



EUROPEAN CENTRAL BANK

EUROSYSTEM

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and Financial Stability

Financial Stability and Macroeprudential Policy

ECB Central Banking Seminar

Frankfurt am Main, 9 July 2018

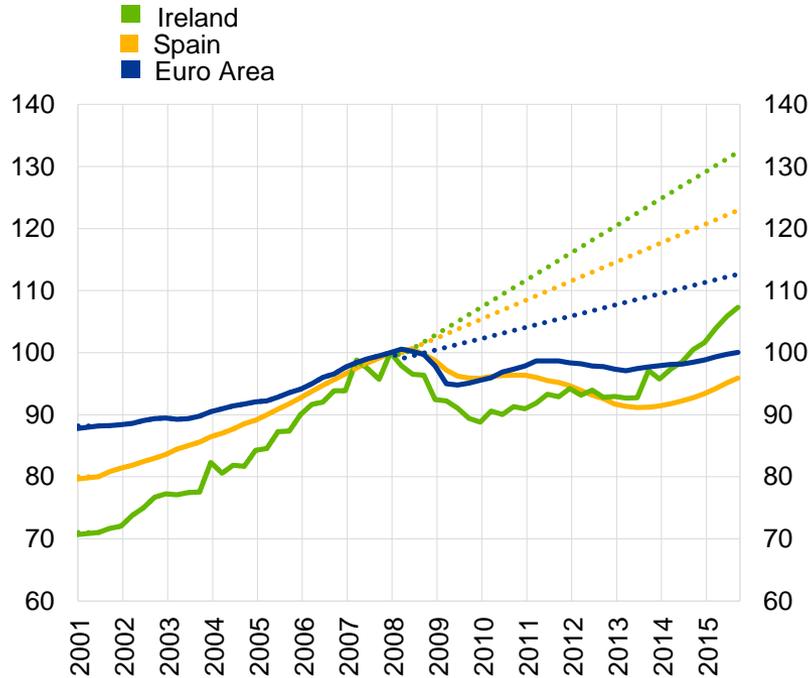
Agenda

- 1** Preliminaries
- 2 Surveillance and assessment
- 3 Policy
- 4 Institutional aspects

Real economic costs, as well as costly activation of public safety nets

Foregone GDP

Euro area GDP more than 10% lower than 2001-2007 trend at end of 2015



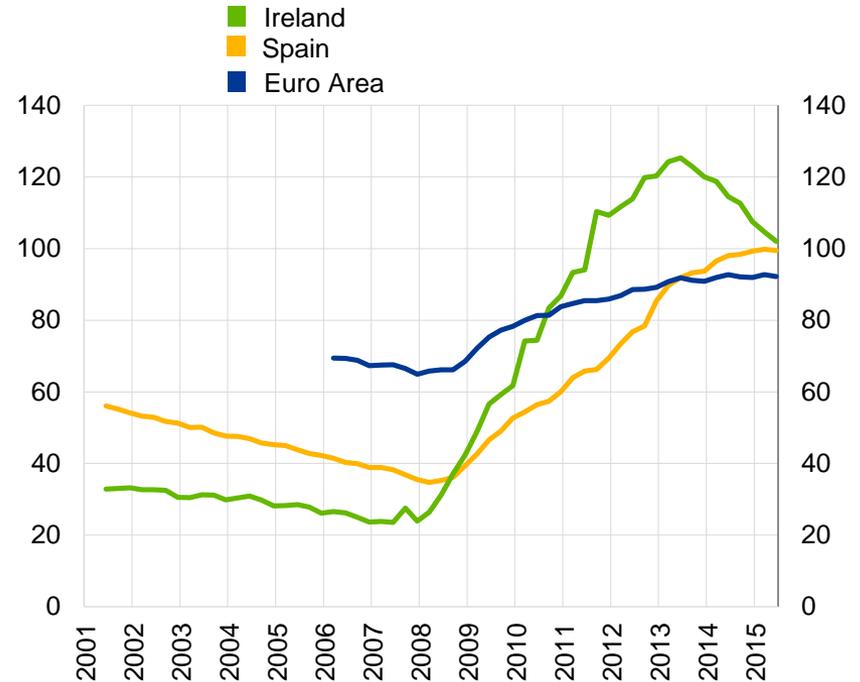
Source: Eurostat, ECB calculations

Notes: All series are rebased to an index with 2007q4 as base quarter (=100). The dotted line is a linear extrapolation using the sample 2001-2007.

Latest Observation: 2015q3

Higher sovereign liabilities

Euro area debt-to-GDP ratios 20 p.p. higher than pre-crisis



Source: ECB calculations.

Latest Observation: 2015q2

Financial stability | Systemic risk

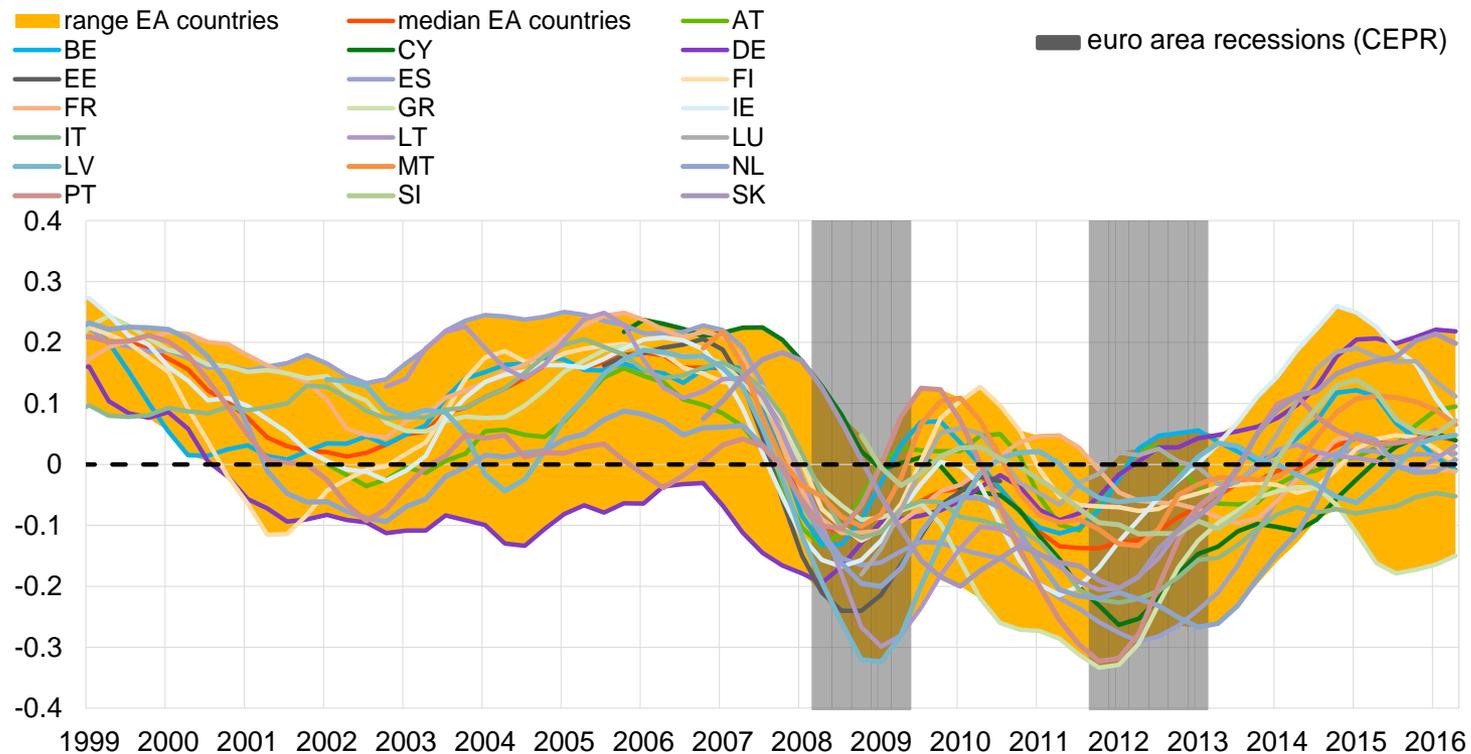
“Systemic risk can best be described as the risk that the provision of necessary financial products and services by the financial system will be impaired to a point where economic growth and welfare may be materially affected.”

- ECB Financial Stability Review

Macroprudential policy aims to:

- prevent the excessive build-up of risk, to smoothen the financial cycle (time dimension)
- make the financial sector more resilient and limit contagion effects (cross-section dimension)
- encourage a system-wide perspective in financial regulation to create the right set of incentives for market participants (structural dimension)

- **Why is macroprudential policy particularly relevant for the ECB?**
 - A single monetary policy geared towards price stability is necessary but not sufficient to ensure financial stability, especially in a heterogeneous monetary union.
 - Macroprudential policy coordinated across SSM countries can address financial imbalances, counter systemic risks and mitigate externalities to foster financial stability.
- **Financial cycles are not synchronised across euro area countries**

