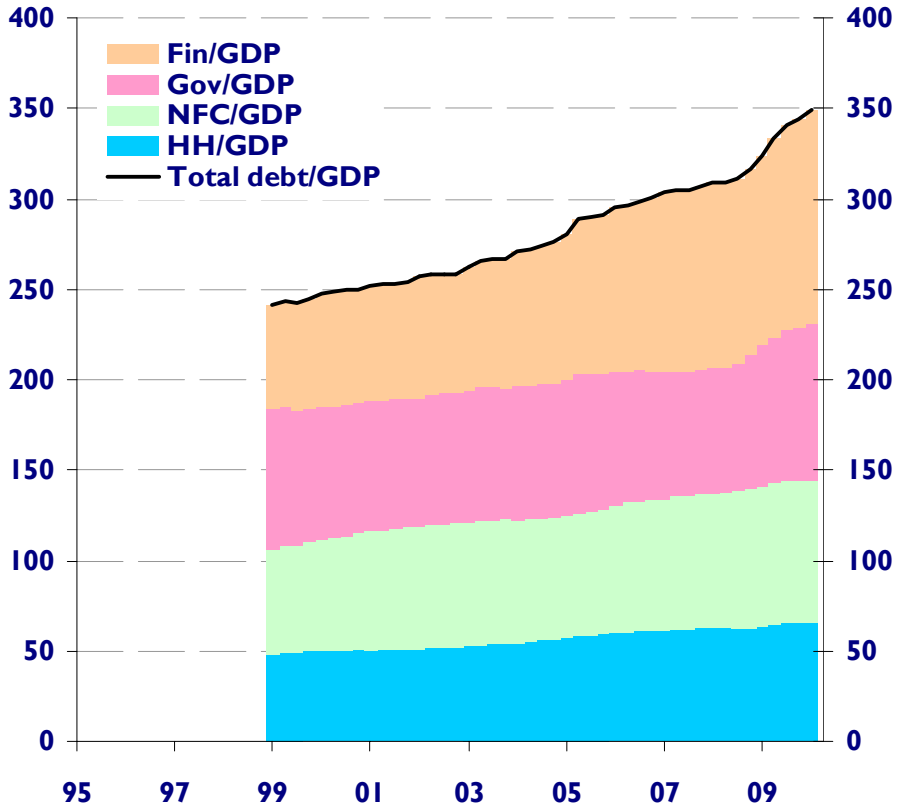
Source: BIS, ECB, Dow Jones, ECB calculations.

and growing monetary and financial imbalances

Trends building up slowly

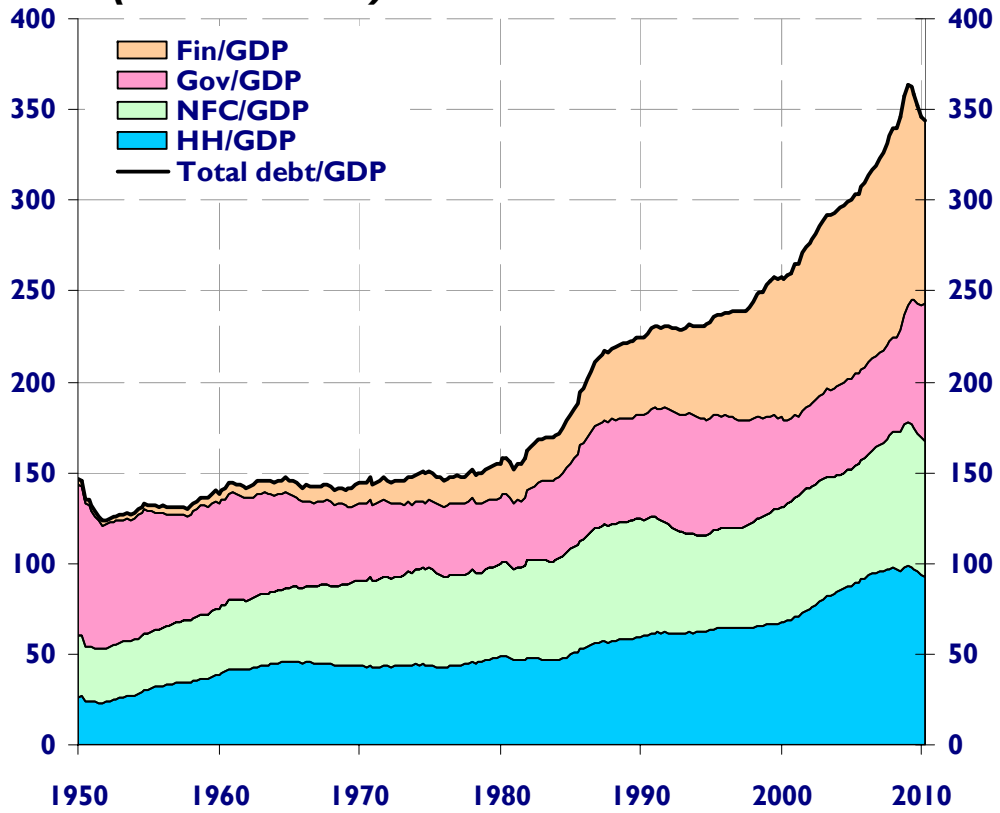
Euro area debt (1999-2010)

(in % of GDP)



US debt (1950-2010)

(in % of GDP)

