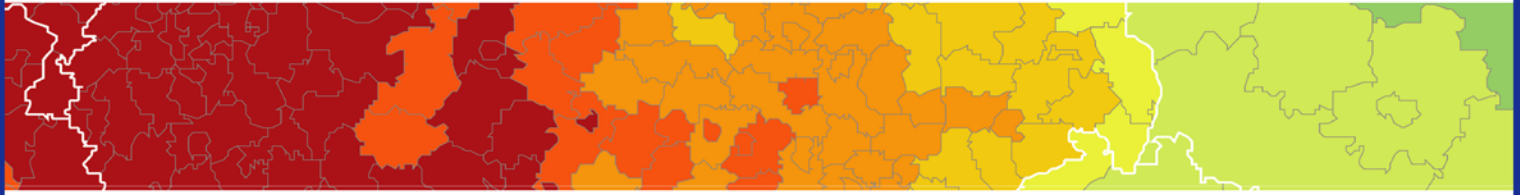


Inspire policy making by territorial evidence



Possible European Territorial Futures

Applied Research

Final Report
Volume F – Property Market Collapse

Version 21/02/2018

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Abbreviations

EC	European Commission
ESPON	European Territorial Observatory Network
EU	European Union
LTV	Loan-to-Value
NUTS	Nomenclature of Territorial Units for Statistics
SRA	Social renting agencies
TIA	Territorial Impact Assessment

1 Introduction

This report provides background information and nuanced considerations concerning the territorial foresight for a property market collapse in Europe in 2030 presented in Volume A of the Final report.

A collapse of European property markets can be understood in many ways depending on different structures of the property market, or due to different habitudes and customs towards property. For the purpose of this project, only the residential property market or housing market is considered. Chapter 2 summarises what the European territory would look like if it European housing markets would collapse and includes reflections on how much this would affect various territorial scenarios.

Chapters 3-5 address the territorial dimension of three specific components of a property market collapse, i.e. (chapter 3) housing market structures, (chapter 4) importance of the housing sector, and (chapter 5) coping capacity. Building on literature studies, two online surveys, two focus groups and one webinar, key factors in each of the three components have been identified to illustrate the territorial dimension.

Finally, chapter 6 sums up the results of the report and provides pointers for policy development.

2 The situation in which we wake up in after a collapse

A collapse of Europe's housing markets has been defined as a significant reduction or halt in transactions. Due to a multitude in European housing markets and due to different territorial characteristics, territories respond differently to collapsing housing markets, and finding different ways to restore housing market transactions. The following presents the main characteristics and assumptions of the future we wake up in.

In the future we wake up in, housing demand and supply are completely out of balance.

This imbalance may have different causes. Most likely the housing market has been distorted by external factors for example a breakdown of the financial sector, significant increase or decrease in migration patterns, or the fact that people won't accept lower prices for their house. This imbalance between housing supply and demand causes uncertainties and may result in a significant decline or even a halt in transactions. A halt to transactions implies that demand and supply need to be more closely matched.

This is an extreme future in which all European housing markets are affected. Under normal circumstances European housing markets which are mostly functioning on local geographical levels are at different stages of boom-bust cycles. However, for the purpose of this study it is assumed that all European housing markets are affected by a collapse.

A well-functioning property market has boom-bust cycles due to differences in demand and supply. Finding an equilibrium is challenging due to general characteristics of the property market. Firstly, it takes time to build houses, so supply adjusts more slowly than demand. Moreover, due to this delay supply of housing reflects past market conditions and so can overshoot past changes in demand. Secondly, housing is fixed in term of its location, so existing housing stock cannot be moved to areas with high demand. In addition, property market participants do not have full access to data and knowledge to determine the price of property. So, property markets are characterised by constant searching for the optimal price, the equilibrium between demand and supply. In a 'healthy' property market price fluctuations and thus transactions are continuous, but stay within limited boundaries.

A 'boom' is characterised by higher property prices and more transactions. As property supply takes time, extra demand will not instantly result in more houses, so prices go up while demand exceeds supply. Suppliers must first estimate whether this extra demand is durable before entering the market and providing additional housing. Furthermore, property development is a choice, meaning that development will only takes place if the price is above a certain hurdle - varying in location and time. This involves speculation of future property market developments and the personal situation of the developer.

The long-term nature of property market cycles as well as their complex interconnections with economic policy, the financial sector and their non-transparent character means that people can start to believe that property prices only increase and the resultant speculation can give rise to a 'property bubble'. A bubble involves the (real) price of an asset increasing

dramatically over several months or years. Another important feature of a property bubble is that price rises exceed valuations, where valuations take into account market and broader economic fundamentals beyond prices of recently sold comparable properties and cannot be sustained, leading to a crash, or 'bust'.

A European housing market collapse effects the housing market as such as well as territories. A significant reduction or halt to transaction on European housing market may affect price development on the market and the various players active on the market. Furthermore, territorial development may change. The main territorial consequences defined for this study include (1) social effects based on regional housing market structures (2) economic effects, based on the relative importance of housing in the regional economy and (3) the coping capacity of the region considering the magnitude and length of declining demand after a property market collapse. The focus on these territorial consequences is the result of different participatory discussion organised in the frame of this study (see Volume C of the Final report). Detailed assumptions per component are shown in the box below.

Detailed assumptions to territorialise the consequences of a property market collapse

- **Regional housing market characteristics – illustrating the impact on society**
 - The distribution of population and tenure status in European cities and regions remains the same as today
 - The dominant ways to finance housing in a region, i.e. with or without a mortgage remains as today
 - Housing markets are organised in accordance with the principles of a social market economy
 - Europe has a single market with freedom of movement for capital, goods, people and businesses.
- **Importance of the housing sector – illustrating the impact on the economy**
 - Supply of housing follows demand, with a delay
 - Most market transactions relate to existing housing rather than new construction
 - New construction is mainly due to private players and real estate developer demand
 - Cities and regions have sufficient available land inside and/or on the edges of settlements for new construction.
- **Coping capacity of regions – illustrating the duration of the crisis**
 - Europe has a market economy in which supply and demand determine the timing for transactions to occur on housing markets
 - Government interventions will be introduced to stimulate property market transactions.

In order to assess the territorial consequences of a housing market collapse in Europe in 2030, the main storyline assumes a continuation of the main socio-economic trends and housing market structures of today. This implies for example similar population and income structures as well as similar tenure structures and ways of financing housing than today. This gives a baseline to assess variations in territorial structures after a property market collapse. Throughout the report this main storyline is contested by discussing two alternative futures. These alternative futures assume a break in current socio-economic trends and current

housing market structures. The main characteristics of the alternative futures are presented in the text box below.

Alternative futures

The first scenario assumes **high resilience** to a housing market price collapse. Such resilience results from the interplay of economic, social and institutional factors. On the economic side, a limited construction sector may moderate the negative impacts of the housing market collapse, which would probably trigger reduced construction, including spill-over to maintenance, repair, furnishing, as well as agency, legal and home loan sectors, with a negative impact on overall employment. Social factors, such as many young people or families with people (singles or single parents) may favour internal and international mobility, in the long-term supporting relocation. Institutional factors address the effectiveness of a broad range of governmental intervention, including fiscal measures reducing the burden of mortgages, usage and rental regulations leading to a more efficient use of land, etc. These can improve the territorial capability to recover from a residential property market collapse, both on the demand side (from households) and supply side (new dwellings).

The second scenario assumes a **low resilience** to the housing market collapse. Negative territorial impacts are exacerbated by many construction employees, a social composition less responsive to relocation and mobility, such as an ageing population, as well as by weak and inefficient policies, unable to relieve households from financial burdens or revitalise markets after a major reduction in transactions.

2.1 Main territorial effects of a housing market collapse

The halt of transactions increases the pressure on suppliers either to accept lower prices, or to wait patiently until markets recover. This affects homeowners as well as tenants, financial players who have financed the development of houses, business in or closely related to the housing market, and governments. The following summarises the main territorial effects by component. Chapters 3, 4 and 5 discuss territorial impacts per component in detail.

Housing market characteristics. For most people housing is their largest single item of monthly expenditure, or the most expensive purchase they make in their lives. The way people live largely determines their vulnerability in the event of a housing market collapse. The choice to buy or rent accommodation may affect an individual's degree of mobility and the share of monthly household disposable income used to meet the costs of accommodation may indicate the risk of social exclusion or even poverty. The collapse may result in homeowners being pushed into negative equity, meaning that the value of their home falls below the outstanding debt. Negative equity affects homeowners' mobility as they are, for example, unable to sell, or repay their home loan and thus move. Subsequently, negative equity increases the risk of foreclosure by the lender and thus increases the risk of social exclusion or poverty.

- **lock-in effect.** People that need to move may be unable to sell their current property in a short timeframe or at a price they previously could, or may be unable use the proceeds to cover the cost of a new property. Homeowners that find it harder to sell their home and become less mobile. In particular regions with high homeownership rates and with relatively high loan to value ratios are most exposed to possible lock-in effects. In addition, areas with less attractive housing markets, for example due to large distances to regional centres are affected by this territorial consequence of a housing market collapse. The combination of high ownership and rural isolation can be found in the north of Europe as well as in Romanian, Bulgarian, Latvian and Spanish rural regions. Here people are at most risk of being locked-in during a housing market collapse.
- **social exclusion and poverty.** In regions where people have high housing costs compared to their income (overburden rate) the risk of social exclusion is higher. In particular population groups with less stable household incomes, such as young people, single parents or in regions where the population has large outstanding debts are vulnerable to poverty and social exclusion. Major urban centres in Bulgaria and Romania as well as Danish and Dutch urban regions and some British and German regions may see an increase of people living at risk of poverty.

Importance of the housing market in the regional economy. The impact to a region's economic performance is higher in regions where real estate and construction sectors contribute significantly to the regional economy. Overrepresentation of these sectors may, following a housing market collapse, increase unemployment and decrease consumption in a region. Subsequently, the housing market collapse may affect other economic sectors as well leading to a long-term crisis.

- **Unemployment.** Unemployment increases in areas where the housing market is important for the regional economy and the labour market. Regions with large real estate and construction sectors have highest chances to increased unemployed in the event of a housing market collapse. This territorial consequence severely impacts tourism areas such as the Algarve in Portugal, southern France, including Corsica, but also rural areas in Romania, Italy and Lithuania and urban fringes in former eastern Germany and in the UK.
- **Spill-over to the rest of the economy.** Moving to a new home is associated with increased consumption. With fewer or no transactions, this type consumption falls. In post-speculative and dynamic markets the decision to move home may be postponed and consumption drops leading to less economic growth. The territorial impact would be most negative in Lithuania and rural regions in Latvia, Bulgaria and Portugal.

Coping capacity of cities and regions. Coping capacities of cities and regions determine the magnitude and length of the decline in transactions and related demand. In dynamic property markets institutions are organised to support and maintain a high level of

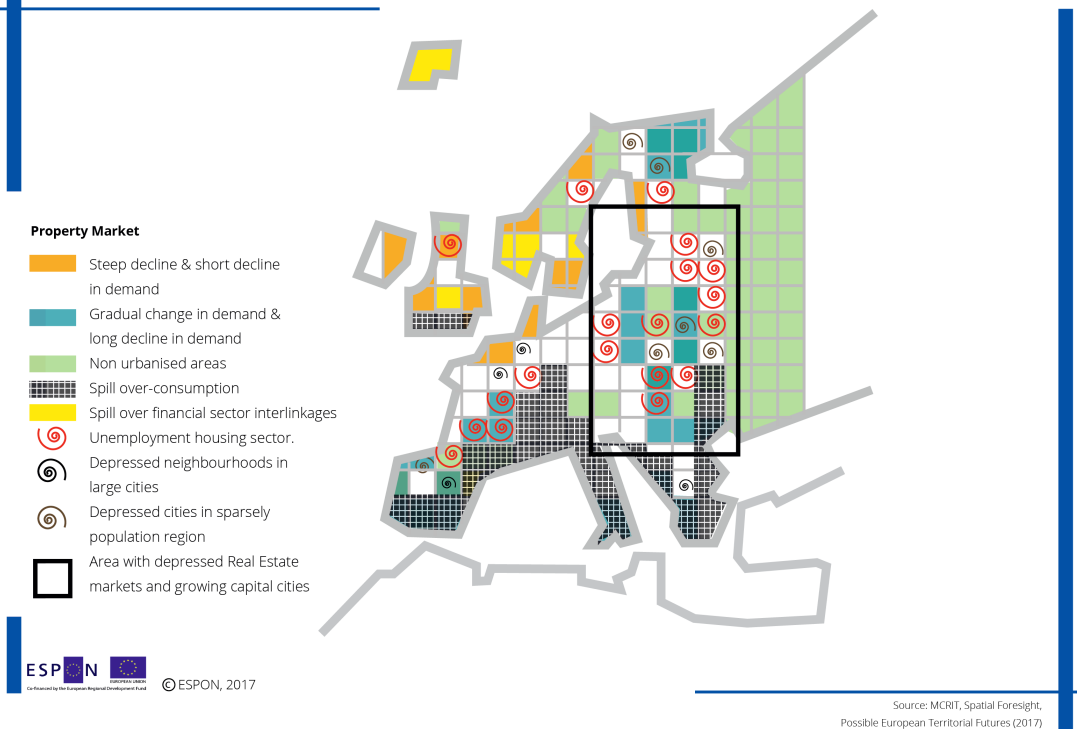
transactions, for example due to the presence of favourable mortgage options. In most cases people follow a path, buying a smaller home and renovating it, then buying bigger and more expensive homes as they get older and progress in their professional career they buy. A property market collapse blocks these movements on the housing ladder, which may impact the whole housing market. Governments play an important role in the coping capacity of regions. They may introduce measures to counterbalance the negative effects of a property market collapse.

- **Steep decrease in demand.** With no transactions, dynamic markets may see a steeper decline in demand than static markets. In regions where links between the property market and financial markets are close this may result in decreased demand as banks assume risks are higher and therefore restrict new loans. Regions with relatively long supply chains are sensitive to decreased demand. Newly constructed housing may reflect outdated demand at the higher end of the market, while the need for less expensive housing for starters on the ladder remains. This oversupply may decrease housing prices and delay people moving. Urban regions in Nordic countries, Baltic countries, the UK, Ireland, Benelux and Romania have the most dynamic property markets. They may thus experience a relative steeper decline in housing demand than in other European regions.
- **Long decline in demand.** Some regions in Europe may lack ways to quickly stimulate property market transactions. Regions with a declining population may have structural problems to stimulate demand and thus face long-term decline. Regions with lower quality government, relatively high unemployment and many homeowners are more affected. Rural regions in Bulgaria, Romania, Greece and the Baltic states are among the areas most at risk of a long-term decline in housing demand in Europe, with all the related risks as described under the other components.

Synthesising the effects of a housing market collapse and combining the territorial impacts per component illustrates patterns in relation to territorial cohesion objectives and the territorial situation today. Map 2.1 illustrates the territorial impact of a property market collapse of different degrees. Mediterranean regions are mostly affected by the risk of spill-over effects due to the secondary effect of lower consumption resulting in these regions experiencing higher unemployment. Regions and cities in eastern Europe experience the greatest increases in unemployment and social exclusion and are at risk of long term-decline of housing demand. Cities in northwest Europe are most at risk of steep, but short decline in housing demand.

Map 2.1 Territorial impact after the property market collapse

Property Market: Integrated Place-based & Network-based Territorial Foresight



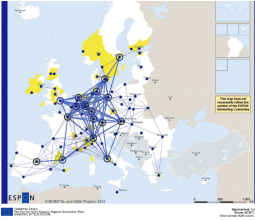
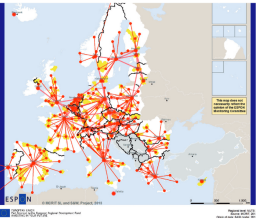
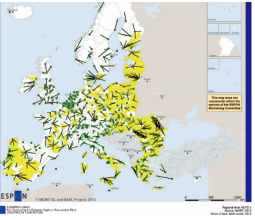
2.2 Towards territorial cohesion?

