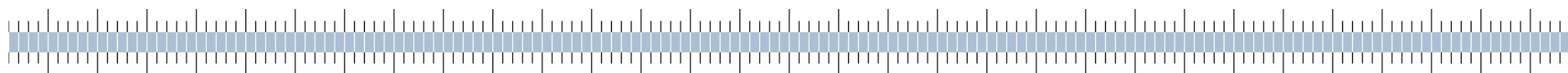


Macroprudential Analysis and the Lessons from Recent Crises

**Dr Bernd Amann
Financial Stability Department
Deutsche Bundesbank**

**European Supervisor Education Initiative
“Financial crises and the challenge of supervision”
Luxembourg, 28 September 2011**



Outline



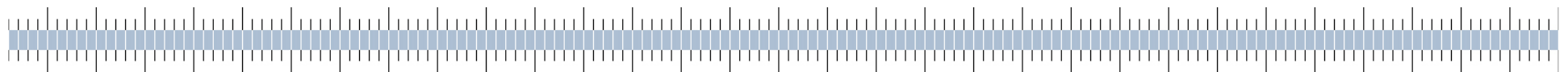
I **Baseline**

- I The financial crisis and its stages
- I Three views on the causes
- I Macro-prudential analysis faced with the multitude of causes

I **The lessons for macroprudential analysis**

- I ...concerning the content
- I ...concerning the conduct
- I ...concerning the central bank's role

I **Conclusions**



Baseline

The financial crisis and its stages



| July 2007

| Stage 1: The Subprime Crisis

| October 2008

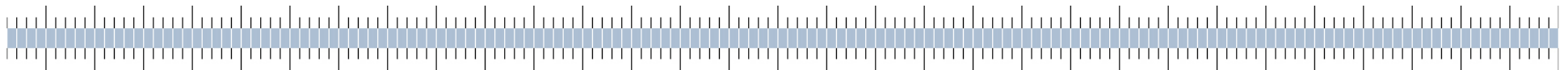
| Stage 2: Lehman and the Great Recession

| May 2010

| Stage 3: Greece and the European Debt Crises

| July 2011

| Stage 4: Surging tensions



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Baseline

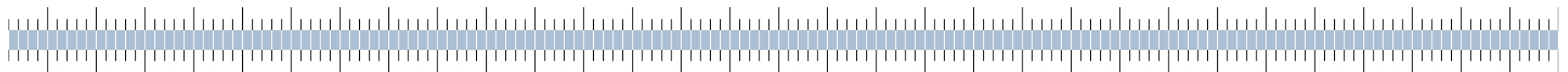
Three views on the causes



■ The macro-economic view: various imbalances

■ The political view: mistakes all around!