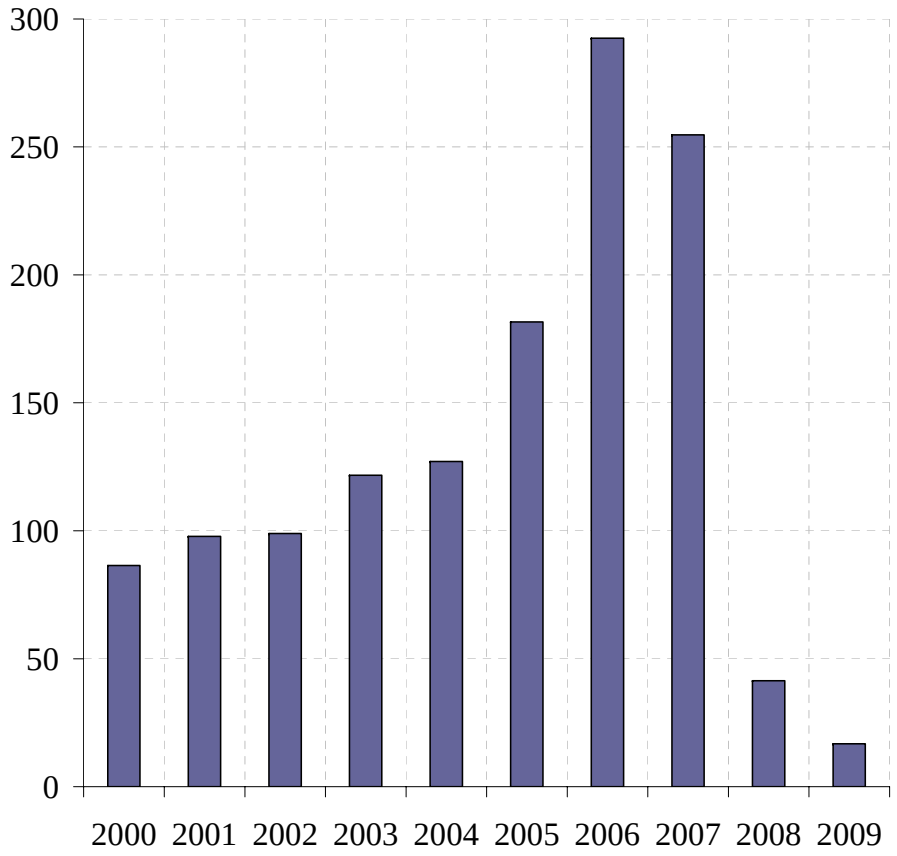


Notes: Debt by households are loans, debt by NFCs are loans, issues securities, net equity of households in pension funds, debt by government are loans and securities.

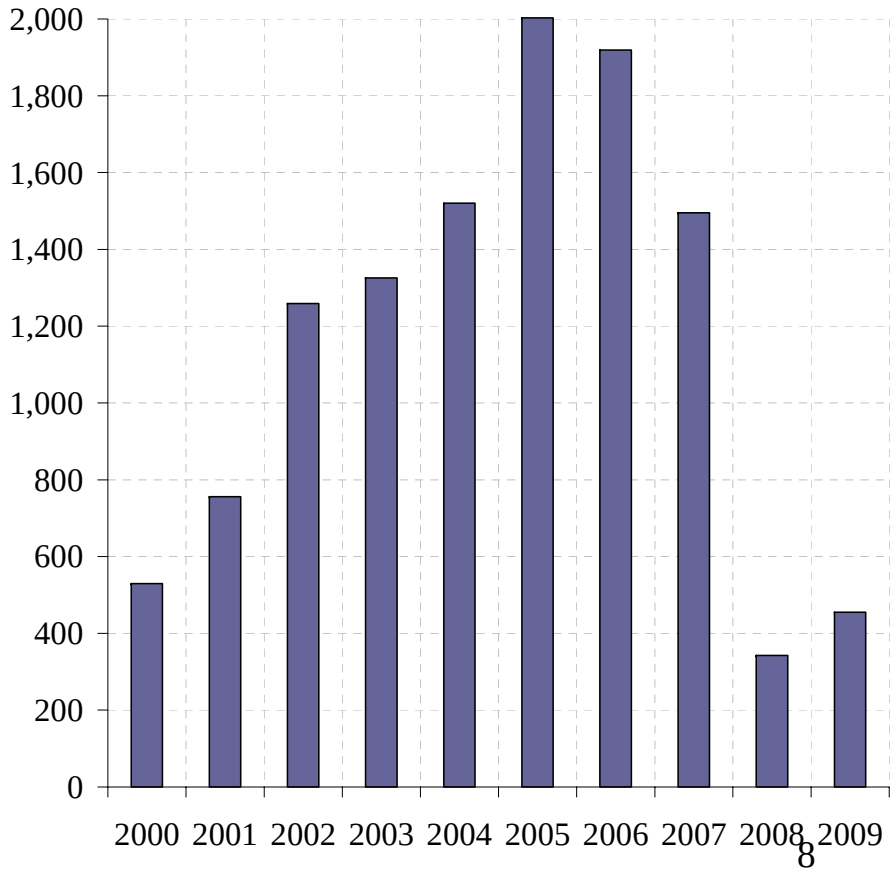
Source: Quarterly Euro Area Accounts Eurostat, Flow of Funds, BEA,

Set the stage for the crisis …

Euro area public securitisation issuance volumes (not retained by issuers) (EUR billions)

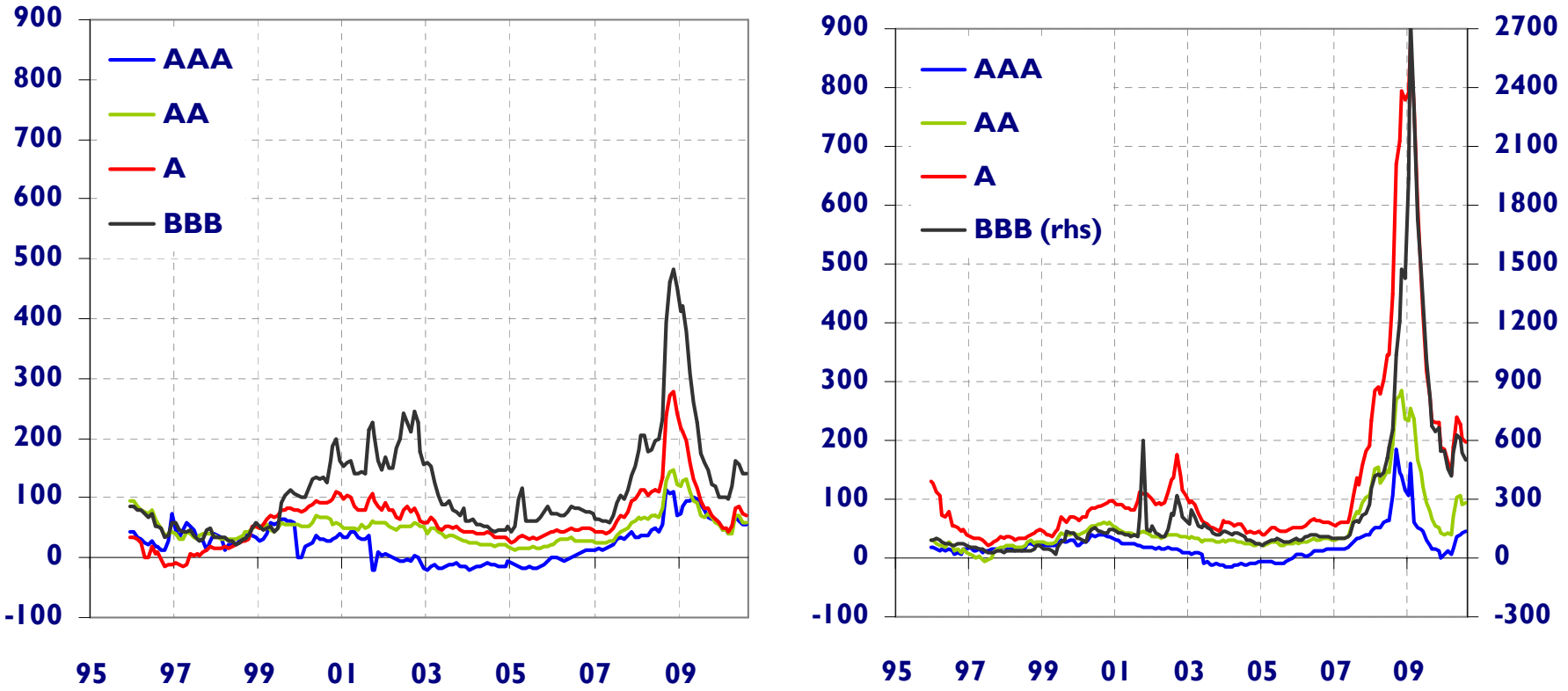


US non-agency securitisation issuance volumes (not retained by issuers) (USD billions)