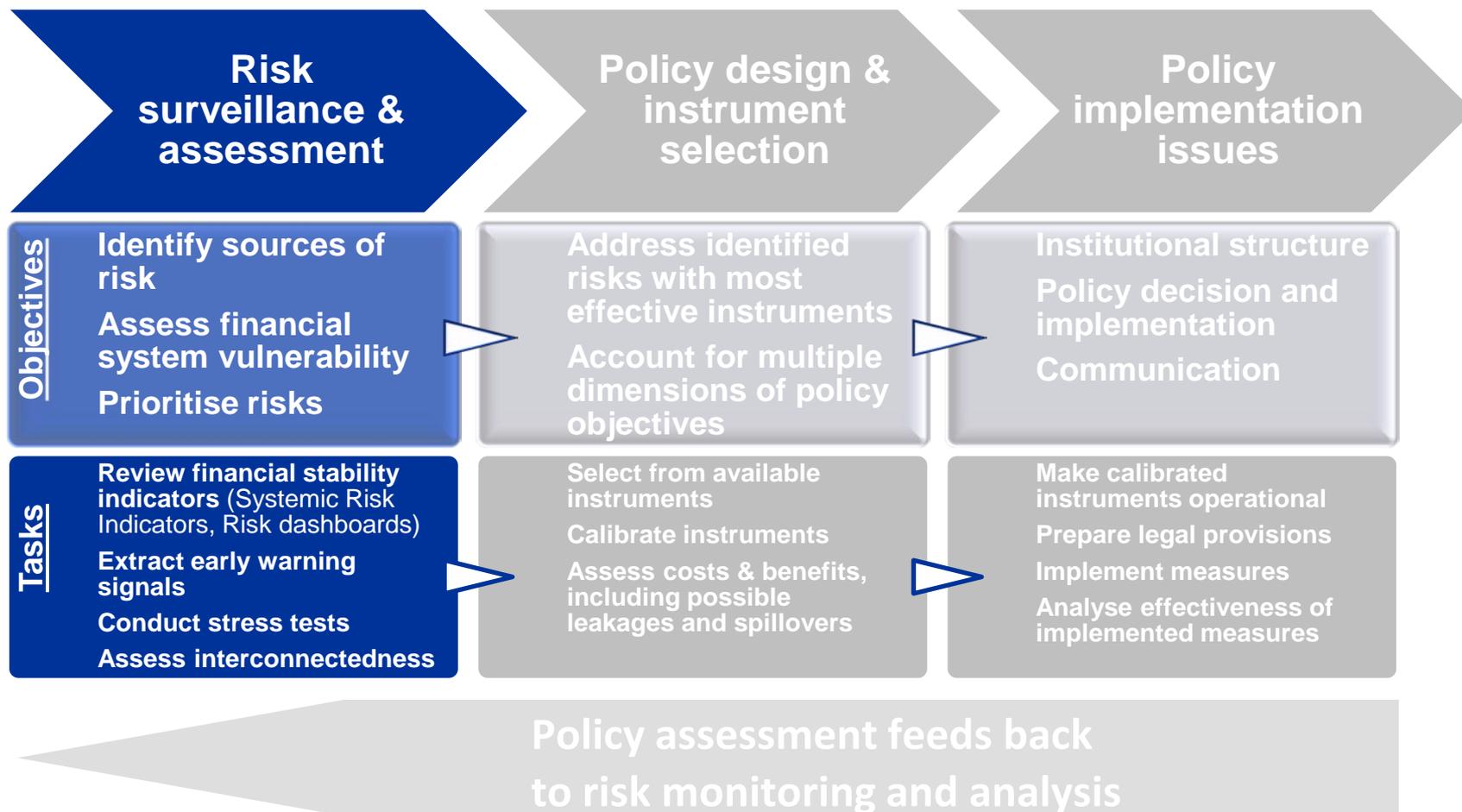


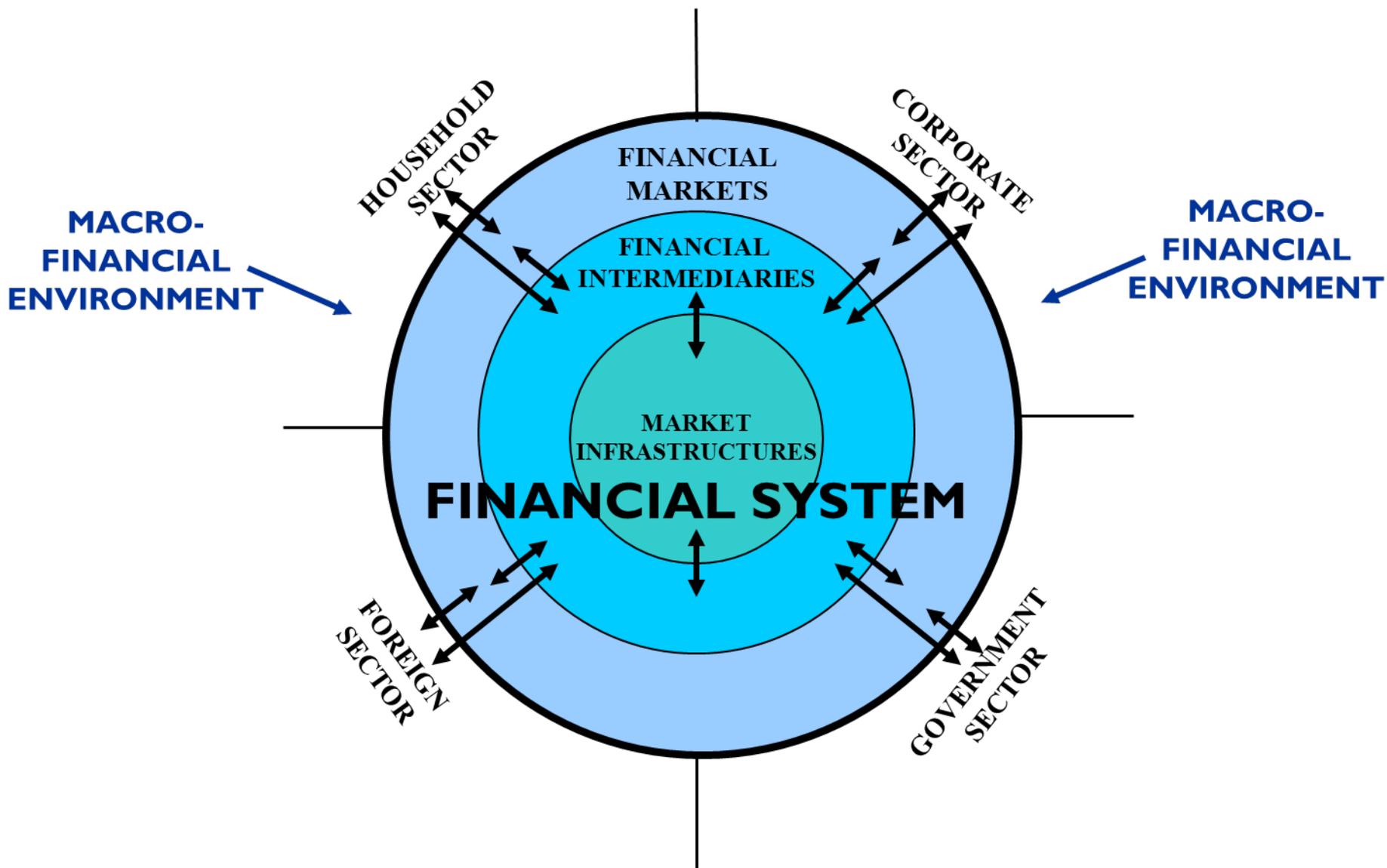
The financial stability and macroprudential process



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Time series and cross sectional dimensions of systemic risk

Phase	Type of systemic risks	Measurement focus	Dimension	Examples of vulnerabilities/ externalities	Modelling approach
Risk build-up	Cyclical risks	Probability of default	Time	Asset price misalignment, excessive leverage, maturity mismatch	Time series models, early warning models, market-based indicators
Amplification of shocks	Contagion and spillovers	Loss given default	Cross-sectional, cross-border	Interconnectedness, commonalities in exposures	Networks, spillover models, conditional loss probabilities, structural

Quantitative measures and the term structure of systemic risk...

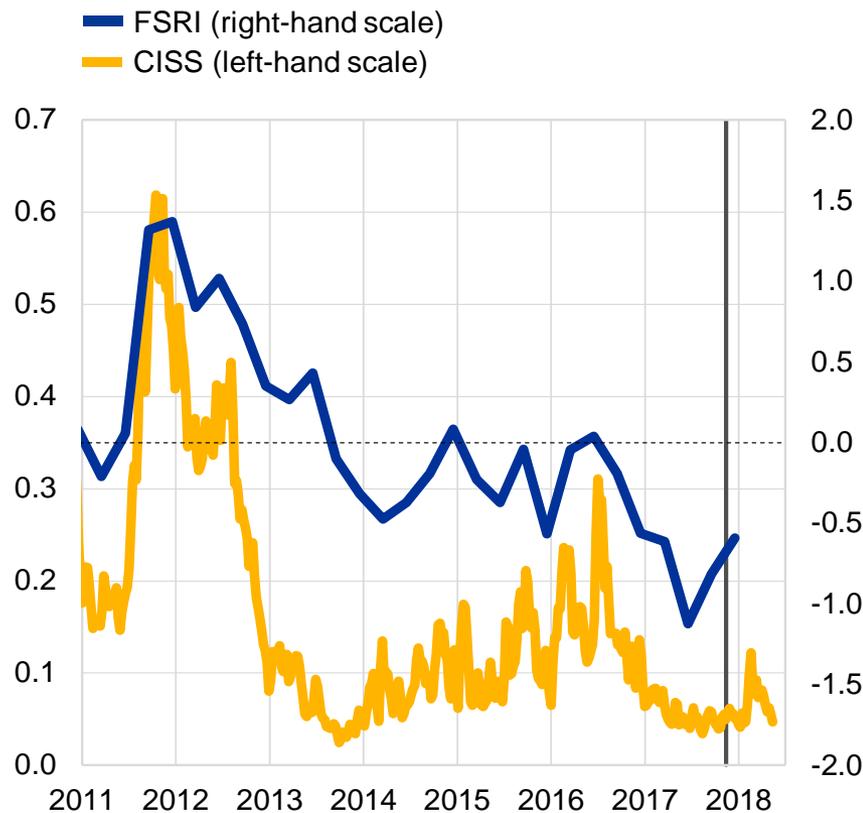
	Financial Stability Risk Index (FSRI)	Cyclical Systemic Risk Indicator (CSRI)
Predictive Horizon	near term (<1Y)	medium-term (>1Y)
Indicators	valuation pressure and risk appetite, non financial imbalances, financial vulnerabilities, spillovers and contagion indicators	bank credit; debt service; house prices; total credit; current account; equity prices
Aggregation Focus	euro area aggregate	country-level
Time Period	from 2000	from 1970
Method	partial quantile regression	weighted average of 6 best-performing univariate early warning indicators

Source: ECB Financial Stability Review (2018), May

... suggest systemic risk contained for both near- and medium-term

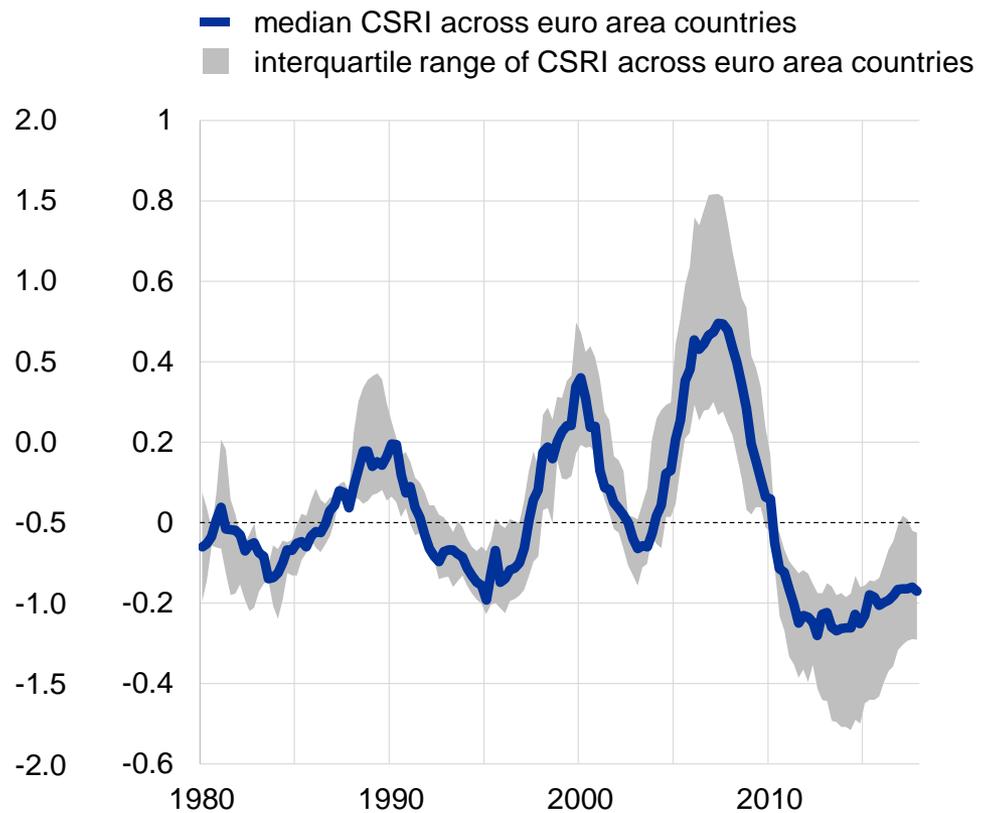
Near term financial stability risk index and current stress

Jan. 2011 – May 2018; Q1 2011 – Q4 2017



Cyclical systemic risk buildup for euro area countries

Q1 1980 – Q4 2017, median and interquartile range

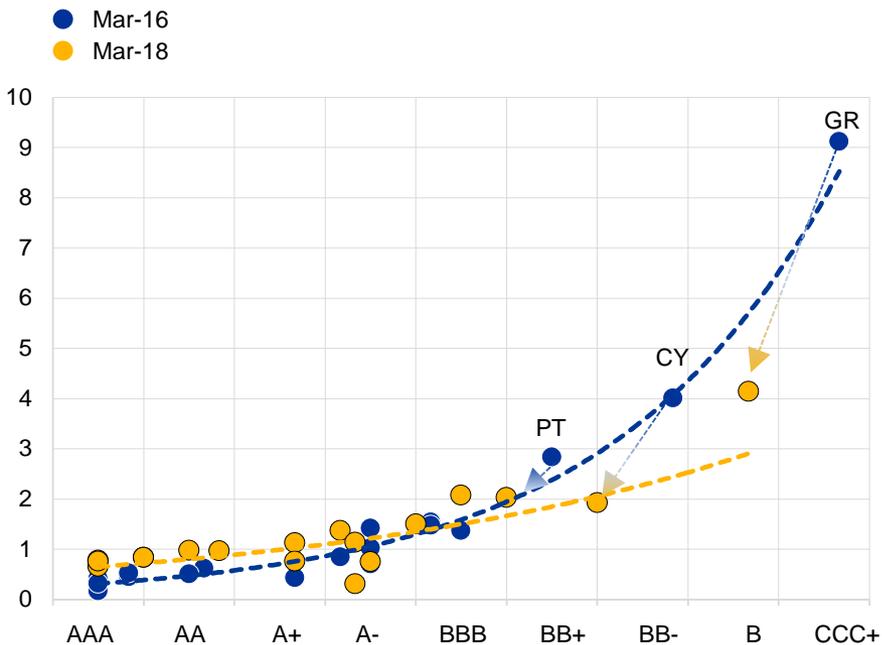


Sources: Bloomberg, ECB, Eurostat and ECB calculations.

