



EUROPEAN CENTRAL BANK

EUROSYSTEM

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# The ECB's role in financial stability and macroprudential policy

XIII ECB Central Banking Seminar

1 July 2019

- **Financial stability definition**

- “... a condition in which the financial system – **which comprises financial intermediaries, markets and market infrastructures** – is capable of withstanding shocks and the unravelling of financial imbalances”

*ECB Financial Stability Review*

- **Macroprudential policy aims to:**

- prevent the excessive build-up of risks, smoothing the financial cycle (time series dimension)
- make the financial sector more resilient and limit contagion effects (cross-section dimension)

## Price stability

- ▶ Main indicator: HICP inflation
- ▶ ECB definition:

*“maintain inflation rates below, but close to, 2% over the medium term”*

- ▶ Main instrument: Policy rates same for all euro area countries

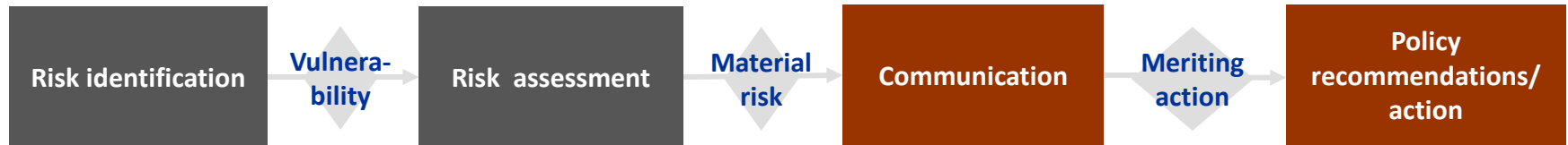
## Financial stability

- ▶ Many indicators needed
- ▶ ECB definition:

*“Financial stability can be defined as a condition in which the financial system – **which comprises financial intermediaries, markets and market infrastructures** – is capable of withstanding shocks and the unravelling of financial imbalances”*

- ▶ Many instruments available, most implemented at national level

# Financial stability analysis and macroprudential policy at the ECB



## Surveillance vulnerabilities & triggers

- Financial stability indicators
- Analytical tools and models
- Market intelligence
- Expert judgment

## Assessment of identified risks

- Severity of risks identified and system's ability to absorb shocks
- Scenario analysis (stress tests)
  - Propagation channels

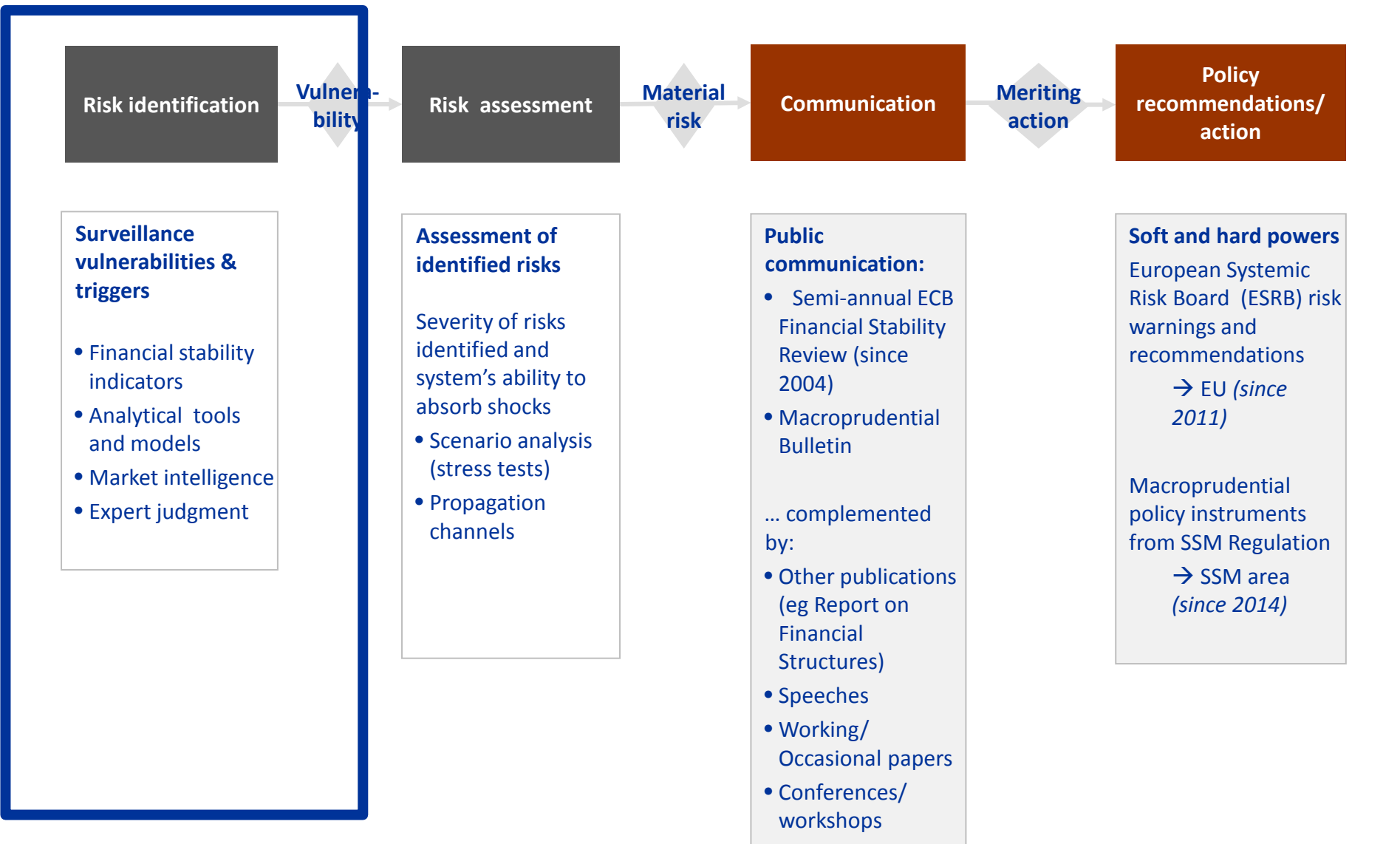
## Public communication:

- Semi-annual ECB Financial Stability Review (since 2004)
  - Macroprudential Bulletin
- ... complemented by:
- Other publications (eg Report on Financial Structures)
  - Speeches
  - Working/ Occasional papers
  - Conferences/ workshops