Set the stage for the crisis …

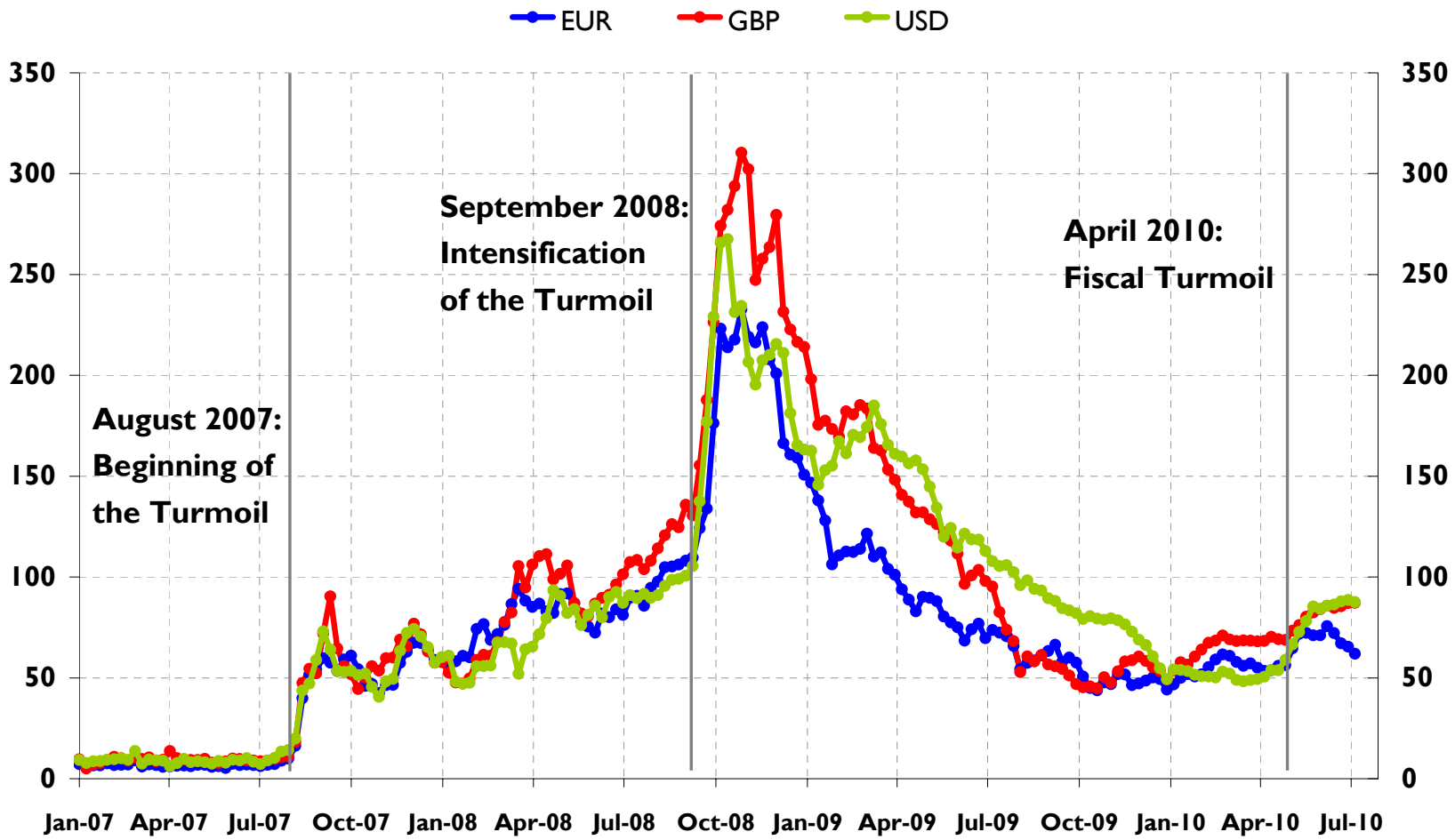
The Crisis



Notes: In basis points. Spreads are difference to EMU benchmark AAA government bond index by Merill Lynch.

Source: Thompson Financial Datastream.

