

Special feature A: Assessing vulnerabilities and policy stances in the residential real estate sector⁵³

In 2016 the ESRB exercised its mandate to warn of the presence of significant systemic risks with Warnings to eight Member States about medium-term vulnerabilities relating to residential real estate (RRE). This was a result of a forward-looking, EU-wide assessment which took account of developments in RRE markets up to mid-September 2016.

In the process of assessing the RRE vulnerabilities and policies across the Union a number of lessons were learned.

First, the ESRB assessed all Member States and concluded that RRE vulnerabilities prevail in eight Member States. These vulnerabilities may be a source of systemic risk to financial stability in the medium term and could potentially spill over to other Member States.

Second, the specific nature of the vulnerabilities varies across the eight Member States. Generally, they are generated by a combination of household indebtedness and price dynamics. That is, they are due to the capacity of borrowers to repay their mortgage debt – in particular to the level of indebtedness or the growth of mortgage credit – combined with the valuation or price dynamics in RRE markets.

Third, in the Member States that were not issued with a Warning, a build-up of any material RRE vulnerabilities has either not been identified, or such vulnerabilities have been identified but the current policy stance is sufficient to address them.

Fourth, across the EU Member States have introduced several measures to ensure the resilience of their banking sectors, for example through increasing bank capital requirements. Partly due to this, the ESRB has not identified direct near-term risks arising from RRE exposures in the banking systems of the countries that received Warnings, although second-round effects cannot be ruled out in the medium term.

Finally, the macroprudential toolkit is still not completely developed in all Member States, as a number of them still do not have a clear mandate with respect to borrower-based measures. Finland, Austria and Sweden are examples of Member States that are still working on ensuring a legal base or clear mandate for the use of such borrower-based measures. As a result, a number of Member States have a lack of borrower-based measures in place even though vulnerabilities prevail.

The remainder of this special feature summarises the identification of RRE vulnerabilities, the assessment of RRE policies and the response of the ESRB to the identified vulnerabilities. The special feature builds on the work published in the ESRB report on vulnerabilities in the EU's RRE sector.⁵⁴

⁵³ Prepared by Morten Niels Haastrup and Katie Rismanchi (both ESRB Secretariat).

⁵⁴ For the complete set of documentation, see ESRB (2016), Vulnerabilities in the EU residential real estate sector, November.



A.1 Vulnerability identification and assessment

Starting in late 2015, the ESRB performed a forward-looking, EU-wide assessment of vulnerabilities relating to RRE. The ESRB – in collaboration with the ECB – performed a cross-country analysis of risk indicators for all Member States in the Union. This was used to identify a set of “focus” countries. Subsequently these focus countries were subject to an in-depth analysis of vulnerabilities, taking account of country-specific factors relating to structural and institutional features and policy measures.

Building on previous work by the ESRB⁵⁵, RRE vulnerabilities were identified according to three “stretches” – collateral, household/income and banking. Overall, the developed framework considers the levels and dynamics of RRE prices, as well as vulnerabilities related to lenders and borrowers. Each of the stretches focuses on RRE vulnerabilities from a different perspective, and each stretch is analysed to see if any vulnerabilities are present or building up. The collateral stretch captures the price levels and dynamics in RRE markets; the household stretch captures the implications of household borrowers’ debt for their consumption and behaviour; and the banking stretch captures the potential impact on lenders of developments in RRE. For each of these stretches, a number of key indicators are identified based on their frequent association with (the build-up of) vulnerabilities and subsequent RRE crises.

The three stretches serves as a bridge between the vulnerability assessment and the policy assessment. For each stretch the relevant policy measures taken by the countries were identified. The appropriateness and sufficiency of these policy measures were considered, taking into account the measures’ suitability, timing and calibration. The assessment of policies is described in more detail below.

The vulnerability assessment highlighted a number of vulnerabilities. The vulnerabilities are of a medium-term nature and relate to rising indebtedness and to the ability of households to repay their mortgage debt or to the valuation or price dynamics of RRE. Regarding households, in many of the countries receiving Warnings, vulnerabilities are related to the level of indebtedness or the growth of mortgage credit. Regarding valuation, some countries have vulnerabilities related to the rate of price growth or overvaluation of RRE. The method behind the assessment of vulnerabilities is described in Box 1.