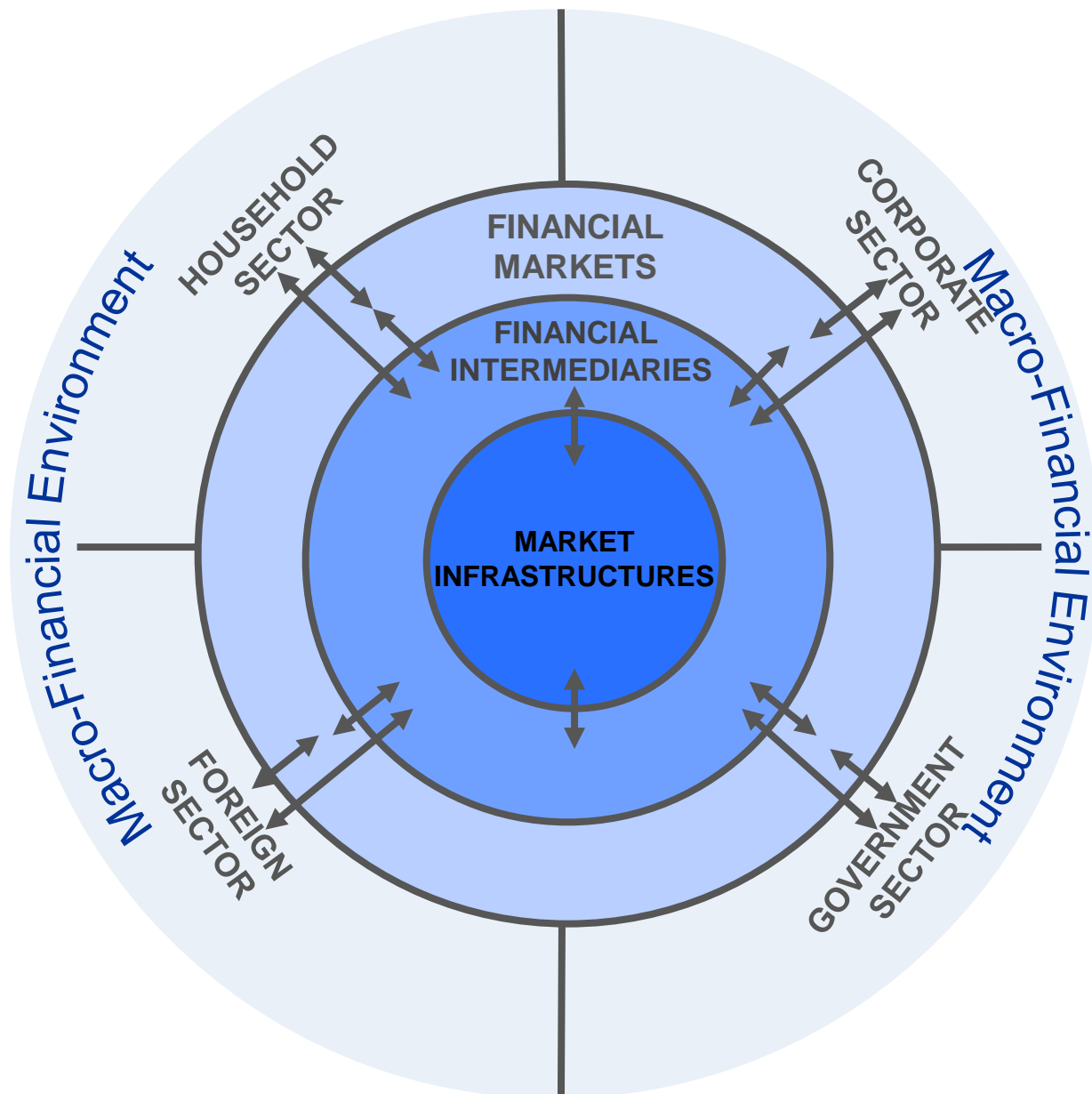
## Soft and hard powers

- European Systemic Risk Board (ESRB) risk warnings and recommendations  
→ EU (since 2011)
- Macroprudential policy instruments from SSM Regulation  
→ SSM area (since 2014)

# Financial stability analysis and macroprudential policy at the ECB



# Risk identification – analysis of financial system and external



## 1. Chartpacks and dashboards

- Euro area wide-level
- Country-level

## 2. Analytical tools and models

- Composite indicators to detect and monitor risks
- Early warning models

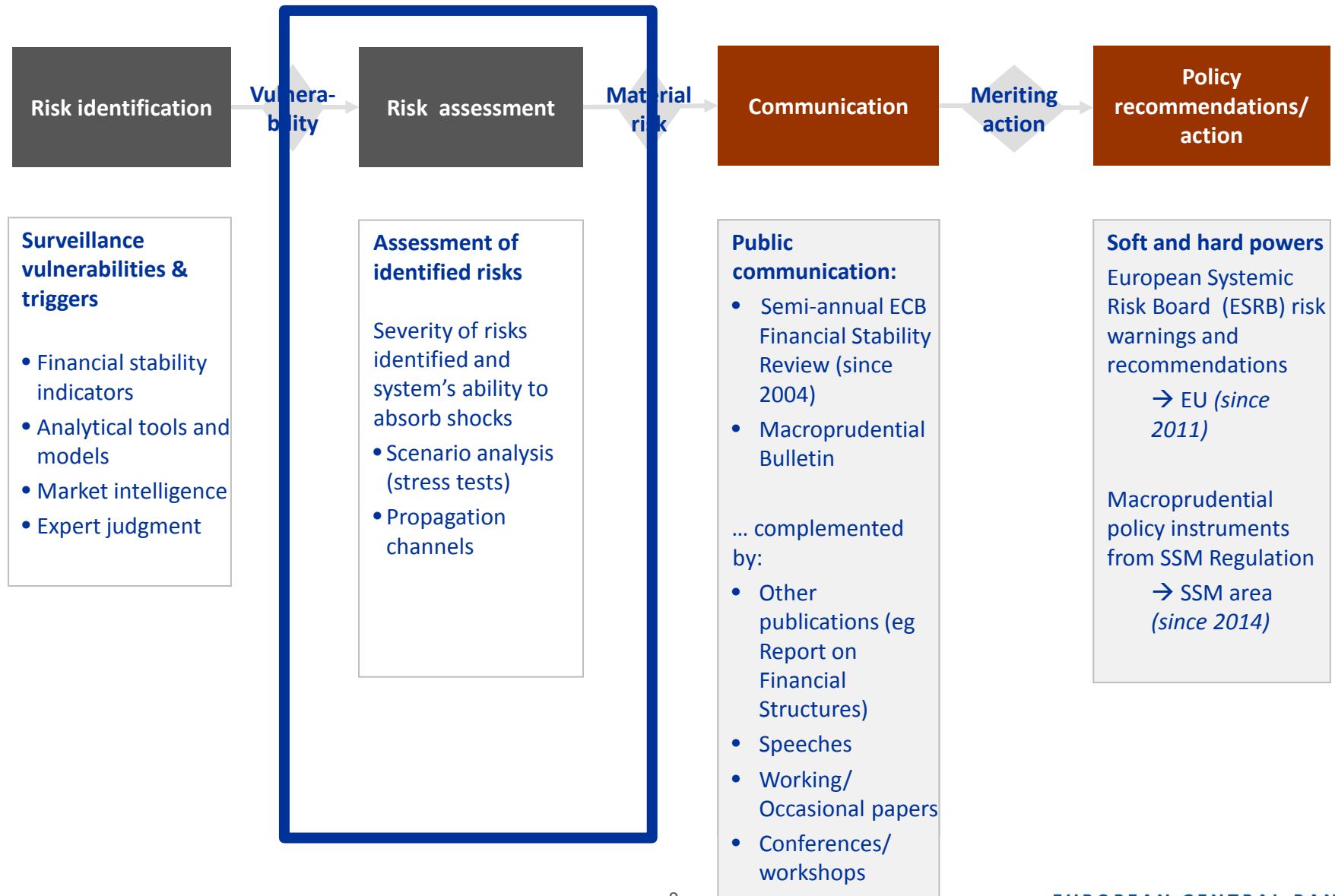
## 3. Topical analysis and deep dives

- Continuous monitoring and analysis of new potential sources of risks
- Deep-dives into specific topics