Sovereign debt dynamics

10-year government bond yields and credit ratings of euro area sovereigns

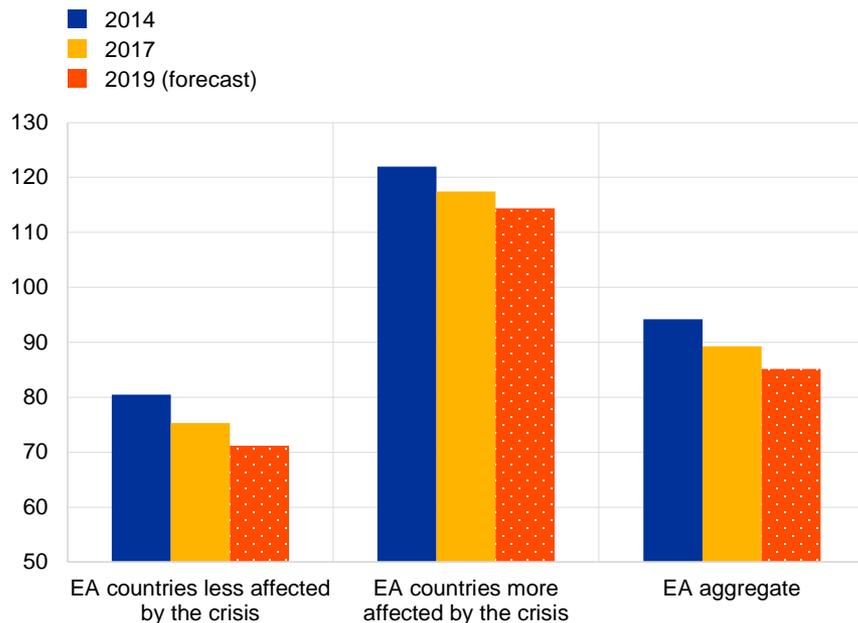
Ratings, percentages per annum



Sources: Standard & Poors, Moody's, Fitch, ECB and ECB calculations.

Notes: The rating score represents the average rating by the three major rating agencies, Moody's, Standard & Poor's and Fitch. The bond yields indicate the long-term interest rate for convergence purposes (secondary market yields of government bonds with maturities of ten, or close to ten, years).

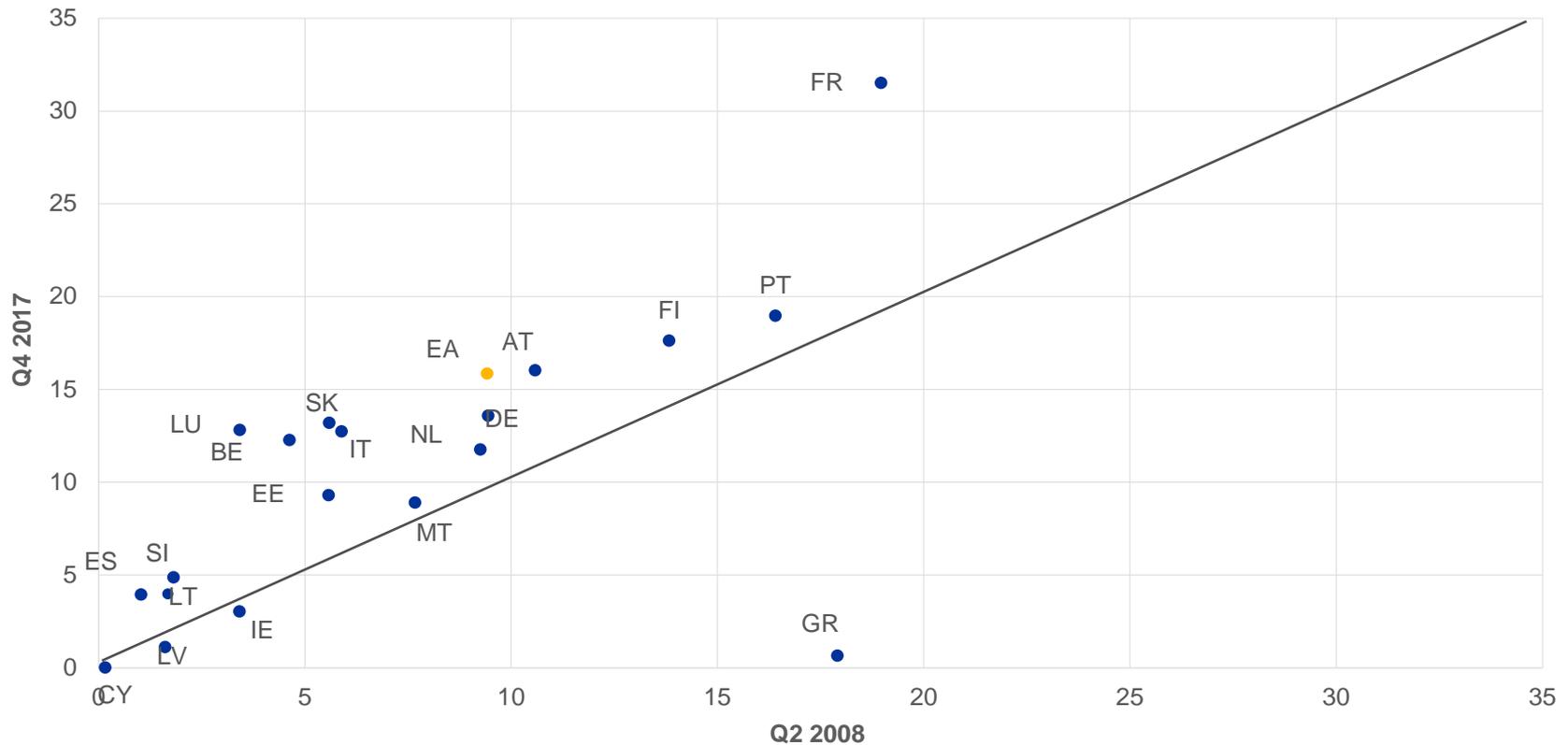
General government debt-to-GDP ratios across the euro area percentages of GDP



Sources: European Commission (AMECO Database) and ECB calculations.

Marked shift towards market-based financing

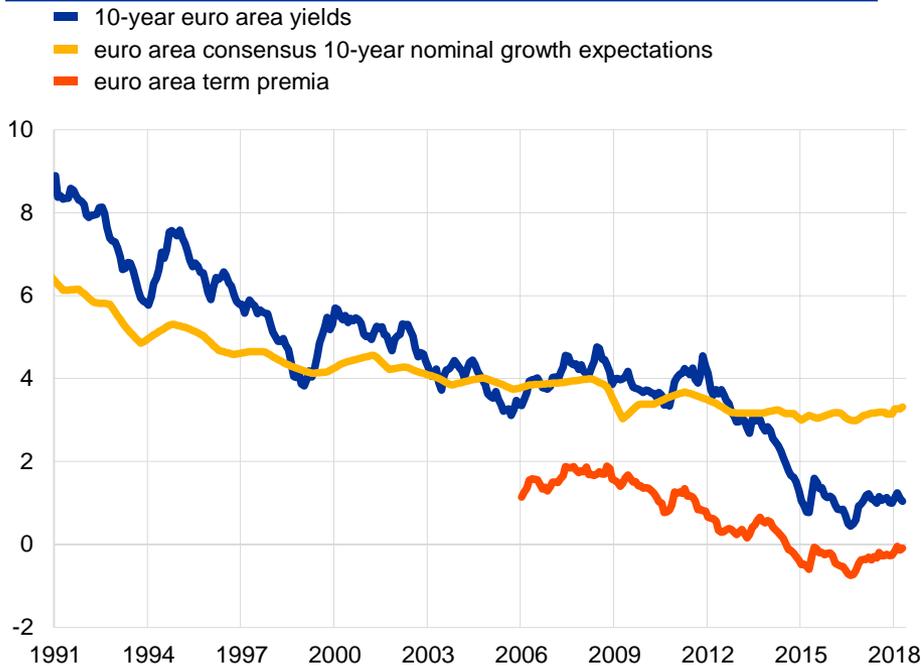
Share of debt securities issued in total market-based (debt securities issued) and bank (MFI loans) financing
(Q2 2008, Q4 2017; percentages based on outstanding stocks)



Sources: ECB euro area accounts and ECB calculations. Note: Figures for Spain do not include debt issuance through financial subsidiaries which account for a significant part of the debt securities funding of large corporates.

Government and corporate bond yields compressed

Long-term government bond yields, nominal GDP growth expectations and term premia in the euro area Jan. 1991 – Apr. 2018; monthly data, percentages per annum, annual percentage changes

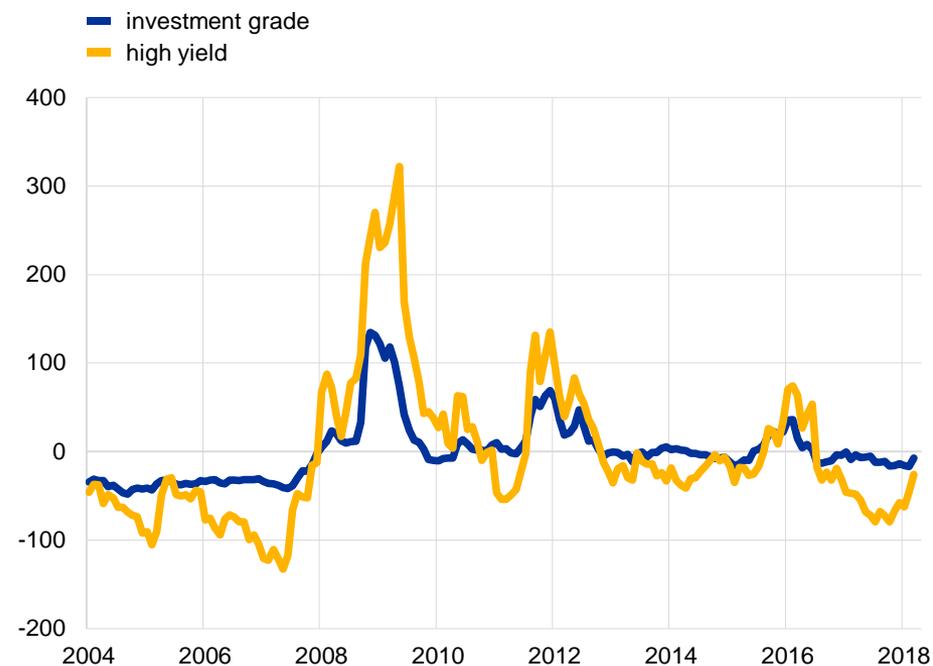


Sources: Thomson Reuters Datastream, Consensus Economics and ECB calculations

Notes: Before 1999, the euro area bond yields are approximated by ten-year bond yields in Germany. The euro area term premia estimates (based on ten-year OIS rates) use an affine term structure model following the methodology used by Joslin, S., Singleton, K.T. and Zhu, H., "A New Perspective on Gaussian Dynamic Term Structure Models", Review of Financial Studies, Vol. 24(3), March 2011, pp. 926-970.