A set of key indicators suggests that vulnerabilities in the collateral and household stretches are elevated and in some cases increasing in 11 Member States. These are the so-called focus countries: Austria, Belgium, Denmark, Estonia, Finland, Luxembourg, Malta, the Netherlands, Sweden, Slovakia and the United Kingdom. These countries were subject to an in-depth analysis. This analysis identified unaddressed vulnerabilities in eight of the 11 countries and the ESRB decided to issue a Warning to these countries. The key message in the Warnings for each country can be seen in Table A. 1.

Several of the eight countries have high household indebtedness; this is particularly pronounced in Denmark and the Netherlands with household debt reaching 123% and 111% of GDP, respectively. Household debt dynamics also suggest increasing vulnerabilities in many countries. In Slovakia, Belgium, Malta and Sweden, household debt as a share of GDP rose rapidly between 2015 Q1 and 2016 Q1. For all countries with high household debt levels, debt service ratios also appear elevated, despite the low interest rate environment. Low loan spreads could indicate underpricing of risks and exuberant lending policies, but the low spreads could also be due to a competitive lending market. It is difficult to measure overvaluation and undervaluation in RRE markets, since the results

⁵⁵ Residential real estate and financial stability in the EU, ESRB, December 2015, p. 86 ff.



depend on the underlying assumptions. Nevertheless prices in Austria, Belgium, Sweden and the United Kingdom are high in comparison to income and at historic peak levels. Growth in RRE prices between 2015 Q1 and 2016 Q1 characterises all the countries mentioned above, with the exception of Finland where RRE prices have remained stable. In a number of countries, RRE price growth has been particularly strong in recent years. In addition, the growth rates in loans for house purchase are high in Slovakia (13.8%), Sweden (8.7%), Belgium (8.1%), Malta (7.9%), Luxembourg (7.0%) and the Netherlands (6.2%). Trends in lending for house purchases are strongly interlinked with RRE price dynamics, particularly in some countries.

Table A. 1
Overview of Warnings issued to countries

Member State	Key messages in Warnings
Austria	The main vulnerabilities are the robust growth , particularly recently, in RRE prices and mortgage credit and the risk of a further loosening in lending standards .
Belgium	The main vulnerabilities are the fast increase in overall household indebtedness combined with significant groups of already highly indebted households, against the background of a significant increase in RRE prices over the past few years.
Denmark	The main vulnerabilities are the robustly increasing RRE prices – in particular in the major cities – in combination with highly indebted households . In addition, if risks were to materialise, there could be potential spillover effects to other countries in the Nordic-Baltic region.
Finland	The main vulnerabilities are the high and increasing household indebtedness , especially among some groups of households. In addition, if risks were to materialise, there could be potential spillover effects to other countries in the Nordic-Baltic region.
Luxembourg	The main vulnerabilities are the combination of high RRE prices and increasing household indebtedness .
Netherlands	The main vulnerabilities are the persistently high household debt levels combined with low mortgage collateralisation . In particular, there is a large group of households, especially younger mortgagors, that have debt levels that exceed the value of their home .
Sweden	The main vulnerabilities are the rapidly growing RRE prices that appear to be overvalued , and high and increasing indebtedness , especially among some groups of households. In addition, if risks were to materialise, there could be potential spillover effects to other countries in the Nordic-Baltic region.
United Kingdom	There are risks under different housing market scenarios – either through the crystallisation of accumulated vulnerabilities , particularly related to household indebtedness and the interaction with elevated RRE prices, or through the further build-up of vulnerabilities . The appropriate policy response is likely to differ between these two scenarios. Therefore, it will be important for authorities to monitor developments closely and adjust macroprudential policy as necessary in the light of them.

Source: ESRB Warning 2016/05 to ESRB Warning 2016/12

At this time, the ESRB has not identified direct, near-term vulnerabilities to the banking systems arising from RRE exposures in the focus countries, although second-round effects are not excluded in the medium term. Past experience in many countries shows that the manifestation of RRE vulnerabilities – such as exuberant developments in lending conditions or markets – can lead to significant risks to domestic financial stability and serious negative consequences for the real economy, as well as to negative spillovers to other countries. However, some of the focus countries have some weakness in the banking stretch related to RRE, for example due to high exposures or low risk weights on RRE lending. This is partly related to the fact that Member States across the EU have taken measures to ensure the resilience of their banks. These measures include additional capital buffers, risk weight add-ons and leverage ratio requirements. An overview of the measures taken is available in Annex 2.