Money market spreads: EA-UK-US

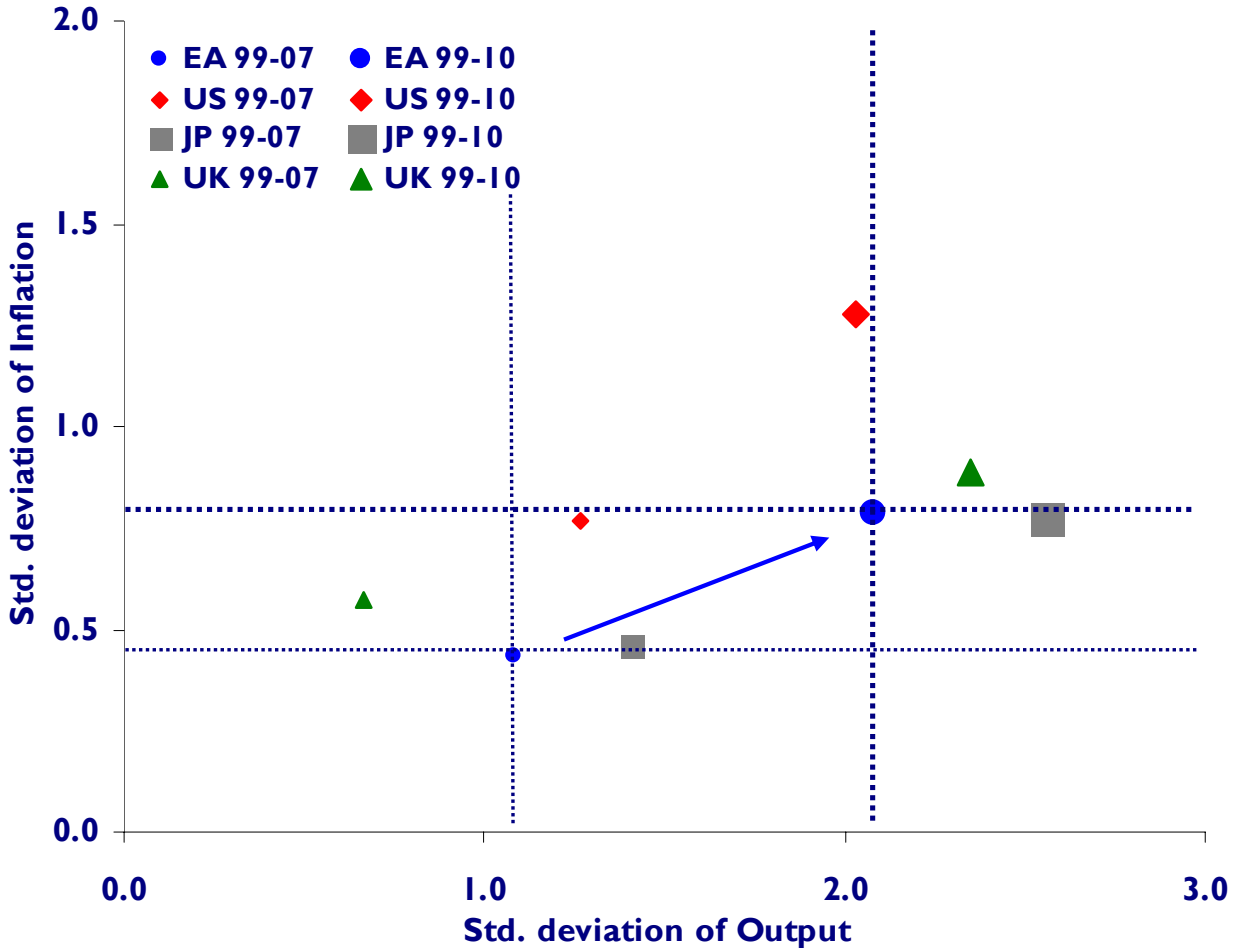


Note: Spreads are the difference between 12-month Euribor/Libor and Overnight Index Swap rates, in basis points.

Source: Bloomberg and ECB calculations. Last observation: 9 Jul 2010.

Set the stage for the crisis …

Macroeconomic Volatility



Notes: Inflation is annual CPI inflation, output growth is annual real GDP growth. Adapted from Benati and Goodhart (2010). Quarterly data, last observation 2010Q2.

Source: OECD.

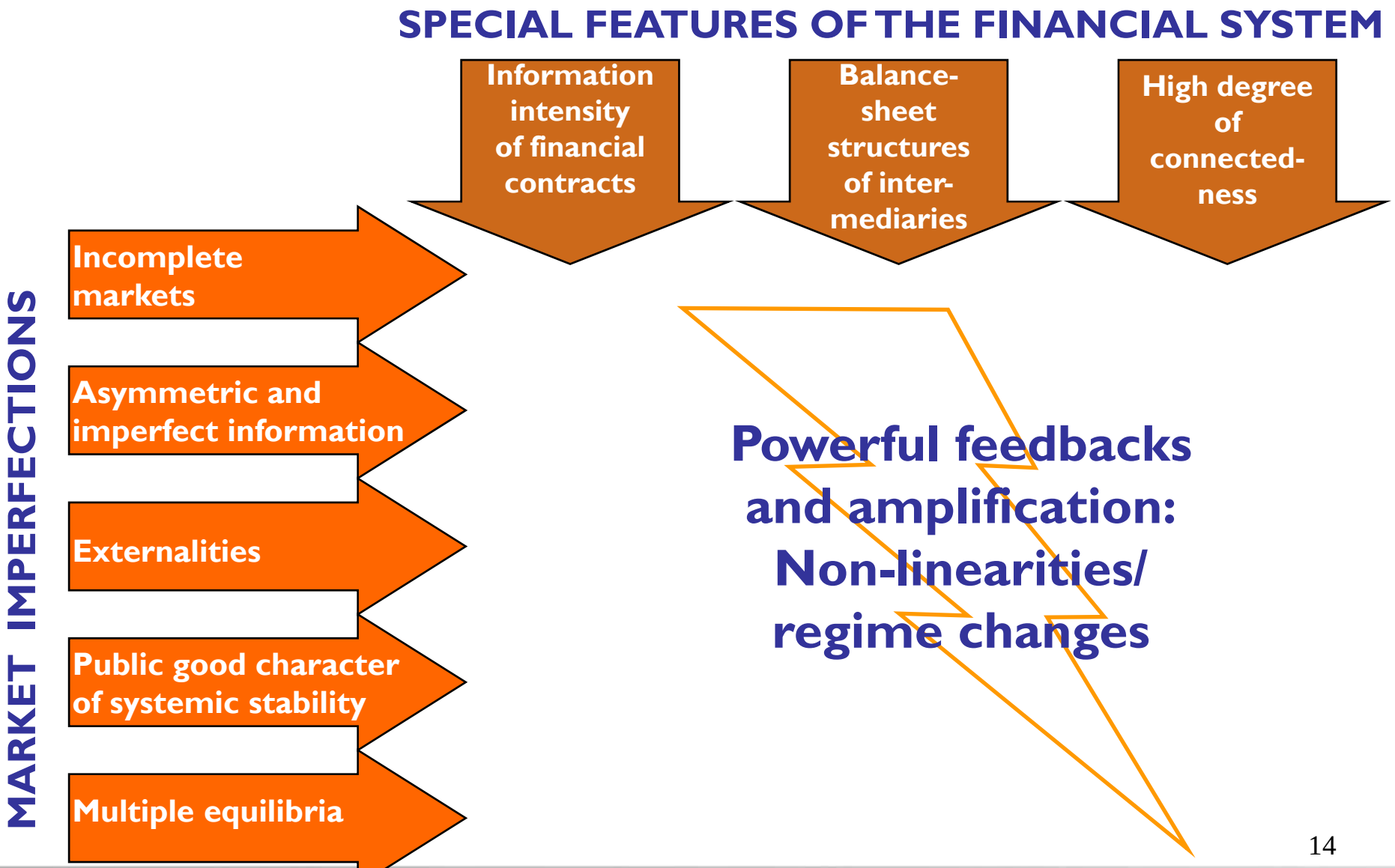
A macro-prudential policy framework

- A key lesson from the crisis: The sources, magnitude and consequences of systemic risk were not sufficiently appreciated by supervisory authorities and market participants, as their focus was on the soundness of individual financial institutions
- Financial and economic crisis has highlighted
  - the relevance of systemic risk
  - the need for macroprudential oversight/supervision

Systemic risk

- The fundamental phenomenon underlying macro-prudential supervision is systemic risk
- One definition (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
- Can involve all components of financial systems (intermediaries, markets and market infrastructures) and entails a two-way relationship with the economy at large
- Can take two forms: contagion (cross-section dimension), endogenous build-up and unravelling of imbalances (procyclicality and time series dimension).