■ The financial industry view: from hero to zero



Baseline

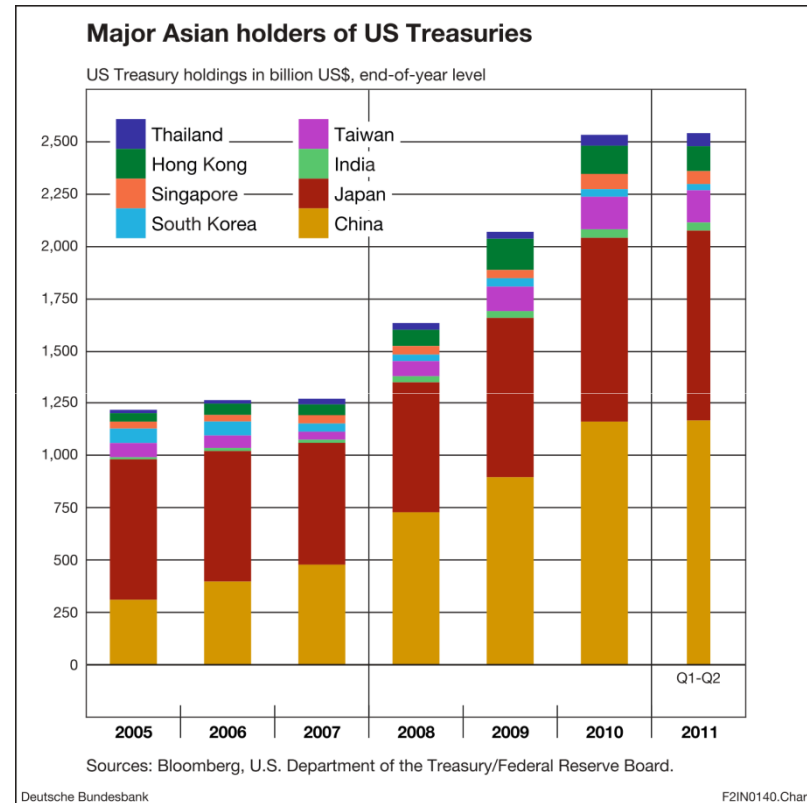
The macro-economic view

US:

- low savings
- high current account deficit

Asia:

- high savings
- lack of safe assets



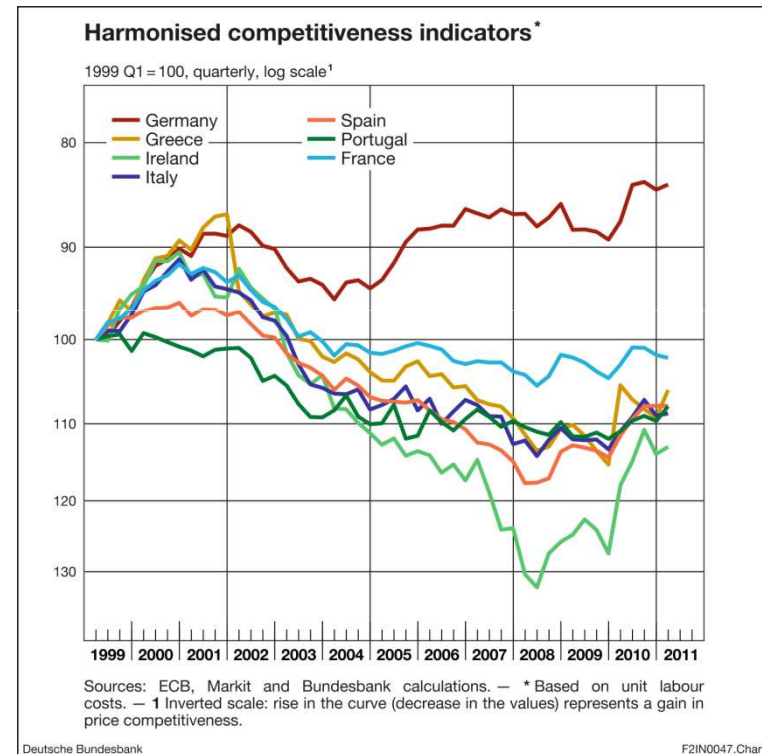
Baseline

The macro-economic view

Euro area:

Increasing divergence

- Sovereign debt and public deficits
- Competitiveness and current account balances



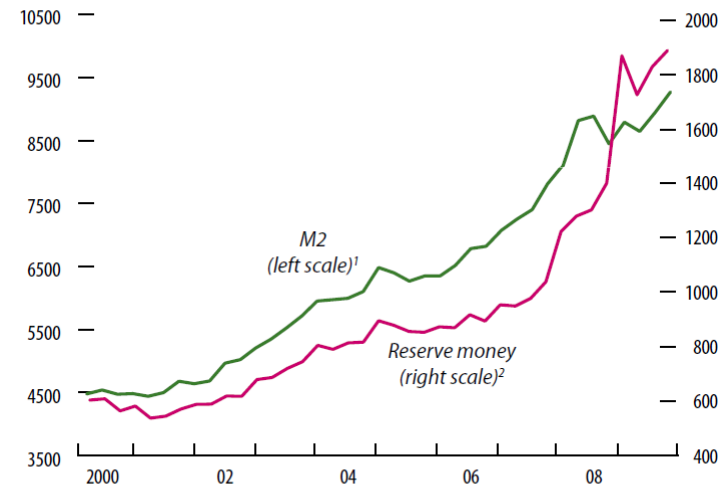
Baseline

The political view

- **Monetary policy: ample liquidity**
- **Deregulation: unleashed financial markets**
- **Competition of financial centers: race to the bottom**
- **US: homeownership as a substitute for income redistribution**
- **Public spending: the deferred correction**