Structural and institutional features and developments can be important amplifiers or mitigants of RRE-related vulnerabilities; these vary considerably across Member States.

RRE markets in the EU display considerable diversity in terms of structural and institutional features. It is difficult to provide a clear view of how these features affect probabilities and potential impacts of RRE-related crises, especially since such features interact and often have both amplifying and mitigating effects that vary over the financial cycle. In some of the focus countries important drivers behind the identified vulnerabilities appear to be structural and institutional factors. Examples include regulatory supply constraints, tax advantages to owning RRE instead of renting, lack of a developed rental market, and demographic factors that lead to high demand for city living despite the limited supply of property.

Understanding the drivers of vulnerabilities is important for designing the policy response.

The ESRB's analysis suggests that the optimal policy response is not necessarily restricted to the macroprudential toolbox. In particular in some cases, where vulnerabilities are amplified by structural and institutional issues, the best policy response could be structural reforms, e.g. changes to the regulation of the rental market or the tax system.

Box 1

Methodology for identifying RRE vulnerabilities in Member States⁵⁶

The cross-country analysis started with a preliminary screening of indicators covering RRE prices, lending conditions and household balance sheets, with a view to detecting

“exuberant” developments. An overview of the indicators used in the analytical framework is given by the scoreboard in Table A. 2. These indicators focus on the household and collateral stretch. Thresholds are used to determine whether the value of an indicator might signal some degree of exuberance: in the scoreboard, the shaded cells denote indicators that are signalling exuberance, from the strongest signal of exuberance (red cells) to the least strong signal of exuberance (yellow cells). As illustrated in Table A. 2, there is wide diversity in terms of the indicators that drive the composite vulnerability measures at the country level.

In addition to the indicators for the household and collateral stretch, indicators for the banking stretch are also taken into account. Key indicators are the average risk weights on banks' RRE exposures (see Figure A. 1, left-hand side), the total exposure from banks' to RRE and the capitalisation of banks (see Figure A. 1, right-hand side). There are also indicators for mortgage exposures to GDP, the share of short-term market funding, the share of market funding and the leverage ratio. These indicators signal where weaknesses in the banking system related to direct RRE exposures might exist.

Taken together these indicators suggest that vulnerabilities in the collateral and household stretches are elevated and in some cases increasing in 11 Member States. Vulnerabilities for the banking stretch only indicate vulnerabilities in two of the 11 Member States (when the policies taken in these Member States are taken into account the banking vulnerabilities are found not to be prevailing). An overview of the vulnerabilities identified is available in Table A. 2.

The 11 Member States are then subject to an in-depth analysis of vulnerabilities. In this analysis country-specific factors relating to structural and institutional features as well as policy measures were also taken into account. Some of these factors have an amplifying or mitigating

⁵⁶ This methodology was developed by a joint ECB-ESRB Methodology Team. For further details regarding this methodology see ESRB report on vulnerabilities in the EU residential real estate sector (2016).



effect on the identified vulnerabilities. The relevant prudential policies were also taken into account; the method for the assessment of the policies adopted is described in Box 2.

Table A. 2

Vulnerabilities in RRE across the EU: results from the indicator-based horizontal analysis

Country	Indicators										Summary measures	
	Collateral stretch				Lending indicators			Household stretch			Average rating across indicators	Composite indicator
	Residential real estate price index, 12m growth, %	Residential price index relative to peak before 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 before 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	2.3	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	-1.4	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	0.8	-0.1
DE	4.7	1.1	4.7	-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
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	-8.0	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	1.8	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
UK	8.7	1.0	30.0	11.0	4.6	1.1		87.0	372.9	18.4	1.7	0.6
EAA	2.4	1.0	4.7	-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	0.7	-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		

Sources: ESRB and ECB (see Annex B in ESRB, Vulnerabilities in the EU residential real estate sector, November 2016, for specific sources and detailed definitions of the indicators).

Notes: EAA is the euro area average; EAM is the euro area median; EUA is the EU average; EUM is the EU median; T1, T2, T3 and TR are risk thresholds. See Box 1 for a description of the methodology underlying these results. In Finland, the household financial assets-to-debt indicator excludes earnings-related pension assets. Including assets held by the Finnish employment pension schemes, the ratio would be around 337%.



