



ESRB risk identification methodology of real estate related risks and vulnerabilities

Nordiska Skattevetenskapliga
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S V E R I G E S R I K S B A N K



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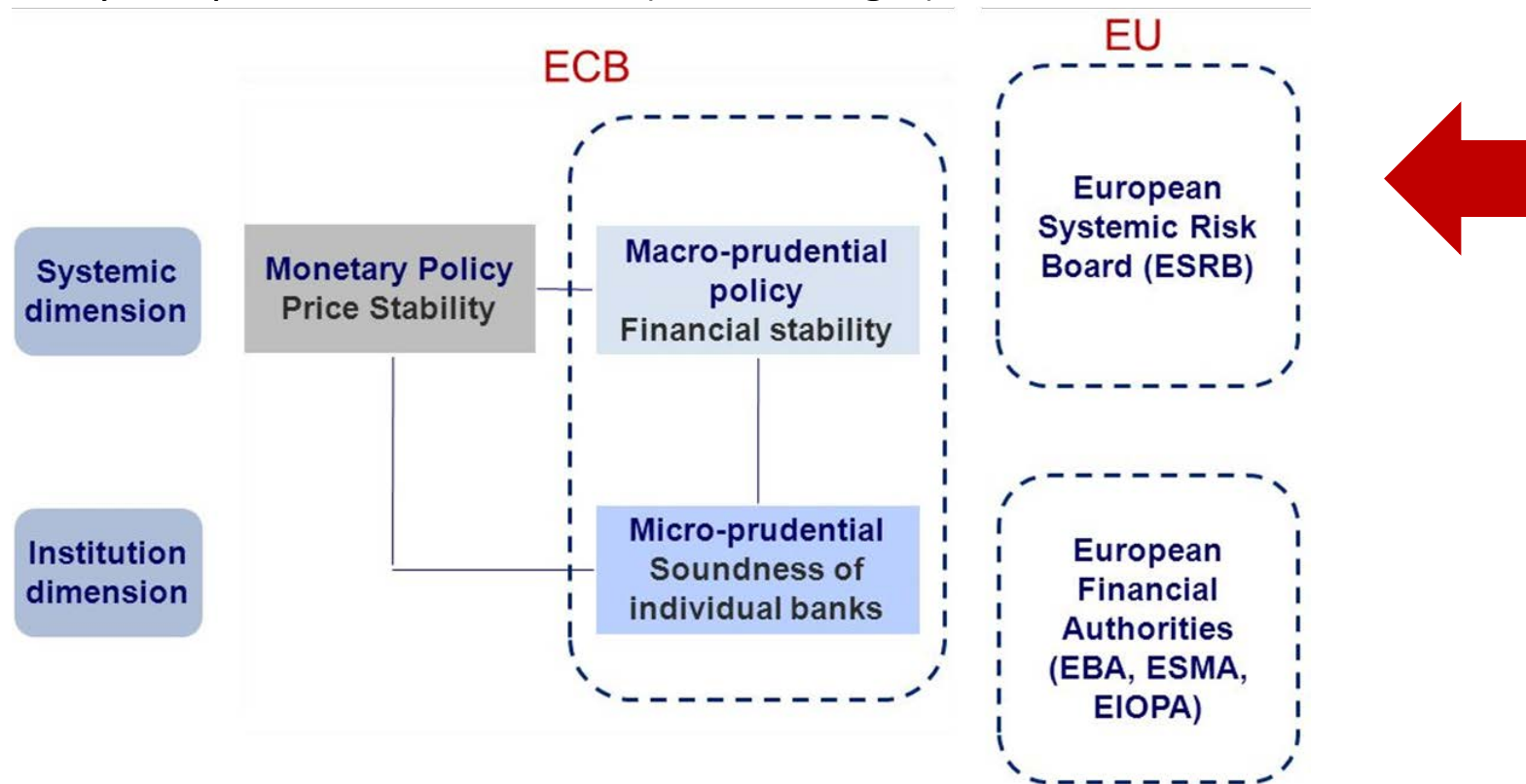
Sveriges Riksbank

(previously ECB, ESRB Secretariat)