Excess bond risk premia on euro area investment grade and high yield bonds

Jan. 2004 – Apr. 2018; basis points



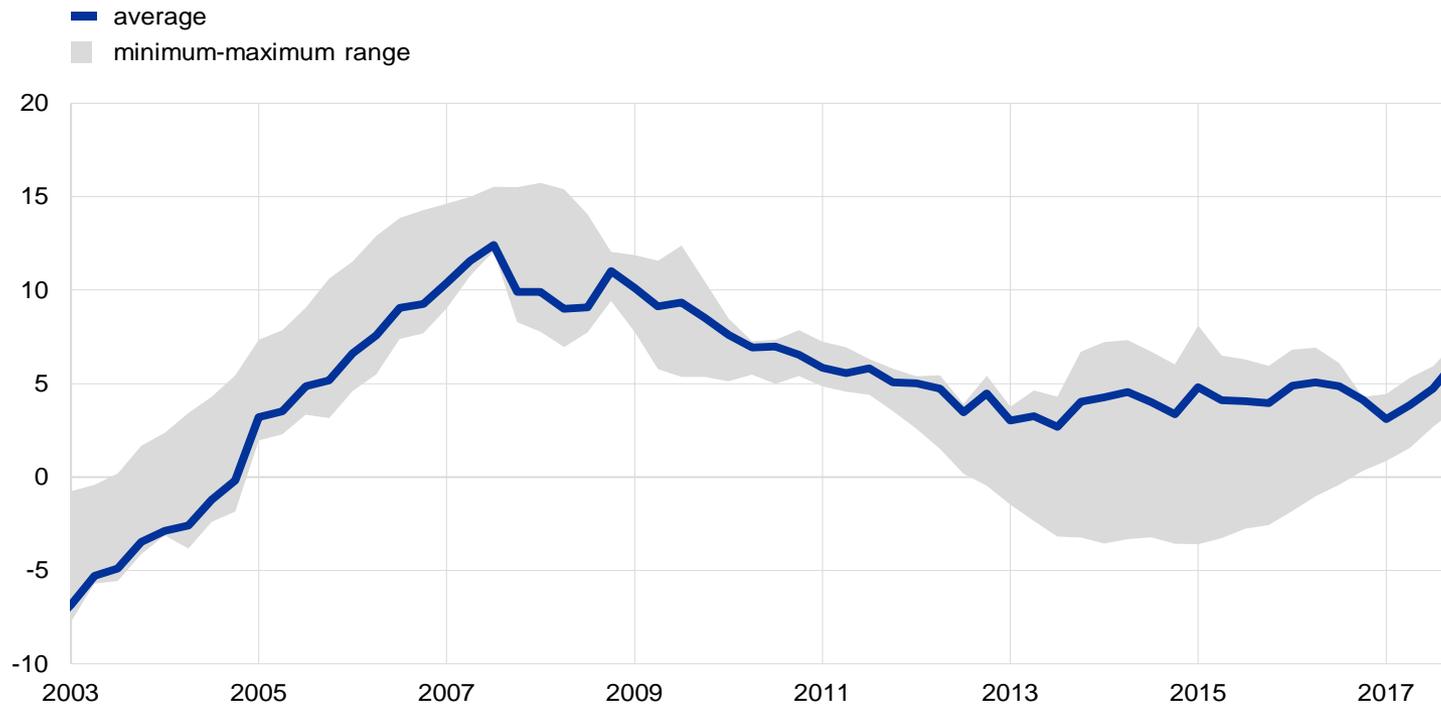
Sources: iBoxx and Moody's

Notes: The excess bond premium (EBP) is defined as the deviation of credit spreads from measures of credit risk and liquidity risk at individual bond level. The series represent averages from two ECB models.

Real estate valuation metrics contained

Residential property prices at the euro area level: deviations from estimated fair value

Q1 2003 – Q4 2017, percentages, average valuations, minimum-maximum range across valuation estimates

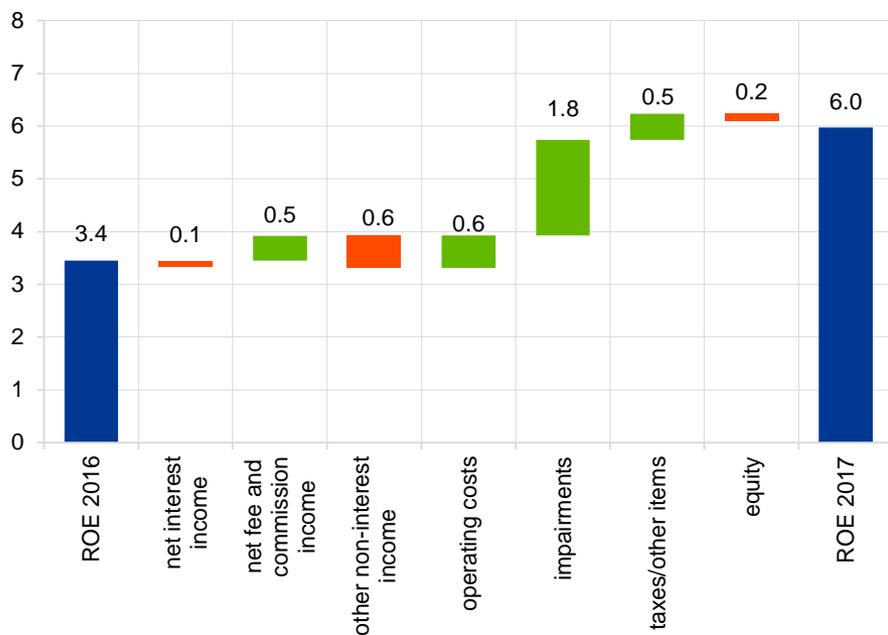


Sources: ECB and ECB calculations.

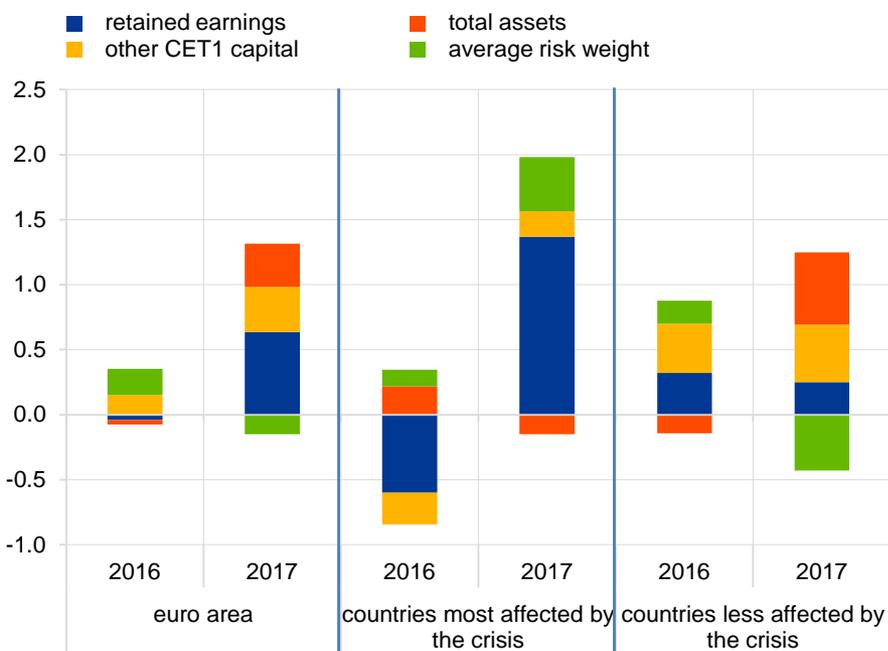
Notes: The fair value estimations are based on four different methods: the price-to-rent ratio, the price-to-income ratio and two model-based methods, i.e. an asset pricing model and a new model-based estimate (BVAR). The average is based on the price-to-income ratio and the new model-based method. For details of the methodology, see Box 3 in Financial Stability Review, ECB, June 2011, as well as Box 3 in Financial Stability Review, ECB, November 2015.

Near doubling in bank profitability, as solvency strengthens further

Decomposition of the change in euro area significant banks' aggregate return on equity (2016-17; percentage points)



Decomposition of changes in euro area significant institutions' aggregate fully loaded CET1 ratios in 2016 and 2017 (2016-2017; percentage points)



Sources: ECB supervisory data and ECB calculations.

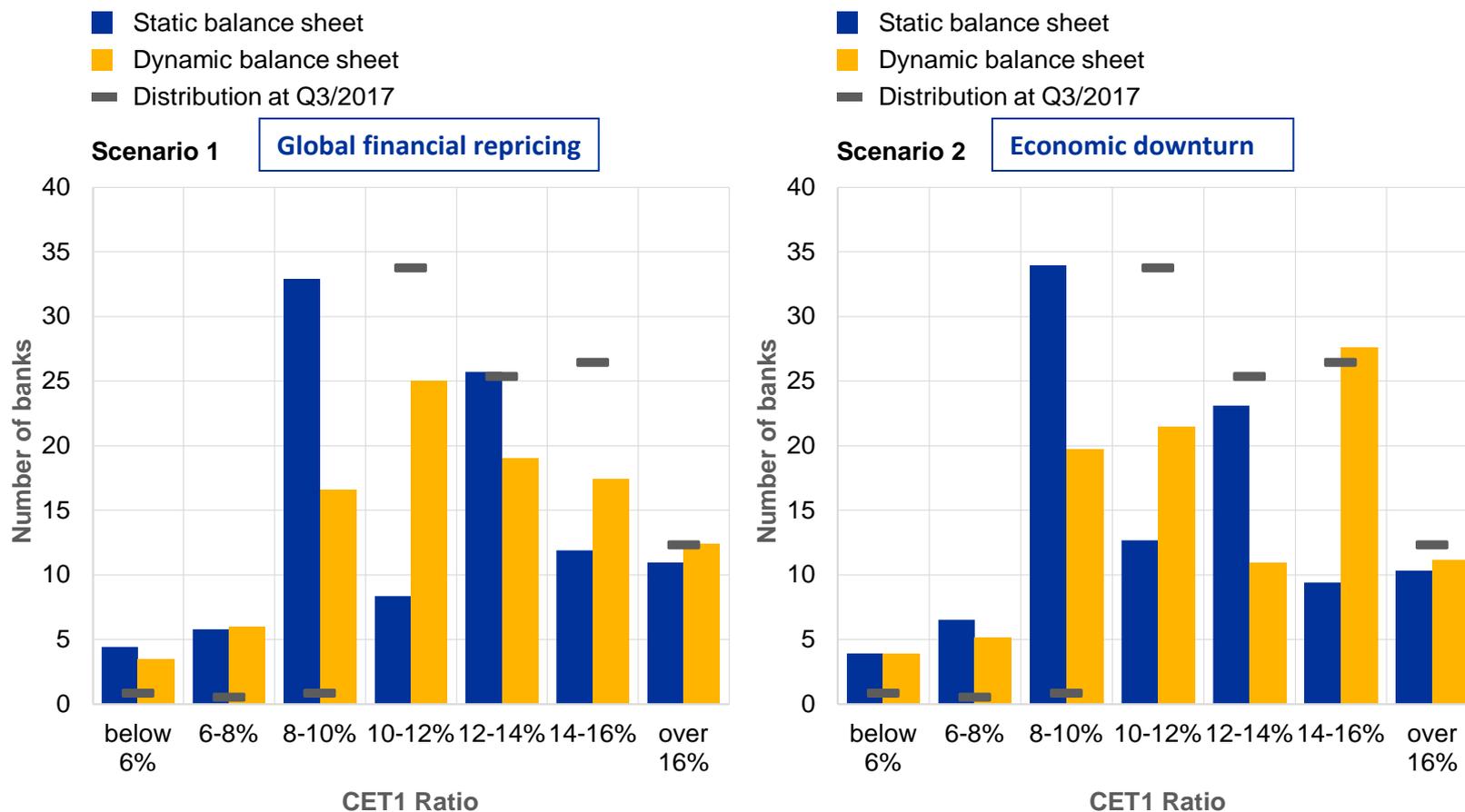
Notes: Based on a balanced sample of 112 SIs (adjusted for mergers and acquisitions). Green and red bars denote positive and negative contributions respectively.