## 4. Market intelligence

- Regular dialogues
- Market missions
- Desk-based intelligence gathering

# Financial stability analysis and macroprudential policy at the ECB

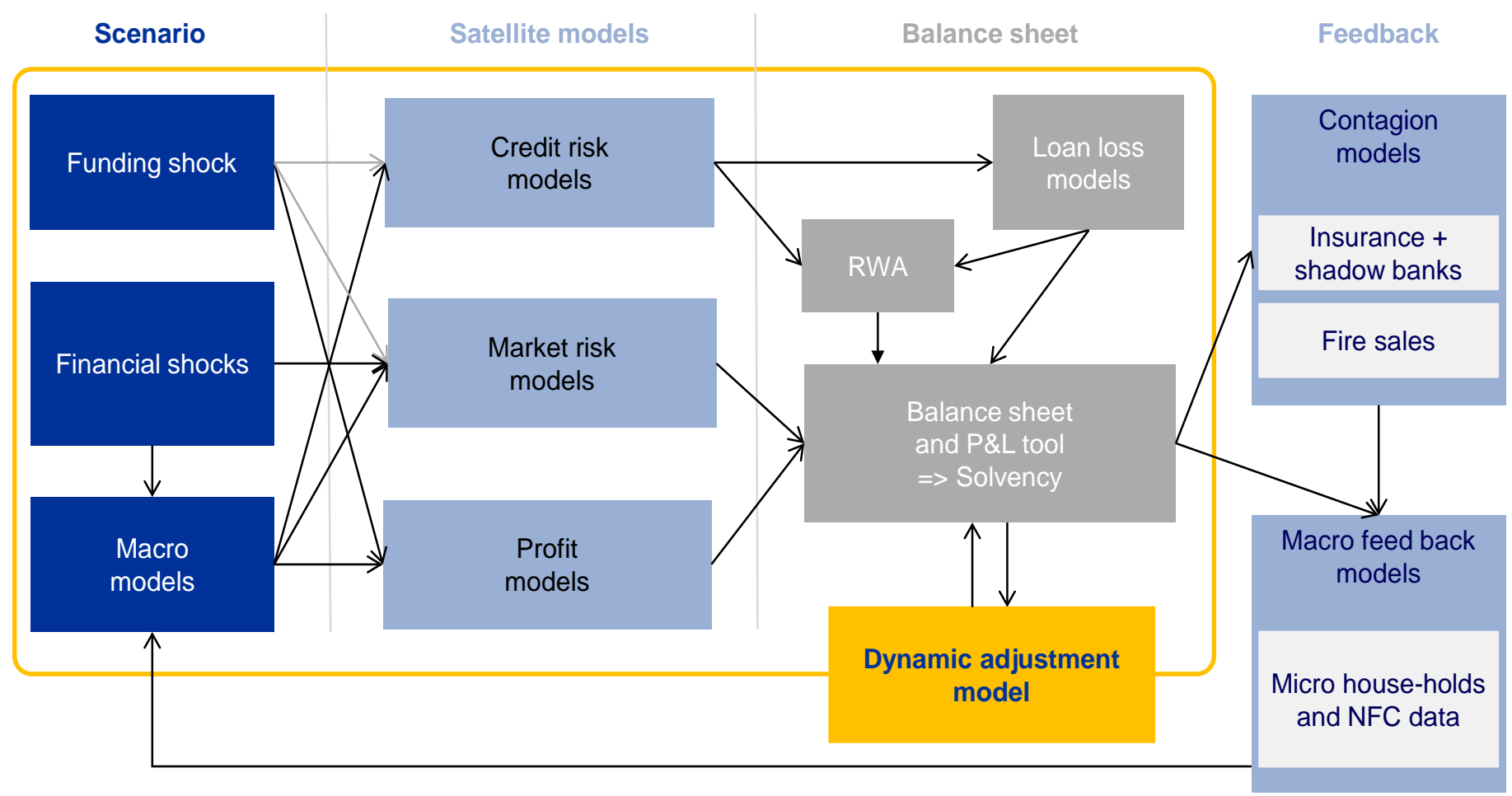




- **ECB/SSM conduct stress test exercises/analysis to assess resilience of the banking sector with different purposes:**
  - **Microprudential perspective:** Results used to **assess individual institutions** and their risk management (e.g. EBA system-wide and SREP stress test)
  - **Macroprudential perspective:** Results used to gauge **resilience of financial system as a whole** and identify potential **feedback loops** within the banking sector (**contagion**), with other sectors or with the real economy<sup>1</sup> (e.g. EBA system-wide stress test and top-down analysis in the framework of the Financial Stability Review)
- **In 2018 EBA system-wide stress test on 48 EU banks (33 from SSM area) covering roughly 70% of total banking sector assets in the euro area**

<sup>1</sup>See Dees, S., J. Henry and R. Martin (eds.), “STAMP€: Stress-Test Analytics for Macroprudential Purposes in the euro area”, ECB, February 2017

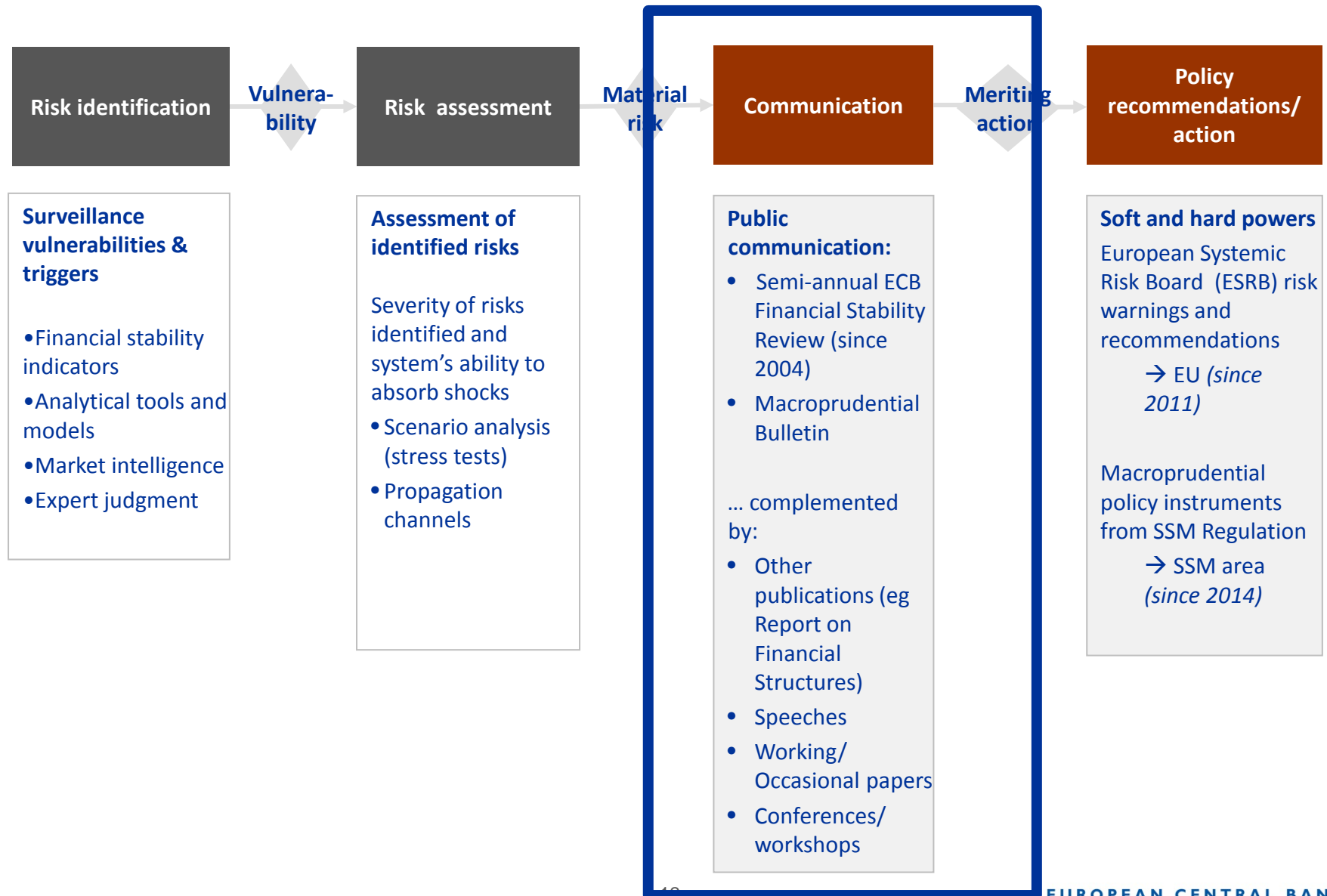
## Four-pillar structure of ECB solvency analysis framework



## Main achievements of recent system-wide exercises from the cooperation of macro- and microprudential authorities:

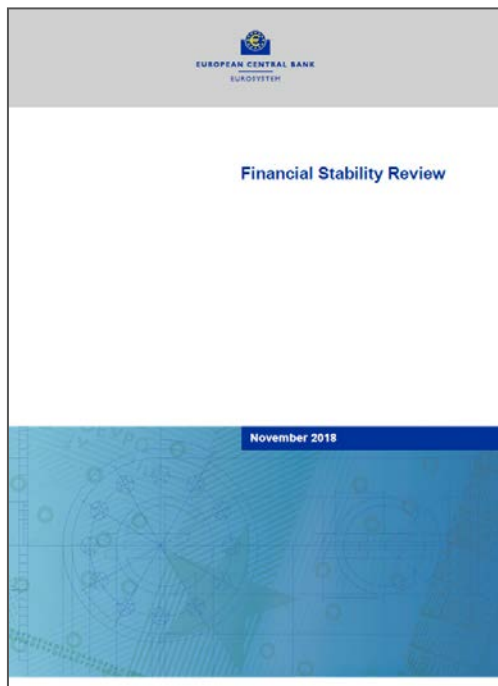
- Greater **transparency** of banks' balance sheets via
  - a systematic and centrally-led quality assurance process
  - a stress test, performed in close cooperation with the EBA
- Banks' **balance sheet strengthening** by reviewing the quality of banks' assets, including the adequacy of asset and collateral valuations and related provisions
- Improved **confidence** in the European banking sector

# Financial stability analysis and macroprudential policy at the ECB



## Regular publications

- **Financial Stability Review**



- **Macroprudential Bulletin**

## Speeches and presentations

*“ECB’s De Guindos urges build-up of banks’ macro buffers” – Reuters*

*“ECB warns eurozone increasingly vulnerable to financial shocks” – Financial Times*