To assess to what extent territorial consequences of a housing market collapse implies changes to expected trends towards achieving territorial cohesion (see analysis in volume B), Table 2.1 highlights how the territorial consequences of a housing market collapse affects the three policy scenarios developed by the ESPON ET2050 project. Arrows pointing up indicate that the territorial consequence of a housing market collapse are inline with the ET2050 scenario, arrows pointing down shows that the territorial foresight does not inline with this scenario.

ET2050 describes three different scenarios for territorial cohesion in the year 2050. The ET2050 scenarios for future territorial cohesion are based on polycentricism at three geographic scales (global, national/macro-regional and regional), promoting different types of regions per geographic scale resulting in three distinct scenarios for territorial cohesion in Europe in 2050: Focus on global metropolitan areas; focus on secondary cities; and focus on smaller cities and less developing regions.

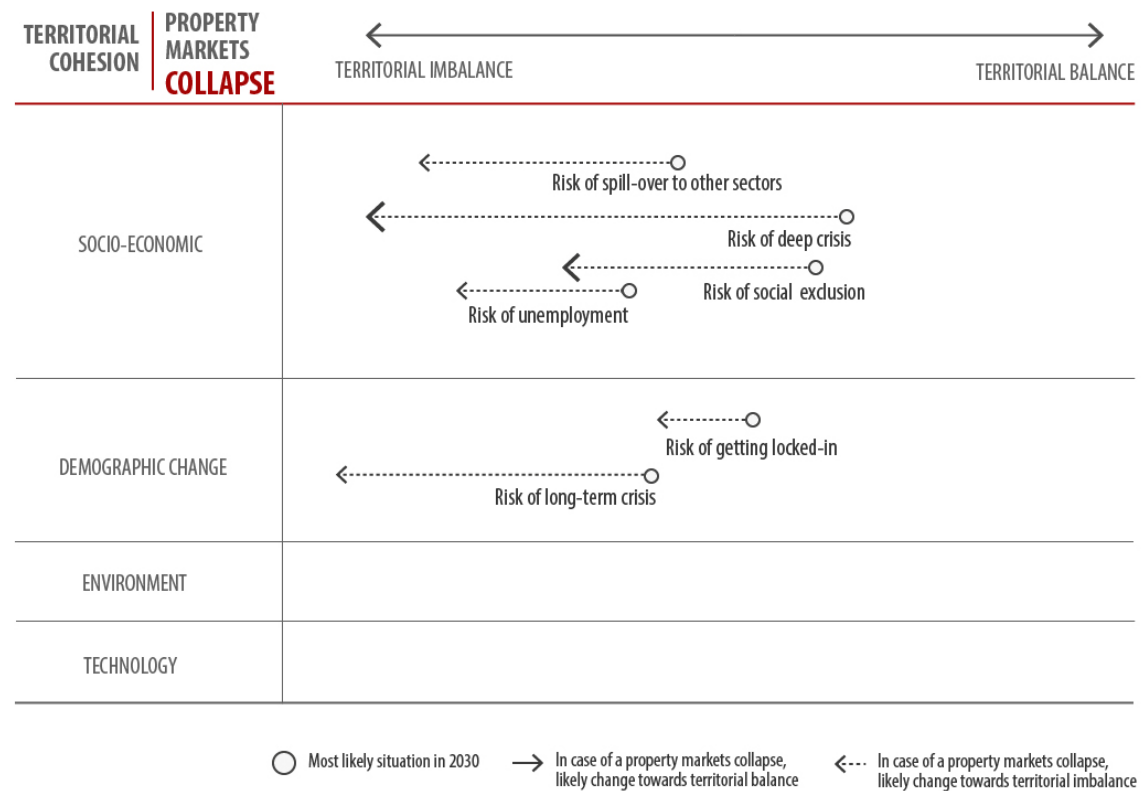
Figure 2.1 presents an attempt to summarise in what way a property market collapse might change the expected territorial outlook presented in Volume B of the Final Report. The figure illustrates the results with regard to the single factors used in the analysis and main topics for describing the current territorial situation of Europe and future outlook presented. The arrows indicate whether a property market collapse is expected to give a push towards more territorial imbalance or balance at European level.

Table 2.1 Territorial impact of the property market collapse assessed against ET2050scenarios

	Focus on large metropolises	Focus on secondary city networks	Focus small cities and less developed regions
			
Housing market structures			
Risk of getting locked-in	 Homeowners in cities are least likely to get locked-in.	 Homeowners in cities are most likely to get locked-in.	 Homeowners in inner-peripheries less able to rent out their property, hampering mobility and socio-economic development.
Risk of social exclusion	 Poverty and social exclusion will be concentrated in cities.	 Poverty and social exclusion will be concentrated in cities.	 Small cities and rural areas are least sensitive to poverty and social exclusion.
Importance of the housing market			
Risk of unemployment	 Unemployment will be highest near urban centres.	 Unemployment will be highest near urban centres.	 Small towns and rural areas are among the least affected.
Risk of spill-over to other sectors	 Tourism areas and densely populated regions are most negatively affected.	 Tourism areas and densely populated regions are most negatively affected.	 Rural and less densely populated areas e.g. in the northern periphery or central France will be least affected.
Coping capacity			
Risk of deep crisis	 Urban regions in Nordic countries, Baltic States, British Isles and Benelux are most impacted	 Urban regions in Nordic countries, Baltic States, British Isles and Benelux are most impacted	 Only secondary effects for rural areas
Risk of long-term crisis	 Urban regions especially regions in northwest Europe are least impacted	 Coastal regions in Spain, Portugal and Greece as well as larger towns in Germany are exposed but not so sensitive.	 Rural in eastern and southern Europe are most impacted

-  Strong developments in line with this scenario
 Development in line with this scenario
 Developments counter acting this scenario
 Strong development counter acting this scenario

Figure 2.1 Housing market collapse impacting on tomorrow's territorial patterns



Source: ESPON Futures project team

3 Component – Housing market structures

This section provides a rationale for this component to assess the territorial consequences of the foresight topic, identifies relevant indicators to assess the territorial consequences and discusses territorial exposures and sensitivities for the component and selected indicators.

3.1 Why this component is important

For many homeowners property is the most expensive purchase in their life and for tenants it accounts for a large part of their monthly expenditure (EUROSTAT, 2015). The way people live and how they fund their accommodation will have social impacts after a housing market collapse.

Homeowners are generally less mobile than tenants. In fact, high homeownership rates are associated with reduced labour mobility (Ceritti et al., 2015). This decreased mobility may lead to a 'lock-in' effect when homeowners do not have the possibility or interest to move home, even if necessary to maintain employment or to access services of general interest.

Households have different costs of living including for regular maintenance, utilities (water, gas, electricity, heating) mortgage payments, rent, insurance, etc. Households which spend more than 40% of their income on accommodation, are considered 'overburdened' according to EUROSTAT (Pittini et al., 2015). In the event of a housing market collapse, certain population groups are more at risk than others of finding themselves in a position where they are overburdened by housing costs. Households that experience some form of significant change in circumstances will be particular at risk. A significant change in the household circumstances may be divorce, child birth, unemployment etc. The overburden rate is generally higher for young people who are new on the housing market ladder and for single person / parent households (Pittini et al., 2015).

The abovementioned effects may be accelerated and/or magnified in cases where the property is debt financed, e.g. by a mortgage particularly in cases where Loan to Value (LTV) ratios are high. The collapse of housing markets may result in the debt being higher than the value of the house. This effect is called negative equity. Depending on the set-up of the mortgage, banks may forbid homeowners to sell their house in case of negative equity or they may require homeowners to repay as much of their loan as necessary to resource the loan an LTV ratio that is acceptable to the bank at short notice. The latter may be particularly difficult in cases where the household's circumstances have changed between the start of the loan and the start of the collapse.

3.2 Territories exposed and their sensitivities

General housing market characteristics in a region may determine some immediate social effects of a housing market collapse. The following section synthesises main indicators to assess the areas that would be exposed to and sensitive to a housing market collapse.

- **A region's dominant tenure structure can illustrate increased exposure to the risk of getting locked-in.** In particular, homeowners are at risk of not being able to sell their house and are thus at risk of not being able to move, despite the need or urge to do so. Homeowners in regions with fewer or least opportunities to sell or temporarily rent out their home are most sensitive to getting locked-in.
 - Regions in which the distance to regional (urban) centres is relatively large, in travel time by car, are less attractive housing markets. Homeowners in these regions are thus in particular sensitive to getting locked-in.
 - Student towns offer the possibility to homeowners to temporarily let out their homes to students. Homeowners in regions without university are more sensitive to getting locked-in.
 - Regions that are relatively popular tourist destinations exhibit more overnight stays. Homeowners in these areas have thus more chances to temporarily rent their home to tourists. Alternatively, homeowners in regions with low numbers of overnight stays are thus more sensitive to getting locked-in.
- **Regions with a large share of the population who have relatively high housing costs compared with their disposable income are most at risk of social exclusion.**
 - Regions with a relatively large share of one-person or single parent households are particularly sensitive.
 - Regions with a relatively young population are in particular sensitive. Generally, this part of the population has a lower than average income, so housing tends to make of a higher share of their household expenditure.
 - Regions with relatively high loan to value ratios are particularly sensitive, as these regions are at a greater risk of finding themselves in negative equity if residential prices fall over moderately.

3.3 Risk of lock-in effect

The risk of lock-in effect in relation to the property market collapse is understood as reduced mobility for households to move to another location. A halt in transactions on the housing market implies increased uncertainties for homeowners concerning the price of their property. In such an event, people may wait to move to a new house, or accept a lower price. In some extreme cases, homeowners cannot realistically sell their home or temporarily rent it out. These homeowners may risk getting 'locked-in' even though their property does not fit their needs anymore.

3.3.1 Exposure

Homeowners that may want or need to move home when the family composition or income changes are particularly exposed to lock-in effects in case of a housing market collapse. In many cases homeowners need to be confident of selling their home in a reasonable

timeframe to be able to afford a new property. Sometimes homeowners have payment obligations which limit their opportunities of easily moving to another home.

Regions in Eastern Europe as well as Norway and Iceland have the highest homeownership rates. Figure 3.1 illustrates homeownership rates, the share of homeowners with outstanding loans or mortgages and the size of the population where housing costs represent more than 40% of their household income. As shown on the x-axis of Figure 3.1, eastern European countries as well as some Nordic countries have the highest share of homeownership. The population in these countries is thus generally more exposed to get locked-in after a property market collapse.

Mediterranean countries such as Spain, Portugal, Italy and Greece have a higher share of homeowners than the European average, followed by Finland, Belgium, Sweden and Ireland.

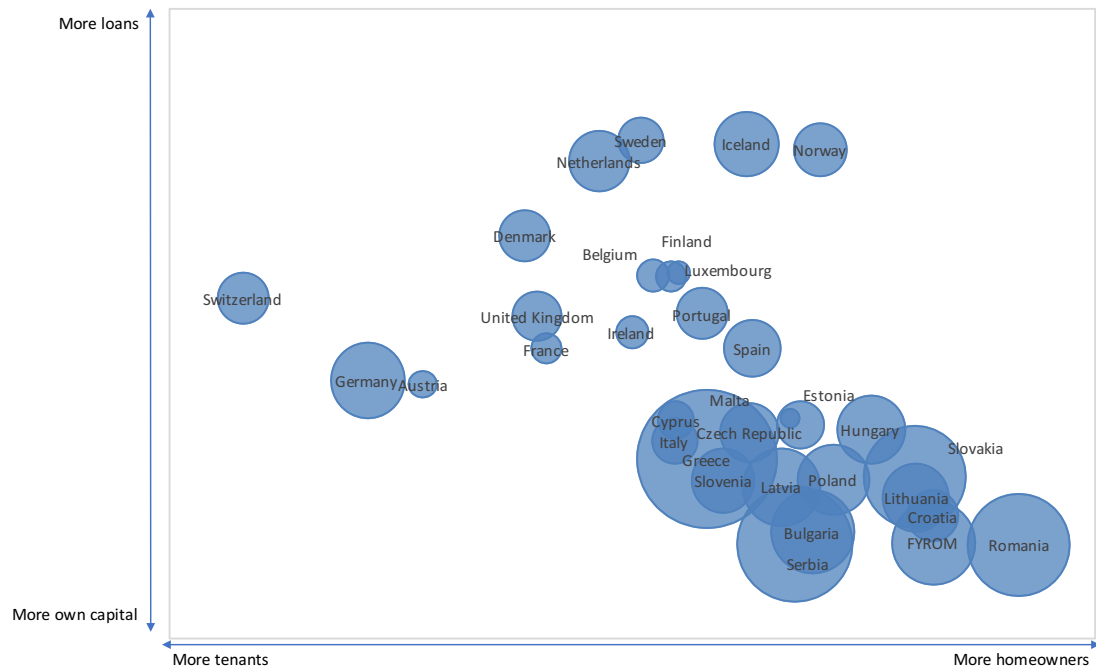
Homeowners in central European countries are least exposed to a lock-in effect. Switzerland, Germany, Austria, Denmark, the UK and France have the most balanced tenure structure which eases property mobility.

Homeowners with an outstanding loan or mortgage may be particularly exposed to lock-in effects after a property market collapse. A collapse of the property market may lead to negative equity, when the value of the property is less than the value of the mortgage. In cases where the value of the property acts as guarantee for the lender, homeowners may not have the right to sell their property, the lender may not accept the sale if they have a right on the property as security for the loan.

The y-axis in Figure 3.1 illustrates the share of homeowners with an outstanding loan or mortgage. Homeowners in Nordic countries as well as in the Netherlands on average have particularly high housing costs including loans relative to their disposable income. This makes them in general more vulnerable to getting locked-in in the event of a collapse. It remains dependent on the details of the mortgage whether homeowners with mortgages in reality are at risk, but data on prevailing types of mortgage is limited at a European level.

The figure also shows the share of homeownership with a housing overburden rate of more than 40%, making homeowners vulnerable to being forced to move if they cannot meet their payment obligations. This is in particularly relevant for those at risk of social exclusion, as discussed in section 3.4.

Figure 3.1 Share of population by tenure status and the share of population with housing costs above 40%



Source: own elaboration based on http://ec.europa.eu/eurostat/statistics-explained/index.php/Housing_statistics

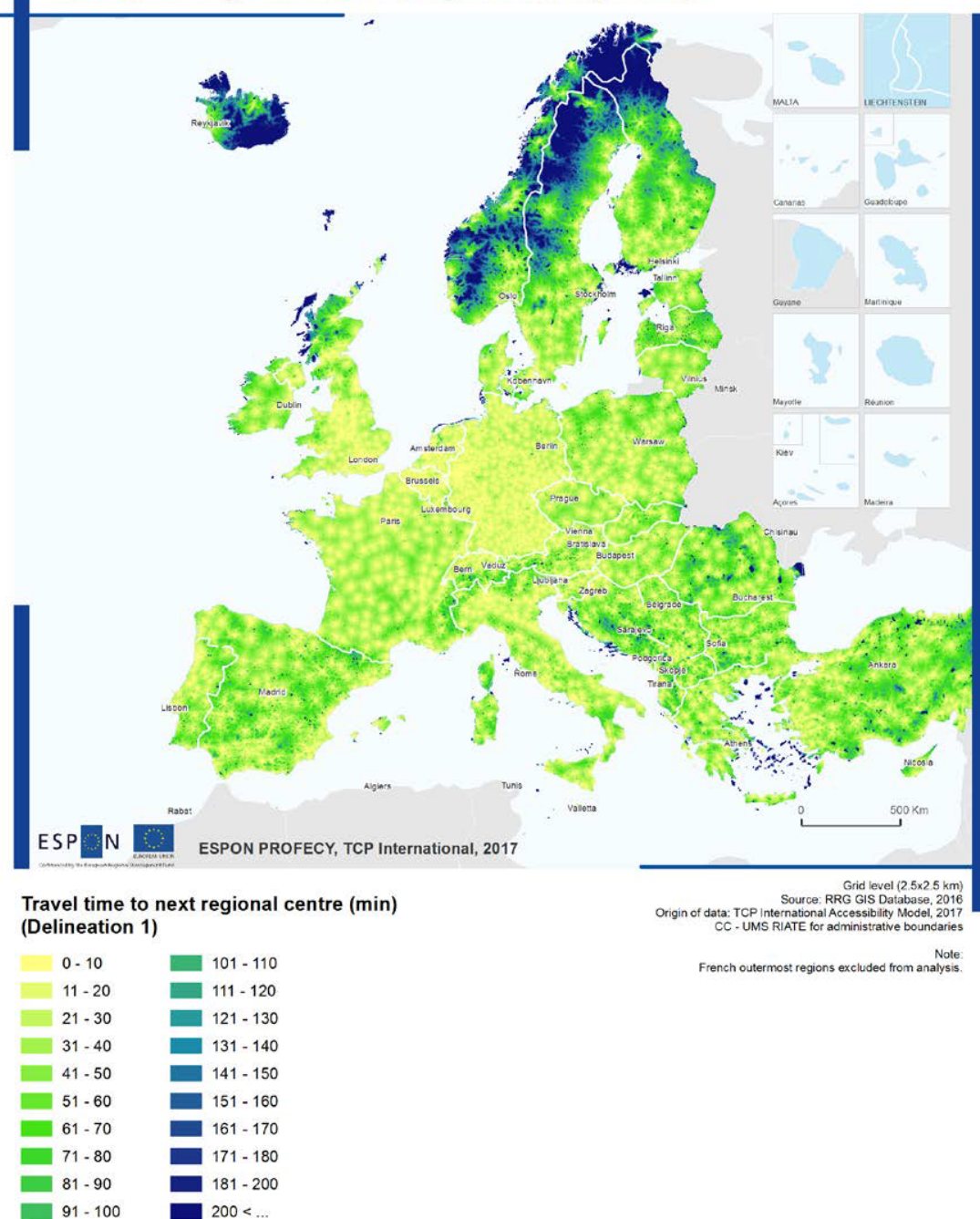
3.3.2 Sensitivity

There are multiple ways to avoid lock-in effects. Firstly, homeowners may for example still be able to sell their property albeit at a lower price. Secondly, homeowners may for example decide to temporarily rent out their homes to cover double housing costs. People in regions lacking either of these two options will be more sensitive to lock-in effects.