Ultimate sources of systemic risk



Source: de Bandt and Hartmann (2000) and ECB (2009)

Macro prudential policy response

- Strengthen macro-prudential wing of supervision and regulation
- Origins: Cross Report (1986), Crockett (2000)
- Macro-prudential supervision: Public oversight that aims at identifying and containing systemic risks
- Macro-prudential regulation: Public regulations that aim at maintaining systemic stability (relatively "new" policy area)
- Typically more realm of central banks
- Micro-prudential supervision: Oversight of specific intermediaries or markets (lesson: not sufficient)

Macro versus micro prudential policy

Table III.1*
The macro- and microprudential perspectives compared

	Macroprudential	Microprudential
Proximate objective	limit financial system-wide distress	limit distress of individual institutions
Ultimate objective	avoid output (GDP) costs linked to financial instability	consumer (investor/depositor) protection
Characterisation of risk	Seen as dependent on collective behaviour ("endogenous")	Seen as independent of individual agents' behaviour ("exogenous")
Correlations and common exposures across institutions	important	irrelevant
Calibration of prudential controls	in terms of system-wide risk; top-down	in terms of risks of individual institutions; bottom-up

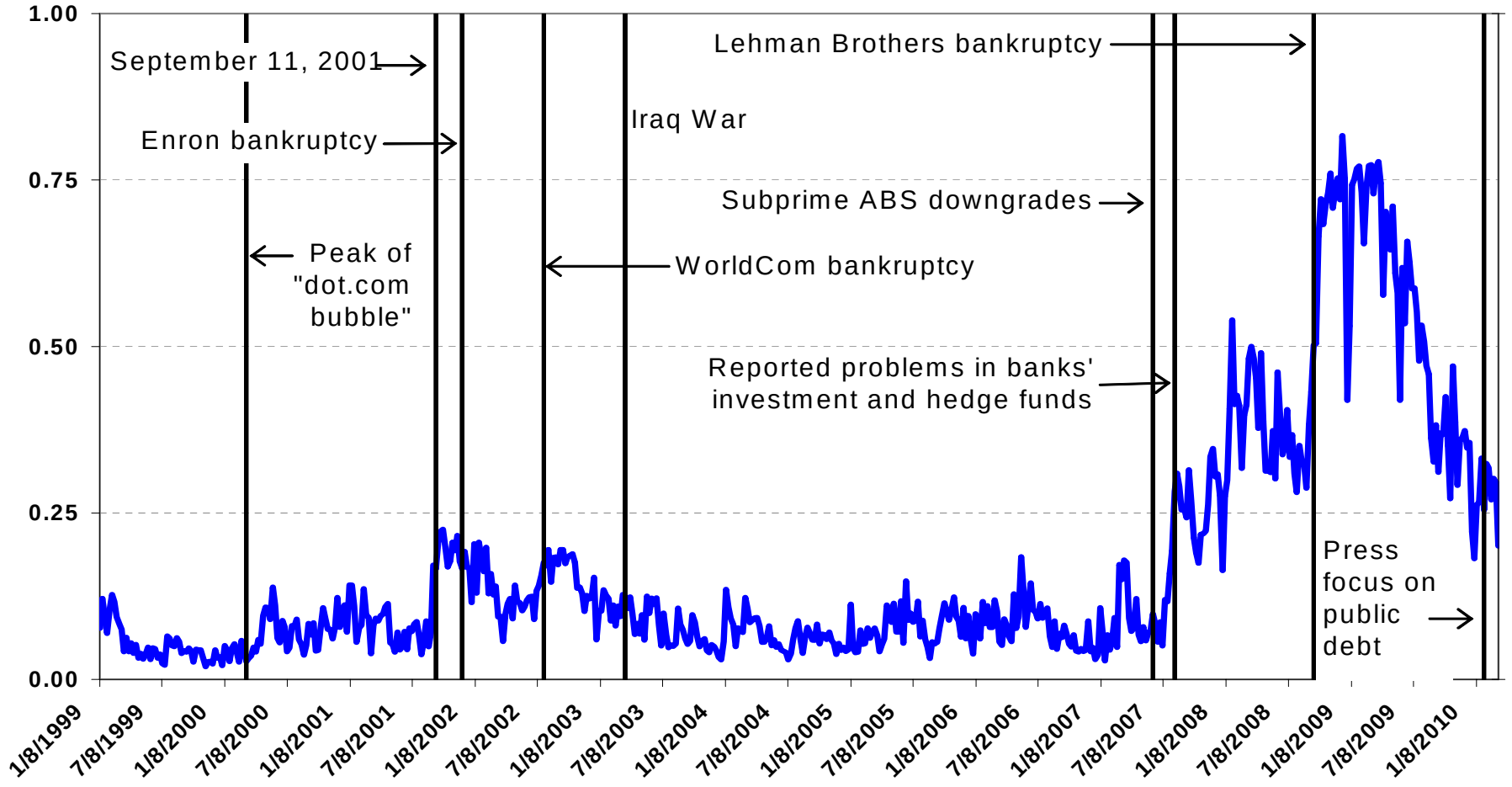
* As defined, the two perspectives are intentionally stylised. They are intended to highlight two orientations that inevitably *coexist* in current prudential frameworks.

Source: Borio (2003).