*“ECB must not turn blind eye to stability risks: Lautenschläger” – Reuters*

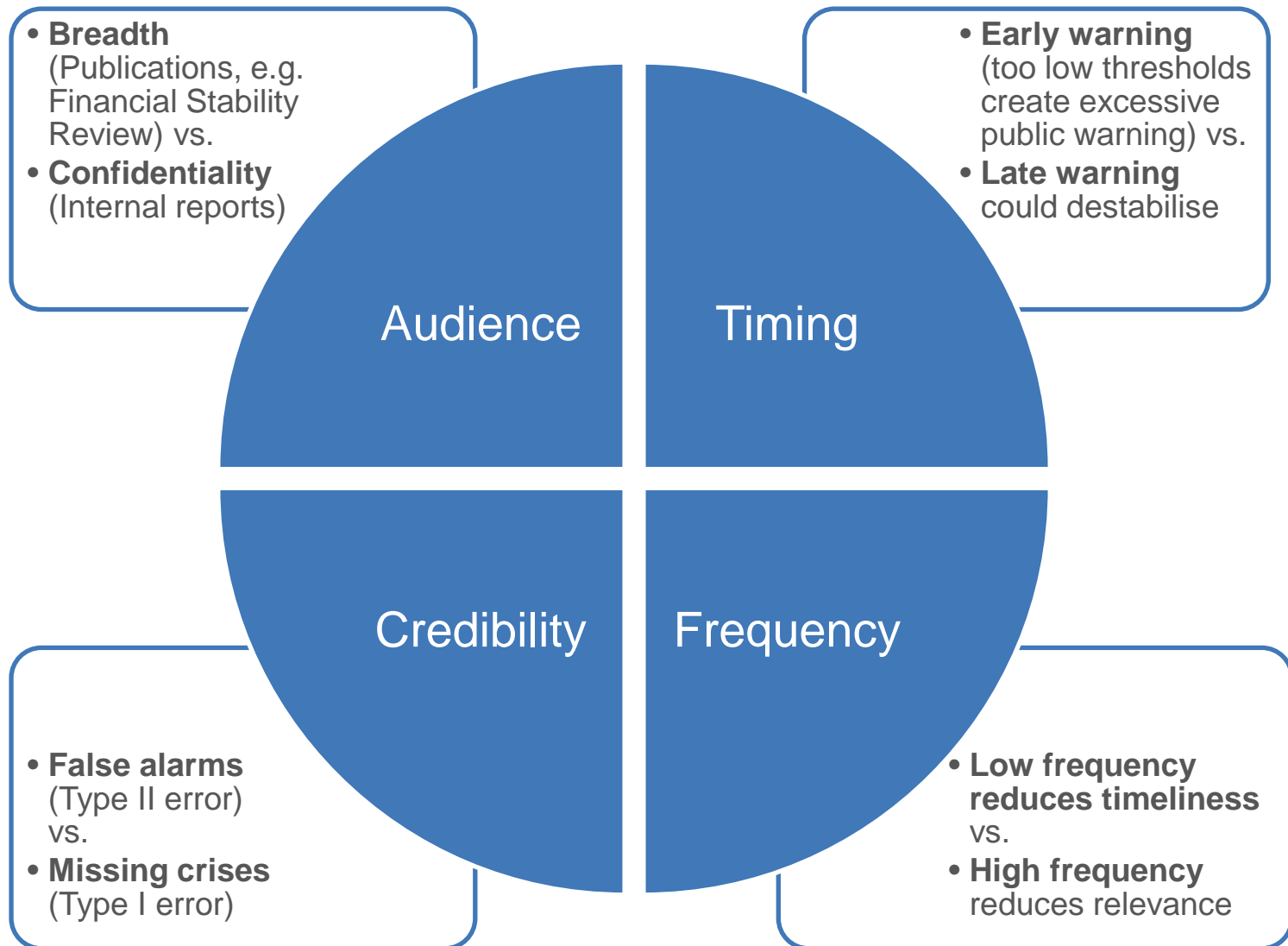
## Ad hoc reports and research papers

### **Publications on Financial stability**

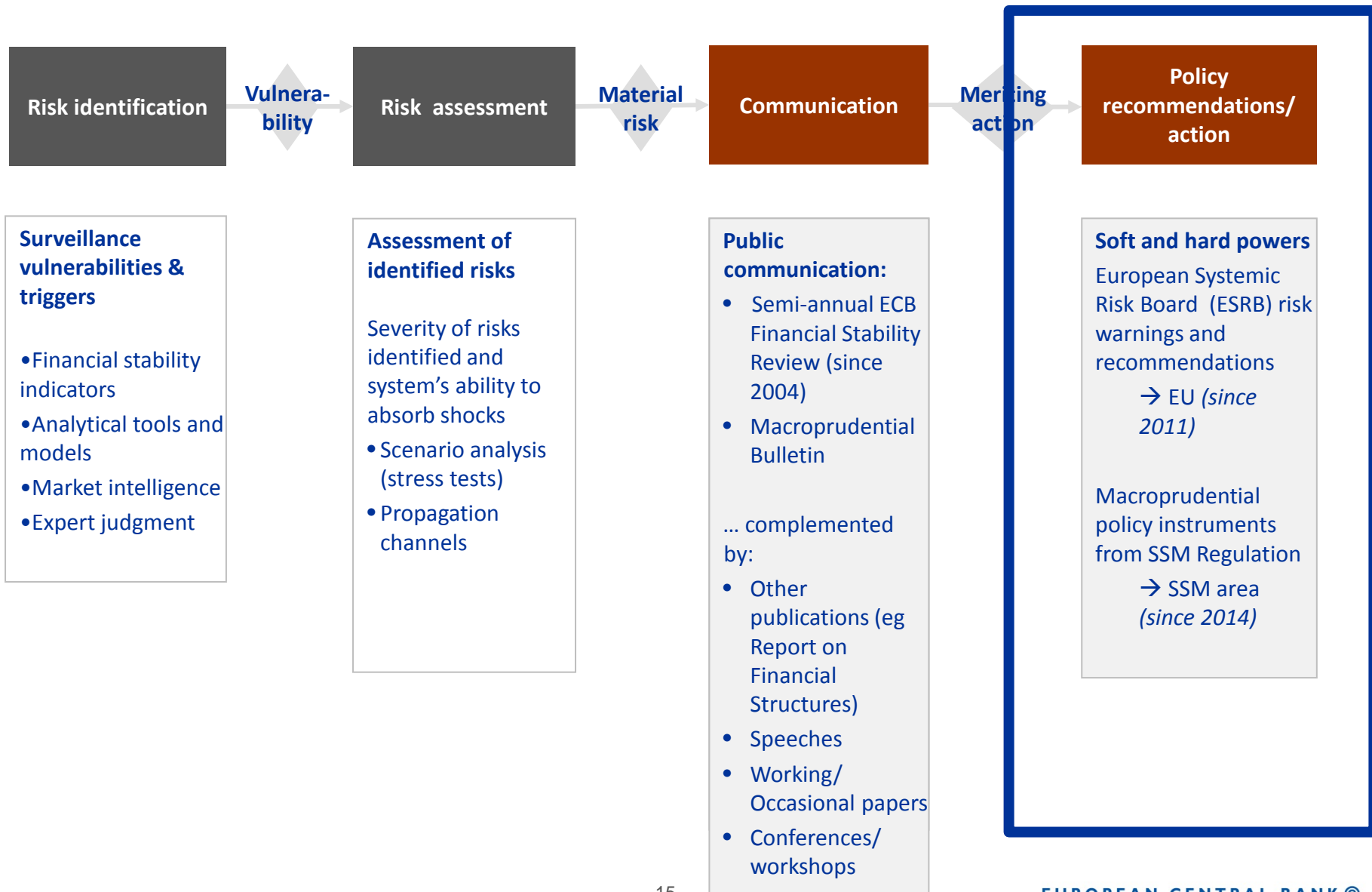
29/11/2018	Counterparty and liquidity risks in exchange-traded funds Financial Stability Review Issue 2, 2018
29/11/2018	How can euro area banks reach sustainable profitability in the future? Financial Stability Review Issue 2, 2018
27/11/2018	The resurgence of protectionism: potential implications for global financial stability Financial Stability Review Issue 2, 2018
02/10/2018	The implications of removing repo assets from the leverage ratio
02/10/2018	Does the G-SIB framework incentivise window-dressing behaviour? Evidence of G-SIBs and reporting banks
02/10/2018	Macroprudential liquidity tools for investment funds - A preliminary discussion
24/05/2018	A new financial stability risk index to predict the near-term risk of recession Financial Stability Review Issue 1, 2018
24/05/2018	Predicting the likelihood and severity of financial crises over the medium term with a cyclical systemic risk indicator Financial Stability Review Issue 1, 2018