Sources: ECB and ECB calculations.

Notes: Changes in average risk weight and total assets are shown with the opposite sign as their decline (increase) indicates a positive (negative) contribution to the capital ratios. Based on a balanced sample of 89 SIs. Countries most affected by the crisis include Cyprus, Greece, Ireland, Italy, Portugal, Slovenia and Spain.

Scenario analysis suggests bank resilience

Distribution of banks' assets by CET1 capital ratio percentages

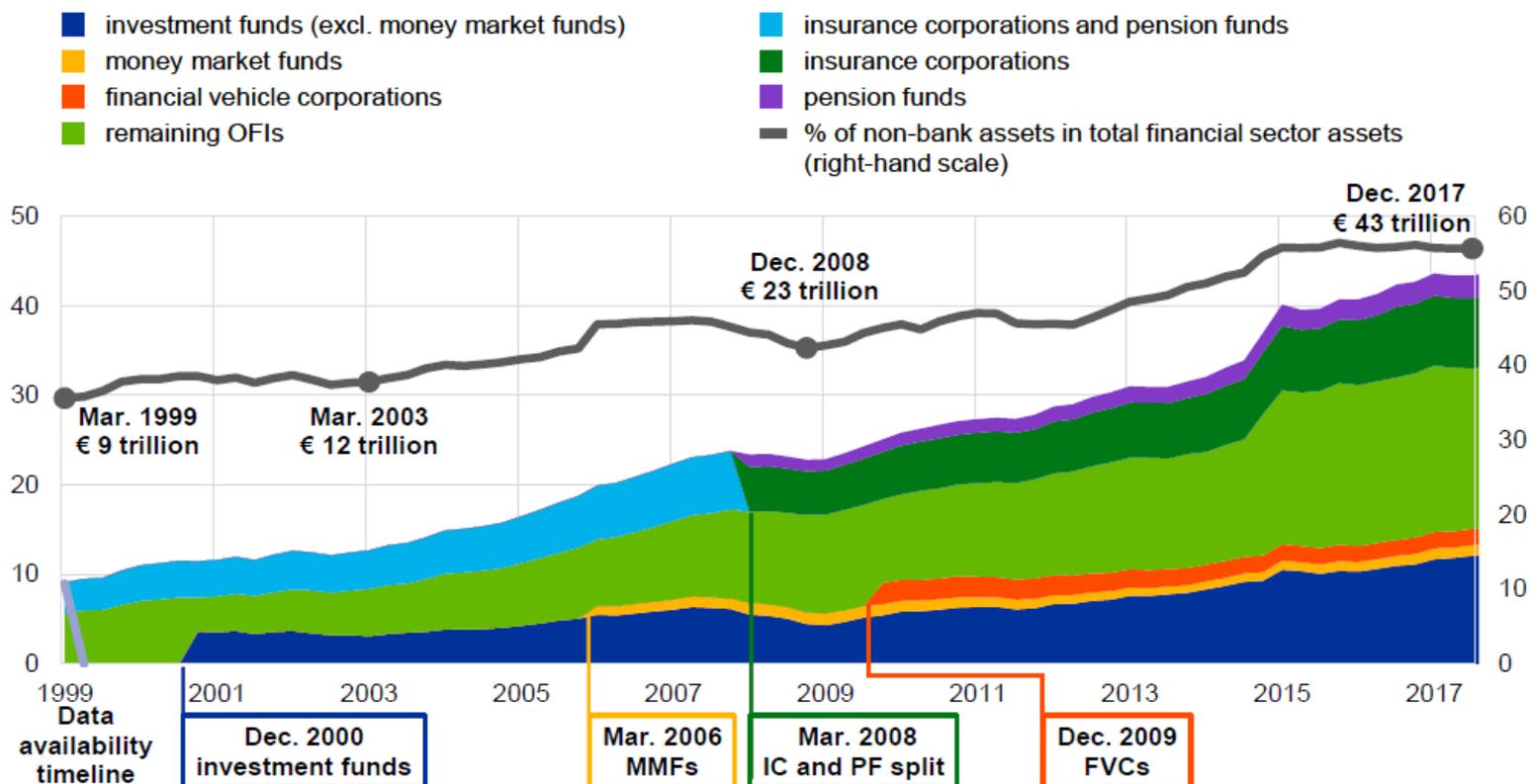


Source: ECB calculations.

Continued expansion of the euro area nonbank sector

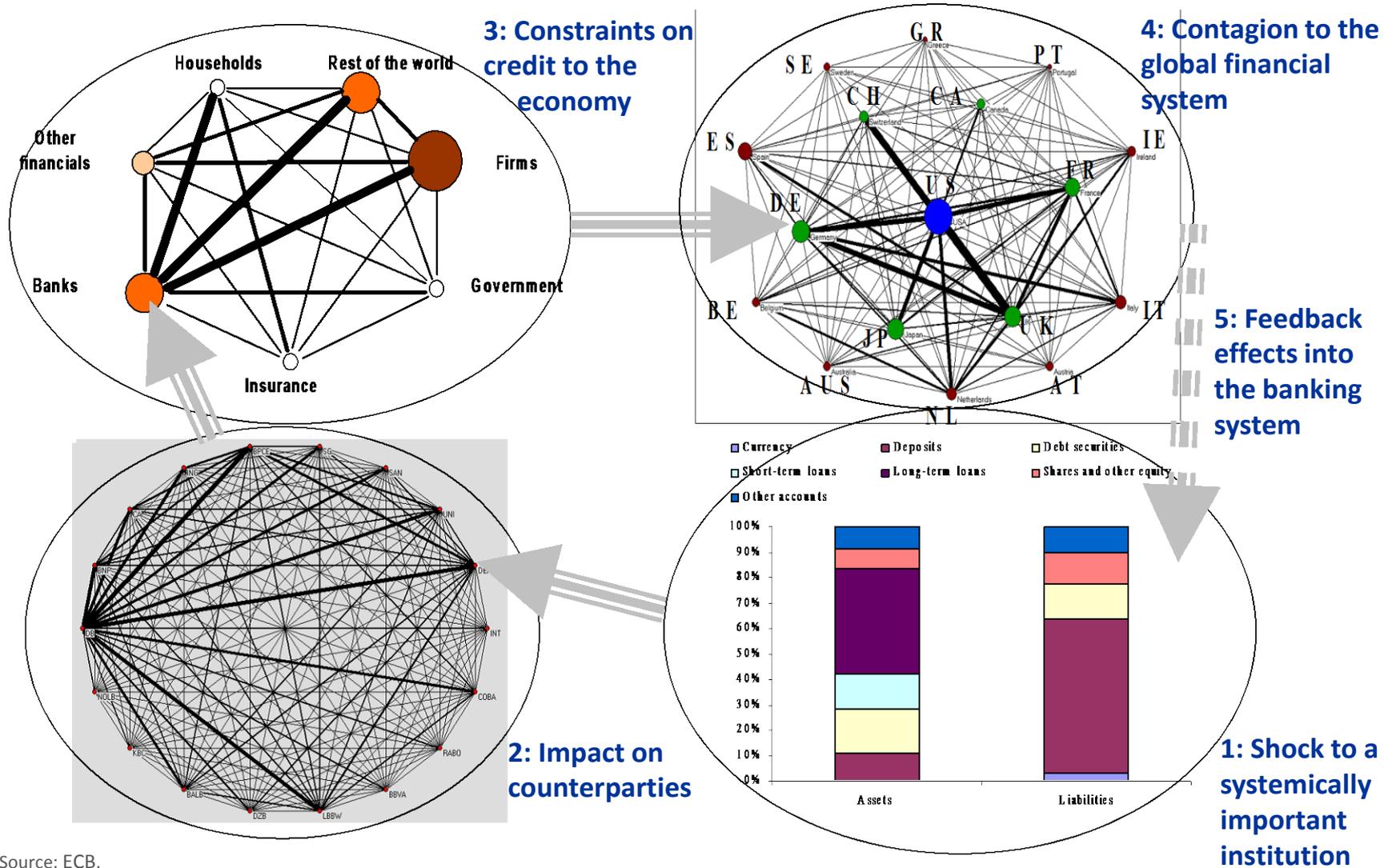
Assets of the non-bank financial sector

(Q1 1999 – Q4 2017, € trillions, percentage of total assets of the financial sector)



Sources: ECB (euro area accounts and balance sheet data of individual sectors) and ECB calculations. Notes: A breakdown of data for investment funds, money market funds, financial vehicle corporations, and insurance corporations and pension funds is available only from the indicated dates onwards. Remaining OFIs (sometimes also referred to as the “OFI residual”) refer to non-monetary financial corporations excluding the sectors depicted in the chart (where data for these sectors are available).