People living in inner-peripheries have most difficulty selling their property. In general, accessible places are more attractive property markets, due to the availability of jobs, amenities, leisure, services etc. Map 3.1 illustrates the driving distance to regional centres by car. For regions in the northern periphery in particular as well as islands (e.g. in the Aegean Sea in Greece) and rural regions in Romania, Spain, Bosnia Herzegovina the distance to regional urban centres is large. This makes homeowners in these areas particularly sensitive to lock in effects after a housing market collapse.

Map 3.1 Access to regional centres by car in minutes, 2016

Access to Regional Centres by Car 2016 (in min)



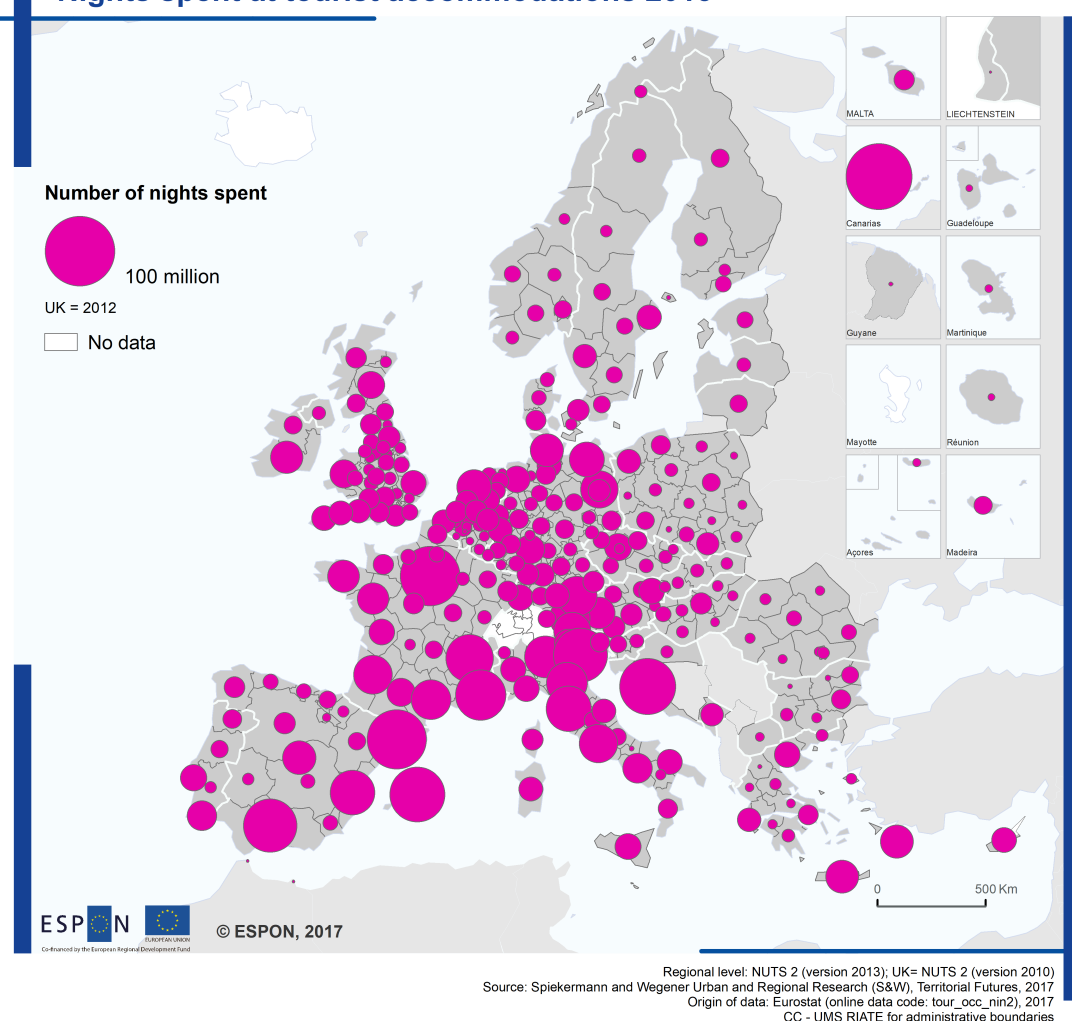
Source: ESPON (2017) PROFECY Processes, Features and Cycles of Inner Peripheries. Interim Report

People in rural regions in Nordic countries as well as in Mediterranean countries are less likely to be able to temporarily rent their homes to students. The presence of European universities is scattered around Europe, but follows largely population patterns. The density of universities is particularly low in the north of Sweden, Norway and Finland as well as the inland regions in France, Spain and Greece. Outside the university towns, the possibilities for temporarily renting out homes is lower, making homeowners in those areas more sensitive to lock-in effects.

Homeowners in northern Sweden and Norway, rural regions in eastern European countries and inland regions in Spain lack opportunities to temporarily let their homes to tourists. These are exposed regions exhibiting a low number of overnight stays (Map 3.2). Homeowners in those regions are therefore more at risk of lock-in. In coastal regions and main urban areas homeowners have most opportunities to let their homes to tourists.

Map 3.2 *Nights spent at tourist accommodations, 2015*

Nights spent at tourist accommodations 2015



3.3.3 Impact

A territorial differentiation can be made for regions that are most impacted by a housing market collapse based on housing market characteristics and resulting lock-in effects. A differentiation can be made between regions that are highly exposed and sensitive to lock-in effects, regions that are highly exposed, but not sensitive and regions where the housing market characteristics are unlikely to result in lock-in effects.

- **High risk of lock-in** – People that want or need to sell their property in the inland regions of the northern periphery, central regions in Spain, apart from Madrid, rural regions in eastern European countries have fewer chances of doing so and are less likely to let their homes and are therefore at a higher risk of getting locked in.

People may also abandon their home. The example below illustrates a consequence of collapsing housing market.

- **Risk of lock-in but with potential to cope.** Homeowners living in more densely populated areas or coastal regions in for example Romania, Sweden, Spain and Croatia have more opportunities to avoid getting locked-in. Here homeowners can wait until the market has stabilised and in the meantime temporarily rent out or let out their property to students or tourists.
- **Easy riding.** People living in Germany, Austria, Switzerland, France, Denmark and the UK are least at risk of getting locked in. In these countries, the housing market is more resilient due to a more even balance of renting and homeownership.

Example – bring life to an abandoned village in Spain

The project "Reviu Solanell" aims to revitalise an abandoned village in the municipality of Montferrer i Castellbò, in the Spanish Pyrenees. The project is managed as a cooperative to ensure participation of inhabitants, providing jobs and good neighbourhood connections.

The project was initiated by the architect and promoter, Saul Garreta about ten years ago. He began buying houses for returning inhabitants. Since then, Garreta has managed to reconnect electricity and water and also brought internet availability to Solanell.

A model developed by the chair of housing at the Rovira i Virgili University is followed with the aim to regain economic activities in the areas and therewith population. The model is based on cohousing where people share property and pay a variable fee based on the days they spend in the town, without having to pay any rent or any mortgage. The aim is to rebuild 30 houses hosting about 150 people. "We want to create an efficient model and begin to build more dwellings than initially foreseen".

3.4 Risk of social exclusion or poverty

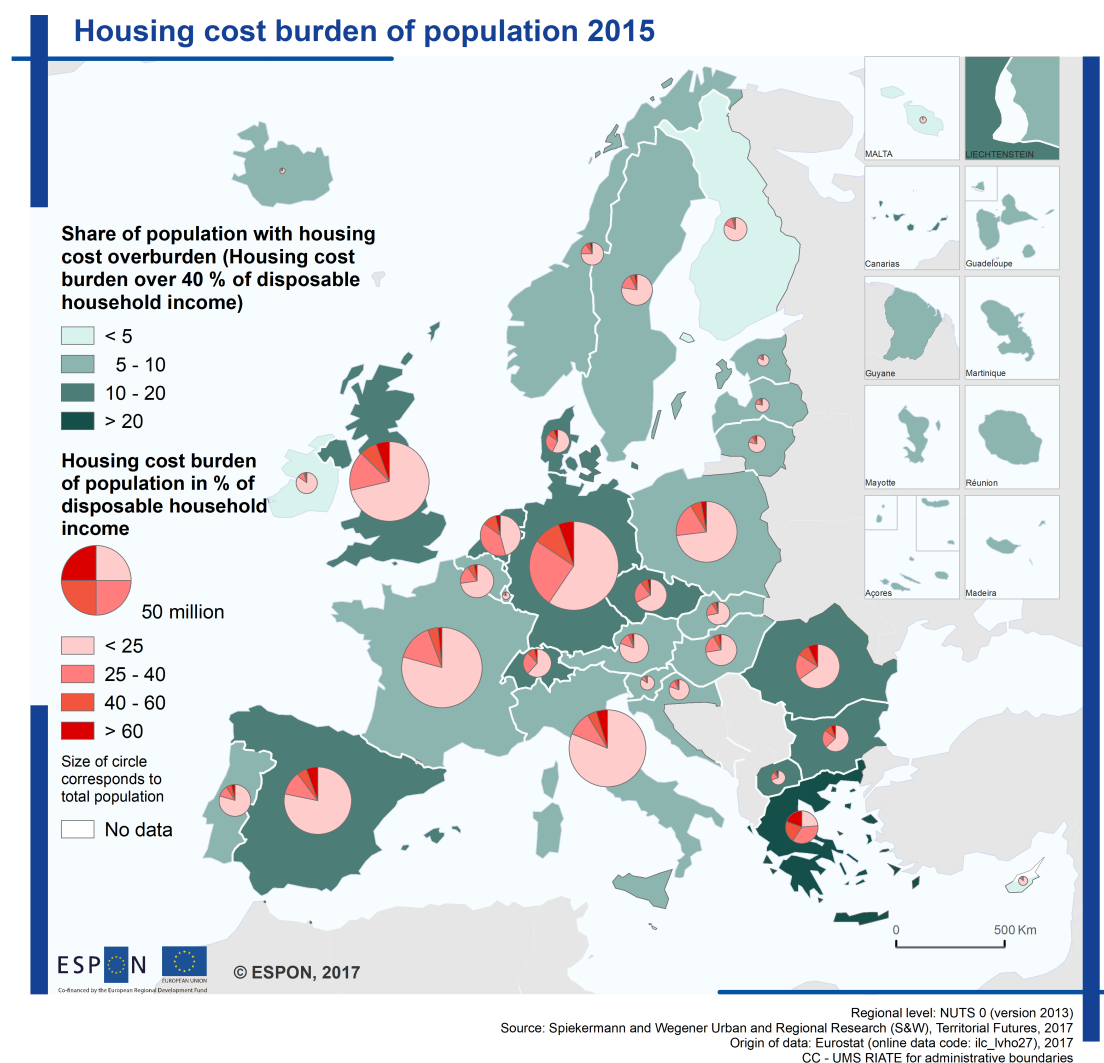
The share of people with a housing overburden rate higher than 40% may increase due to the housing market collapse. A sudden increase in the share of population with housing costs overburden illustrates an increased risk in social exclusion or poverty. In particular, households that experience a change in their circumstances, either in composition or financially may see a change in the share of income that needs to be paid for living expenses. Households where an increasing share of the income would need to be spent on living expenses can afford less other things such as healthy meals, unexpected financial expenses, a car, heating etc. This may increase their chances of being socially excluded or in extreme cases poverty.

3.4.1 Exposure

People that have high housing costs such as rent, utilities, or mortgage may no longer be able to afford them and may have to consider moving to a more affordable home, or risk foreclosure if the bank claims their property to cover their debts. Areas where housing costs are a large share of household disposable income are most at risk of social exclusion or even poverty.

Regions with large shares of population that are overburdened by housing costs are most exposed to increasing risk of poverty. Map 3.3 depicts Greece, Denmark, the Czech Republic, Germany, the Netherlands, Romania, Bulgaria, Macedonia, Spain, Switzerland and the UK as countries with the highest share of population that have 40% or more housing costs compared to household disposable income. The share of the population that has a housing cost burden of more than 40% is also represented in Figure 3.1.

Map 3.3 Housing cost overburden rate, 2015



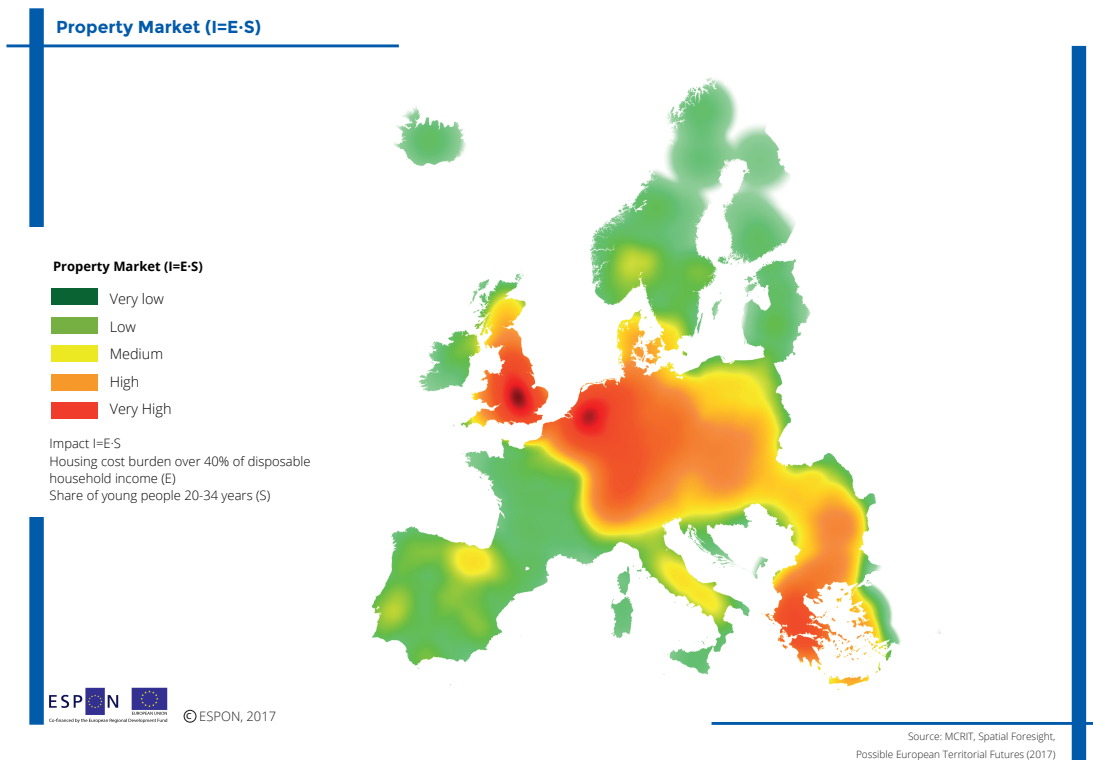
3.4.2 Sensitivity

An increased risk of poverty and social exclusion can depend on demographic characteristics, or the financial circumstance of households. In particular young people and one-person households or single parent households have on average higher housing costs and are more sensitive to changes in their household situation.