Objective of macro-prudential policy

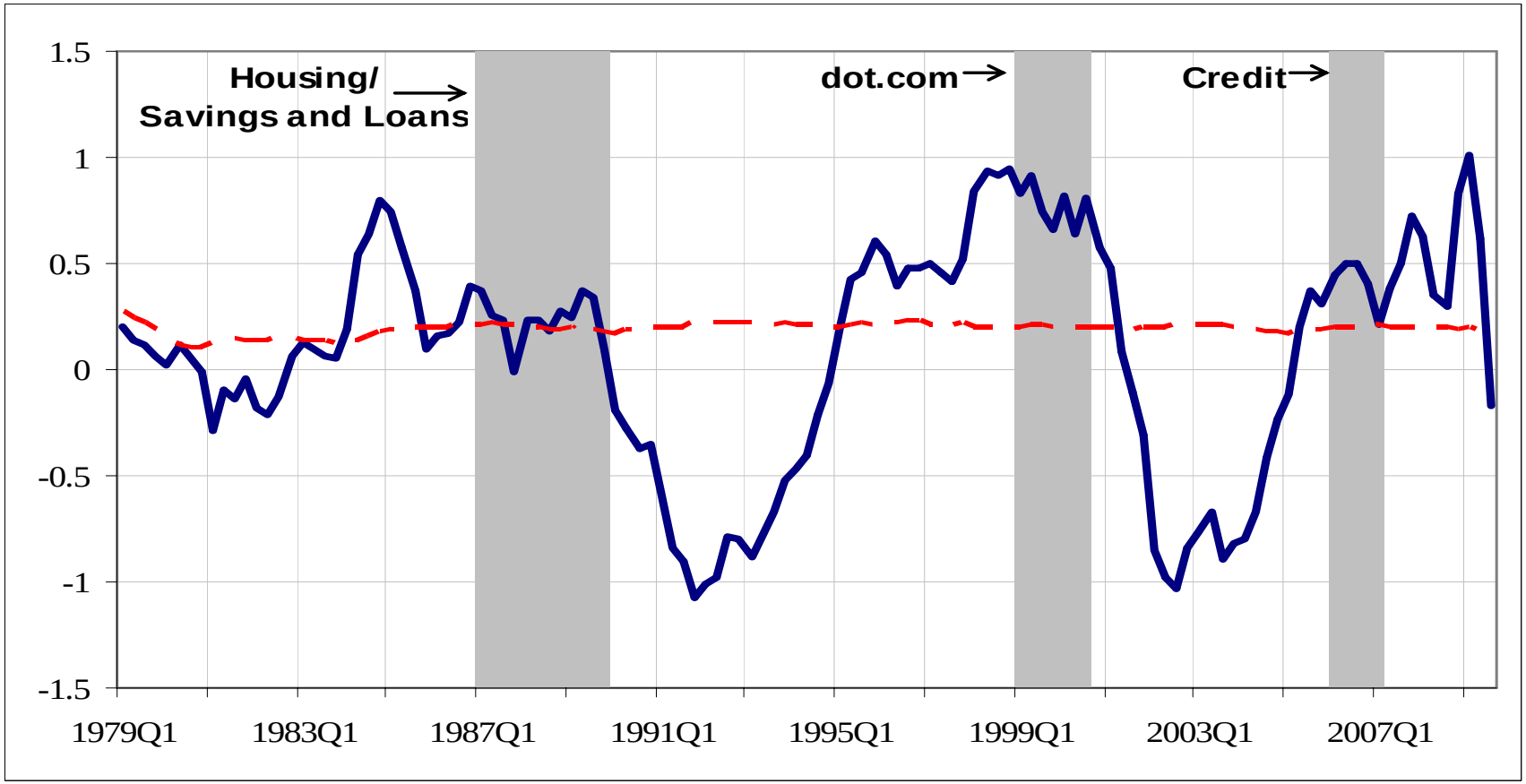
- Systemic stability is an extraordinarily complex target
- There is no simple metric to measure it, multi-faceted phenomenon
- Very different from price stability objective in monetary policy
- "Prudential" policy focuses on ex ante activities (not ex post: crisis management) – "asymmetric" in this sense:
  - Need to be able to predict or assess the probability of systemic instability

Composite indicator of systemic stress (CISS)



- Scope: Equity, bond, money, FX markets and intermediaries (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")

Credit gap as EWI for "costly" 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)

Research needs

- Financial stability/systemic risk indicators (continuous effort)
- Contagion and spillover models
  - Incorporate endogenous reactions of market participants/amplification mechanisms
  - Distinguish contagion from unravelling of imbalances
- Early-warning signal models
  - Increase precision/reduce standard error in predictions
  - Europe: Aggregation of different models/indicators for countries with different financial structures
- Macro-stress testing models
  - Use frameworks that have two-way interaction between financial system and wider economy

Macro-prudential policy instruments I

- To contain contagion risks
  - Enhance capital and liquidity requirements (Basle III), 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
  - Limit leverage, maturity and currency (EMEs) mismatches
  - Influence compensation practices to remove incentives for risk taking and herding
  - Impose constraints on loan-to-value ratios and debt-to-income caps

Macro-prudential policy instruments 2

- **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)**

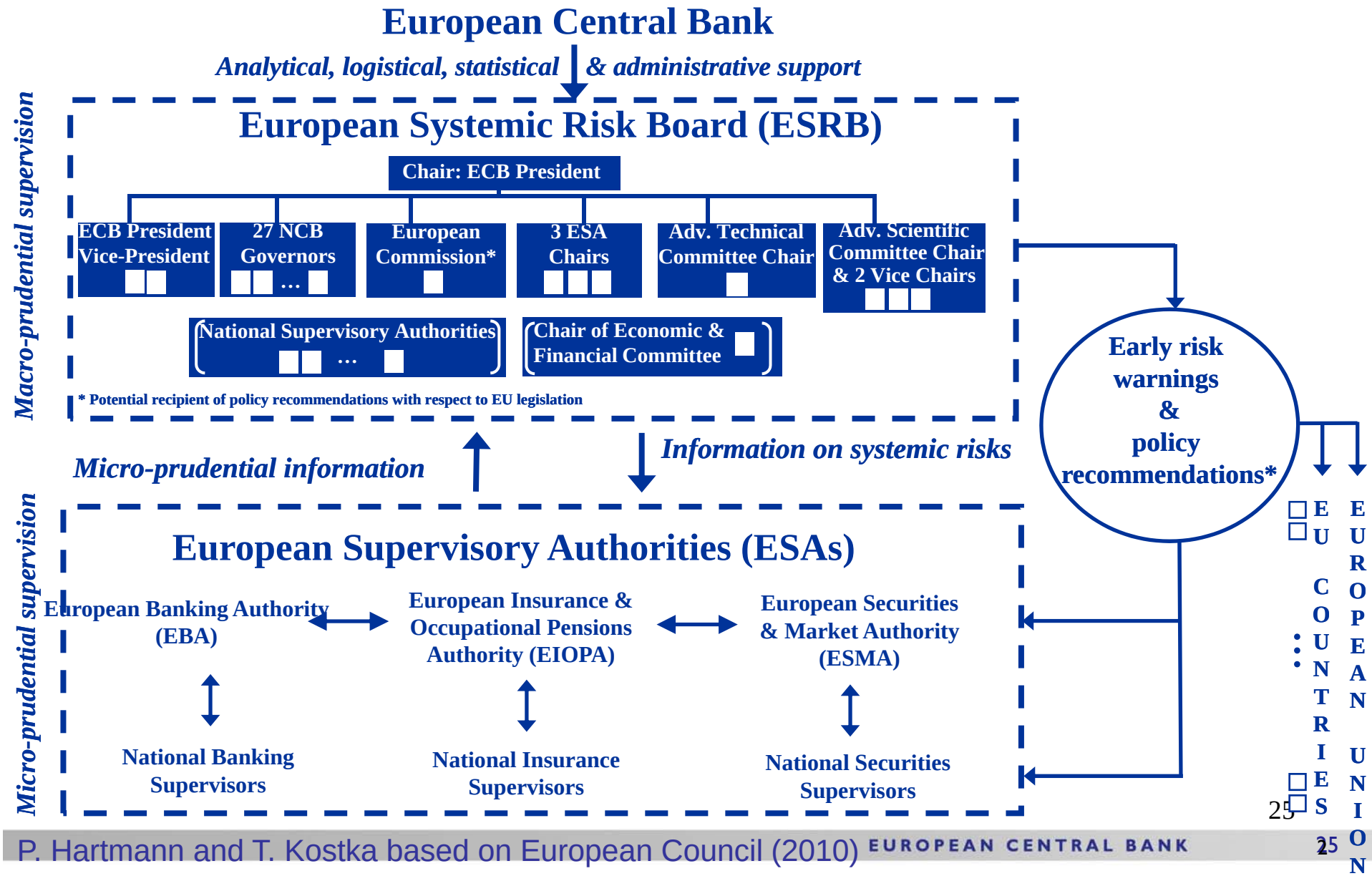
Research needs

- Huge lacuna in economics: Aggregate models with realistic characterisations of widespread financial instability
- One dimension of a better integration of finance and macroeconomics
  - Bottom up (finance to macroeconomics): Make finance stability paradigms more aggregate
  - Top down (macroeconomics to finance): Introduce more sophisticated financial sectors in macroeconomic models, which can exhibit states of widespread instability
- Current macroeconomic paradigm (DSGE models) has some way to go
- Once such a framework exists, it can be extended for the assessment of policies (macro-prudential regulation, monetary and fiscal policy and their interactions)