Figure A. 1
Market price contagion

(percentages)



Notes: Average risk weights on RRE are only for IRB banks. The calculation of the average risk weights is based on the EBA transparency exercise from 2015; Estonian authorities provided their own figures for Estonia. In the right-hand chart the CET1 capital ratio is in parentheses.

(1) Risk weights in Luxembourg are reported for all banking sectors for consistency purposes. Note that the (seven) banks active in real estate lending have higher risk weights (16%).

(2) The risk weight in Finland is <10 %.

(3) Belgium has added a 5 p.p. add-on to the risk weights, this is not included in the presented figure.

(4) The total mortgage loans series uses consolidated banking data and therefore captures cross-border lending. However, it is necessary to use this data for consistency with the denominator, CET1 capital.

Source: National authorities and Consolidated Banking Data (ECB).

A.2 Measures taken to address vulnerabilities in the 11 focus countries

The in-depth analysis of the 11 focus countries included an assessment of whether the identified vulnerabilities were appropriately and sufficiently addressed by the countries' policy stance.⁵⁷ In addition to prudential policies, non-prudential policy measures were also investigated if they were deemed to be potentially important for RRE markets.

The focus countries' implementation of measures differs along most dimensions. An overview of the measures taken in the 11 focus countries is presented in Annex 2. As the measures taken by the focus countries have in most cases only recently been introduced, the evidence for determining "best practice" is still relatively scarce. In practice, a combination of instruments, even if not applied simultaneously, is the general rule, in particular for collateral and income stretch instruments.

A range of policy tools can be used to address the risks of high indebtedness. The focus countries have taken a range of measures, some of which help in mitigating the identified vulnerabilities. The ability of the policies to mitigate the vulnerabilities has been assessed in each of the focus countries (see Box 2 for the methodology used in the assessment). The assessment identifies the measures taken for each stretch and evaluates whether they are appropriate and sufficient. The assessment takes into account the suitability, timing and calibration of the measures.

⁵⁷ For the United Kingdom, the ESRB did not assess whether policies in place are appropriate and sufficient given the uncertain impact of the vote to leave the EU on the medium-term outlook for the UK housing market.



Indeed, macroprudential tools are best used to prevent the build-up of vulnerabilities and should in this regard be forward-looking. The result of this assessment can be seen in Table A. 3.

Table A. 3
Assessment of policies adopted in each of the 11 focus countries

Assessment	
AT	Policy stance is appropriate but not expected to be sufficient for collateral and household stretches
BE	Policy stance is appropriate but not expected to be sufficient for collateral and household stretches
DK	Policy stance is appropriate but not expected to be sufficient for collateral and household stretches
EE	The policy stance is appropriate and expected to be sufficient
FI	Policy stance is not expected to be sufficient for the household stretch
LU	Policy stance is not appropriate and not sufficient for the collateral stretch, and appropriate but not expected to be sufficient for the household stretch
MT	Policy stance is appropriate and expected to be sufficient
NL	Policy stance is appropriate but not expected to be sufficient for collateral and household stretches
SE	Policy stance is appropriate but not expected to be sufficient for collateral and household stretches
SK	The policy stance is appropriate and expected to be sufficient
UK	Not directly assessed given the uncertain impact of the vote to leave the EU on the medium-term outlook for the UK housing market

Source: ESRB report on vulnerabilities in the EU residential real estate sector (2016)

Several macroprudential tools can be used to lower household indebtedness. These can be categorised into measures that are directed towards the loan contract between a lender and borrower (borrower-based measures) and measures targeted at the lender itself (lender-based measures). Measures that set limits on certain characteristics of mortgage loans (such as LTI or LTV caps) have a direct impact on the flow of credit. Several of the focus countries have introduced LTV caps in some form: Austria, Denmark, Finland, the Netherlands, Sweden and the United Kingdom. LTI/DSTI measures have not been as widely used as only the Netherlands and the United Kingdom have introduced these.⁵⁸ A number of the focus countries do not have a clear legal basis or mandate for introducing borrower-based measures, which is restraining their ability to react. The lack of a legal basis is also reflected in the assessment of the focus countries.