The share of young people is highest in secondary towns and cities. The territorial pattern of NUTS 3 regions with largest share of the population in the 20-34 age group is scattered. There are more young people in Polish, FYROM and Turkish regions as well as some capital regions. The highest share of population between 20-34 can be found in German cities as well as some cities in Romania such as Cluj Napoca, Iasi and Timisoara but also in Amsterdam, Utrecht and Groningen in the Netherlands, Sofia in Bulgaria, Vilnius in Lithuania, Switzerland and southern Spain.

Map 3.4 illustrates the territorial impact if only a large share of young people in the population were taken as an indicator of sensitivity the exposure of share of population with housing cost overburden. Combining the exposure with only this sensitivity shows that areas in the UK, around London, and in the Netherlands as well as Greece are most impacted.

Map 3.4 *Impact of housing cost burden and share of young population*



One-person or single parent households are most common in western European cities.

Regions with the highest share of one-person households are in Germany's main urban areas, western Netherlands and Groningen, Zürich and southern Switzerland, and the capital regions of Denmark and the Czech Republic. Among the regions with the highest share of single parents are the Canary Islands, rural areas in the UK, including Northern Ireland and the Czech Republic.

Homeowners with an outstanding loan or mortgage or also sensitive to increased risk of social exclusion. In regions where it has been easier to obtain loans people are more at risk that they may not be able to pay back their loan and risk social exclusion in the event of a housing market collapse or when the household composition changes. European mortgage markets are based on different traditions (Ceritti et al., 2015). European countries can be distinguished by the prevailing type fixed or flexible interest rates, the duration of mortgages and the average loan to value (LTV) (European Systemic Risk Board, 2015). LTV ratios express the ratio of the loan to the value of the house at the time the loan is made. Lenders use this ratio as part of the risk assessment for providing the loan. Higher LTV ratios are generally associated with higher risks of housing booms and vulnerabilities when the property market collapses. Low LTV ratios are usually considered as a stabilising factor. Limits to the LTV were introduced or lowered in some European countries during the financial and economic crisis (Zidonyte, 2015).

Loan to value ratios are generally higher in France, Denmark, the Netherlands, Poland, Lithuania and Romania. This implies that lenders in these countries generally take more risks. Due to higher LTV rates, homeowners with outstanding loans are more sensitive to large fluctuations in property prices and may thus be at an increased risk of social exclusion without sufficient government support. Among the exposed regions, the highest loan to income ratios are in the Netherlands, Denmark and Romania¹.

3.4.3 Impact

A territorial differentiation can be made for regions that are highly exposed and sensitive to a property market collapse due to their housing market characteristics, regions that are highly exposed, but not sensitive and regions where the housing market characteristics are not a determinant component in territorial development.

- **High risk of poverty and social exclusion.** The main urban centres in Bulgaria and Romania as well as in the Netherlands and Denmark have the highest chance of an increased share of population being at risk of poverty due to their homes losing value in a housing market collapse. These regions are exposed, have a relatively young population, and high LTV ratios. Some German and British regions are impacted due to the relatively young population and one-person or single parent households.

¹ In these countries the LTV ratio is more than 75% (ESRB (European Systemic Risk Board), 2015).

- **Risk of poverty and social exclusion but with potential to cope.** Rural regions can be exposed due to relatively high overburden rates, but they are less sensitive to an increased share of people at risk of social exclusion or poverty.
- **Easy riding.** Rural regions in the remaining parts of Europe are less vulnerable to increased poverty due to a housing market collapse as they have fewer one-person or single parent households and a slightly older population.

Example – Social rental agencies in Belgium

The intervention of social rental agencies can limit risks of social exclusion by providing affordable housing.

Social rental agencies (SRA) are non-profit housing institutions that address the housing problems of poor and vulnerable people. SRAs are active in all three of Belgium's regions (Flanders, Brussels and Wallonia). This example focuses on Flanders, where SRAs are well established, and presents the way they have evolved as a social innovation.

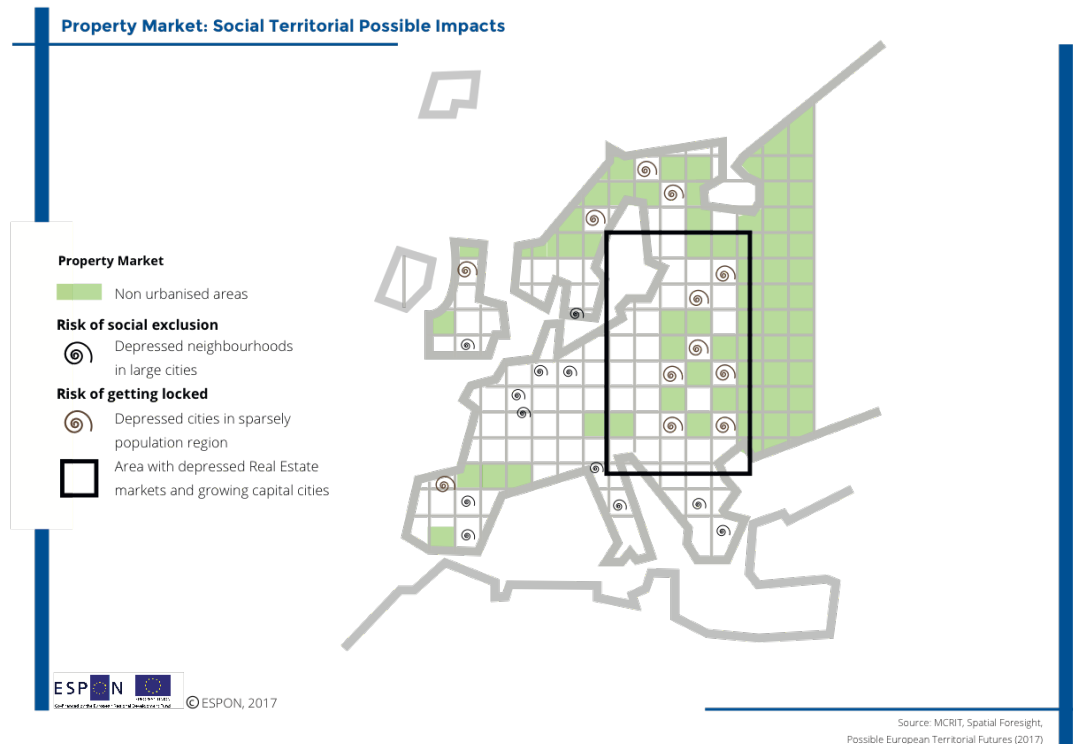
SRAs act as mediating agents between private landlords and people in need of housing. In short, SRAs lease dwellings and sublet them at affordable rents to tenants with low-incomes.

An SRA contacts a private landlord and offers to lease their property. If they agree, the SRA guarantees payment of rent and maintenance of the physical quality of the housing. SRAs negotiate rents and can offer lower than market rates because the landlord's revenue is guaranteed over a long period (one average nine years). SRAs also subsidise and carry out renovations to incentivise landlords to lease their properties.

SRAs select tenants and carry out administrative and management tasks. These include making a property inventory, registration of the rental contract, processing of deposits, collection of rent, fire insurance and the organisation of repairs and maintenance.

3.5 Territorial patterns in the new situation

A region's dominant housing market structure, especially the share of income being spent on housing, illustrate direct social-territorial impacts after a housing market collapse. The two main impacts expected are increased risks of lock-in and an increased risk of social exclusion or poverty. The main territorial impacts are sketched in Map 3.5. The sketch shows roughly the main areas at risk of lock-in effects and social exclusion or poverty.



The lock-in effect increases regional disparities across Europe. People living in peripheral and rural regions are particularly at risk of getting locked-in, mainly because the chances of temporarily renting out the homes is low. The effects of lock-in are greater because there are fewer opportunities in the labour market in these regions. Homeowners are obliged to wait until the housing market recovers. This decreases the possibilities to move to get a job with negative effects on the economic growth of these regions.

The risk of social exclusion increases in cities. Young people and one-person or single parent households have the highest risk of not being able to pay their housing costs if their financial situation deteriorates. These population groups are mostly concentrated in cities. Where mortgage markets accept higher loans against household income these population groups are at risk of losing their property and facing social exclusion or poverty.

Table 3.1 below summarises the territorial impact of this component.

The housing market collapse may change demographic patterns as a secondary effect.

The collapse of property markets can entail secondary effects directly linked to the housing market structure. For example, the average number of people per household may increase and young people may live longer with their parents. This may be caused by low expectations of price increases and limited possibilities for young people to buy or rent their own property, despite the reduced prices. Governments may see a decrease in tax revenues from property, especially from transaction taxes and registration fees. This may cause a change of priorities and policy objectives e.g. measures supporting the housing market, or introducing mortgage lender regulation.

Table 3.1 *Summary of territorial impact of social effects*

		Highly exposed and highly sensitive	Highly exposed but not so sensitive	Low exposure and low sensitivity
Risk of lock-in effect		Rural and peripheral regions in northern, eastern and southern Europe	Urban and more densely populated regions in Belgium, Italy, Poland, Czech Republic, Hungary, Nordic countries, the Baltic countries as well as coastal and more touristic regions in Portugal, Spain, Italy, Greece, Bulgaria and Romania.	North west European and Alpine countries such as Germany, Switzerland, Austria and France have a more balanced tenure structure and are less impacted.
Risk of social exclusion		The main urban centres in Romania and Bulgaria as well as Dutch, German and British cities.	Rural and less densely populated regions in Norway, Germany, Spain, Bulgaria, Romania and Greece.	The housing overburden rate is lowest in Malta, Cyprus, Ireland, Finland, France and Estonia as well as Austrian rural regions. People in these regions are at least risk of social exclusion.

Alternative futures

The housing market structure contributes to reduce or increase the territorial impacts of a residential property market collapse under the two scenarios.

In the **high resilience** scenario, territories with demand pressures from population growth, net migration inflows and job opportunities, such as metropolitan areas in North Europe (e.g. Stockholm, The Hague, Luxembourg), may suffer in the short term, due to fewer transactions, lower house prices and less construction, which create housing shortages and negative equity effects. However, in the long term, housing market structures with many tenants at market prices and households with the ability to finance with debt are intrinsically more dynamic, both in terms of market openness (number and diversity of real estate agents, owner occupiers and domestic and international investors) and social mobility (willingness to relocate). In North-European metropolitan areas (e.g. Brussels, Amsterdam, Luxembourg, Lille), the housing market structure may induce increased residential opportunities in rural or surrounding urban areas (supporting polycentric development). In the high resilience scenario, balanced ownership and rental market composition is a pre-condition to ensure long term house price stabilisation and widespread territorial development.

In the **low resilience** scenario, the structure of the housing market is static, with low mobility (low turnover in the existing housing stock and new dwellings). In such a market, the number of transactions for existing owner-occupied dwellings is limited and a residential real estate collapse in the short term may lead to reduced impacts in economic terms with tenants' lower exposure to market prices and owners' low exposure to mortgages and loans. However, in the long run, in such a market, a market collapse may trigger processes leading to growing inequalities. For example, urban areas in Eastern European countries (e.g. Budapest, Sofia, Zagreb, Bratislava), where the territorial pattern is dominated by a polycentric macro regional urban system with monocentric national urban systems and a fragmented rural network, the market collapse may lead to increasing core-periphery disparity, with risks of marginalisation and ghettos. In such a scenario, rural and sparsely populated areas show higher vulnerability, also due to negative demographic trends.

4 Component – Importance of the housing sector

This section provides a rationale for this component to assess the territorial consequences of the foresight topic, identifies relevant indicators to assess the territorial consequences and discusses territorial exposures and sensitivities for the component and selected indicators.

4.1 Why this component is important

A collapse of Europe's housing markets may directly impact employment and consumption. The importance of housing in personal wealth, the contribution of construction activity to GDP growth, and the fact that house purchases are typically bank-funded, imply that developments in housing markets can have a significant impact on other economic sectors. Interactions between the housing market and macroeconomics differ depending on the role of housing market in a region's economic structure (European Systemic Risk Board, 2015).

The housing sector is closely related to the rest of the economy. A large part of the housing stock is financed with debt. A downturn in the housing market leads to higher risks for banks which may reduce credit availability in general. This link between the financial system and the housing market illustrates the risk of spill-over effects to the rest of the economy with the risk of a more general economic downturn affecting more sectors.

4.2 Territories exposed and their sensitivities

The relative importance of housing in a region's economy may determine the immediate economic effects of a housing market collapse. A reduction or complete halt in transaction affects the price of housing as well. Fewer house sales increase the pressure for sellers to accept lower prices. Construction companies, real estate agents and developers, acting as intermediate bodies will also be affected. If these suppliers do not have sufficient reserves to wait for the transactions to start again, they will need to cut costs by reducing wages, including letting employees go. The knock-on effects will extend to building material, furniture and appliance manufacturers and retailers, among others.

The following synthesises the main areas exposed and sensitive after a housing market collapse related to the importance of the housing sector in a region.

- **Regions with relatively large shares of the population working in the housing sectors** real estate and construction are directly exposed to increasing unemployment. Regions where construction companies have less reserves to wait out the property collapse are more sensitive to increasing unemployment.
 - Regions with a declining population are particularly sensitive to unemployment in these sectors as they risk an oversupply of housing.
 - Regions where the construction costs have recently (between 2010 and 2015) increased most are more sensitive to increasing unemployment in the construction sector. The increase in construction costs indicates a boom, making these regions more sensitive to a bust.

- **Regions with a relatively large wholesale or retail sectors are more at risk of spill-over effects from the housing sector.** These sectors are related to the housing market due to consumption related to moving house.
 - Regions with a declining population are particularly sensitive as there are fewer possibilities to fill the consumption gap left by a lack of transactions in the housing market.
 - Regions with a relatively large share of outstanding residential loans are more sensitive as banks and other financial institutions may tighten credit generally due to their exposure to households.
 - Regions with relatively high sector concentration are sensitive as they generally have lower resilience levels.