Global liquidity

(In billions of U.S. dollars; GDP-weighted; quarterly data)

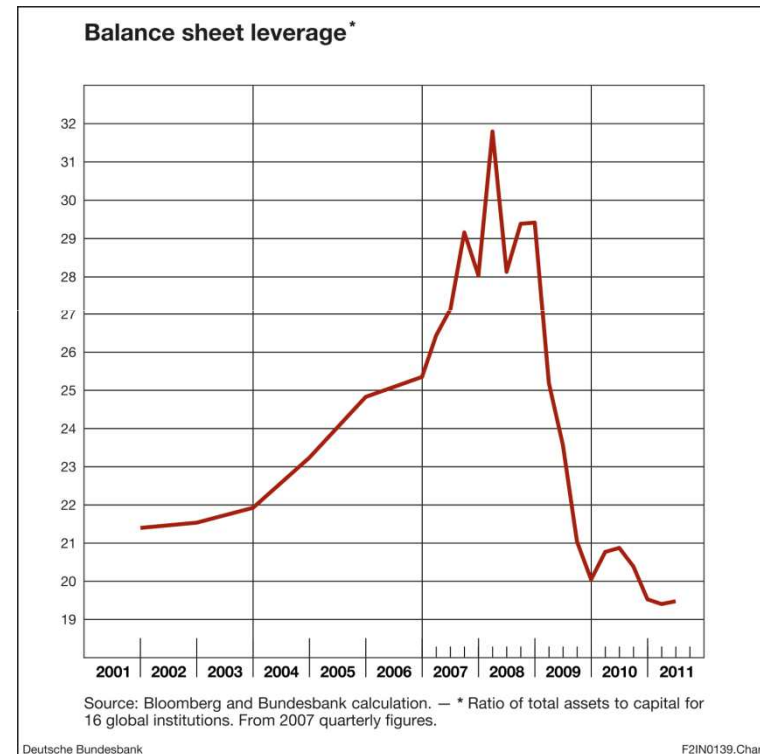


Sources: Datastream; IMF, International Financial Statistics database; and IMF staff estimates.

Baseline

The financial industry view

- **Wrong incentives, conflict of interests (remuneration schemes, rating agencies)**
- **Risk-taking, leverage, search for yield, excessive securitisation**
- **Complacency of investors (in particular in structured products)**
- **Herding behavior**



Baseline

Macro-prudential analysis faced with the multitude of causes

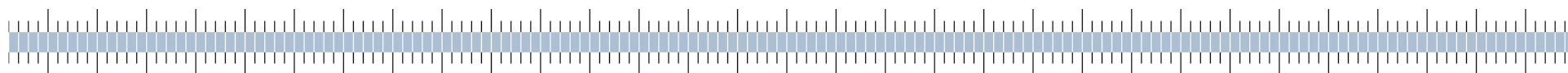


■ What is macro-prudential analysis?

■ The use of regulatory and supervisory prudential tools to improve the pursuit of financial stability

■ What is the main focus of macro-prudential analysis?

■ Of the three causes presented → financial industry view



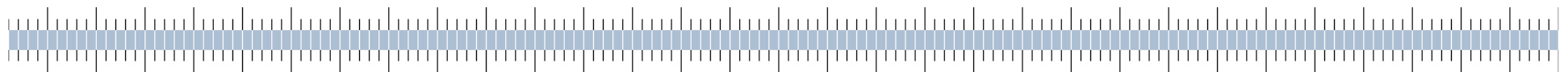
The lessons for macro-prudential analysis

“These increasingly complex financial instruments have contributed to the development of a far more flexible, efficient, and hence resilient financial system than the one that existed just a quarter-century ago.”