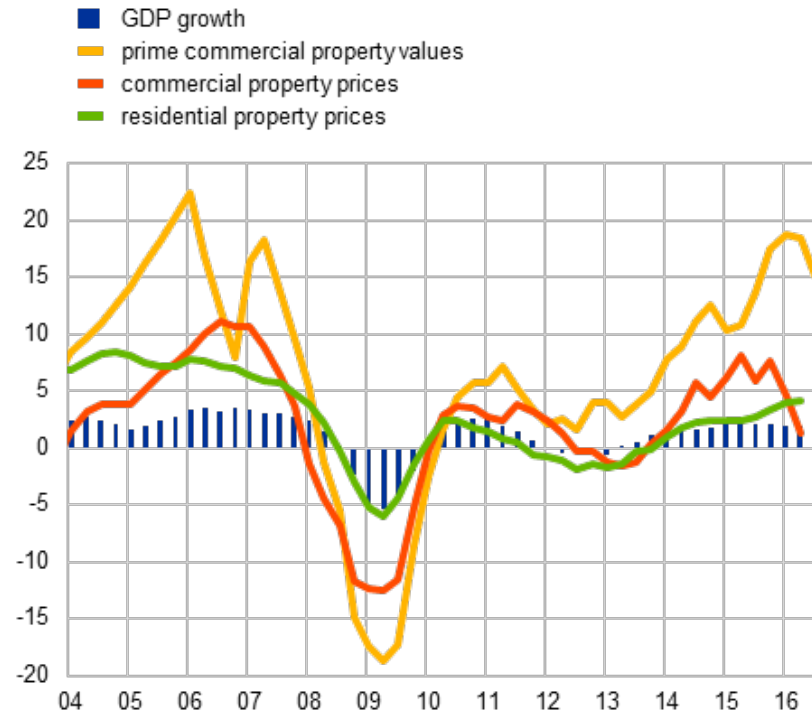
The role of the European Systemic Risk Board (ESRB)

- The ESRB was established in 2010 to oversee the financial system of the European Union and prevent and mitigate systemic risk.
- Chaired by the president of the ECB (Mario Draghi)



Real estate markets are important for financial stability

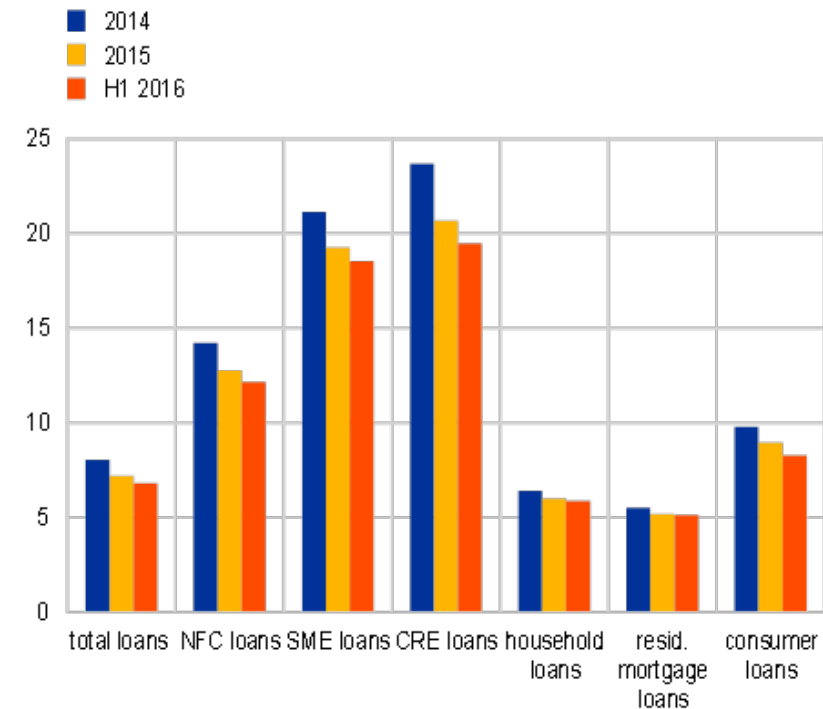
CRE and RRE cycles are positively correlated and reinforce each other (percentage change per annum)



Source: ECB, Experimental ECB estimates based on IPD, Jones Lang LaSalle and national data.

Note: For all of the EU. Residential and commercial property prices are until Q2 2016, prime commercial property until Q3 2016.

High share of non-performing loans to CRE and RRE in the euro area (percentage of total loans)



Source: ECB (2016), "Financial Stability Review", November.11

Note: Non-performing loan ratios of significant banking groups in the euro area, by sector and loan type as a percentage of total loans; weighted average across banks.

Process of the ESRB for identifying risks and vulnerabilities in residential real estate (RRE) markets in 2016

- Aim: To identify RRE-related vulnerabilities across all EU countries and identify countries for further in-depth analysis
 - From a countercyclical macroprudential perspective, not focusing on risks that have already materialised (legacy issues)
 - Joint project with the ECB
- The assessment of vulnerabilities followed a two step procedure:
 1. Common risk indicators (heat map) for the whole of the EU were used to short list countries for further analysis
 2. An in-depth analysis (peer-review) of the short-listed countries
 - Institutional and structural features (e.g. tax-regimes and role of rental market)
 - Policy measures in place or in the pipeline
 - Additional information and analysis from the short-listed country and other international organisations (European Commission, IMF, OECD)

Risk identification framework: 3 “stretches”

- Inspired by the ESRB Expert Group on RRE report (December 2015), a 3 “stretch” approach was applied to analyse vulnerabilities and for categorising policy measures:

Household stretch

- Credit growth, debt level (DTI, DSTI) etc.