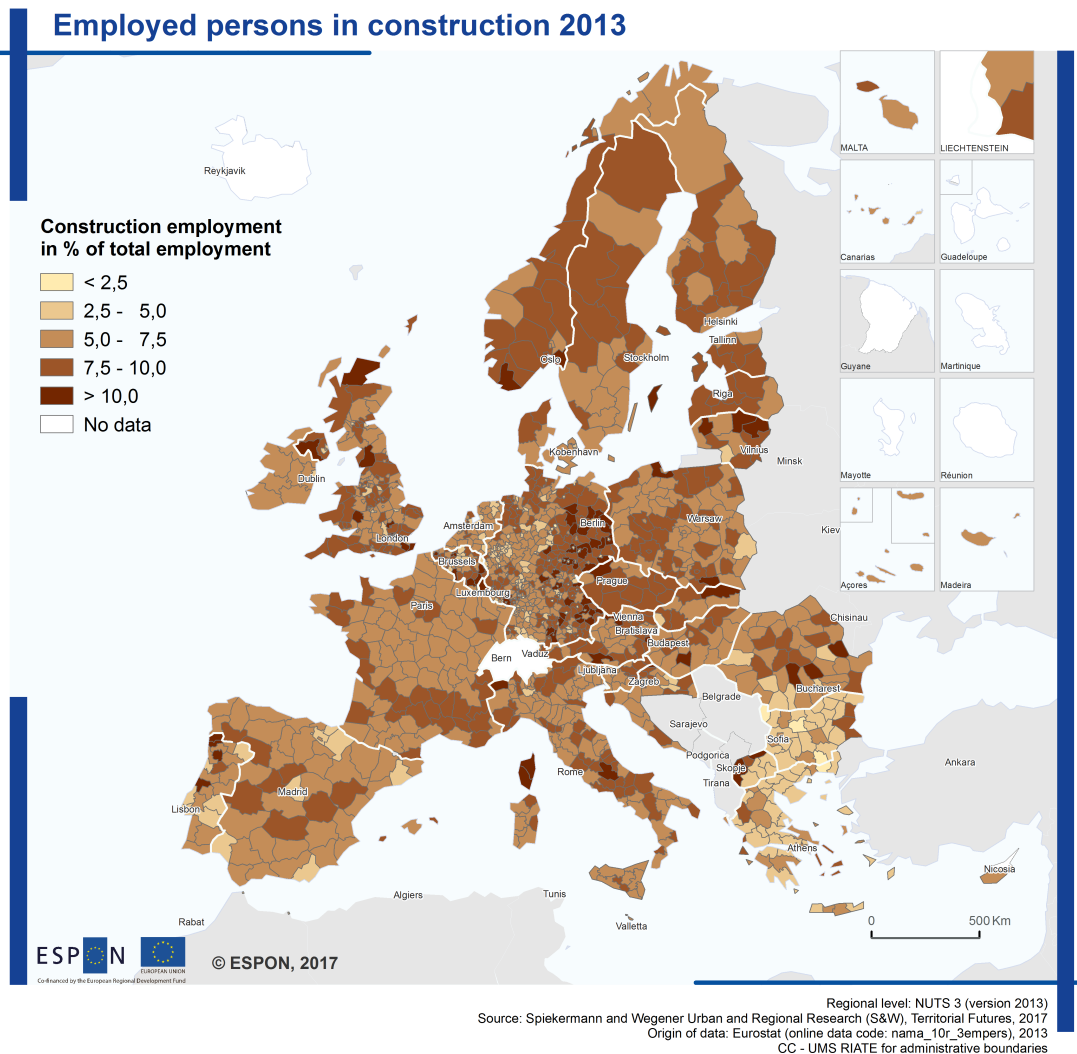
4.3 Risk of unemployment

There are close links between the real estate, construction and financial sectors. A collapsing real estate market risks spilling over to other sectors and the rest of the economy, especially where the real estate sector is relatively large in the economic structure of the region.

4.3.1 Exposure

Regions with large parts of the population in the housing sector are directly exposed to increased unemployment in the event of a housing market crisis.

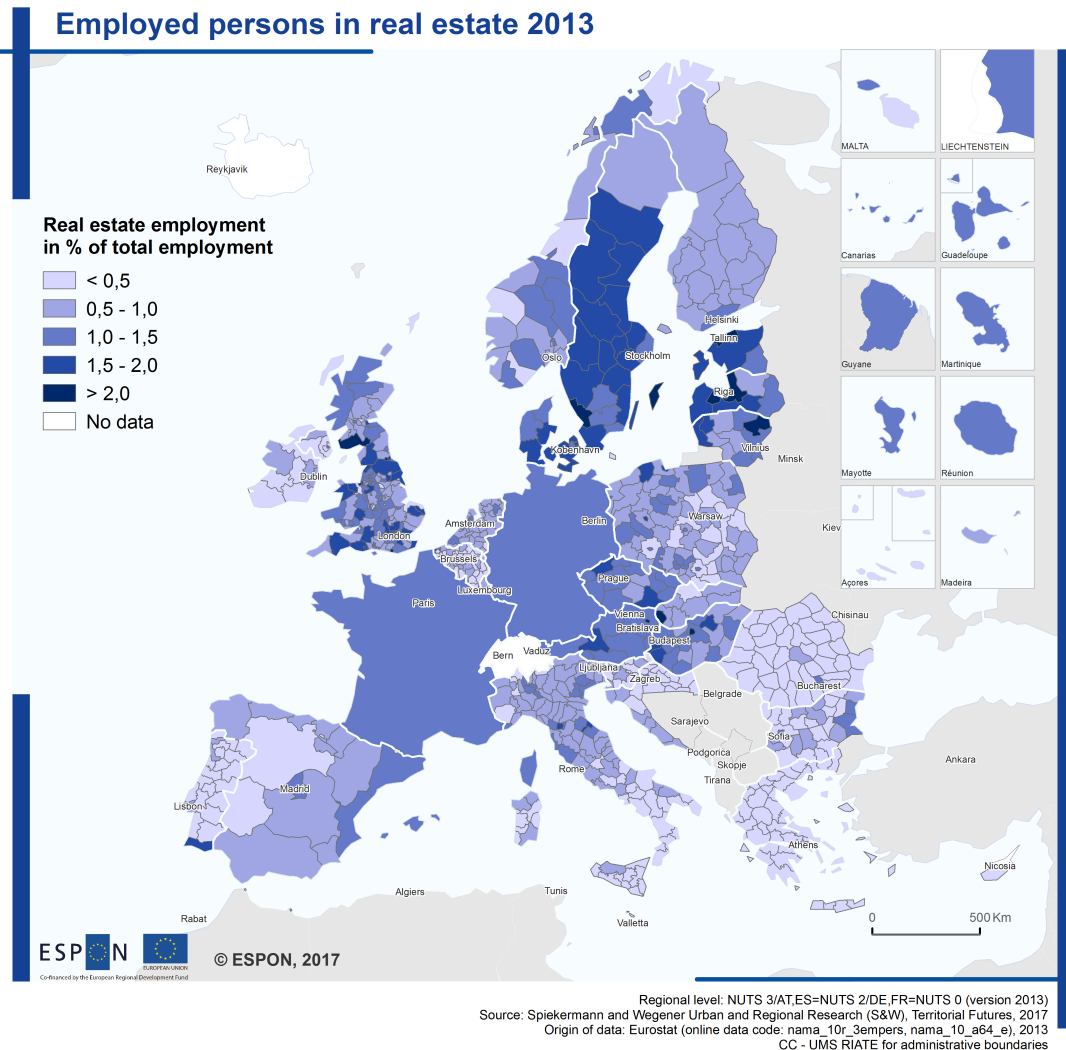
Smaller towns and cities as well as regions close to larger urban regions have the highest share of people employed in the construction sector. These regions are particularly exposed to increased unemployment in the event of a property market collapse. As shown in Map 4.1, the share of people employed in construction is particularly high (+10%) in regions around Berlin, Bucharest, Vilnius and Porto (Portugal) as well as southern Norway, the highlands in Scotland, the North West in the UK, Corsica (France) and Presov in the Slovakian Carpathians. Between 7.5% and 10% of people employed work in the construction sectors in rural areas in the Nordic countries the Baltic state, Spain and Poland as well as in eastern Germany, Southern France, Wales, the Czech Republic and Southern Italy.



The share of people working in real estate is higher in tourism areas and larger cities (Map 4.2). These regions are particularly exposed to increased unemployment due to a property market collapse. The Algarve in Portugal as well as Riga, Vilnius, Bratislava, Halland in Sweden and Dumfries and Galloway in Scotland are impacted due to the relatively large share of people employed in real estate. Unfortunately, the map does not depict regional data for France or Germany. Comparing employment data with Structural Business Statistics in Eurostat for enterprises and people employed per sector shows that in France the real estate sector is important in the Mediterranean regions. This can be explained by relatively large numbers of tourism accommodation and second homes in this region. It is similar in the Algarve.

Map 4.2

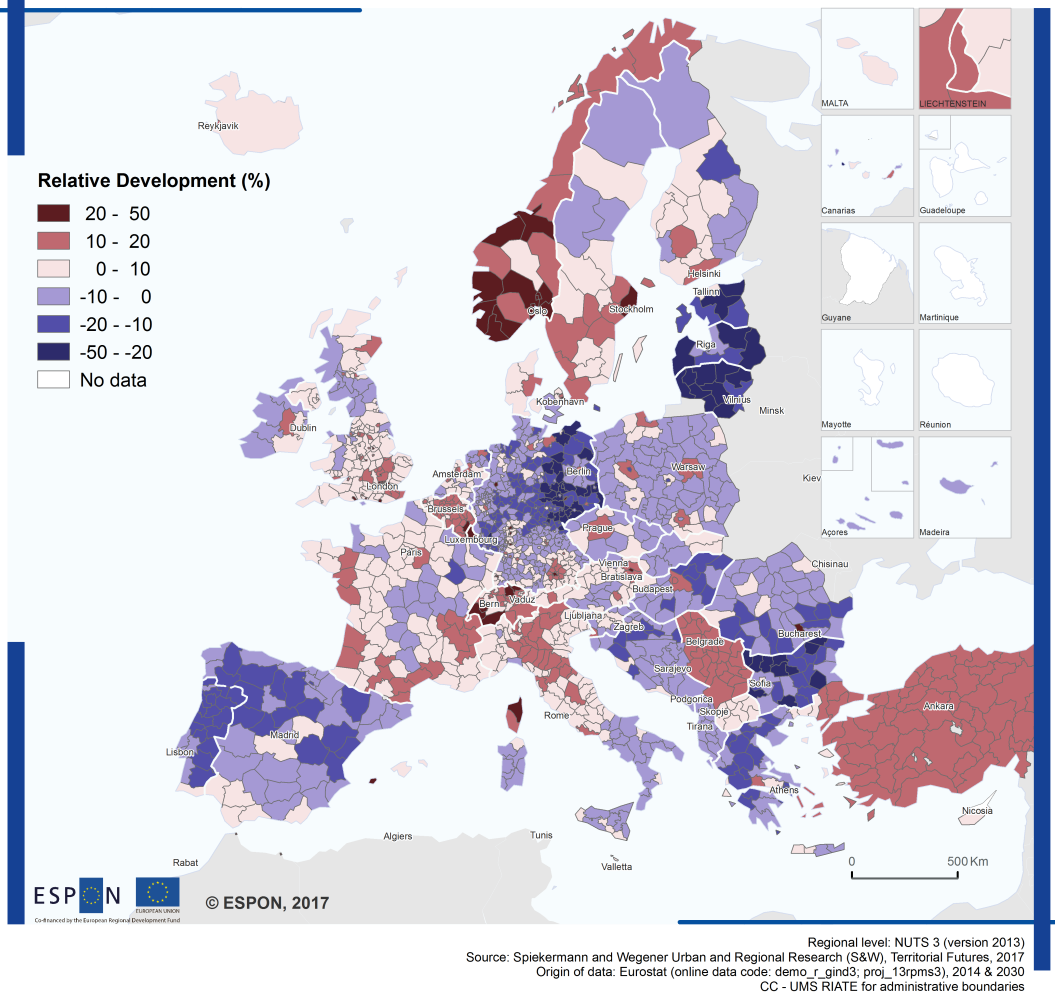
Share of persons employed in real estate, 2013



4.3.2 Sensitivity

Rural regions in the south and east of Europe as well in eastern Germany are particularly sensitive to increasing unemployment. Population forecasts assume these regions will show the highest population decline between 2014 and 2030. This forecast covers population changes to 2030, affecting the supply in housing. Regions in the Baltic states, northern Bulgaria as well as eastern Germany are expected to decline. This increases the sensitivity of companies in the housing sector, so construction and real estate companies in these regions are more likely to go out of business or reduce employment.

Population development 2014 - 2030



Whereas labour costs are the main costs for companies in the real estate sector, construction companies also have to consider material and energy costs among others that can increase the pressure on their balance sheets. Construction usually reflects demand in housing from the past, due to the time it takes to construct a house. With a sudden collapse of the property market construction, companies will have the same costs as before the collapse but be unable to sell properties for the expected price.

Construction costs have increased most in Nordic countries, the Baltic states as well as in northwest Europe and Hungary and Romania. This increase of construction costs between 2010 and 2015 illustrates a higher sensitivity to a housing market collapse for construction companies (EMF, 2016). Construction costs have increased by more than 10% in Sweden, Luxembourg, Denmark, the UK, Latvia, Estonia, Norway, Hungary and Lithuania. Construction costs have increased by more than the European average of 6% in Romania, Austria, Germany, Malta, Belgium and Finland.

4.3.3 Impact

A territorial differentiation can be made by regions that are highly exposed and sensitive to a property market collapse due to the relative importance of housing activities in the economy, regions that are highly exposed, but not sensitive and regions where the housing market characteristics are not a determinant component in territorial development.

- **High risk of increasing unemployment in the housing sector** – Rural regions in the north of Sweden and Finland as well as rural regions and urban fringes in the Baltic States, Germany, Hungary and Romania are at risk of increased unemployment in the housing sector. These regions are exposed and sensitive due to declining populations and increased construction costs. In this assessment, sensitivity to unemployment due to low expectations of returning demand, due to declining population is more important than the increased construction costs. The latter can be substituted by higher prices for housing. Other regions that are more at risk of unemployment due to depopulation are coastal regions in Bulgaria, Croatia, Greece, Spain and Portugal as well as southern Italy.
- **At risk of increased unemployment in housing sectors but with the potential to cope.** Wales, northern Italy, southern France, urban regions in the Czech Republic, Slovakia and Austria are exposed but do not have declining populations. Therefore, it may be easier for companies in the housing sector in these regions to wait for better times than go out of business or reduce employment.
- **Easy riding.** The Benelux, southern Ireland and western Norway, are among the regions that are neither exposed nor very sensitive and are thus less at risk of unemployment in the housing sector.

Example – Different ways for constructing housing– building groups in Berlin

Alternative ways for housing provision can limit the risk of unemployment in the sector due to better coordination between demand and supply. The German building group model is an example of this.

The Baugruppen—German for “building groups”—is an architect-led housing construction model which is a collective. The R50 Baugruppen project reflects a wish for cohousing to ease some of the problems of the housing market. The project managed to complete good quality housing for a relatively low price.

The Baugruppen is “a solution for the moment, when the city is not acting as it should,” says R50 resident Florian Zeyfang. The bank and project manager structured a package of financing by pooling individual mortgages for the units of future residents to fund all phases of construction. This unusual method of financing was made possible by specialised programs offered by Nürnberg’s UmweltBank.

4.4 Risk of spill-over effect to other economic sectors

A collapse of the property market decreases consumption and hampers overall economic activity. Transactions on the property markets are closely related with general consumption trends. Buying or renting a house implies buying paint, furniture, fittings and appliances, as well services for moving. A halt to transactions in the housing market also reduces consumption in these sectors, increasing the vulnerability of a region, so a property market collapse can become a general economic crisis.

4.4.1 Exposure

Densely populated regions in northwest Europe, capital regions in eastern Europe and tourism areas in southern Europe have the highest shares of wholesale and retail in the economy. These sectors have the closest links to the housing sector, due to consumption associated with moving house. The share of employment in wholesale and retail per 1,000 inhabitants is highest in Southern Norway, London, Prague, Bratislava, Hamburg, Normandy (France), Bucharest and Noord-Holland (a province in the Netherlands that includes Amsterdam). Other regions in the core of Europe as well as coastal regions in southern Europe and the capital regions of Sweden, Poland, Hungary, Lithuania, Latvia and Bulgaria have a relatively large share of the population working in wholesale and retail.

4.4.2 Sensitivity

Regions with an outflow of people see a decrease in consumers and may thus be negatively affected, while growing regions still see demand despite fewer transactions.

Regions with a declining population are particularly sensitive with fewer options to substitute housing related consumption. From the exposed regions, it is expected that Lithuania, Latvia as well as Bucharest, Sofia, and the region of Valencia (Spain) would decline most. Other exposed and declining regions are Basse-Normandie and Nord-pas de Calais in France, other coastal regions in Spain, other regions in Bulgaria and rural regions in former west Germany.

Consumption may be restricted in regions where the financial and residential sectors are closely related. With a housing market collapse banks face higher risks because lower property values offer less security and a general economic downturn would increase the risk that households can't pay their mortgages. This may lead to reduced credit for households lowering consumption. The links between the financial system and the rest of the economy can be depicted by the share of outstanding residential loans compared to total GDP.