■ Alan Greenspan, 2005

“First lesson from the crisis: Lack of adequate macroprudential supervision“

■ De Larosière Report



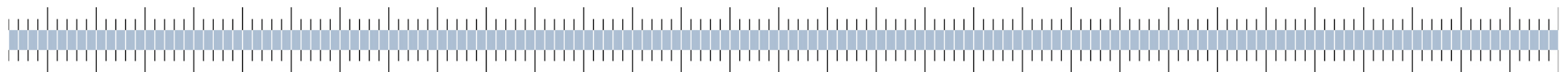
Lessons concerning the content of macro-prudential analysis



Two fundamental lessons:

Systemic risk is at the heart of financial stability

Finance matters

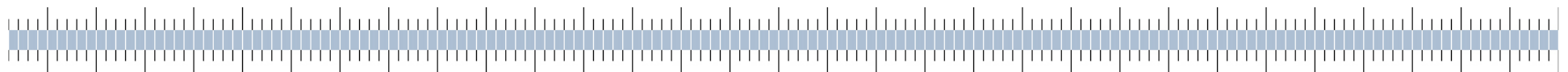


Content of macro-prudential analysis: Systemic risk



■ Different forms of systemic risk:

- **Contagion: initially idiosyncratic problem becomes more widespread**
- **Financial imbalances that built up gradually unravel suddenly with detrimental effects on intermediaries and markets simultaneously**
- **Exposures to financial markets or adverse macro-economic developments negatively affect a range of financial intermediaries or markets**



Content of macro-prudential analysis: Finance matters

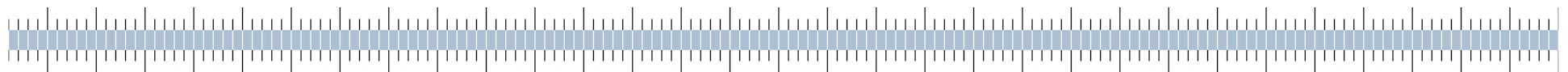


Financial markets are not efficient

Integration of finance and macro-economics

- Introduce financial sectors and instability in macro models (default risks, liquidity risks, nonlinearities, etc.)
- Current macro-economic models (DSGE models) to be extended
- Forecasting and simulation models to be improved (stress-testing and assessment of macro-prudential policies)

Role of competition and market structures to be reviewed

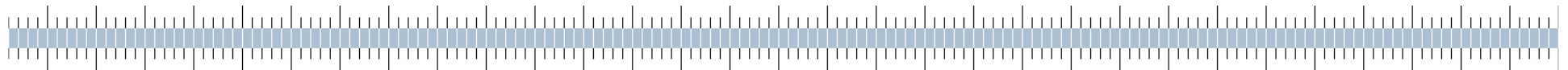


Content of macro-prudential analysis: Research needs



■ **Need to assess exogenous and endogenous systemic risk**

- Financial stability indicators (continuous effort)
- Early-warning signal models
- Macro stress-testing models
- Contagion and spillover models
 - Network models
 - Co-movement models
- Assessment of systemic relevance

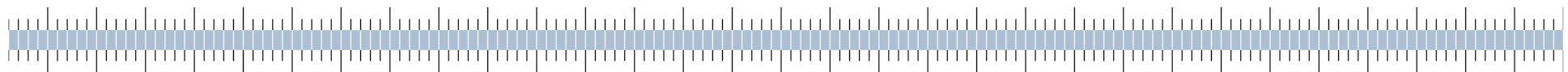


Content of macro-prudential analysis: Research projects



■ Papers and Projects

- C. Memmel, A. Sachs and I. Stein (2011), **Contagion at the interbank market with stochastic LGD**, Bundesbank Discussion Paper No 06/2011.
- N. Puzanova and K. Duellmann (2011), **Systemic risk contributions: a credit portfolio approach**, Bundesbank Discussion Paper No 08/2011.
- N. Podlich and M. Wedow (2011), **Credit contagion between financial systems**, forthcoming Bundesbank Discussion Paper.
- J. Bosma, M. Koetter and M. Wedow (2011), **A credit default swap measure of banking stability**, forthcoming Bundesbank Discussion Paper.
- F. Fecht, N. Podlich and N. Schulze (2011), **“Fire sales” and reciprocal effects on the interbank market**, project.