All focus countries have introduced additional capital requirements in order to improve the resilience of their banking sectors. Instruments targeting bank capital, such as sectoral capital requirements for RRE exposures, aim at strengthening bank rather than household balance sheets. Higher (sectoral) capital requirements may be less effective than borrower-based tools in curbing the flow of new loans as they do not set a strict limit. Although there is some empirical evidence that borrower-based tools are most effective in reining in credit growth, most studies find that both borrower-based and lender-based instruments can impact credit growth. However, as macroprudential capital requirements apply only to banks, these measures may be circumvented by non-bank lending, which is significant in countries such as the Netherlands.

Where high debt levels are caused by institutional and structural factors, policy measures can be directed at changing these factors. Such options should not be excluded even if they are not always in the toolkit of macroprudential authorities. These measures can directly affect household indebtedness, for example by increasing the cost of borrowing or the supply of housing.

⁵⁸ The Danish “7 best practices” (published in 2015) on mortgage lending recommend some restrictions on lending with respect to income, for example borrowers with high LTIs should remain solvent even if house prices decrease and the borrowers’ ability to repay should be assessed individually. These recommendations apply to borrowers in the greater Copenhagen or Aarhus area. There are also a number of exceptions, e.g. for students.



They can also lower the riskiness of a given level of indebtedness by reducing the volatility of RRE prices. For example, countries with high stocks of debt are generally characterised by a preferential tax treatment of mortgage debt, such as mortgage interest deductibility. Reducing the tax deductibility can then be an effective and efficient way of reducing the level of household debt and can affect both the stock of existing debt and the flow of new loans. Belgium, Denmark, Finland and the Netherlands have all taken steps in this area. Another way to reduce debt levels is by encouraging borrowers to amortise more, either through binding requirements or incentive measures. Ensuring an adequate supply of housing and a well-functioning rental market may also reduce indebtedness and RRE price volatility.

Box 2

ESRB methodology for assessing the policy stance of Member States⁵⁹

The ESRB developed a methodology for assessing whether policy measures in a Member State were mitigating the identified vulnerabilities in the collateral, household or banking stretch. This box explains the developed methodology. Before this methodology was developed, there were no established approaches to assessing RRE policies in the literature or among practitioners, partly because there is still limited experience in using RRE-focused (macroprudential) policies in the EU. Although a number of countries have been applying measures in recent years there has been a large diversity of measures used across countries, including the type of instrument, calibration, scope of application, etc. Furthermore, it is difficult to assess the adequacy of recently enacted or planned policy measures as – depending on the policy measure – it can take time to influence RRE developments. In addition, national policy strategies might comprise several measures which may interact, which makes it difficult to isolate the effect of an individual measure.

A largely qualitative, expert judgement-based approach was taken, where two main criteria were used to assess the policy stance. The criteria were:

- **Appropriateness:** whether or not policies are conceptually suitable given the nature and timing of the vulnerabilities. Appropriate measures are those which suitably address the vulnerabilities in that country, e.g. if there are vulnerabilities related to a country having a high debt-to-income ratio, an appropriate measure could be a DTI or LTI limit.
- **Sufficiency:** whether or not policies are expected to or could be shown to significantly mitigate, or reduce, the build-up of vulnerabilities over an appropriate time horizon with a limited unintended impact on the general economy. Factors to be considered when assessing policy sufficiency relate to the calibration of the measure, its timeliness and its scope of application. If there was evidence that the measure was having the intended effects and was mitigating or reducing the identified vulnerabilities, and/or if it was causing any unintended negative effects, this has been taken into account.

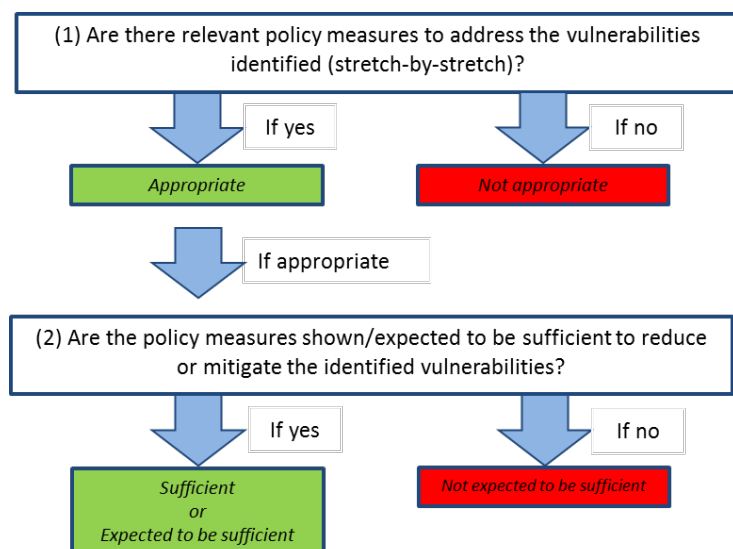
The policy stances of the focus countries were assessed individually for each of the three stretches and then an overall assessment was made. The grading procedure is outlined in Figure A. 2.