Collateral stretch

- Price dynamics and overvaluation etc.

Banking stretch

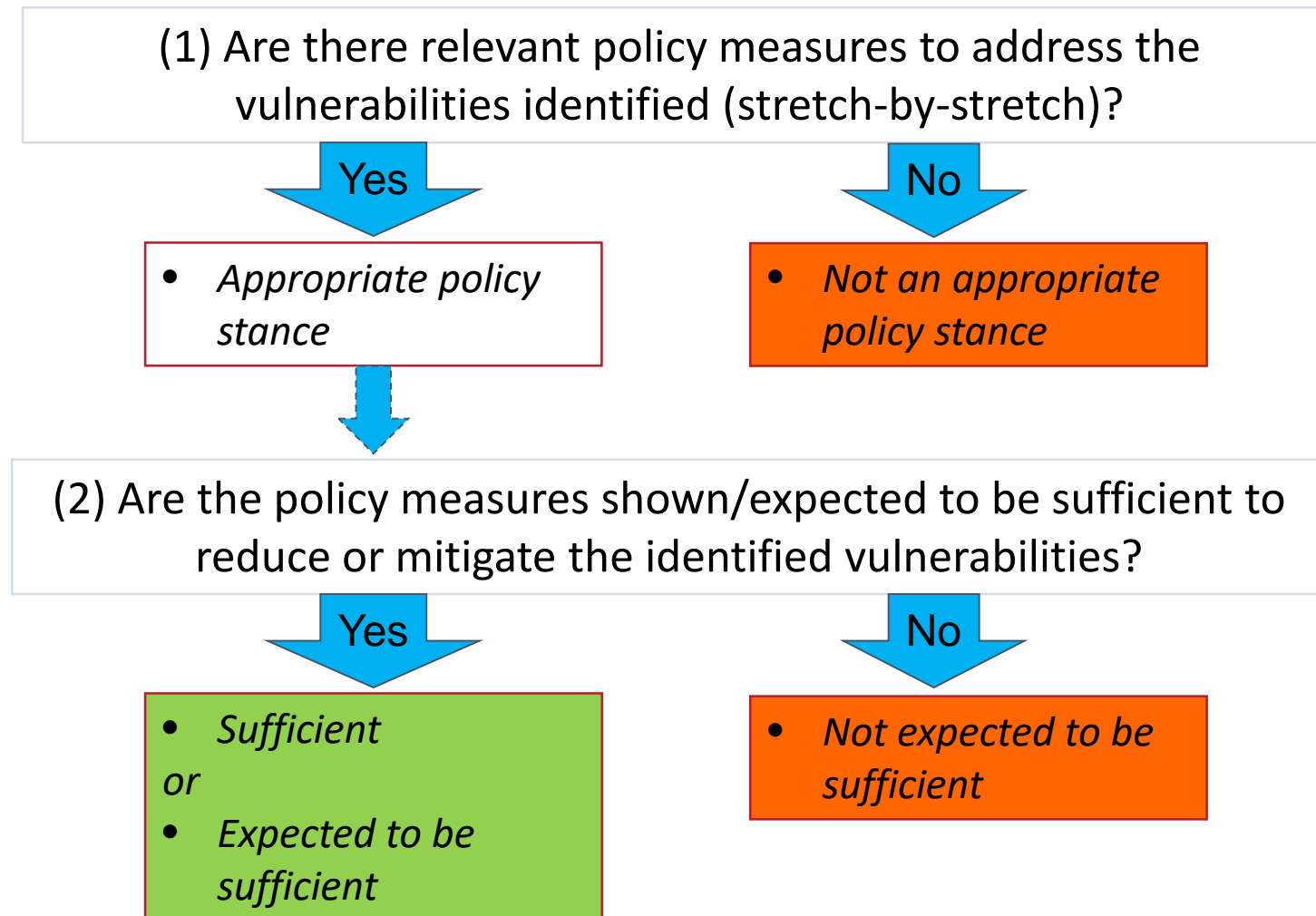
- Housing loans to capital, average risk weights etc.