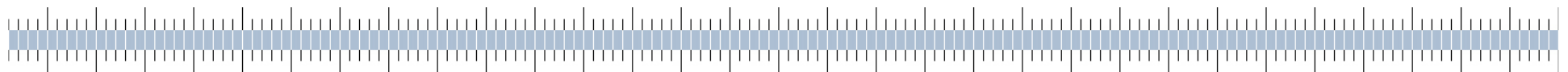


Lessons concerning the conduct of macro-prudential analysis

Splitting the analysis into several stages

- Stage 1: monitoring risks and risk factors
- Stage 2: assessing the potential impact
- Stage 3: preparing mitigating actions
- Stage 4: evaluating the effects of introducing or abrogating measures

Overall objectives



Conduct of macro-prudential analysis

Stage 1: Monitoring risks and risk factors



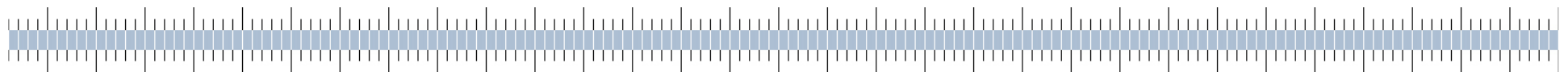
Quantitative elements (I)

Data gathering

- More timely and complete

- Regular and ad hoc

- Bundesbank supports international efforts to close existing data gaps (a joint FSB - IMF working group)



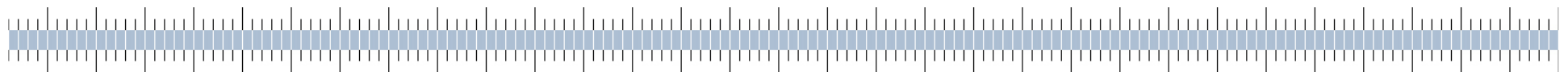
Conduct of macro-prudential analysis

Stage 1: Monitoring risks and risk factors



Quantitative elements (II)

- Development of financial stability indicators
 - for national financial systems
 - EU-wide: ESRB Dashboard
 - Worldwide: FSI-IMF
- Indicators cover different risk groups (macro risk, credit risk, liquidity risk, market risk, contagion risk)
- Colour code can be used to describe the level of financial stability (using z-scores)
- Some indicators work as early warning indicators
- Sectoral balance sheet analysis



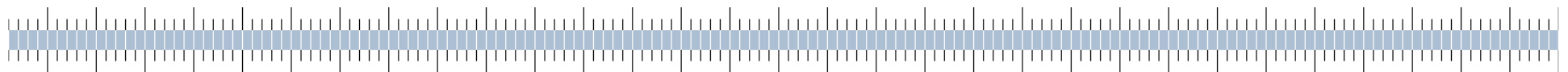
Conduct of macro-prudential analysis

Stage 1: Monitoring risks and risk factors



Qualitative elements

- Incentives
- Structure and structural changes
- Include market intelligence



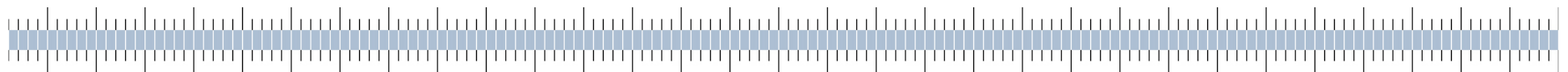
Conduct of macro-prudential analysis

Stage 2: Assessing the potential impact



■ **Stress testing**

■ **Value-at-risk models**



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Conduct of macro-prudential analysis