<https://www.ecb.europa.eu/pub/pub/prud/html/index.en.html>

## Communication trade-offs

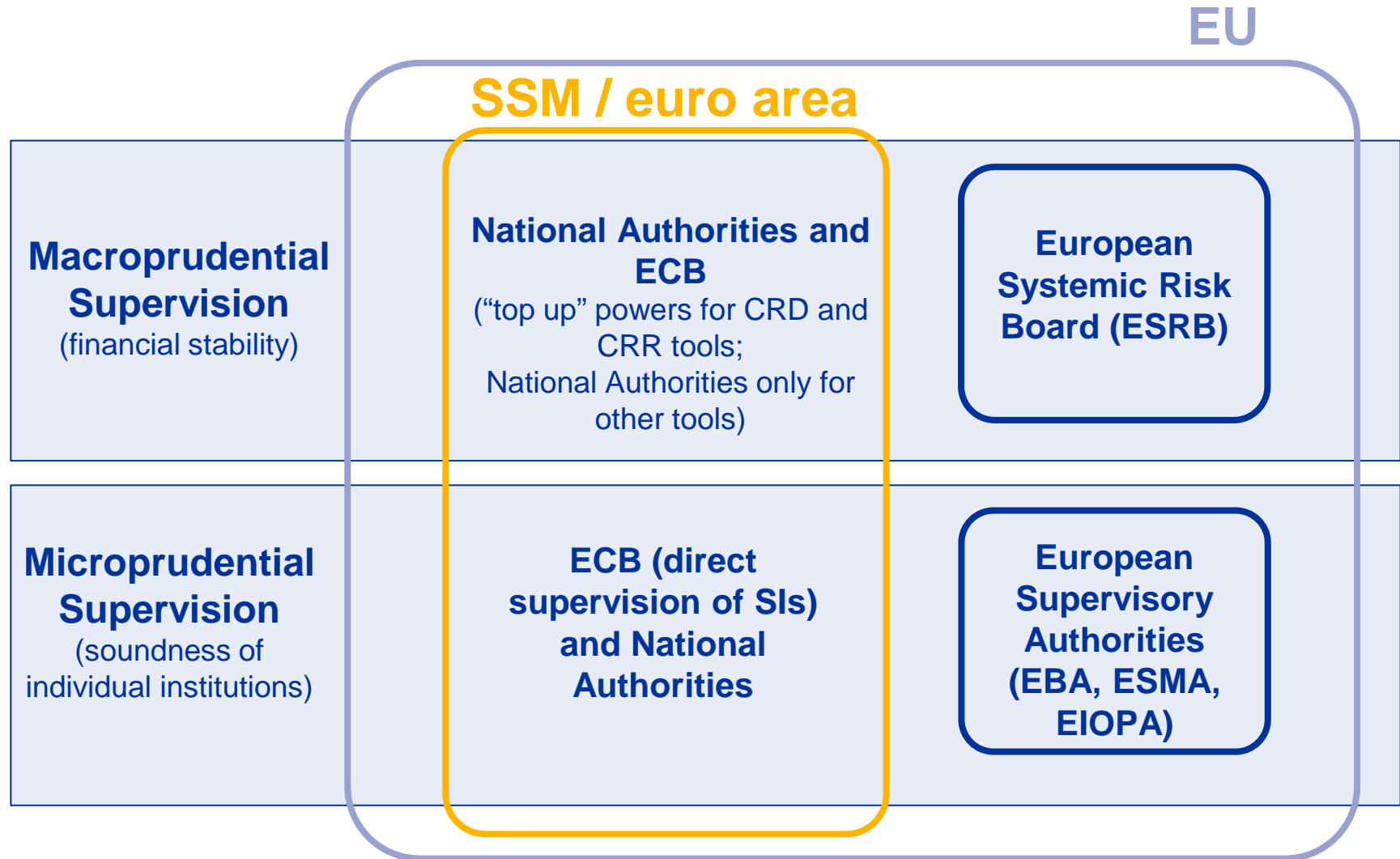


# Financial stability analysis and macroprudential policy at the ECB







# Institutional framework for prudential policies in the EU

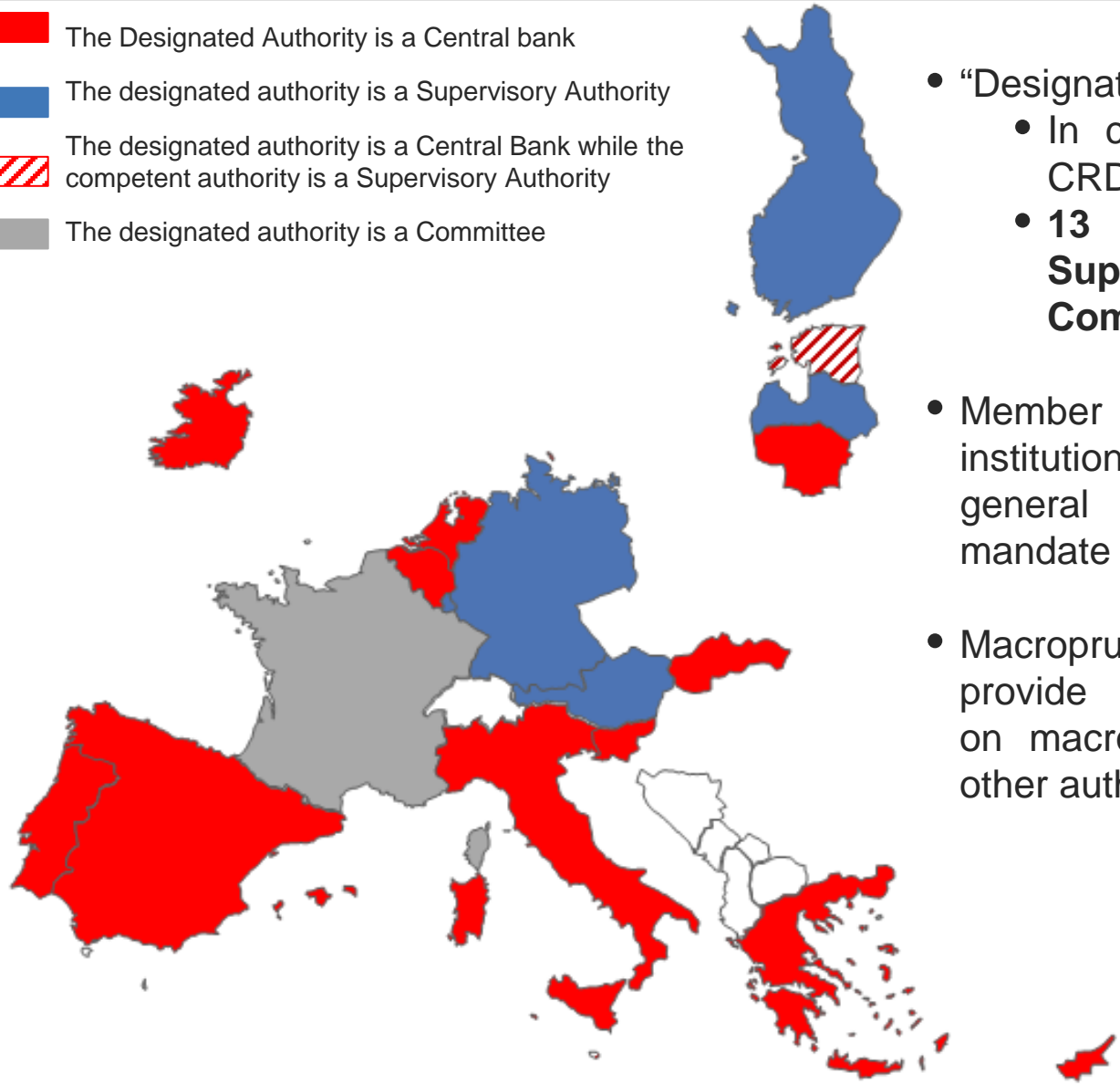
Macroprudential policy: shared responsibility between the ECB and National Authorities in the SSM / euro area