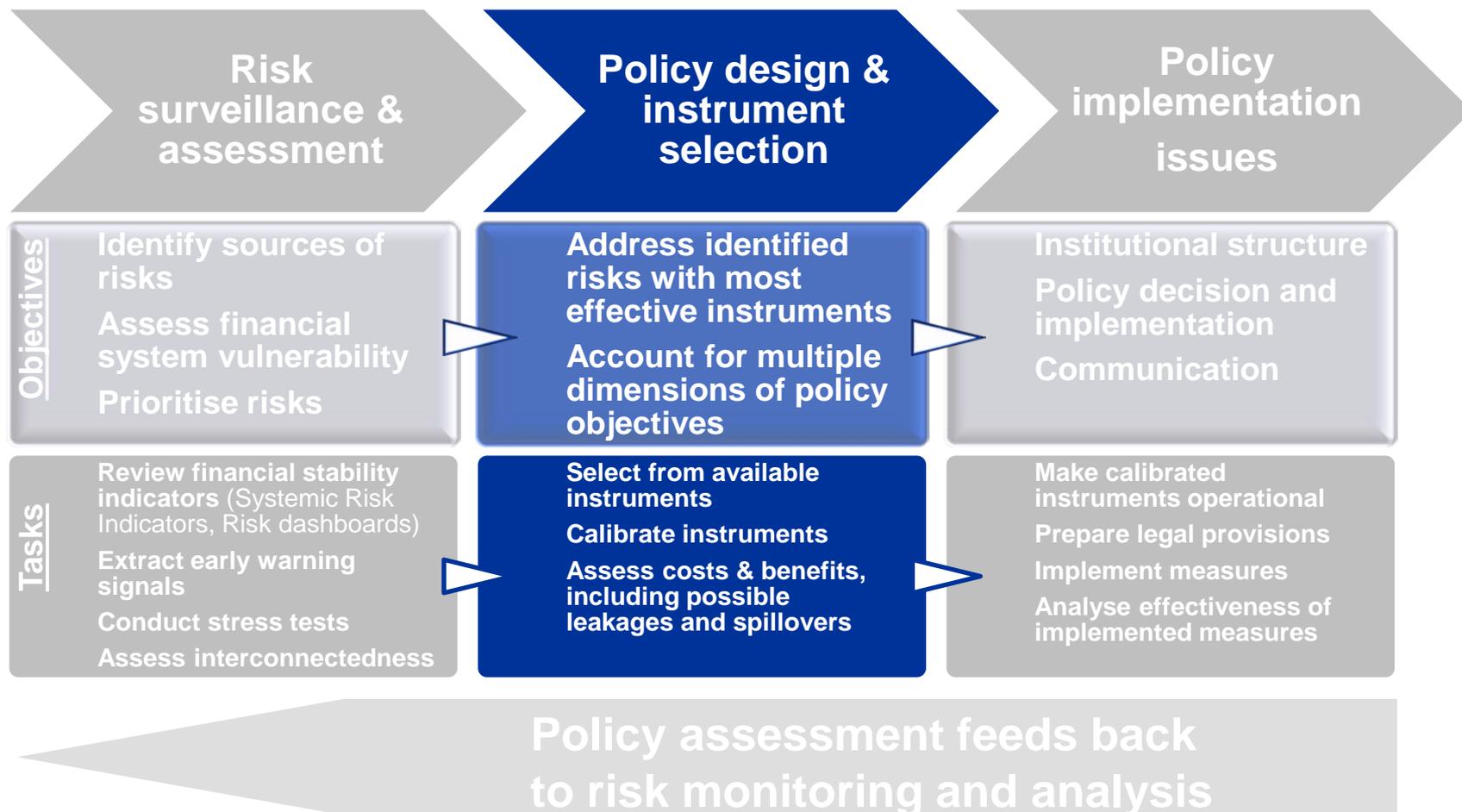
Assessment: Stylised layers of interconnectedness



Source: ECB.

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Financial regulation: Designing a safer financial system

Crisis Prevention

Crisis Management

GLOBAL

BASEL III
Financial Stability Board's recommendations on asset management

Financial Stability Board's TLAC
FSB key attributes of effective resolution regimes

EUROPEAN UNION

CRD IV rules
European Systemic Risk Board (ESRB)
European Supervisory Agencies (ESAs)

Bank Recovery and Resolution Directive (BBRD)
Deposit Guarantee Scheme

EURO AREA

Single Supervisory Mechanism (SSM)

Single Resolution Mechanisms (SRM)

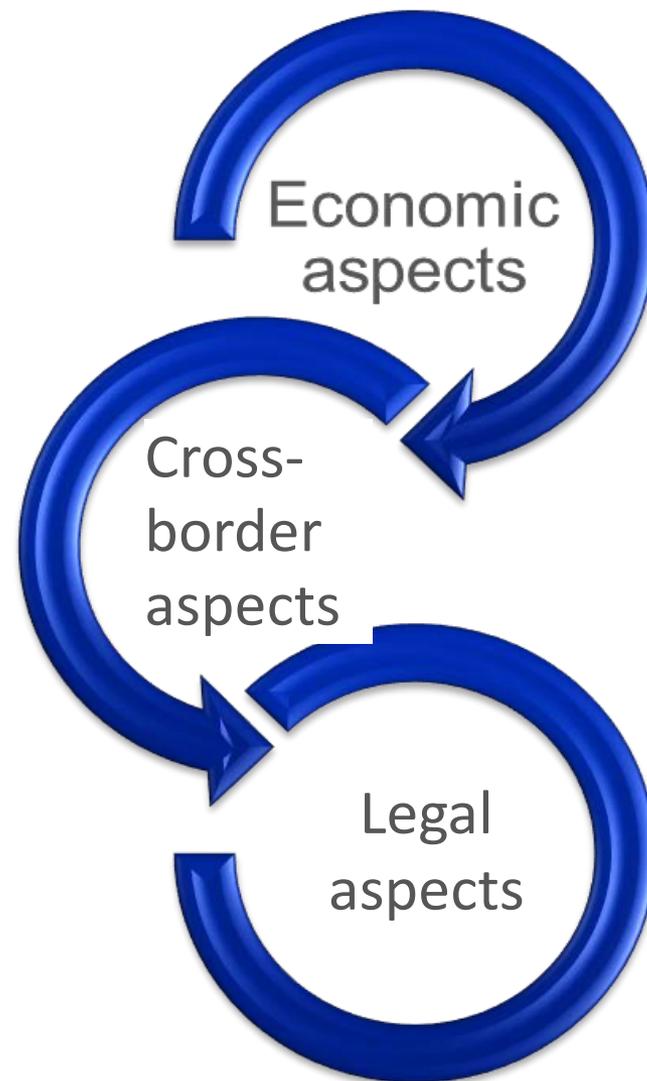
Macroprudential policy: Legal basis for broad set of instruments

	CRD IV Tools	CRR Tools	Other Tools
Capital based measures	<ul style="list-style-type: none"> • Countercyclical capital buffer (CCB) • Systemic risk buffer (SRB) • G-SII & O-SII capital buffer 	<ul style="list-style-type: none"> • Risk weights for real estate sector and intra-financial sector exposures • Capital conserv. buffer • Own funds level 	<ul style="list-style-type: none"> • Leverage ratio
Liquidity-based measures		<ul style="list-style-type: none"> • Liquidity requirements • Large exposure limits (incl. intra-financial sector) 	<ul style="list-style-type: none"> • Non-stable funding levy • LTD ratio caps
Borrower-based measures			<ul style="list-style-type: none"> • LTV ratio caps • LTI ratio caps • DSTI ratio caps • DTI ratio caps
Other measures		<ul style="list-style-type: none"> • Large exposure limits (incl. intra-financial sector) • Disclosure requirements 	<ul style="list-style-type: none"> • Margin and haircuts requirements
<p>Can be used by national authorities and the ECB (for SSM countries)</p>			<p>Can only be used by national authorities</p>

Role of the ECB: Foster consistent implementation in SSM countries with 'top-up' powers to apply more stringent measures to address systemic risks

Macroprudential policy: Selection of instruments

- **Objective:** *Address identified risks with most effective instruments (given that more than one instrument may be available)*
- Multiple dimensions:
 - Economic, cross-border and legal aspects
- Role of the ECB
 - Analyze interaction of risks at national and European level
 - Ensure consistent cross-country risk assessment
 - Coordinate national policies and consider cross-border spill-overs
 - Collective mechanism to overcome inaction bias



Macroprudential policy: Economic aspects

Activation

- Identify and consider financial cycle
- Match available instruments to identified risks
- Consider implementation and transmission lags

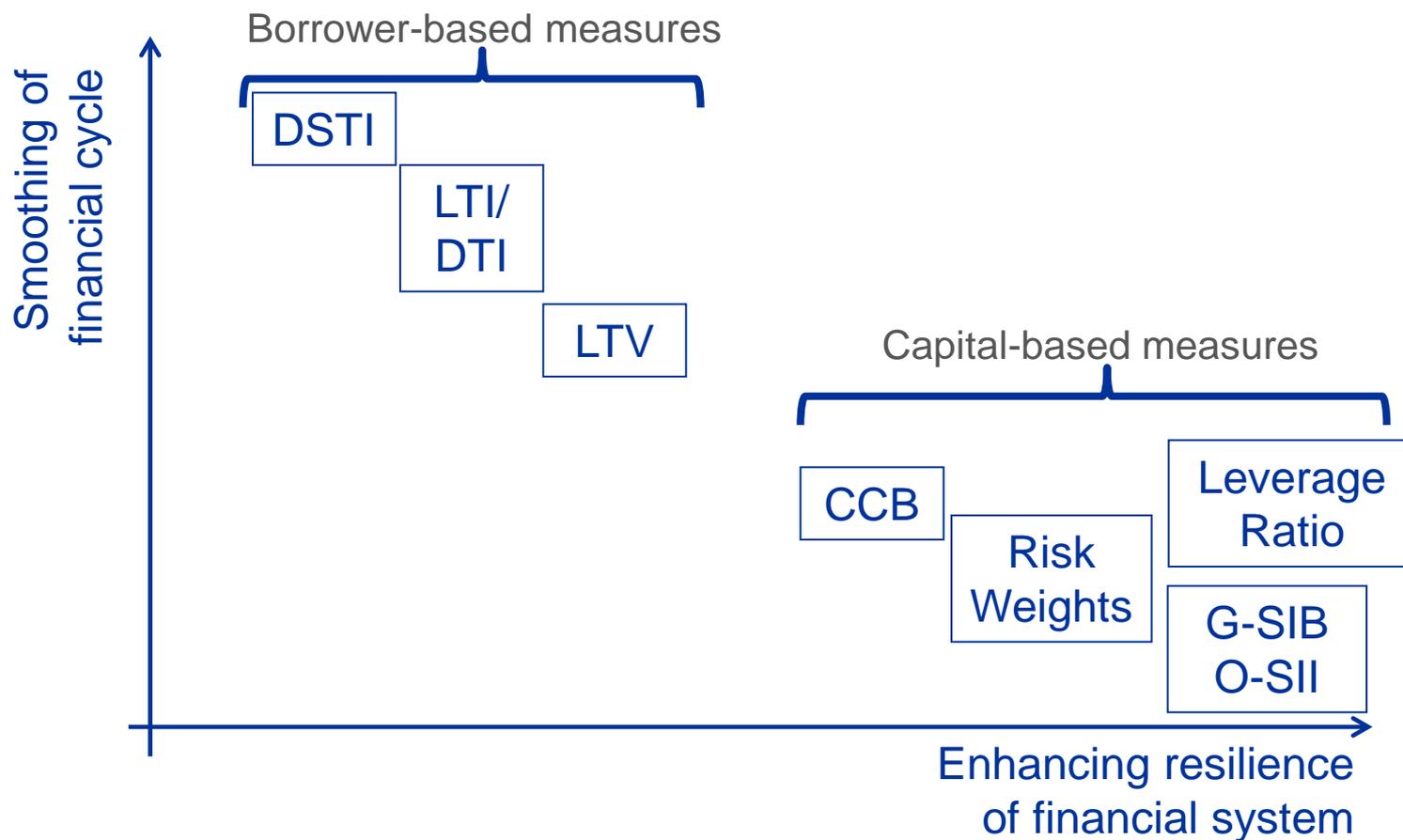
Effectiveness

- Ensure robust transmission of instrument
- Account for cross-country heterogeneous transmission
- Account for risks of leakages
- Consider combination of macroprudential instruments and/or coordination with other policies