Stage 3: Preparing mitigating actions

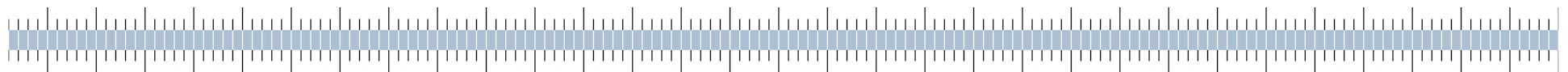


■ Define toolkit

■ Choose appropriate tools

■ Work on regulatory framework

■ Explore resolution scheme

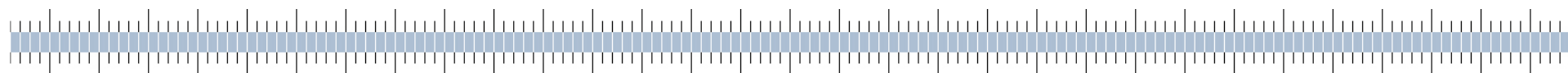


Conduct of macro-prudential analysis

Stage 4: Evaluating the effects of introducing or abrogating measures

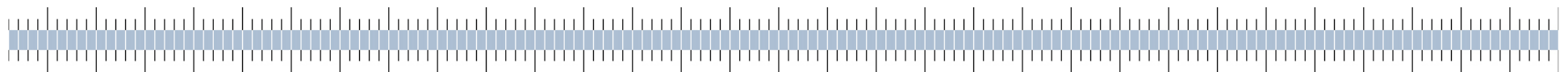
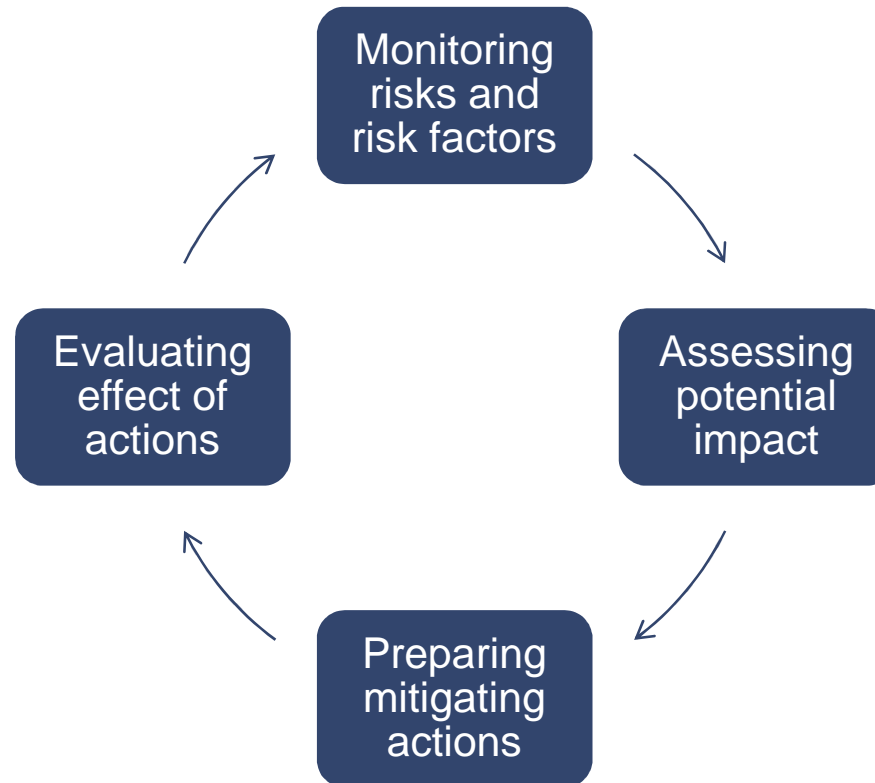
■ **Ex-ante analysis**