# Macroprudential policy - authorities in the SSM area

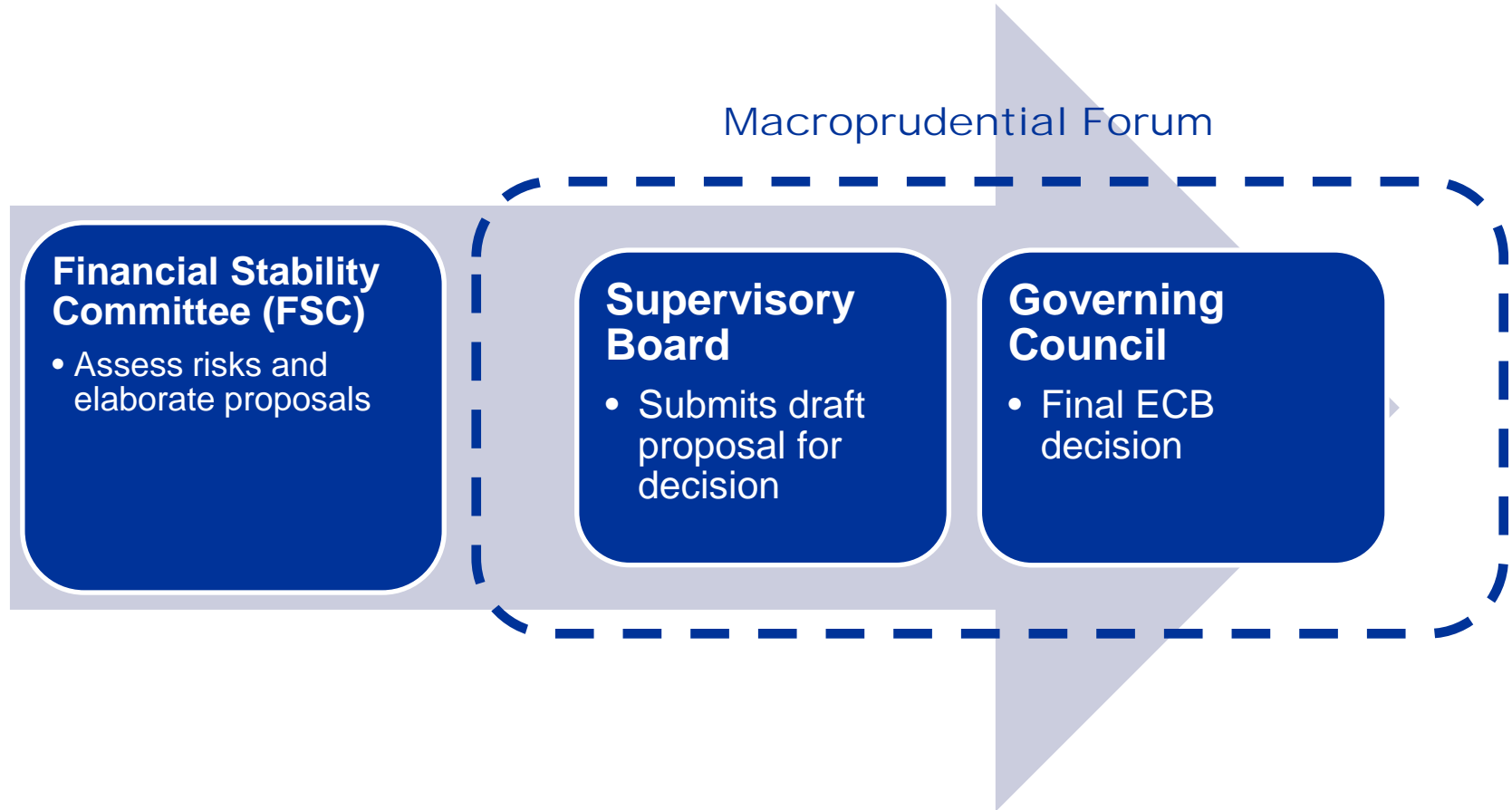
-  The Designated Authority is a Central bank
-  The designated authority is a Supervisory Authority
-  The designated authority is a Central Bank while the competent authority is a Supervisory Authority
-  The designated authority is a Committee



- “Designated” authority:
  - In charge of implementation of CRD and CRR measures.
  - **13 Central Banks, 5 Supervisory Authorities and 1 Committee** in the SSM area
- Member states may set up separate institutions or committees with a general macroprudential policy mandate (“macroprudential authority”).
- Macroprudential authorities may provide guidance, recommendations on macroprudential policy issues to other authorities

- With SSM Regulation (4 November 2014), ECB was granted macroprudential policy tasks and tools to tackle the emergence of possible systemic risks in the financial system
- ECB has two mandates in the field of macroprudential policy:
  - 1. To comment and object**
    - National designated authorities notify ECB when they intend to implement or change a macroprudential measure.
    - ECB assesses planned measures and can object.
    - National authorities consider ECB's comments before proceeding with the decision
  - 2. To apply more stringent measures**
    - ECB may, instead of national designated authorities, apply higher requirements for capital buffers and apply more stringent measures aimed at addressing systemic or macroprudential risks

## Preparing macroprudential policy decisions in the SSM



# Macroprudential policy - the role of the ECB

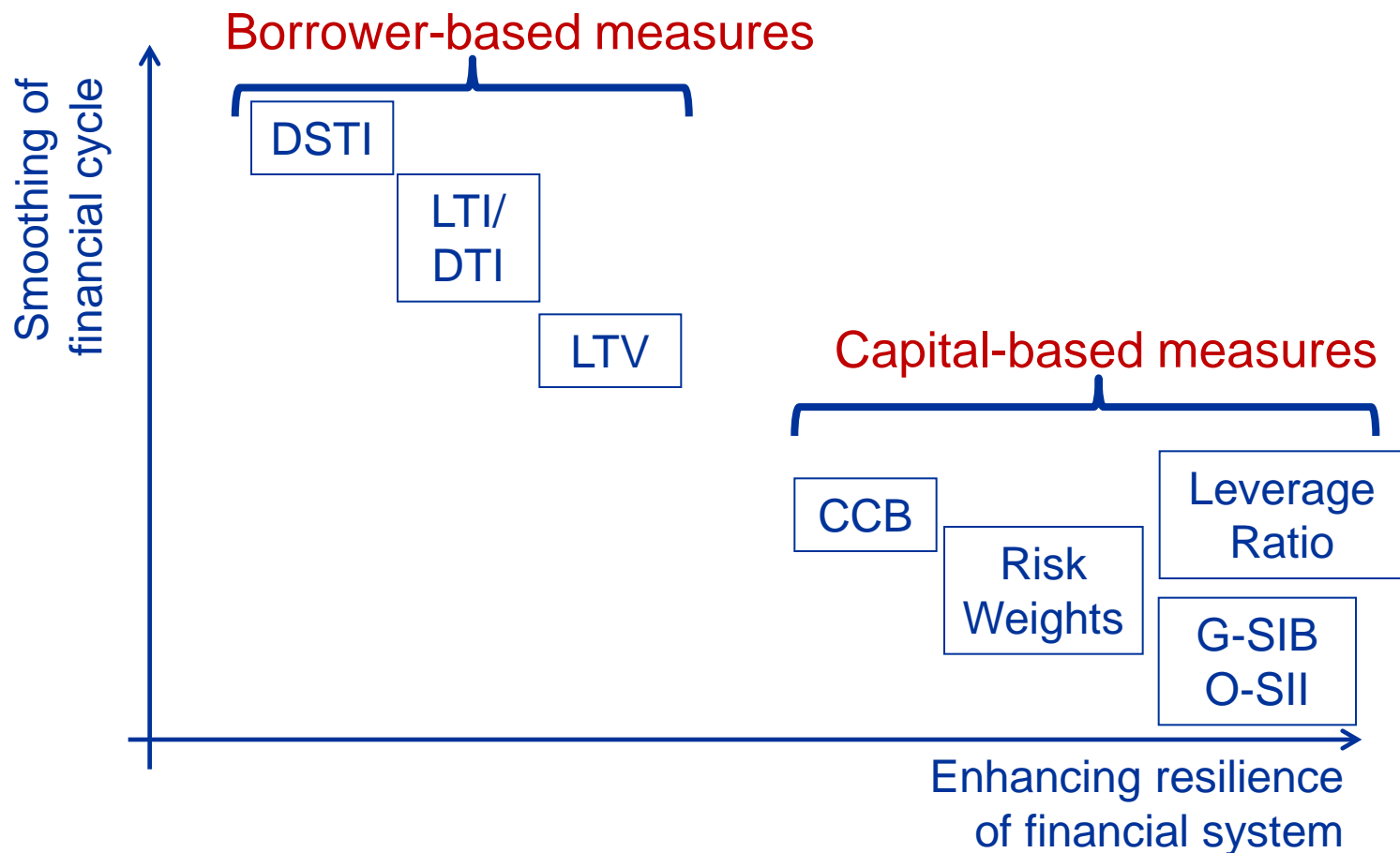
## Broad set of instruments with varying legal basis

	Capital Requirements Directives (CRD) IV tools	Capital Requirements Regulation (CRR) tools	Other tools
Capital based measures	<ul style="list-style-type: none"> <li>• <b>Countercyclical capital buffer (CCB)</b></li> <li>• <b>Systemic risk buffer (SRB)</b></li> <li>• <b>G-SII &amp; O-SII capital buffer</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Risk weights</b> for selected exposures</li> <li>• <b>Capital conservation buffer</b></li> <li>• <b>Own funds level</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Leverage ratio</b></li> </ul>
Liquidity-based measures		<ul style="list-style-type: none"> <li>• <b>Liquidity requirements</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Non-stable funding levy</b></li> <li>• <b>Loan-to-deposit ratios</b></li> </ul>
Borrower-based measures			<ul style="list-style-type: none"> <li>• <b>Loan-to-value ratios</b></li> <li>• <b>Loan-to-income ratios</b></li> <li>• <b>Debt service-to-income ratios</b></li> <li>• <b>Debt-to-income ratios</b></li> </ul>
Other measures		<ul style="list-style-type: none"> <li>• <b>Large exposure limits</b> (incl. intra-financial sector)</li> <li>• <b>Disclosure requirements</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Margin and haircuts requirements</b></li> </ul>