⁵⁹ This methodology was developed by a joint ECB-ESRB Methodology Team. For further details regarding this methodology see ESRB report on vulnerabilities in the EU residential real estate sector (2016).



Figure A. 2

Illustration of process for assessing appropriateness and sufficiency of the policy stance



Source: ESRB

This leads to four possible assessment grades at the level of each stretch (household, collateral, and banking):

1. **appropriate and sufficient**, where policies are conceptually suitable given the nature and timing of risks and where the level and build-up of risks can be shown to be fully addressed by the policy packages;
2. **appropriate and expected to be sufficient**, where policies are conceptually suitable given the nature and timing of risks and where the level and build-up of risks cannot be shown, but are expected, to be addressed by the policy packages;
3. **appropriate but not expected to be sufficient**, where policies are conceptually suitable given the nature and timing of risks, but where the level and build-up of risks are not expected to be addressed by the policy packages;
4. **not appropriate**, for cases where no conceptually suitable measures, given the nature and timing of risks, have been taken.

When an assessment had been arrived at for each of the three stretches, an overall assessment of the country's policy strategy was made. If the policy stance was assessed to be not appropriate for any individual stretch, the overall policy stance was assessed as not appropriate. If the policy stance was assessed to be appropriate for all three stretches, the sufficiency of the overall policy stance was determined by the lowest sufficiency grading of the individual stretches. In cases where the overall policy stance was assessed as either not appropriate, not sufficient or not expected to be sufficient the ESRB decided to issue a Warning to that country.

A.3 Response of the ESRB to the identified vulnerabilities

The ESRB has a legal mandate to issue warnings or recommendations when significant systemic risks are identified. A Warning is issued in order to raise awareness or draw attention to a systemic risk. A Recommendation is more far-reaching as it also specifies recommended remedial action. The ESRB decides, on a case-by-case basis, whether a Warning or a Recommendation should be made public, bearing in mind that disclosure can help to foster compliance. It then monitors if, and to what extent, the systemic risk is addressed.



Following the assessment of medium-term RRE vulnerabilities, the ESRB decided that it was necessary from a macroprudential perspective to issue Warnings to the eight Member States. The specific vulnerabilities vary in the individual Member States; they are summarised in Table A. 1. At the time of its assessment, the ESRB did not identify direct near-term risks arising from RRE exposures in the banking systems of the warned countries, although second-round effects were not excluded in the medium term.

The ESRB decided not to issue a Warning to three of the 11 focus countries. Following the in-depth country-specific analysis of Malta, it was concluded that there are no significant sources of medium-term risks to financial stability from RRE in that Member State. While vulnerabilities were identified for Estonia and Slovakia, these are expected to be mitigated by policy measures or institutional factors in the medium term and so warnings were not issued to those Member States. For the United Kingdom, the ESRB did not assess whether policies in place are appropriate and sufficient given the uncertain impact of the vote to leave the EU on the medium-term outlook for the UK housing market.

The eight Warnings were addressed to the relevant ministers in each Member State; the head of the national macroprudential authority also received a copy of the Warning. The addressees were chosen with consideration that the potential policy response may extend beyond the mandate of macroprudential authorities. It is for the individual Member States to decide how to respond to the Warning, and what actions to take in response to the identified vulnerabilities. Addressees had the opportunity to respond to the Warning – the addressees from seven of the Member States chose to provide a public response, which was made available on the ESRB website.

Going forward, the ESRB will continue exercising its mandate of macroprudential oversight of the financial system in the EU, including identifying financial stability vulnerabilities related to real estate. The ESRB will continue to issue warnings if a significant systemic risk to financial stability is identified and, where appropriate, issue recommendations for remedial action. The ESRB will monitor the development in the RRE markets in the warned countries as well as in the entire Union. Furthermore, the ESRB will continue to work on improving the assessment methodologies of vulnerabilities and policies in the real estate sector.