3. The new supervisory framework in the EU

- **23 February 2009:** publication of de Larosière Report
- **23 September 2009**: following a Communication in May and European Council conclusions in June, the Commission presented legislative proposals for: (1) the establishment of the ESRB, (2)entrusting specific tasks to the ECB with regard to the ESRB, and (3) the establishment of three European Supervisory Authorities (ESAs)
- **20 October 2009**: the ECOFIN reached a broad agreement on the substance of the ESRB legal acts (and on 2 December 2009 on the substance of the ESAs legal acts)
- **Fall 2010: A**doption of the legislation by the Council and the European Parliament
- **1 January 2011:** Establishment of the ESRB and the ESAs

3. European System of Financial Supervision



P. Hartmann and T. Kostka based on European Council (2010)

25

3. The ESRB: tasks

1. Gathering of all the relevant *information* for the assessment of systemic risks in the EU

2. Identification and *prioritisation* of systemic risks in the EU

3. Issuance of *risk warnings* when systemic risks are significant

4. Issuance of *recommendations* to contain the identified risks

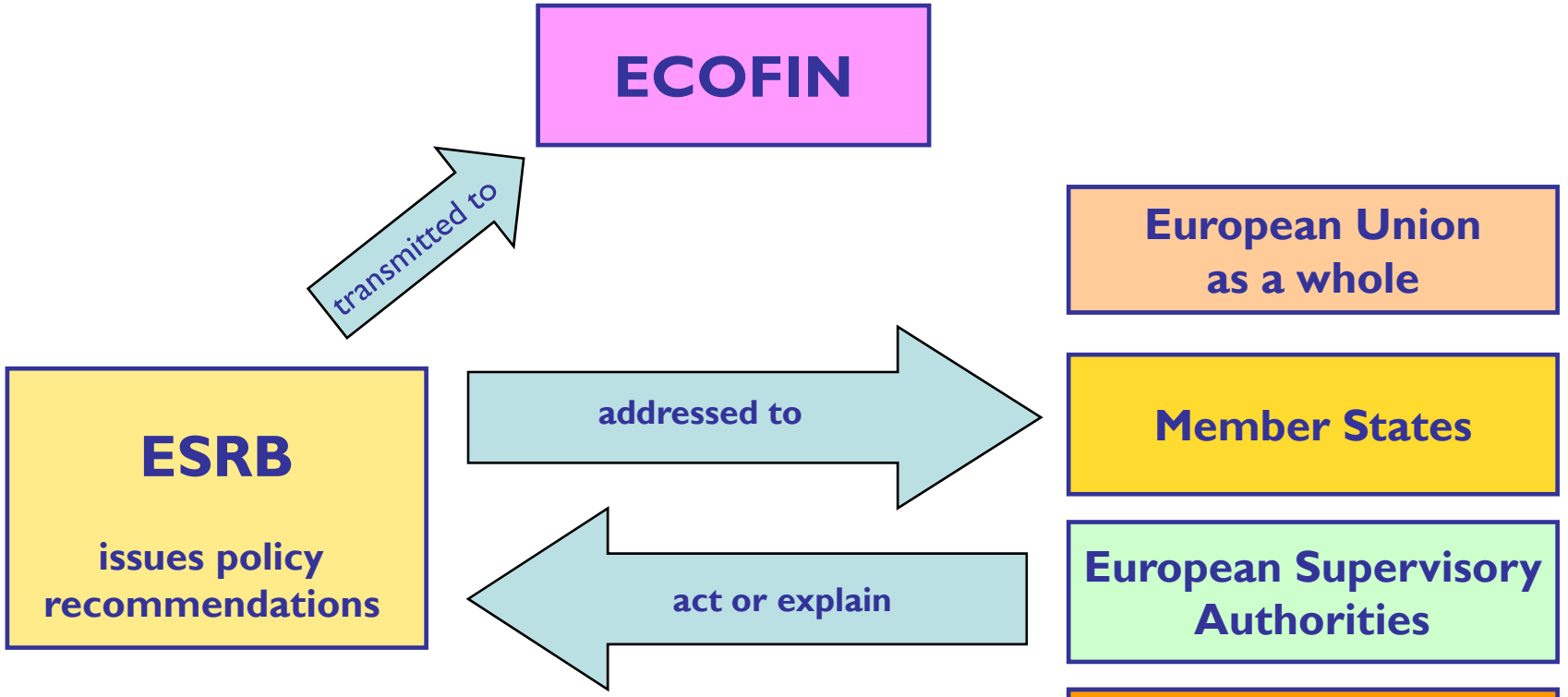
5. Monitoring of the *follow-up* to warnings and recommendations

6. International *coordination* with the IMF, FSB, and third parties

Early risk warnings

- Intermediate goals
  - Change market behaviour
  - Encourage preventive policy action
- Challenges for public warnings
  - Type I errors (false alarms): Endanger credibility for next time
    - If warnings are successful in changing market behaviour then crises may not be observed (difficulty to ascertain counterfactual)
  - Type II errors (missed crises): Mandate not fulfilled
- "Art" to make communication effective

3. The ESRB: procedure for recommendations



The addressees of the recommendations should communicate the actions taken or justify why action was not taken

The ESRB may decide to make the recommendations public

4. The role of the ECB and the ESCB

- **The members of the General Council of the ECB represent the majority of voting members; the *ESRB Chair* will be elected by the members of the General Council**

- **The ECB will ensure the Secretariat and provide *analytical, statistical, administrative* and *logistical support***

- **Therefore, the ESRB set-up ensures that the EU central banks' *analytical capabilities* and *expertise* in financial stability as well as in monetary and macroeconomic analyses will provide a solid basis for the conduct of macro-prudential supervision in the EU**

The role of the ECB and the ESCB

- **Risk monitoring and assessment:** ECB to contribute to the *identification* and *monitoring of risks* to financial stability in the EU
- **Tools and methodologies:** ECB to contribute to the development of *analytical tools* and *methodologies* necessary for identifying and assessing systemic risk
- **Collection of information:** ECB to help gathering *information for the ESRB* on the basis of its existing statistical infrastructure and through the exchange of information with the European Supervisory Authorities
- **Other supporting tasks:** the ECB will provide *logistic* and *administrative* support to the day-to-day functioning of the ESRB and its sub-structures