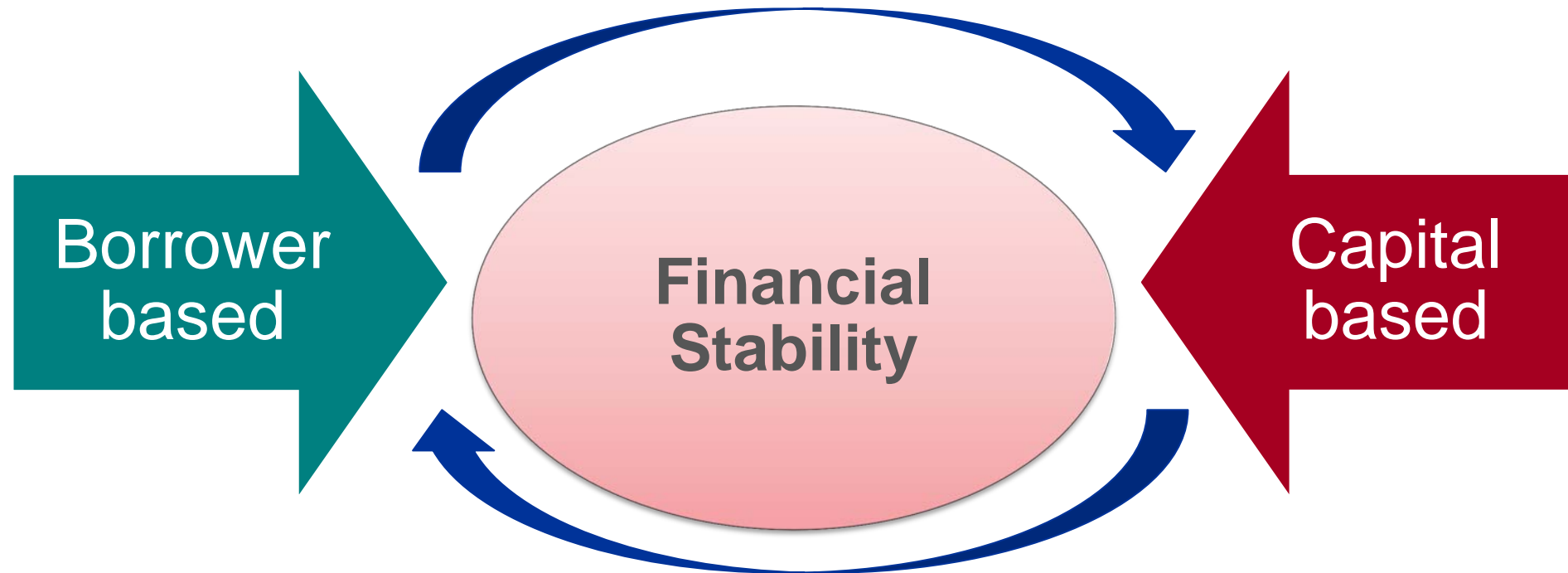
**Can be used by national authorities and the ECB (for SSM countries)**

**Can only be used by national authorities**

## Relative strength of instruments



Broad complementarity and synergy...



...but also occasional substitution

# Enacted macroprudential policy measures in the SSM

	Current Measures	2011	2012	2013	2014	2015	2016	2017	2018	2019
<b>AT</b>	BBM: LTV + DSTI +Maturity SyRB									
<b>BE</b>	CCyB: 0.5% RW									
<b>CY</b>	BBM: LTV+DSTI									
<b>DE</b>	CCyB: 0.25%									
<b>EE</b>	BBM: LTV + DSTI +Maturity SyRB									
<b>ES</b>										
<b>FI</b>	BBM: LTV + Maturity RW SyRB									
<b>FR*</b>	CCyB: 0.5%									
<b>GR</b>	BBM: DSTI									
<b>IE</b>	CCyB: 1% BBM: LTV + LTI RW									
<b>IT</b>										
<b>LT</b>	CCyB: 0.5% BBM: LTV + DSTI +Maturity									
<b>LU</b>	CCyB: 0.25% RW									
<b>LV</b>	BBM: LTV + DSTI									
<b>MT</b>	BBM: LTV + DSTI +Maturity RW									
<b>NL</b>	BBM: LTV + DSTI +Maturity SyRB									
<b>PT</b>	BBM: LTV + DSTI +Maturity									
<b>SI</b>	BBM: LTV + DSTI +Maturity									
<b>SK</b>	CCyB: 1.50% BBM: LTV + LTI + DSTI +Maturity SyRB									

Source: ECB. OSII and GSII buffers not included in the table. For borrower based measures, also non-legally binding measures are included in the table. Legenda: BBM: borrower-based measures; CCyB: countercyclical capital buffer; SyRB: systemic risk buffer; LTV: loan-to-value ratio; LTI: loan-to-income ratio; DSTI: debt service-to-income ratio; RW: risk weights



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# Background slides

- Euro area-wide dashboards

<b>Non-financial sector</b>	<b>Financial markets</b>	<b>Banking sector</b>	<b>Non-bank financial intermediaries</b>
Macro environment	Government debt markets	Solvency and leverage	Solvency and leverage
Household sector	Corporate credit markets	Profitability	Profitability
Non-financial corporate sector	Equity markets	Asset quality	Flows and valuations
Public sector	Foreign exchange markets	Risk taking	Risk taking
Property markets	Money markets	Funding and liquidity	Funding and liquidity
		Market valuation	Market valuation

# Chartpacks and dashboards

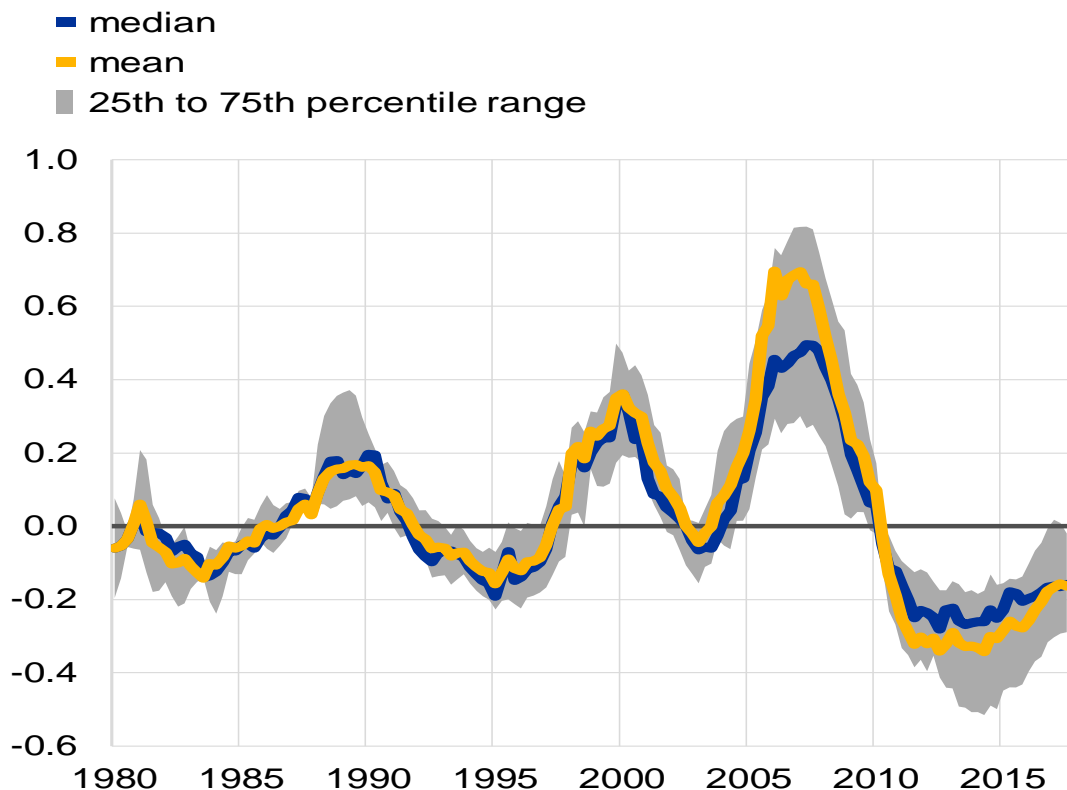
- Country-level dashboards for macroprudential policy making
- The risk typology in the MPR is linked to macroprudential instruments:
  - **Cyclical risks** – relevant for CCyB setting
  - **Commercial and residential real estate risks** – for macroprudential instruments for real estate risks
  - **Structural risks** – for setting of structural macroprudential buffers (SRB, O-SII buffers)