The share of outstanding residential loans is particularly high in north and west Europe as well as on the Iberian Peninsula and Cyprus. In the UK, Sweden, Spain, Portugal, the Netherlands, Luxembourg, Denmark, Cyprus, Belgium, Norway and Iceland the share of outstanding residential loans is more than 48% of their GDP, the European average percentage. In addition, the share is more than 40% in Finland, France, Germany, Hungary and Lithuania. The large share of residential loans against GDP in these countries illustrates

the close links between the financial system and the rest of the economy (see graph) and thus a higher risk of an economic crisis beyond the housing market.

The ESPON ECR2 project assessed the resilience of cities and regions during the economic and financial crises that started in 2007. The analysis has shown that sector diversity is one of the strongest territorial assets for economic and employment resilience. The Smart Specialisation benchmarking collected data to assess sector concentration by taking the five NACE sectors with the largest employment in the region and measured the share of employment in these against total employment. Regions with the highest sector concentration are more specialised, whereas regions with low sector concentration have more diverse economic structures.

Sectoral concentration is highest in regions in Greece, the British Isles, the Netherlands, in Northern France as well as southern Spain, Latvia and urban regions in Poland. Due to the sectoral concentration, these regions are more at risk of a housing markets spilling-over to other economic sectors. More than 12.5% of the workforce are employed in the five largest sectors in Notio Aigiao, Crete and the Ionian Islands (Greece), Basse-Normandie and Nord-Pas de Calais (France), Algarve (Portugal) and Bratislava (Slovakia) (Smart Specialisation Platform, based on Eurostat data). Less than 5% work in the five largest sectors, so regions with the least sector concentration, in Sachsen (Germany), Nord-Est, Sud-Vest Oltenia, Sud Muntenia (Romania), Severoiztochen, Yugoiztochen and Severozapaden (Bulgaria) and Lorraine (France).

4.4.3 Impact

A territorial differentiation can be made by regions that are highly exposed and sensitive to a property market collapse due to their relative lack of real estate activities in the total economy, regions that are highly exposed, but not sensitive and regions where the housing market characteristics are not a determinant component in territorial development.

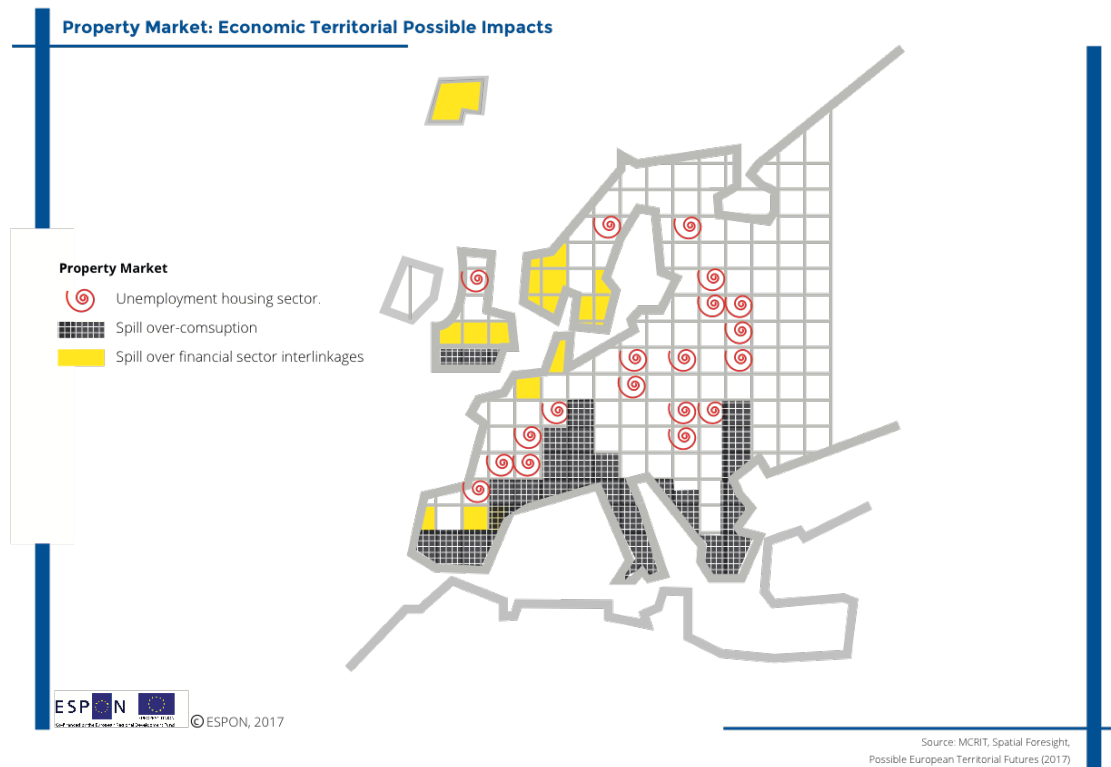
- **High risk of spill-over effects from a property market collapse to other sectors –** Regions that are both exposed and highly sensitive to spill-over effects are scattered around Europe. These include tourism areas such as the Algarve in Portugal and Greek island regions as well as urban regions in the UK, Ireland and the Netherlands, Latvia, Lithuania, Basse-Normandie and Nord-Pas de Calais in France and capital regions in eastern Europe such as Warsaw, Bratislava, Budapest and Bucharest. Eastern European regions are highly impacted due to declining population and so demand and transactional activity are less likely to recover here.
- **High risks of spill-overs but with potential to cope –** Some urban and economically well performing regions are exposed but are not sensitive to spill over effects. This includes the regions of Stockholm, southern Norway, Paris, Copenhagen and Baden Württemberg in Germany.

- **Easy riding** – Regions in the northern periphery as well as in central France will be least affected by spill-over effects. These regions have relatively low shares of employment in wholesale and retail and their economic sector structure is among the least concentrated. Romanian regions, with the exception of Bucharest also fit in this category, but here the population decline is greater.

4.5 Territorial patterns in the new situation

The housing market is closely linked to the rest of the economy. If transactions on residential markets stop overnight companies directly working in the sector will be affected immediately as well as companies in other sectors linked to the real estate market. This will be exacerbated when the region's economic structure is less resilient to crisis. The importance of the housing sector in the overall economy illustrates two main territorial impacts – an increased risk of unemployment and an increased risk of a general economic crisis. Map 4.4 sketches the territorial patterns of the main economic effects after a housing market collapse. The most negatively impacted regions for different reasons are depicted on the map. Mediterranean coastal regions are most negatively impacted by the risk of spill-over effect related to consumption. Regions in western Europe are most negatively impacted by the risk of spill-over effect related to the financial sector and many regions in close proximity will see an increase in unemployment.

Map 4.4 *Sketch of territorial impact of economic effect based on the overrepresentation of the housing sector in a region's economy*



The risk of unemployment increases urban-rural divides. Since rural regions as well as the regions around urban centres are greatly impacted, the difference between urban centres as poles for employment and rural areas with fewer job opportunities increases. This effect is even stronger in regions that are also declining. This effect may last a long time and become structural.

The increased risk of spill-over effects partly decreases territorial disparities at the European level. In the short run, the wealthier regions in Northwest Europe are among the regions most impacted. If a housing market collapse evolves to a general crisis, the less wealthy regions in the south and east of Europe may have less spill-over effects, lowering some of the territorial diversities in Europe in the short term. Urban regions outside the Pentagon are not so sensitive, reinforcing the polycentric pattern of Europe. However, the wealthier regions are likely to recover much sooner so in the long run the effects could contribute to higher territorial diversity, this will be further discussed in the next section on coping capacity.

Table 4.1 *Summary of territorial impacts economic effects*

	Highly exposed and highly sensitive	Highly exposed but not so sensitive	Low exposure and low sensitivity
Increasing unemployment	Rural regions and urban fringes, particularly in declining regions	Wales, northern Italy, Southern France, urban regions in the Czech Republic, Slovakia and Austria.	Benelux, Ireland, western Norway
Decreasing consumption	Tourism areas as well as some densely populated regions	Stockholm, southern Norway, Paris, Copenhagen and Baden Württemberg in Germany.	Northern periphery and central regions in France

Shifting policy objectives to counterbalance the economic effect. Economic impacts from the housing market collapse may have secondary effects in the medium and long term. Increasing unemployment or decreasing consumption may affect government budgets in the regions concerned. This may force governments to shift priorities from boosting transactions on the housing market to austerity measures and containing a further crisis. It may also effect the wealth of homeowners and their willingness and ability to invest in their homes. They may not be able to make necessary repairs, maintenance and renovations or invest in environmentally-friendly measures. This may lead to increased urban decay or limited possibilities of energy savings in housing.

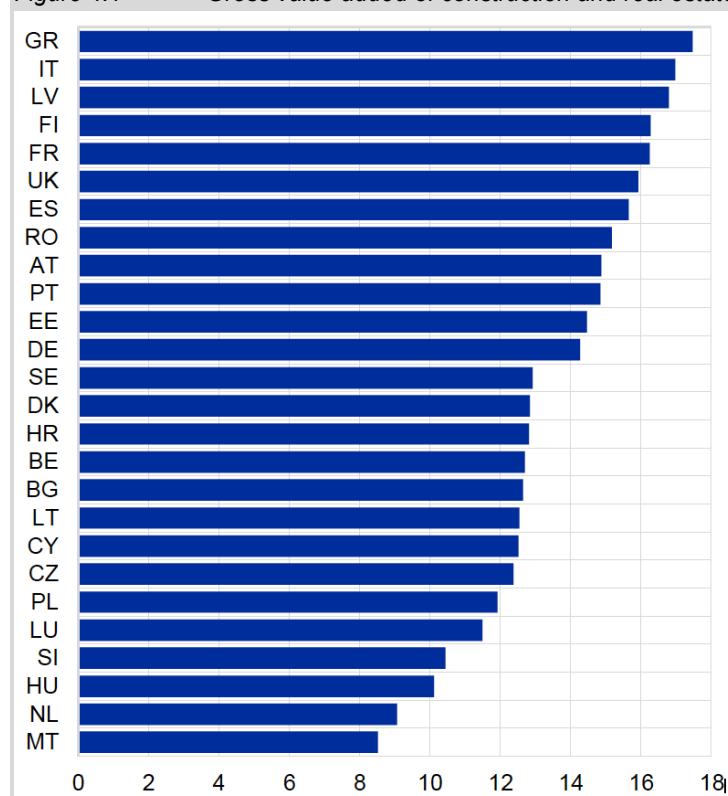
Less investment in homes including environment-friendly measures as secondary effect. Investments in dwellings depend on the financial capacities of homeowners and on the construction sector. A secondary economic effect of the collapse may be decreasing investment in homes, leading to urban degradation or to less environmental-friendly measures in homes.

Alternative futures

The importance of the housing sector in the economic system has been demonstrated by recent and older financial crises. These have shown how “boom and bust” cycles in the housing market may have severe implications on the financial system and the rest of the economy. The importance of housing to household wealth, the contribution of construction activity to GDP growth, and the fact that investment in housing is generally bank-financed, imply that developments in housing markets can have significant impacts on other economic sectors.

The two scenarios assume different hypotheses on the pervasiveness of an economic downturn in different territories following a residential property market collapse. One important hypothesis is represented by the weight of the construction sector and real estate activities in the economic system, as for example measured by the value added (gross) of the construction and real estate activities in % of GDP (see the below picture).

Figure 4.1 Gross value added of construction and real estate activities in % of GDP



Source: ESBR, “Vulnerabilities in the EU residential real estate sector”, 2016

Gross value added of construction as share of GDP for some European countries, i.e. Greece, Italy, Latvia, Finland, France and the UK, is well above 15% (above the EU average of 12%). Evidence from the 2008 crisis showed that reduced housing investment was responsible for decreased employment in the following European countries: Greece, Spain, Latvia, Estonia, Lithuania and Ireland.

Countries with negative house price changes had to deal with stronger declines in residential investment and more pronounced increases in unemployment. Changes in house prices can generate significant spill-over effects, affecting the wider economy. However, the extent to which the construction sector crisis affects unemployment may also depend on national labour market regulations.

The assumption behind the two extremes is that by 2030 there is still a divide in the European economy in terms of the relative importance of the construction sector. Some countries are more sensitive to the spill-overs from the reduction of construction activities due to the degree of diversification.

The **high resilience** scenario assumes that the structure of the economy is **diversified**, with a lower weight for the construction and financial sectors. Areas which can benefit from a complex network of economic sectors will be less affected by the collapse of property markets. The resulting spill-overs to the economic system are therefore reduced. Positive implications on household disposable income and the solidity of the banking system can revitalise markets both on the demand and supply side. Urban areas in Belgium, the Netherlands, and Nordic countries may benefit in terms of a quicker recovery, due to the lower importance of the construction sector.

The **low resilience** scenario assumes that lower house prices produce more pronounced spill-overs to the economic system. Areas which rely on a few economic sectors, especially finance and construction, will be more affected by a collapse of property markets, as that translates more quickly into job losses and declining economic activity. Urban and rural areas in Greece, Southern Italy, Latvia and Spain may suffer the most pervasive spill-over effects.

5 Component – Coping capacity

This section provides a rationale for this component to assess the territorial consequences of the foresight topic, identifies relevant indicators to assess the territorial consequences and discusses territorial exposures and sensitivities for the component and selected indicators.

5.1 Why this component is important

A halt or significant reduction in transactions in the housing market may result in different degrees of declining demand depending on the coping capacity of individual markets. The coping capacity may depend on different market characteristics, demographic changes or government interventions.

As discussed in section 2 of this report, property markets are characterised by boom-bust cycles, which over time result in fluctuating numbers of transactions. The number of transactions is very high during boom and very low after a bust. The dynamism of a market is reflected in the frequency and magnitude of booms and busts.

Dynamic markets have shorter boom-bust cycles with a higher magnitude of the boom and bust phases. Dynamic housing markets are characterised by many transactions taking place. These are based on a process of gradually moving up and down the housing ladder and include a market for new construction where housing is primarily built by commercial market players at their own risk. In general, they offer newly built homes via estate agents or their own sales channels. As their housing preferences change, many homeowners opt to move rather than extend or renovate their existing home in dynamic markets. Changing living preferences may be the result of changes in the composition of the household, or in income. Consequently, these markets have high levels of mobility and many transactions (Van der Heijden et al., 2011). These events make boom-bust cycles shorter.

In the event of a housing market collapse, there is diminished confidence that house prices will rise. For this reason, many homeowners delay moving, deterred by the prospect of investing in a more expensive dwelling that may fall in value. As a result, fewer dwellings are sold and mobility decreases. This can lead to a downward price correction, although many sellers are willing to accept longer selling times instead of lowering the price (Van der Heijden et al., 2011). These events make boom-bust cycles with a higher magnitude.

Static markets have longer boom-bust cycles with a low magnitude of boom and bust phases. Static housing markets generally have fewer transactions than dynamic markets. In static housing markets, private individuals who commission new residential properties play a major role. These are often detached properties built on a plot owned or acquired by the individual. Usually in consultation with an architect, the individual, or a project manager arranges planning permission and coordinates the design, tenders to contractors and construction. In a static market, changing housing preference is less likely to result in people moving but rather in modifying their existing home. Consumers in static housing systems generally buy only one or at most two homes in their lifetime. Consequently, the system is

typified by low levels of mobility and short housing ladders. This therefore means that the number of transactions in the market for existing owner-occupied dwellings is limited. In markets where self-build housing plays an important role, the influence of economic trends on the housing market is likely to be less significant. (Van der Heijden et al., 2011).

5.2 Territories exposed and their sensitivities

A region's coping capacity will affect the magnitude and length of the property market collapse. A region's coping capacity consists of market and government capacity. Regions with high coping capacity can contain the collapse to a relatively short or shallow crisis. A halt or significant reduction in transactions may imply a deep and long crisis if there is limited coping capacity following depending on the market's dynamism.