Overall risk rating

- An organizing framework to guide expert judgement. Structures help ensure consistency. Allowed for identifying ‘gaps’ between vulnerabilities and policy measures

Policy analysis framework

- Focus on whether taken measures are appropriate and sufficient given the nature and level of RRE vulnerabilities, over a medium term horizon



The heat map identified vulnerabilities in 11 countries in 2016

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, %		
AT	8.1	1.1	26.0	14.0	4.9	1.1	2.1	51.2	350.8	10.2	1.4	0.3
BE	6.5	1.0	26.0	4.0	8.1	1.2	1.8	59.6	500.2	10.7	1.5	0.2
BG		0.8	-9.0	-11.0	0.6	1.0	5.6	23.8	552.6	8.1	0.0	-0.9
CY	-1.6	0.7	-16.0	-3.0	-1.8	0.9	3.2	127.3	206.0	28.8	0.9	0.3
CZ		1.0	8.0	2.0	8.7	1.1		30.3	360.4	8.2	0.9	-0.1
DE	4.7	1.1	5.0	-2.0	3.7	1.1	1.9	53.4	338.1	9.4	0.8	0.1
DK	3.5	0.9	19.0	4.0	1.2	1.0	1.4	122.8	248.5	20.4	1.5	0.6
EE	0.8	0.9	8.0	-7.0	4.6	1.0	2.3	40.6	270.4	7.6	0.4	-0.2
ES	6.3	0.7	-6.0	5.0	-3.5	0.8	1.9	66.4	275.8	12.9	0.5	-0.1
FI	-0.1	1.0	10.0	3.0	2.6	1.0	1.4	66.7	210.9	11.4	1.4	0.2
FR	0.3	0.9	14.0	4.0	3.2	1.0	1.7	56.5	394.1	10.0	1.0	0.0
GB	8.7	1.0	30.0	11.0	4.6	1.1		87.0	372.9	18.4	1.7	0.6
GR	-5.0	0.6	-25.0	-5.0	-3.6	0.8	2.7	61.8	218.3	21.8	0.7	-0.2
HR	-2.1	0.8	-11.0	-16.0	-4.8	0.8	4.4	36.9	302.7	8.8	0.0	-0.6
HU	4.3	0.9	-7.0	-15.0	-3.3	0.6	4.6	21.2	563.5	7.6	0.1	-0.9
IE	7.4	0.7	-3.0	-23.0	-4.2	0.6	3.4	57.8	237.3	19.9	0.7	-0.4
IT	-1.2	0.8		-5.0	0.9	1.0	1.6	42.1	581.5	11.8	0.3	-0.3
LT	10.5	0.7	-3.0	0.0	6.6	1.0	1.9	22.3	414.2	5.1	0.6	-0.4
LU	4.5	1.1	18.0	9.0	7.0	1.2	1.7	57.4	242.1	10.8	1.7	0.4
LV	7.4	0.7	-6.0	-19.0	-2.2	0.7	3.3	24.3	430.8	5.7	0.2	-0.8
MT	10.0	1.1	10.0	-9.0	7.9	1.2	2.3	57.8	462.8	12.8	1.6	0.1
NL	4.4	0.9	-4.0	2.0	6.2	1.1	2.8	111.4	296.7	21.5	0.9	0.3
PL	1.8	0.9	-9.0	-17.0	0.7	1.1	1.4	36.2	268.6	13.4	0.5	-0.2
PT	5.0	0.9	-9.0	-3.0	-3.5	0.8	2.0	76.3	269.5	16.4	0.6	0.0
RO	3.6	0.7	-20.0	-29.0	16.5	1.3	2.8	17.2	414.6	6.5	0.6	-0.6
SE	12.9	1.3	69.0	47.0	8.7	1.1		84.7	333.4	16.0	2.2	1.2
SI	0.8	0.8	-10.0	-8.0	3.2	1.0	2.0	27.5	367.4	5.8	0.1	-0.4
SK	1.0	0.8	-6.0	-15.0	13.8	1.3	2.3	35.8	213.9	10.0	1.0	-0.1
EAA	2.4	1.0	5.0	-1.0	2.1	1.0		59.3	356.1		0.5	0.0
EAM	4.5	0.9	-3.0	-3.0	3.2	1.0	2.0	57.4	296.7	10.8	0.8	0.0
EUA		1.0									1.0	0.4
EUM	4.4	0.9	-3.0	-3.0	3.2	1.0	2.1	54.9	335.8	10.8	0.8	-0.1
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		

 AT
 BE

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 EE

 FI

 GB

 LU

 MT
 NL

 SE

 SK

The country-specific analysis identified 8 countries with medium-term vulnerabilities – public warnings issued in November 2016

Overall risk assessment	Proposal to issue a warning	
	YES	NO
Financial stability risks identified but policy stance may not sufficiently address them	Austria, Belgium, Denmark, Finland, Luxembourg, Netherlands, Sweden	
Financial stability risks identified (no policy assessment possible given medium-term uncertainty)	United Kingdom	
Financial stability risks identified but policy stance <u>is expected</u> to sufficiently address them		Estonia, Malta, Slovakia



ESRB

European Systemic Risk Board

European System of Financial Supervision

Thank you for your attention