## Example - Residential real estate dashboard

Country	Indicators										Summary measures	
	Price Indicators				Lending Indicators			Household Balance Sheet			Average rating across indicators	Composite indicator
	Residential real estate price index, 12m growth, %	Residential price index relative to peak prior to 2014	RRE valuation measure, house price to income	RRE valuation measure, econometric model	Loans to HH for house purchases, 12m growth, %	Loans to HH for HP relative to peak prior to 2014	HH Loan spread	HH debt, % of GDP	HH financial assets to debt, %	Debt service to income ratio for HH, %		
A	7.6	1.1	24.0	12.0	4.7	1.1	2.1	52.1	347.6	10.2	1.4	0.3
B	3.3	1.0	24.0	1.0	10.6	1.2	1.9	59.5	496.6	10.6	1.4	0.2
C	-0.1	0.7	-16.0	-4.0	-2.8	0.9	3.3	127.4	198.7	29.2	0.9	0.2
D	4.4	1.1	2.0	0.0	3.6	1.1	1.9	53.6	333.1	9.5	0.6	0.0
E	8.0	0.9	12.0	-8.0	4.7	1.0	2.2	40.3	258.1	7.5	0.7	-0.1
F	4.2	0.7	-9.0	5.0	-4.0	0.8	1.9	67.5	273.0	13.3	0.5	-0.1
G	-0.1	1.0	9.0	5.0	2.5	1.0	1.4	67.4	206.4	11.4	1.4	0.2
H	-0.3	0.9	13.0	2.0	3.2	1.0	1.8	56.6	392.0	9.9	0.7	0.0
I	-5.4	0.6	-25.0	-5.0	-3.7	0.8	2.7	62.3	218.8	22.3	0.7	-0.3
L	6.6	0.7	-6.0	-23.0	-2.1	0.6	3.5	69.7	234.6	22.1	0.8	-0.3
T1	4.0	0.9	2.5	2.5	5.0	1.0	1.5	50.0	220.0	10.0	1.0	0.0
T2	6.5	1.0	5.0	5.0	7.5	1.1	1.8	70.0	240.0	15.0	1.2	0.2
T3	9.0	1.1	7.5	7.5	10.0	1.2	2.0	90.0	260.0	20.0	1.7	0.5
TR	4.0	0.9	2.5	2.5	5.0	1.0	2.0	50.0	260.0	10.0	10.0	

# Analytical tools and models

- Indicators and tools for system-wide and country-level risk identification
- **Cyclical systemic risk indicator (CSRI)** to assess the likelihood and severity of financial crises
  - All euro area countries + euro area aggregate
  - Domestic NFPS vulnerabilities
  - Cross-country risk spill-overs



## Indicators:

Bank credit-to-GDP ratio, 2-year change

Real total credit, 2-year growth rate

Debt Service Ratio (DSR), 2-year change

Current account balance, % of GDP

RRE price-to-income ratio, 3-year change

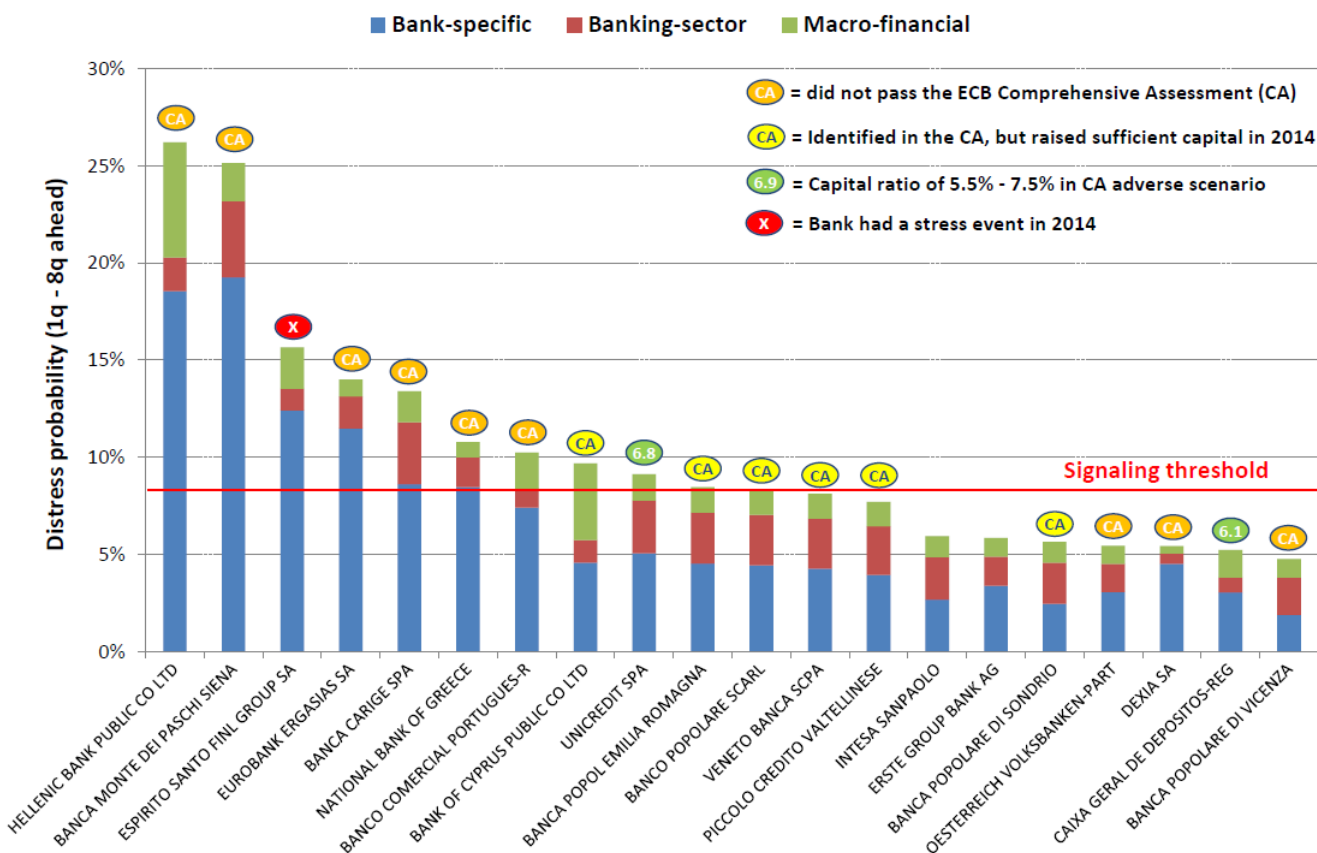
Real equity prices, 3-year growth rate

Carsten Detken, Stephan Fahr and Jan Hannes Lang, "Predicting the likelihood and severity of financial crises over the medium term with a cyclical systemic risk indicator", ECB Financial Stability Review, May 2018

# Analytical tools and models

- Indicators and tools for banking sector and bank-level risk identification
- Bank Early Warning Model (B-EWM)**
  - Identify build-up of risk in banking sectors
  - Identify vulnerable systemic banks

## Most vulnerable SSM banks in Q2 2014



### Variables

#### CAMELS

- C Tangible leverage ratio (Tangible equity / Assets), lag 2
- A Reserves for NPLs / Total assets, lag 2
- E Interest expenses / Total liabilities, lag 2
- E Pre-tax income / Total assets, lag 2
- L Short-term investments / Total liabilities, lag 2

#### Banking Sector

- Financial assets / GDP, lag 2
- Loans / Deposits (Diff. y-on-y), lag 1
- Issued debt / Total liabilities, lag 1
- Issued debt / Total liabilities (Diff. y-on-y), lag 1

#### Macro

- House price index, recursive hp-gap, 1600, lag 2
- 10-year yield (Diff. y-on-y), lag 1

- Continuous monitoring and analysis of new potential sources of risks
- Deep-dives into specific topics for thematic notes, boxes and presentations
- Some recent examples from Financial Stability Reviews
  - Assessing the risks to the euro area financial sector from a no-deal Brexit
  - Policy uncertainty and the risk of market repricing
  - CLOs: a financial stability perspective
  - Recent developments in and the outlook for global bank ratings
  - Gauging systemic risks from hard-to-value assets in euro area banks' balance sheets
  - The Eurosystem's asset purchase programme, risk-taking and portfolio rebalancing
  - Insurers' investment in alternative assets
  - Explaining the slowdown in portfolio flows to EMEs
  - Liquidity conditions in the Italian sovereign bond market
  - ESTER – the new overnight rate for the euro money markets
  - Bond funding of euro area banks: progress in the issuance of loss-absorbing instruments
  - Insurance companies and derivatives exposures: evidence from EMIR data