■ **Ex-post analysis**



Conduct of macro-prudential analysis

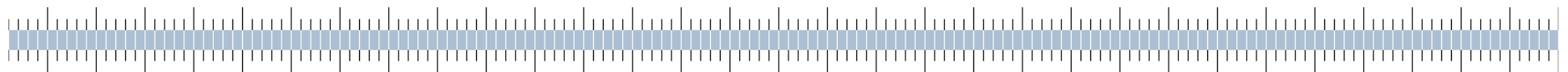
Stages of macroprudential analysis



Lessons concerning the conduct of macro-prudential analysis: Overall objectives



- Broad interpretation of macro-prudential analysis, analysis to go beyond the pre-crisis understanding including “action plan”**
- More research needed, but avoid false sense of security**
- More policy-orientated, but maintain independence**



Lessons for the central bank's role: New framework for financial stability analysis

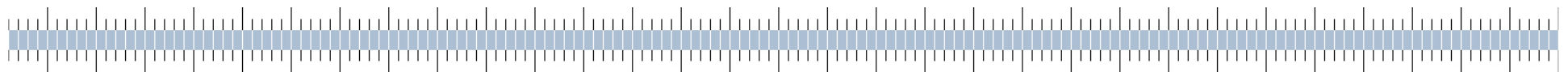


"The ESRB shall contribute to the prevention or mitigation of systemic risks to financial stability in the Union that arise from developments within the financial system. "

■ ESRB Regulation

"Macro-prudential policy has never been used comprehensively. We are still learning."

■ Jaime Caruana



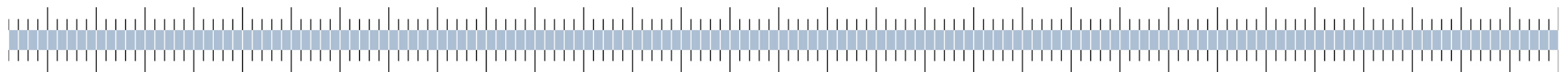
Lessons for the central bank's role: Legal foundation for macro-prudential oversight



European level: ESRB established

National level

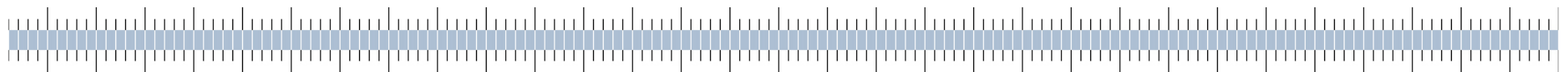
- Macro-prudential mandate for central bank
- Roles and interplay of Finance Ministry, supervisory authority and central bank to be clarified



Lessons for the central bank's role: Priorities for a macro-prudential mandate



- | Ensure the independence of the analysis at all stages of macro-prudential surveillance**
- | Build the analysis on a rich data base**
 - | far-reaching access to data which are already collected by micro-prudential supervision
 - | right to impose additional duties for financial intermediaries to disclose data if necessary as part of a macro-prudential view
- | Provide a clear rule with respect to the access to macro-prudential tools**
- | Communication tools: warnings and recommendations**



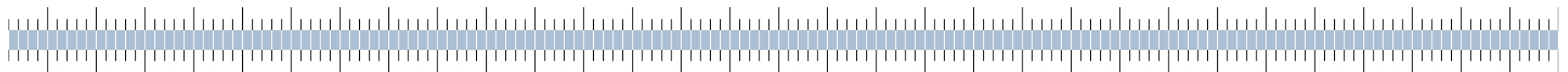
Lessons for the central bank's role: Communication



Official communication: warnings and recommendations

Accountability

Transparency to the public: enhance understanding of macro-prudential policy issues



Conclusions



- Systemic risk and the financial system are at the heart of macro-prudential analysis**
- Macro-prudential analysis to be based on an adequate data base and thorough research**
- Macro-prudential analysis will exert increasing impact**