The role of central banks

- **More generally, central banks are called upon to play an important role in the macro-prudential function:**
  - **Are at the core of the financial system and therefore have an expertise in analyzing and understanding the financial system and its interaction with the real economy.**
  - **Independent institutions, which, by their very nature, are anchors of stability and have a medium term-oriented policy horizon.**
  - **lenders and market makers of last resort, being able to provide the ultimate source of liquidity, which may be necessary in times of financial crisis.**

5. Monetary policy and financial stability

- **Tinbergen: Effective policy assignment suggests to have as many instruments as targets.**
  - **The primary objective of the ECB is to maintain price stability;**
  - **The ESRB deals with maintaining financial stability**
- **In general, both objectives are complementary:**
  - **The fulfilment of the ESRB mission can facilitate the conduct of monetary policy by preventing or mitigating financial disturbances;**
  - **Price stability will contribute to financial stability.**

5. Monetary policy and financial stability

- **Whether or not those macro-prudential policies are present, monetary policy can, however, not ignore financial stability:**
- **Art 105(5): One of the ECB's tasks is to contribute to the promotion of financial stability.**
- **Monetary policy needs to take into account the effects of the financial system on the transmission mechanism and the shocks that come from the financial system. Both monetary policy and macro-prudential policies affect the cost of financing and therefore will tend to interact.**
- **Friedman's advice: Avoid that monetary policy itself becomes itself a source of instability.**
- **Increasing evidence that keeping interest rates too low for too long may sow the seeds of the next crisis.**

5. Monetary policy and financial stability

- "To lean or to clean": The costs of the financial crisis have moved the debate toward leaning
- The ECB's monetary policy strategy provides a natural framework for taking into account credit driven boom-bust cycles:
  - medium-term orientation;
  - two pillar approach including emphasis on monetary analysis
- Remaining question: Is it feasible?
  - Will small changes in interest rates be effective?
  - Can we identify costly credit/asset price booms?

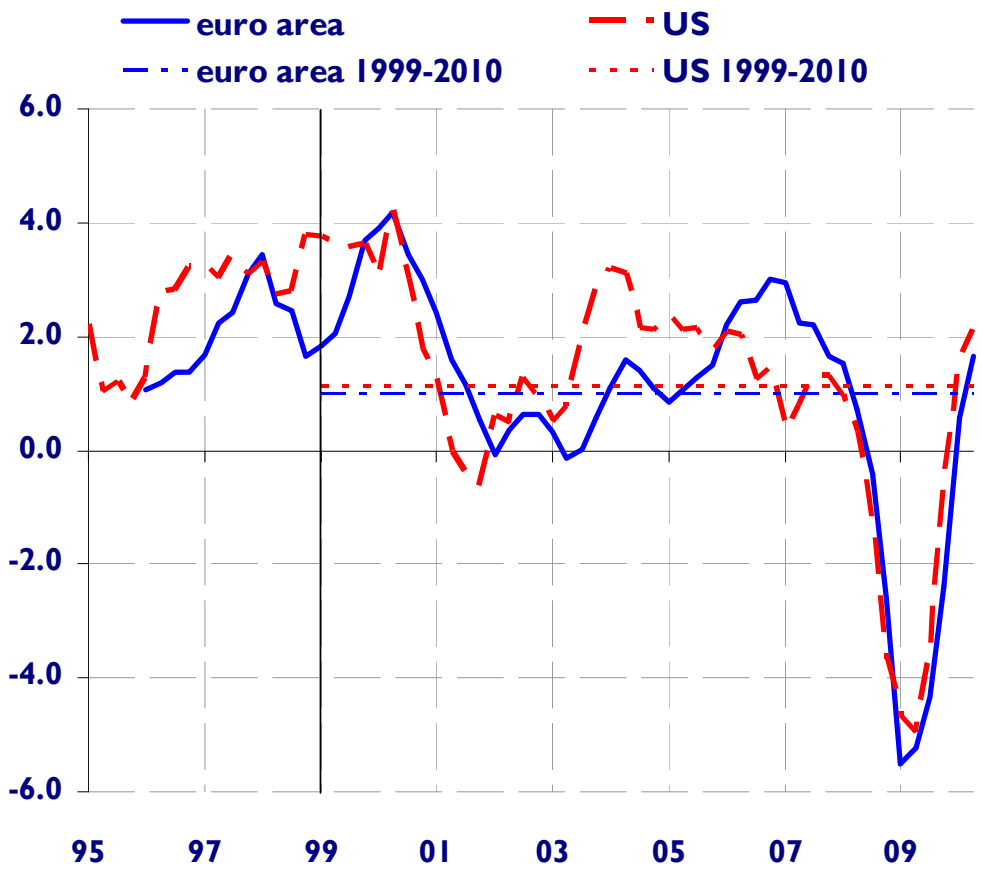
Conclusions

- Economic and financial crisis has shown the devastating effects of systemic risk
- The macro-prudential approach to supervision and regulation is an adequate broad policy response
- But important challenges remain
  - Difficulties to identify risks early and doubts about the effectiveness (and costs) of regulatory measures lead some to favour ex-post and insurance-type policies over preventive policies
  - We need to invest in collecting all the data and in enhancing our understanding of systemic risk and how to fight it;
  - Difficult to "take away the punch bowl" when things go well
  - Research could play an important role

Thank you

Tale of the last 15 years: Great moderation

Growth



Stability in euro area achieved with comparable average per-capita growth performance to the US.

Notes: Annual percentage changes. Last observation: 2010 Q2.

Source: BEA, Eurostat.

Interaction with other policies

- **Macro-economic stabilisation policies**
  - **Fully developed macro-prudential policy could join monetary and fiscal policy as third aggregate stabilisation policy**
  - **<u>Monetary policy</u>**
    - **Relieve pressure for "leaning against the wind" (assignment)**
    - **Angeloni and Faia (2009): Monetary policy that puts strong emphasis on price stability, leans against asset bubbles/leverage and counter-cyclical capital requirements**
    - **Differentiation from monetary policy implementation**
  - **<u>Fiscal policy</u>**
    - **Relevant systemic risk factor**
    - **Corporate taxation and bank levies, tax treatments of interest rates or loan losses**
- **Other (e.g. social policies fostering home ownership)**

Identification and assessment of systemic risks

- Market intelligence (e.g. understanding the role and risks of financial innovations)
- Data and statistics (e.g. assets, liabilities and bilateral exposures)
- Analytical tools and models
  - Identification of systemic crisis: Composite coincident indicators (e.g. ECB "CISS")
  - Contagion: Contagion and spillover models (e.g. counterfactual simulations with balance-sheet data, flow-of-funds analysis)
  - Build-up of widespread imbalances: Early-warning signal models (e.g. credit-to-GDP gaps or leverage) and forward looking financial stability indicators
  - Aggregate shocks: Macro-stress testing models
- Experience and judgement