Efficiency

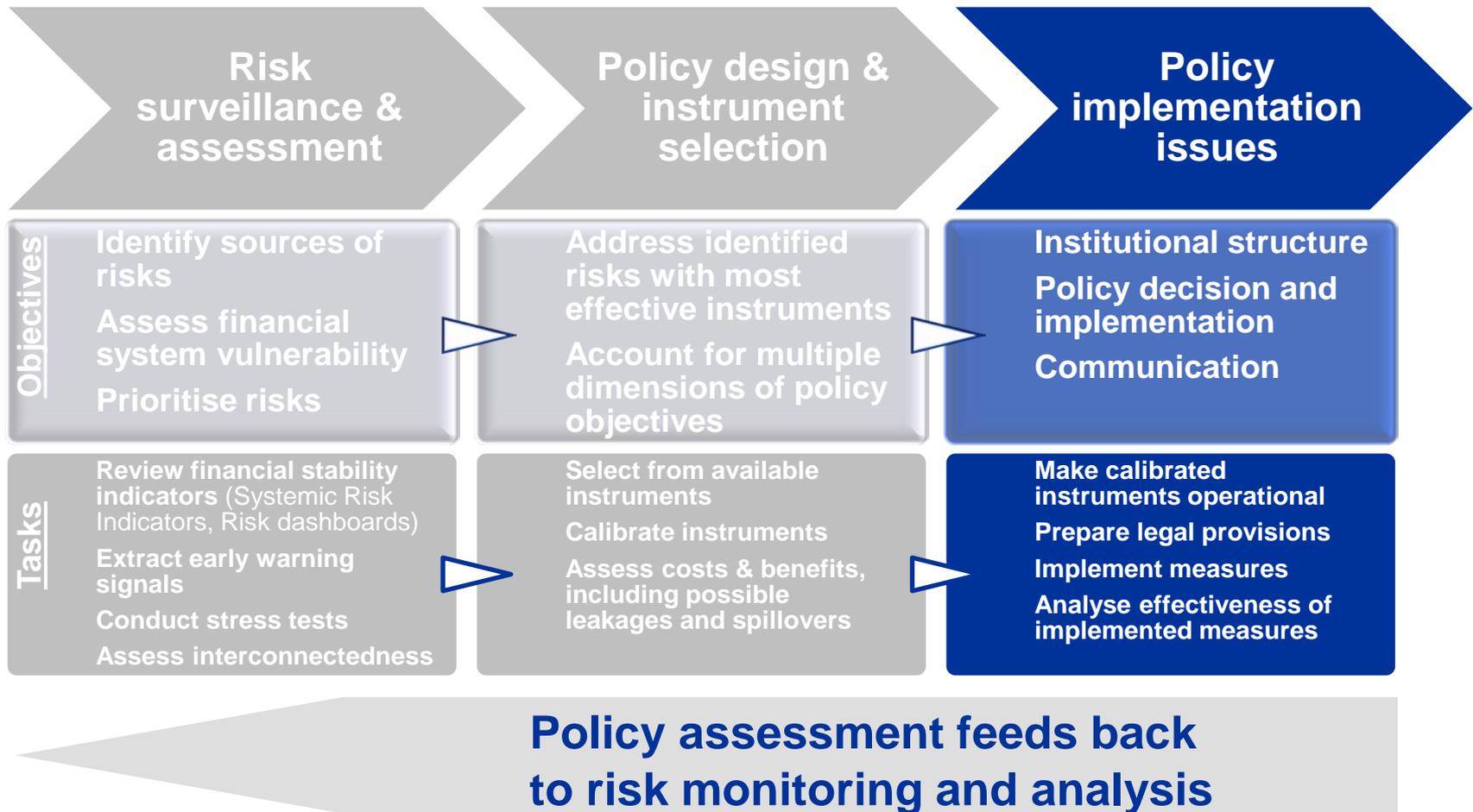
- Carry out cost-benefit analysis

Stylised depiction of relative strength of instruments



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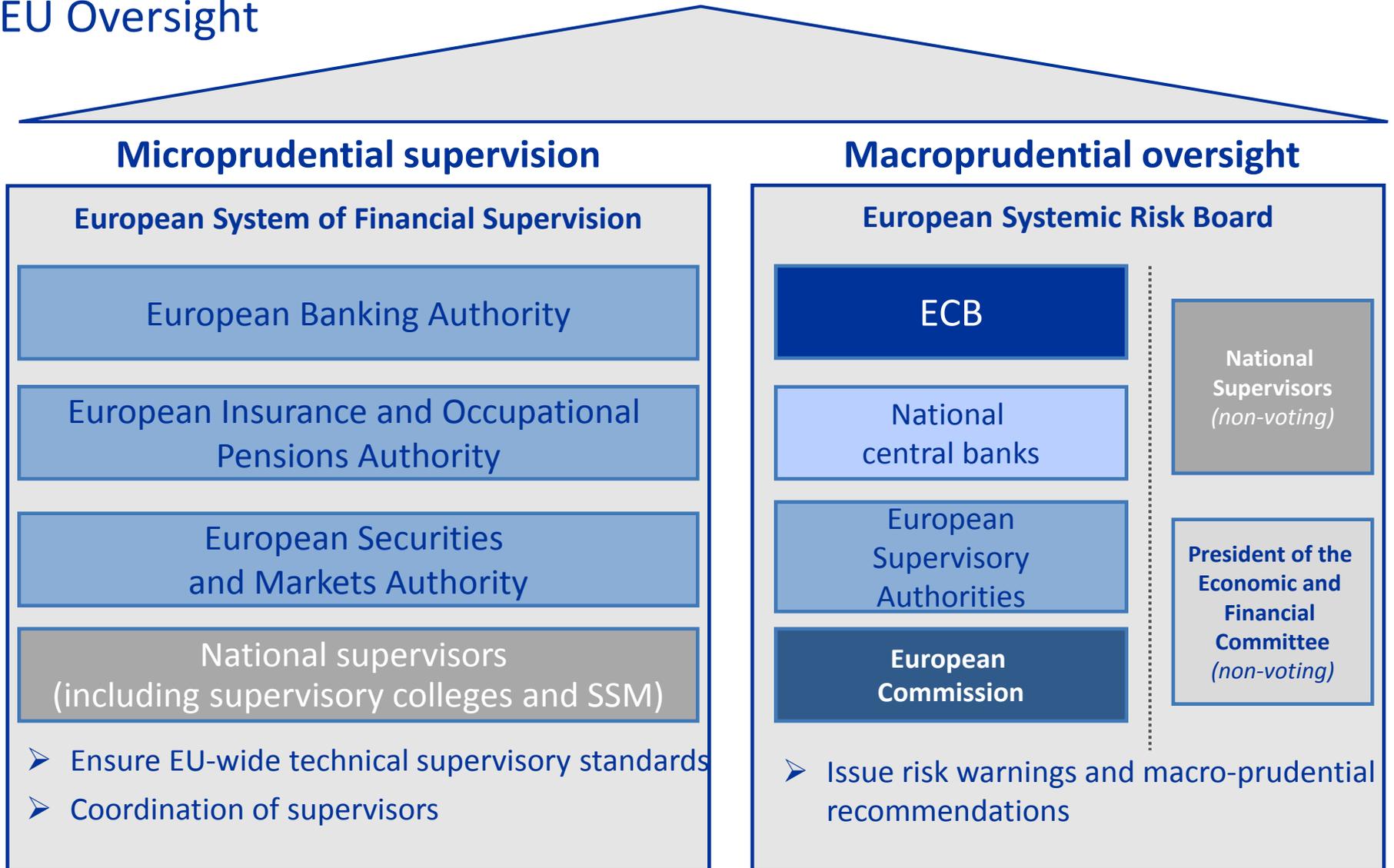
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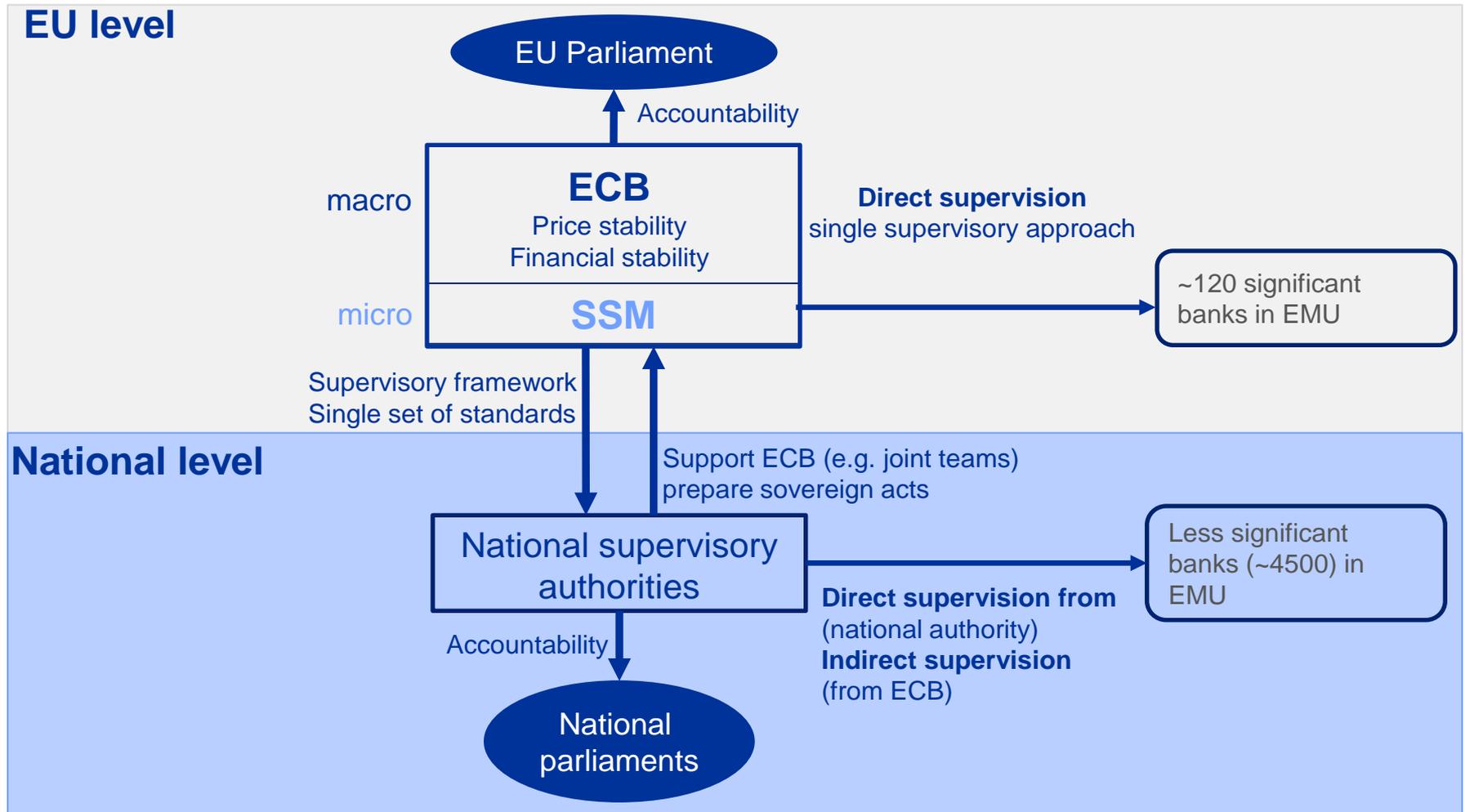
Micro- and Macroprudential Mandate of the ECB

- **Treaty on the Functioning of the European Union** (Article 127(6))
“The [European] Council, acting by means of regulations [...] may [...] confer specific tasks upon the European Central Bank concerning policies relating to the prudential supervision of credit institutions and other financial institutions with the exception of insurance undertakings.”
- **SSM Regulation** (Council Regulation No 1024/2013 Art. 5)
 - National authorities preserve macroprudential powers
 - ECB can top-up national macroprudential measures
 - ECB can act on its own initiative and upon the request from national authorities