- **Dynamic property markets, illustrated by the number of transactions are most exposed to a steep decrease in demand.** Dynamic property markets have built up a system that relies on many transactions. Following a housing market collapse, transaction activity would have to increase very significantly to reach long-term average of pre-crisis levels.
 - Regions with more outstanding residential loans are more sensitive to a deep crisis. In these markets, the risk of a general crisis is higher due to the links between the real estate market and financial markets, making it more difficult to recover with only measures targeted at the property market.
 - Regions with long supply chains are more sensitive. Dynamic markets contain on average more players since public and private real estate developers act as intermediaries between the construction sector and homeowners. This makes the supply chains in these markets relatively longer. In the event of a housing market collapse longer chains function as a barrier to adjusting the supply.
 - Regions with lower quality governments are more sensitive to a deep crisis as they are less likely to introduce appropriate measures to boost demand.
- **Regions with a declining population are particularly exposed to a longer-term decline in demand.** These regions lack the opportunities for property market transactions to recover quickly.
 - Regions with lower quality governments are more sensitive to a longer crisis as they are less likely to introduce appropriate measures to boost demand.
 - Regions which are relatively less attractive for tourism lack the opportunity to change the use of the property from housing to tourist accommodation, which would help decrease a surplus of housing.
 - Regions with many homeowners are more sensitive to a long decline in demand. These people are less mobile than tenants. The lower mobility rate in these regions suggests that people will wait longer to buy or sell property.

5.3 Risk of steep decline in demand

A halt or significant reduction in transactions in the housing market implies a decrease in demand. Dynamic markets are exposed to the negative impacts of decreased demand as their institutional structure is based on a rapid turnover of properties with many new homeowners.

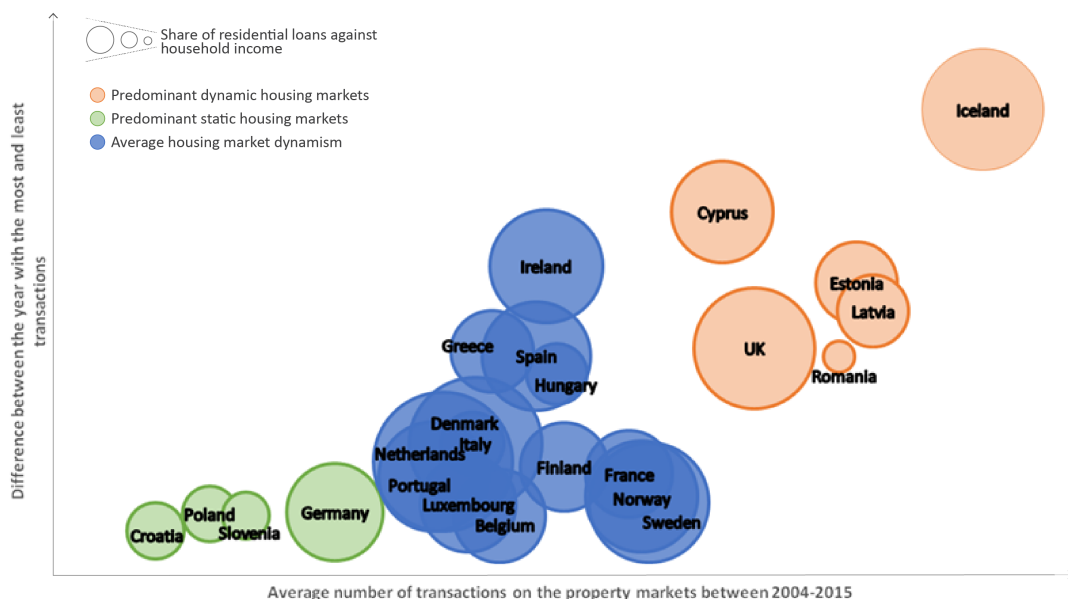
5.3.1 Exposure

Regions in Iceland, Cyprus, Estonia, Latvia, Romania and the UK are among the most dynamic property markets. Based on the average number of transactions between 2004 and 2015 and the dynamics on the transactions in that period a distinction in European countries can be made between dynamic and static property markets. The European Mortgage Federation (EMF) collects annual data on European property markets at national levels, including transactions (EMF, 2016).

Figure 5.1 illustrates the dynamism of European property markets. There are large variations in transactions due to external factors such as different sensitivities and the stage of recovery from the 2007 financial and economic crisis. A comparison is made between the number of transactions over 12 years and the difference between the years with the most and least transactions. The higher the number of transactions and the greater the difference, the more dynamic the national property market.

The analysis classifies European countries based on the level of dynamism in their housing market. The countries in oranges have the most dynamic markets, followed by those in blue and the least dynamic property markets are in Croatia, Poland, Slovenia and Germany.

Figure 5.1 *Dynamism of European property markets by the change and number of transactions and the share of debt financing between 2004-2015*



Source: own elaboration based on EMF, 2016: 114

5.3.2 Sensitivity

Dynamic markets are particularly sensitive to a steep decline and other characteristics of the housing markets suggest strong links with other sectors making the whole economy more vulnerable. Relatively long housing supply chains suggest more sensitive dynamic property markets. Such markets may also be sensitive to a steep decline in demand if they lack opportunities to counter balance the negative effects of a halt of transactions, especially if they lack governmental capacity to intervene in the market.

The share of residential loans against disposable household income is highest in the Netherlands, Denmark, Sweden, Luxembourg, the UK, Cyprus, Ireland, Belgium, Spain and Portugal. The share of residential loans reflects the link between the housing market and the financial market. The tighter the link the more sensitive the market to a steep decline. The halt of transactions may result in tight credit requirements in general due to increased risks for lenders and investors. The share of residential loans against household income is illustrated in the size of the bubbles in Figure 5.1 The figure illustrates that households in Iceland, Cyprus and the UK are most impacted, followed by Ireland, Spain, the Nordic countries and Benelux.

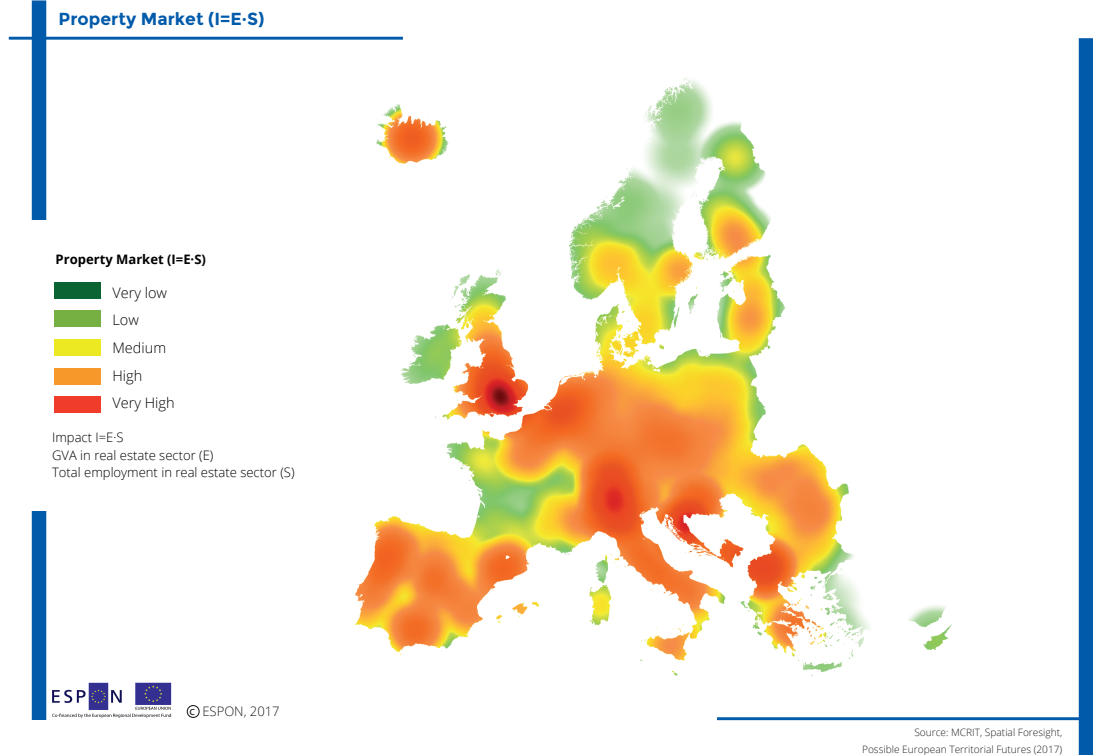
The share of people employed in the real estate sector is highest in urban areas in the UK, densely populated areas in Sweden, Bucharest and the Baltic States. The relatively large share of people employed in real estate activities may indicate long supply chains in these areas. This makes dynamic markets sensitive to a deep crisis, under the assumption that longer chains imply more delay in the supply of housing. Responsiveness of supply to diminished demand and the resulting halt or significant reduction in transactions and takes a long time. In the short term, new residential development may be completed that cannot be sold.

Based on the Eurostat structural business database data on employment per sector these exposed regions have the highest share of employment in the real estate sector compared to the total employment.

The share of employment in real estate is also high in other urban areas in Europe, southern Portugal, northern Italy and the most densely populated regions in Germany.

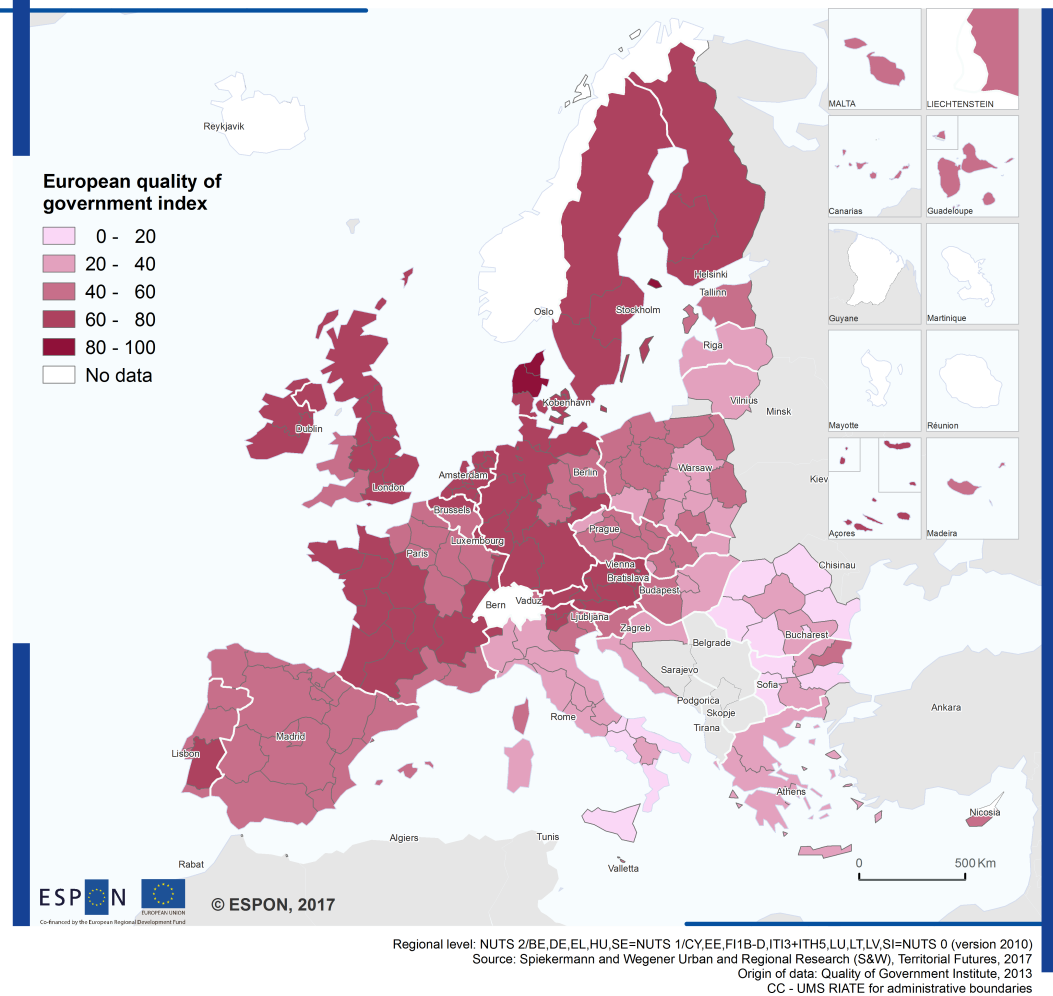
The representation of real estate activities in the economy has greatest negative impact around London, in northern Italy and in Croatia. Map 5.1 below illustrates the impact of a property market collapse based on real estate activities in the region. It combines gross value with employment in the sector.

Map 5.1 Territorial Impact of real estate activities by GVA and employment by region.



The quality of governance is relatively lower in eastern and southern European regions. Rural regions in Romania and Bulgaria as well as in southern Italy have lower quality government than in the rest of Europe (see Map 5.2). This implies that governments in these regions have less capacity to introduce measures to counteract the negative consequence of a housing market collapse, or lack the resources to boost demand.

European quality of government index



5.3.3 Impact

A territorial differentiation can be made between regions that are highly exposed and sensitive to a deep crisis after a property market collapse. Dynamic markets, where housing is predominantly debt financed and with relative long supply chains have the highest chance of a steep drop in demand. Regions where governments lack capacity and resources are particularly impacted.

- **High risk of a steep decline in demand** – Urban regions in Nordic countries, the Baltic countries, the British Isles, Benelux and Romania have the most dynamic property markets, with relatively high residential loan to household income ratios and relatively long supply chains. Therefore, these regions are most at risk of a steep decline in demand after a halt in transactions in property markets. Of these regions, governments in Romania and the Baltic States have the least capacity to counteract the negative effects.
- **At risk of a steep decline of demand but with the potential to cope.** Finnish and Greek regions as well as rural regions in Romania and France are exposed due to their dynamic markets, but are at less risk of a steep decline due to relatively fewer real estate

activities, suggesting shorter supply chains. In these countries household debt in housing is relatively lower than in other European countries.

- **Easy riding.** Property markets in Germany, Poland, Slovenia and Croatia are the least dynamic and thus less at risk of steep declines in demand and a deep crisis.

5.4 Risk of long-term decline in demand

A halt or significant reduction in transactions in housing markets implies a decrease in demand. Static markets have a longer period of steady decline. Regardless of market dynamics the decline in demand may be for longer and may reinforce the halt in transactions, creating a downward spiral of prices and transaction volumes. Regions with low coping capacities to counterbalance this downward development may face a long period of economic crisis.

5.4.1 Exposure

Rural regions in the Baltic states, Bulgaria and former Eastern Germany are expected to experience the greatest decrease in population between 2014 and 2030. In general Europe is expected to further urbanise and population decline is expected in most rural regions. In addition to the regions above, large parts of eastern Europe as well as southern Europe are expected to have declines (Map 4.3).

Example – Lines of development if urban shrinkage – case of Porto, Portugal

Public authorities in the city of Porto, counterbalance the effects of a declining population in the region by revitalising the inner city through resettlement, the promotion of commercial activities, structuring public space and intensified tourist, cultural and leisure activities.

The key objective of stimulating recovery the partially abandoned city centre is to increase the number of families and younger people. These groups should relocate to vacant areas as a catalyst for inner city development. It is noteworthy that the target group of young graduates, young couples and middle-aged people is wide ranged. Vacant retail spaces on the ground floors of many buildings should be reactivated by establishing shops, especially of port wine, other regional products and jewellery. In this context the creative potential of immigrants (for example from Brazil, China, Africa and eastern Europe) should be utilised and their integration supported.

Infrastructure improvements of the telecommunications network and gas supply are expected with the controlled separation of waste water and rainwater. Moreover, measures to improve mobility in the old city centre and more tree planting is expected. Streets in the centre will be largely free of traffic and travel by bike or on foot promoted.

5.4.2 Sensitivity

Exposed regions may be particularly sensitive if they lack other possibilities to restore demand in housing markets, for example by government intervention or by changing the use of the property e.g. to tourist accommodation. Regions where the population is less mobile

are also sensitive to a long decline in housing demand. People living in these areas have fewer opportunities to adapt to new economic situations because they are first faced with accepting a lower price or waiting to move.