EU Oversight

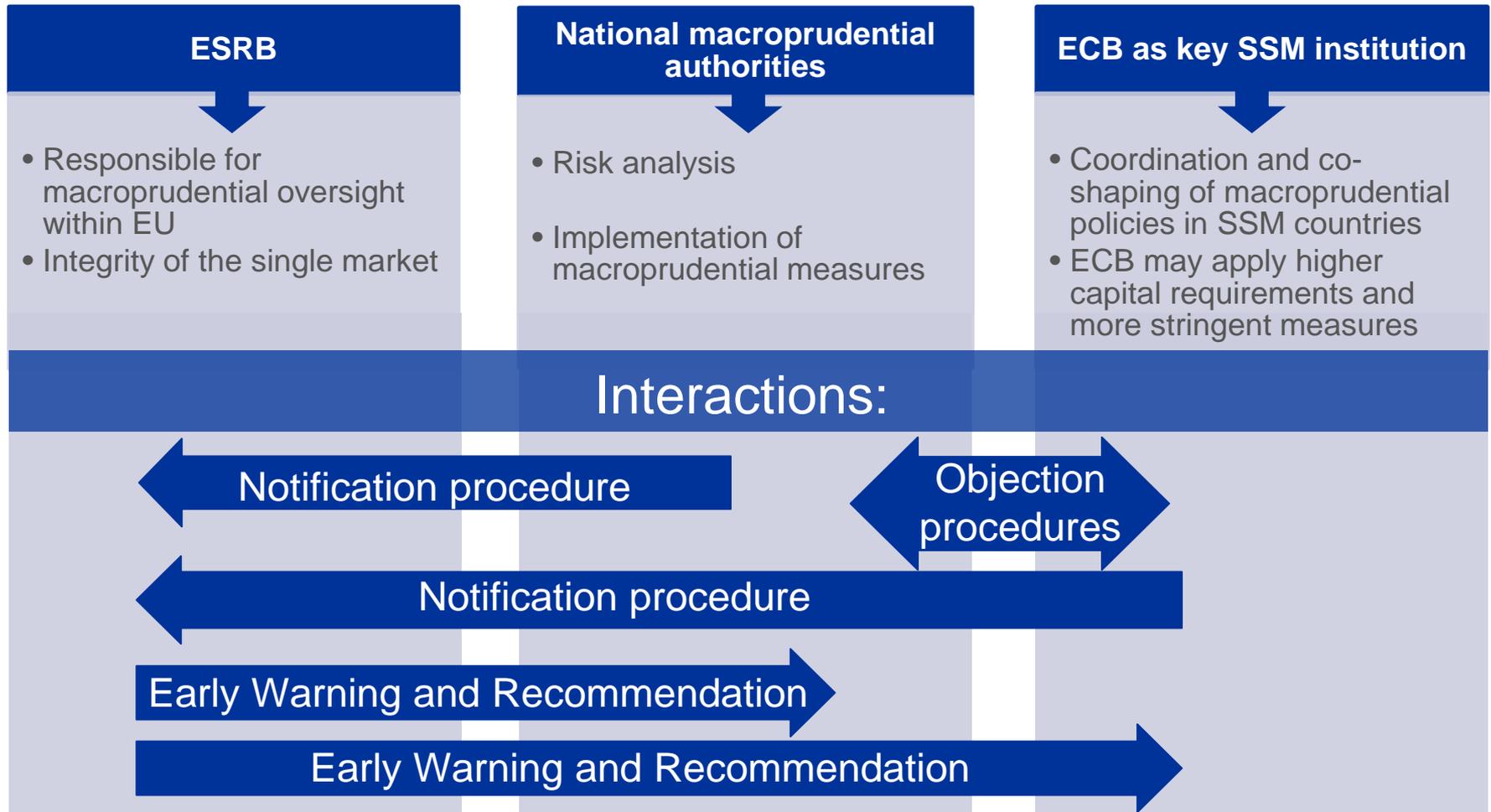


Tasks of the ECB and the national supervisory authorities



Source: Adapted from Deutsche Bundesbank.

Macroprudential policy in the EU



National macroprudential mandates

A clear objective

- To overcome inaction bias
- Ultimate objective: safeguarding the stability of the financial system

Clear tasks and powers

- (At a minimum) identifying, monitoring and assessing risks to financial stability and implementing policies to achieve its objective

Transparency

- Macroprudential policy decisions should be made public in a timely manner
- The power to make public and private statements on systemic risk

Accountability and independence

- Ultimately accountable to the national parliament

The relevant role of the Central Banks

- NCBs should have a leading role in macroprudential oversight because of their expertise and their existing responsibilities in the area of financial stability

Cooperation mechanisms with the ESRB

- Allow for adequate follow-up to ESRB risk warnings and recommendations

Source: Recommendation ESRB/2011/3, 22 December 2011.

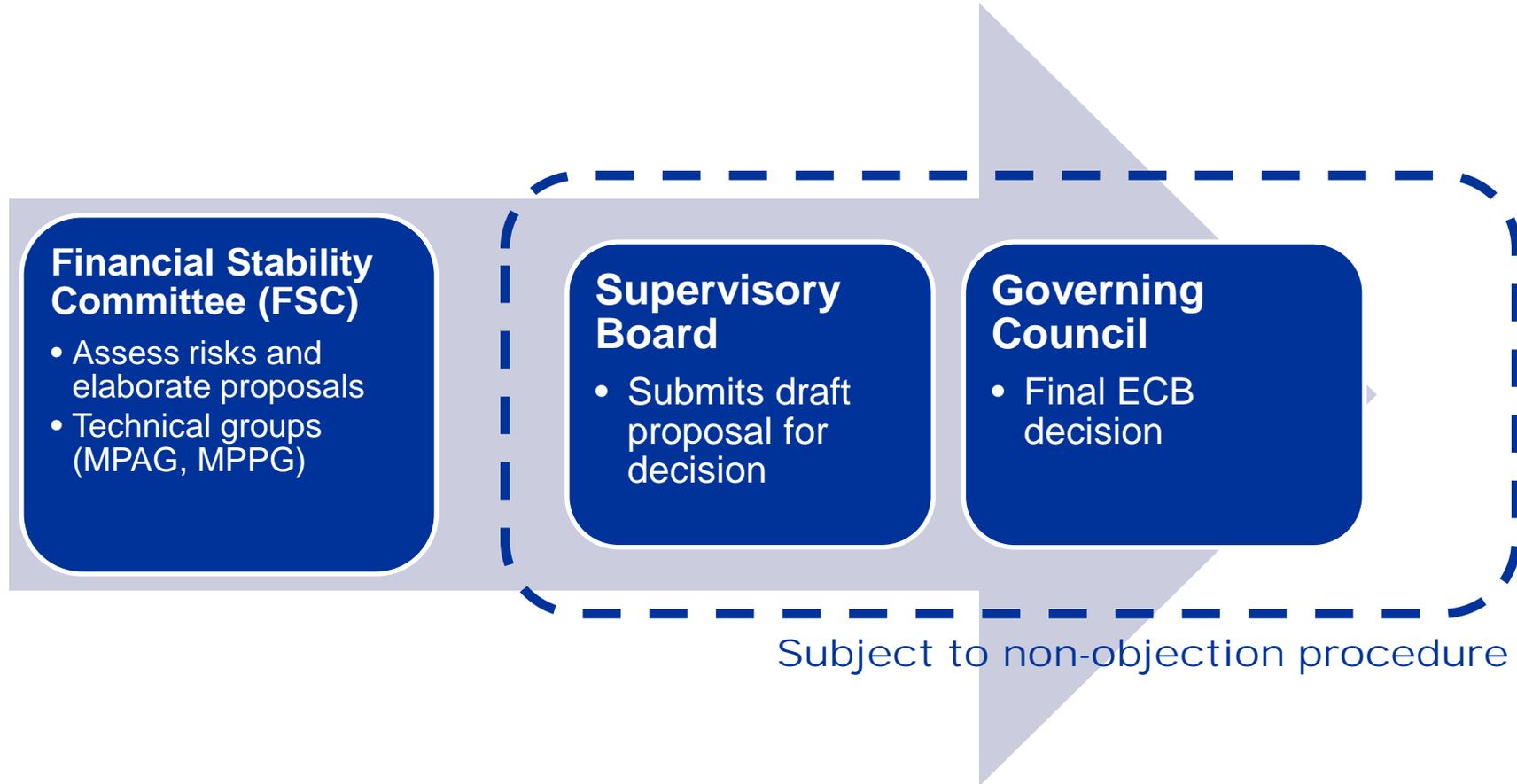
Policy Decision - “Guided Discretion” principle

Guidance through rule-based approach helps overcome the inaction bias when thresholds of early warning signals are breached

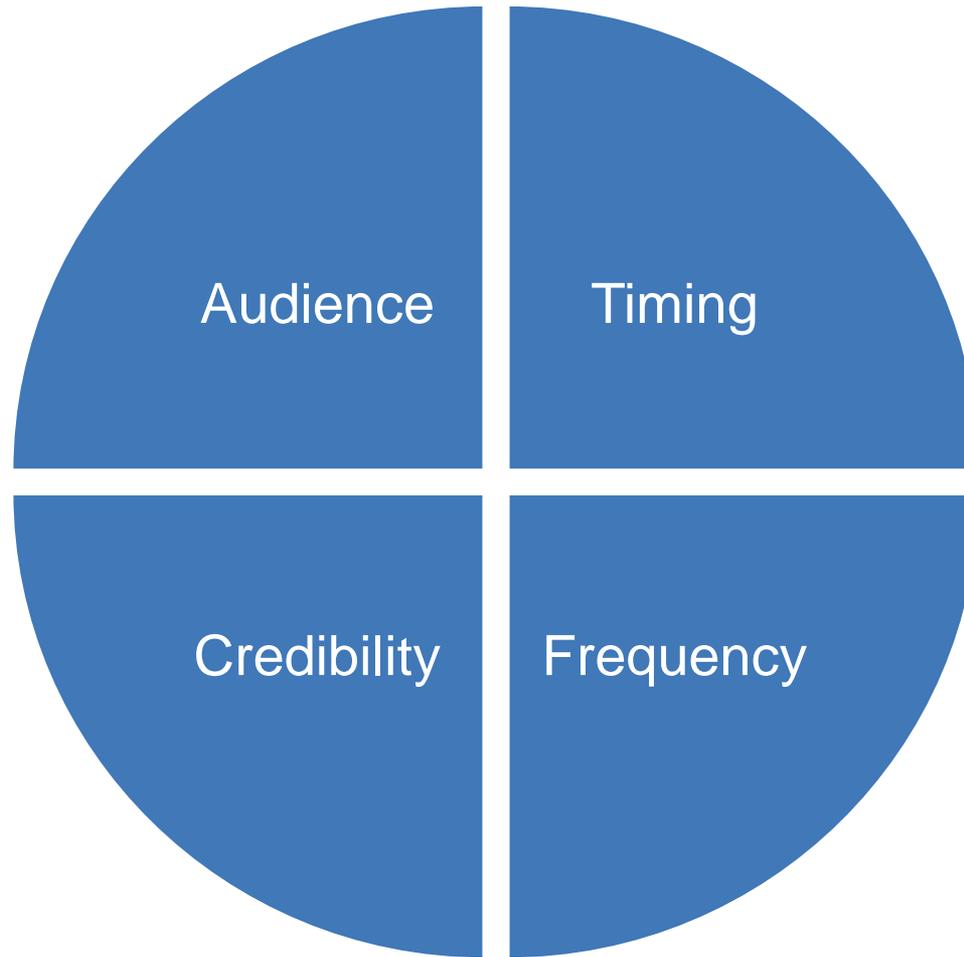
Discretion is needed as indicators and thresholds cannot fully capture all aspects of identified risks

Judgement firmly anchored by a clear set of principles supported by additional indicators and their thresholds.

Preparing macroprudential policy decisions in the SSM



Communication trade-offs





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The views expressed are those of the presenter and not necessarily those of the ECB.