Regions in Romania, Bulgaria and southern Italy have the poorest prospects to speed up a recovery in housing transactions. These regions have a lower quality of government, followed by Latvia and Lithuania, large parts of Poland, eastern regions in Slovakia and Hungary, Croatia, Greece and northern Italy apart from Venice and South Tyrol.

Inland regions as well as northern and eastern European regions have the fewest tourist overnight stays. This suggests that these regions are less attractive tourist destinations and there are fewer possibilities to change the use of the property from housing to tourist accommodation. In declining regions, this may imply that in low tourist destination areas housing oversupply would delay the new demand dramatically.

The share of homeownership is highest in Eastern European countries, followed by Nordic countries. In these countries people are less mobile compared to markets with more tenants. This implies that there are fewer possibilities to rebalance population to new labour market characteristics. For example, in the recent economic and financial crisis, the relatively high shares of tenants in Germany and resulting relatively high mobility of the population ensured that people were more able to adapt to new economic situations.

5.4.3 Impact

A territorial differentiation can be made of regions that are highly exposed and sensitive to long-term decline in demand for property.

- **High risk of long decline in demand on the property market.** Inland and rural regions in former East Germany, Romania, Bulgaria, Lithuania and the Nordic countries, as well as central regions in France and Spain, except for Madrid, are at risk of long term decline in demand for housing.
- **At risk of long term decline in demand but with the potential to cope.** Coastal regions in Portugal, Spain and Greece as well as urban areas in former East Germany are declining in population, but have either a more balanced tenure structure, relatively good quality of government or are tourist destinations. So, these regions have more possibilities to counterbalance the decline in demand.
- **Easy riding.** Urban regions in north and west Europe should see an increase in population by 2030 and would not be exposed to long term decline in housing demand.

5.5 Territorial patterns in the new situation

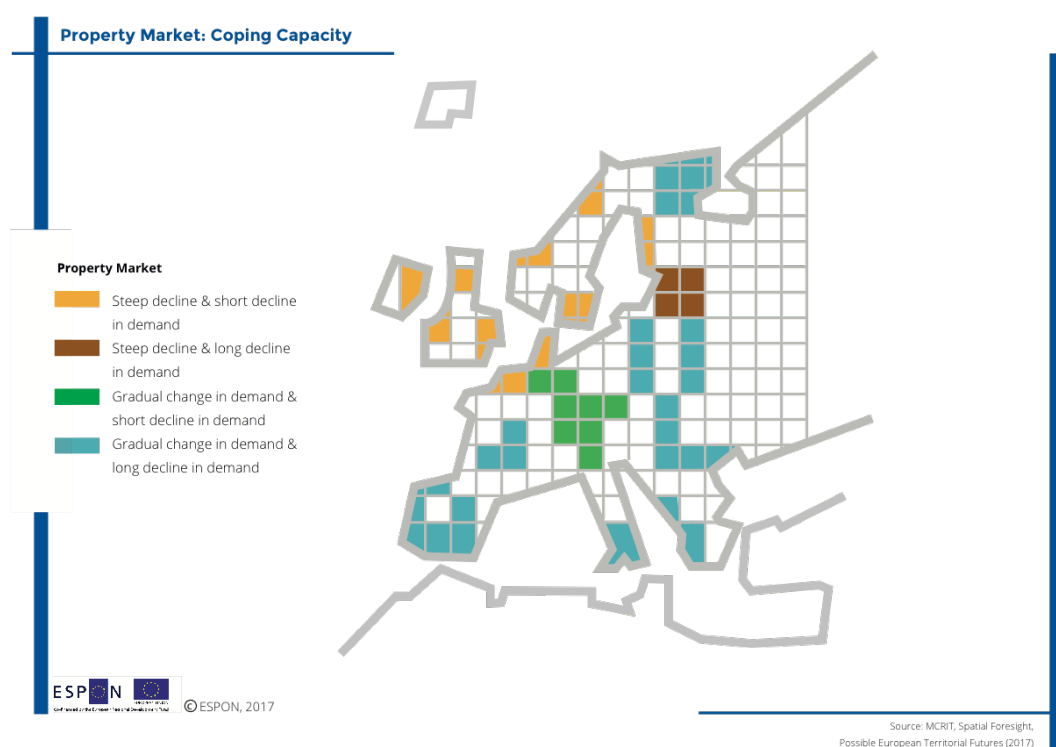
Regions have different capacities to cope with a sudden halt or significant reduction in transactions on the housing market. Dynamic markets that have built their institutions based on many transactions might see the steepest declines in demand. Depopulating regions might

face a longer period of decline due to more challenges to restore demand and thus transactions.

The collapse of housing markets suggests multi-speed economic development in Europe. Urban regions in northwest Europe may be hard hit, but only for a short period of time. These regions have attractive property markets and their governments have sufficient capacity to counterbalance the main negative effects. Coastal regions in southern European countries, such as Portugal, Spain and Greece, may be hit later by the crisis as they are less exposed to a steep decline in demand, but they are exposed to a longer period of declining demand for housing. However, these regions have some possibilities to prevent long-term declining demand. Rural and inland regions in southern and eastern Europe as well in the northern periphery are hit later by the collapse and lack both the market and the governmental capacity to prevent a long-term decline in housing demand.

Map 5.3 illustrated the variety of developments of European regions after a property market collapse. Following the discussions above, some regions have steep, but short declines in demand, some steep and long, other regions have a gradual decline or no decline and for a short period and yet other regions have a gradual decline in demand for a long period of time.

Map 5.3 *Sketch of the territorial impact of the magnitude and length of the collapse by region's coping capacity*



A halt or reduction in housing market transactions may imply increasing territorial cohesion in the short term. Regions in north-west Europe may see a steep decline in demand. These are currently among the more prosperous regions in Europe. Low demand directly after the housing market collapse would suggest a more balanced distribution of GDP

in the short term. However, most of these regions are expected to quickly recover from the housing market collapse.

Rural regions in eastern and southern Europe may experience a longer period of decline suggesting increased territorial imbalances at European and urban-rural levels.

Although these regions are not hit directly by a steep decline in demand, they lack the opportunities to increase demand or limit supply after a halt in property transactions.

Table 5.1 Summary of territorial impact on regional coping capacity

	Highly exposed and highly sensitive	Highly exposed but not so sensitive	Low exposure and low sensitivity
Steep decline in demand	Urban regions in Nordic countries, Baltic States, British Isles and Benelux.	Finnish and Greek regions as well as rural regions in Romania and France.	German, Slovenian and Polish, Croatian regions.
Long term decline in demand	Rural regions, primarily in eastern and southern Europe.	Coastal regions in Spain, Portugal and Greece and well as larger towns in Germany	Urban regions, especially in northwest Europe.

Shifting investment dynamics in the market as secondary effects. The territorial impacts outlined above depend on different regional coping capacities that may have secondary effects. In declining markets, investors may move from high risk investments in housing to lower risks, such as housing markets abroad or bonds if a decline in demand is expected to be met with lower interest rates. For example, during the recent economic and financial crisis the number of investors in the Viennese market increased. This market was seen as having the lowest risks in a declining European housing market. As a result, the number of new homeowners, often private investors, led to increased prices in this market. The easy riding regions may see an even faster or steeper recovery in transactions and residential property prices.

Alternative futures

The coping capacity is the capability to offset negative impacts of a property market collapse through a broad range of instruments (policies and regulations). As such, coping capacity differs across EU countries to the extent that a broad range of instruments can be made available for national property markets with different levels of effectiveness. The instruments can address both demand and supply side factors which can influence the economy's resilience to the collapse.

On the supply side, rules and regulations can influence the housing market through social housing policies and rental market regulation as well as improving the responsiveness of supply through construction regulation.

On the demand side, government regulations can influence household demand, e.g. via taxation incentives, easing credit availability as well as the regulation of mortgage markets.

In the **high resilience** scenario, EU countries apply the following policies and regulations.

- An increase in the **supply of social housing**. This is an instrument with which governments support housing for certain categories of households. In general, two social housing models can be identified: one broad-based, in which social housing is widely accessible and the other more targeted to specific types of households. In the high resilience scenario, the increase in social housing avoids two common drawbacks: 1) crowding out private investment, so the total (public and private) long-run supply of accommodation is not affected; and 2) residential segregation, particularly when targeting households in greatest need, which may result in a concentration of low income households in particular zones.
- **Land use and planning regulations**. These are important instruments to improve property market resilience. In the high resilience scenario, it is assumed that land use and planning regulations are associated with a responsive housing supply.
- **Rental regulation** concerns regulations covering rents and landlord-tenant relationships. In the high resilience scenario, rental regulations address market imperfections such as asymmetric information and/or unequal bargaining power between landlords and tenants, favouring the development of market transactions.
- **Financial regulation and housing taxation**, on the demand side, in the high resilience scenario reduce or avoid risks to macroeconomic stability (as in the 2008 financial crisis) and ensure a more balanced allocation of savings and investments.

In the **low resilience** scenario, the coping capacity in EU countries is characterised by weaknesses and flaws in the following areas:

- **High social housing rates**, which pose risks to mobility. Empirical evidence has shown that tenants in below-market rent social housing are on average 6% less mobile than private tenants (OECD, 2011).
- **Ineffective land use and planning regulations**, i.e. excessive and burdensome administrative procedures and licensing processes, which reduce market responsiveness to new household construction. The same holds for the long time needed to obtain approval for building permits, which can reduce the long-term market resilience.

6 Strengthening territorial cohesion after a housing market collapse

This final chapter focuses on potential policies to strengthen territorial cohesion in Europe after a housing market collapse.

For this purpose, the main differences in terms of territorial cohesion after a housing market collapse and in a business as usual scenario are repeated from the introduction and volume B of this draft interim report. Based on relevant drivers for these differences being identified, subsequent policy can be developed to further support territorial cohesion.

6.1 Territorial cohesion today and tomorrow

As shown in volume B of this draft report on the future of the European territory, a business as usual scenario for the territorial future of Europe points to considerable challenges for territorial cohesion, including:

- increasing polarisation of settlement patterns;
- increasing concentration of economic activities;
- growing climate change and environmental concerns; but on the positive side
- technology and innovation hold the potential to make new regional stars.

A property market collapse has a different impact on territorial cohesion and a polycentric development. Aspects such as increased risks of spill-over and social exclusion are generally high in well-developed parts of Europe suggesting increasing territorial cohesion. Cross-analysing the different effects of the property market collapse shows territorial diversity and divers development to territorial cohesion over time.

- **Increasing disparities between urban and rural regions (chapters 3.3 & 4.3).** Sectors directly linked to housing, such as the construction sector are more important in rural regions, where there are also fewer opportunities to temporarily rent. This makes rural regions more vulnerable to the negative consequences of a property market collapse.
- **Temporarily increasing territorial cohesion due to high impacts in northwest European cities (chapters 3.4, 4.4 & 5.3).** Regions in Europe's core are among the most exposed and sensitive regions to a halt in transactions. These markets are more dynamic, have longer supply chains and have more outstanding loans compared to GDP, suggesting close links between the property and financial markets. A halt to transactions in the property market in these regions implies a steep decline of demand and a spill-over of the housing collapse to a general crisis. Furthermore, cities are more impacted by increasing poverty, implying lower wealth in urban regions compared to rural regions.

These markets are however also, among the regions with sufficient capacity to regain demand, e.g. due to a growing population. So, the effect on increasing territorial cohesion might be temporary.

- **Increasing long-term centre – (inner) periphery differences (chapters 3.3 & 5.4).** In the long-term disparities between urban centres and (inner) peripheries might grow. Inner peripheries have declining populations and therefore fewer opportunities to revive transactions in the property markets. These regions may also face lock-ins.

6.2 Changed drivers for territorial cohesion in the new situation

As consequence of a housing market collapse people, governments and other players on housing markets may shift their priorities regarding territorial development. From the four domains defined in this study (demographic change, socio-economic development, environmental and climate change, and technological development see Volume B) the focus would primarily be on demographic change and socio-economic development.

The expectation is that housing markets affected mostly demographic and socio-economic territorial development. These territorial development domains directly link to the demand and supply of housing. Demand for housing is heavily influenced by population changes - new people moving into the region, or evolving family structures. The fewer people in a household, the more demand for housing (EUROSTAT, 2015).

Technological and environmental territorial development are rather indirect affected by a housing market collapse. Technological development may play a role in providing new solutions to adjust housing supply to demand. This could include new developments regarding constructing houses in a modular method or via additive manufacturing (3D printing). Territorial development regarding environmental and climate change may diminish the supply of land or investment in environmentally-friendly measures. Areas that face population decline may have fewer new urban developments and thus less need for land. Homeowners may invest less in environmental-friendly measures as a decrease in home value decreases their wealth.

Due to the close relation between the housing market and macroeconomics, governments would be concerned about containing and mitigating risks after the collapse. The main drivers in the socio-economic domain may therefore focus on economic resilience to maintain wealth and employment levels.

6.3 Pointers for policies for territorial cohesion tomorrow

To ensure more territorial cohesion after a housing market collapse, negative effects would need to be prevented and positive effects encouraged. The literature proposes mainly economic and financial measures at the national level. The following pointers in support of balanced polycentric development and territorial cohesion focus on local and regional levels.

Increase diversity. Diversity is one of the key concepts to increase resilience to a housing market collapse, as the alternative futures have shown.

- **Diverse tenure structures increase stability in the housing market.** The most static markets in Europe have the least difference in transactions and housing prices during

both boom and bust phases. These have the most diverse tenure structures. Local and regional governments may support this by providing social housing.

- **Diversity in economic sectors increases economic resilience.** The ESPON ECR2 project showed that economic diversity in terms of the variety of sectors increases resilience to crisis in terms of employment and GDP. Decreasing a dependency on construction and / or real estate sectors decreases the risk of unemployment.
- **Diverse service provision increases attractiveness of the location.** Ensuring good access to services of general interest, i.e. by improving infrastructure, affordability and quality may improve the attractiveness of a location, increasing demand or slowing a decline. Local or regional authorities in such areas may want to cooperate to reach critical mass for service provision in a wider area.

Reduce policies that boost location values. Governments use instruments that support demand for housing. Many of these policies may increase property prices. The net effect is that property becomes less affordable.

- **Reduce mortgage deduction policies.** These policies generally support higher prices and more household debt, resulting in property price collapses with stronger effects.
- **Make certain that measures intended to increase affordability of housing do not result in higher prices, but in more affordable houses.** This means that affordability support should not to increasing property prices. Housing allowances can encourage higher rents (in the short term the supply of houses stays the same so property values increase).
- **Develop tax systems to benefit from increased values.** By taxing property based on its value can reduce the effects of a property collapse. Current systems tax increased values (income taxes, VAT on improvements and profit taxes) more than property values. Changing this could reduce impacts from housing market collapses.

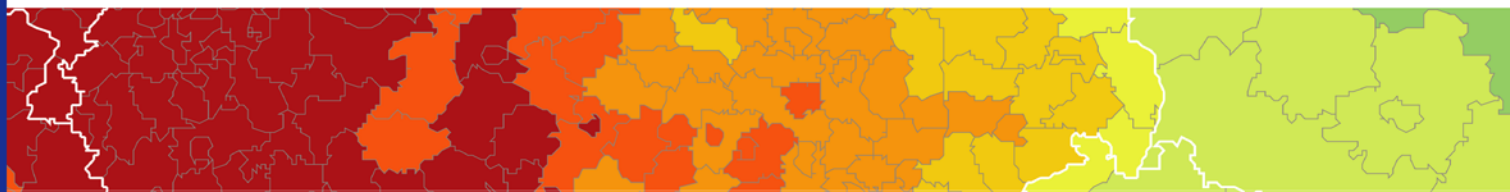
Make the banking system more resilient to housing market collapse. After the credit crunch policies strengthened the banking sector in this respect. It would be necessary to evaluate these actions and improve them to prevent a housing market collapse impacting the banking sector.

Support initiatives and allow for innovation. Through spatial planning tools local and regional authorities can intervene in the housing market, reducing regulation making the market more robust.

- **Allow innovative developments for new housing.** Cooperative development via local bottom-up movements or allowing temporarily renting out to students or tourists may create new opportunities for housing supply.
- **Support more investment.** construction costs and related sectors will go down during a housing market collapse. Make use of this opportunity to invest in public goods.

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