European Commission

European
Construction Sector
Observatory

Analytical Report

Stimulating favourable investment conditions

October 2016

Construction

Table of Contents

Table of Figures

Executive summary

This analytical report is conducted by the European Construction Sector Observatory (ECSO) and aims to provide insight into the Thematic Objective 1 "Stimulating favourable investment conditions" of the EU Construction 2020 Strategy[1]. It gives an overview of the investment trends in and by the construction sector of 10 EU Member States (MS)[2]. It also focuses on policies that have an effect on investment in the construction sector, particularly in the residential, non-residential and infrastructure markets in the MS analysed.

Comparing construction output to the GDP in 2014 shows that the narrow construction sector (construction, building and civil engineering[3]) plays a significant role in each of the sample of 10 MS, amounting to 4.9% of GDP at the lower end of the spectrum in Ireland and Hungary, and to 13.2% of GDP at highest end in Sweden, with 10,9% in Poland and 10,1% in Germany. On average, the GDP share of the narrow construction sector is approx. 8.8% for the EU-28.

In terms of investment trends, **key indicators to be considered are construction costs, gross operating surpluses as well as business confidence**. The highest surplus across all four sub-sectors analysed was reached in 2012 by Germany in the real estate sector, amounting to EUR 61 billion. The real estate sector enjoys large surpluses also in France and the UK (EUR 26 billion each). The highest surpluses generated by the narrow construction sub-sector are found in the UK (EUR 45 billion), Germany (EUR 22 billion) and in Italy (EUR 21 billion). Architectural and engineering activities in this sample, despite having low surpluses in absolute terms, had a relatively high profitability, from 8% in Sweden to 25% in the UK, with the exception of Ireland with a negative gross operating rate (-1%). Narrow construction had on average a profitability of 7%-19%, while manufacturing had a profitability of 7%-8% in Sweden and Germany. While growth in construction has been picking up since the decline caused by the economic crisis, business confidence in the sector remained negative for the 10 countries analysed, indicating that the crisis is still disruptive in its aftermath.

The analysis revealed that the countries with a strong and well-developed economy (e.g. Germany, France, Italy and Sweden) had a similar **investor structure in the construction sector** in 2013. These markets are characterised by the high share of investment from the real estate sector (on average 60% of total investment), followed by a similar share of the non-financial sector (15%) and the public sector (14%), with marginal contribution of other investors. In contrast, markets like Hungary have a more balanced investor structure, with equal shares each (22%-26%) of investment from the real estate, public, non-construction and non-financial sectors for a total of 97% of all investment in construction.

At the same time, **investments made by the construction sector** in Europe were heavily influenced by the general economic trends. In terms of specific investments in assets types, the category **'other machinery and equipment'** takes a prominent role in investments made by the narrow construction sector, particularly in Italy, Spain and the UK which have each invested EUR 3.7 billion, EUR 982 million and EUR 448 million in 2012, respectively. In contrast, the Irish construction sector divested of machinery for an amount worth EUR 41.5 million. **Transport equipment** also is an important area of investment for the sector. In 2012, most investment again came from Italy (EUR 1.4 billion) followed by Spain (EUR 795 million). Conversely, the UK construction sector heavily divested of transport equipment (EUR -392 million). Finally, investments into **intangible assets**, notably computer software, play a significant role, particularly given the increasing importance of digitisation in the sector. The UK leads investment in this field with EUR 627 million spent on intangible assets in 2012. Substantial investment also comes from Spain (EUR 259 million) and Italy (173 million).

As for **access to finance**, it appears that enterprises face different types of challenges, depending on their size. SMEs are still affected by lack of funding, while large firms struggle more with low profitability than with access to capital. High levels of non-performing loans in certain MS are further curtailing lending, in particular to construction SMEs. Late

1 https://ec.europa.eu/growth/sectors/construction/competitiveness_en

2 This analytical report is based on the results of the analysis of the construction markets in 10 EU MS: Germany (DE), Spain (ES), France (FR), Hungary (HU), Ireland (IE), Italy (IT), Poland (PL), Romania (RO), Sweden (SE), and the (United Kingdom) UK. The report will be updated upon completion of the analysis of the remaining 18 countries.

3 For further clarification on nomenclatures used refer to Annex 1 – Legend

payments also affect investment, although not all countries are impacted to the same extent. Insufficient collateral or guarantees (17%) and high interest rates (15%) are considered. to be the main barriers to financing in construction. To ease access to finance in the future, respondents see the need for policy intervention. Tax incentives, subsidised loans, grants, as well as availability of guarantees for loans, are viewed as important by surveyed SMEs in construction.

Late payments are a recurring issue affecting the investment landscape in the construction sectors of all Member States analysed. The construction and real estate sectors were responsible for 16% of the total Romanian overdue payments in 2014. Late payments between Polish construction contractors result in a considerable financial burden, with an ensuing debt estimated to amount at PLN 200 million (EUR 48.2 million). In addition to being associated with financial and liquidity issues, late payments are also linked to other structural issues, such as employment. As an example, in Sweden 9% of construction companies and 19% of real estate firms ascribe employee dismissals to late payments, and 12% of construction companies and 35% of real estate firms cite late payments as a main barrier to personnel recruitment.

Policies meant to strengthen investment in the **residential building market** can be divided in three main categories: improving the regulatory environment by simplifying the planning process and building rules, as well as introducing guidelines (e.g. 2013-Sweden, 2015-UK), financing of residential development (Real Estate Investment Trusts and Home-Building Investment Finance Joint Venture in Ireland), and supporting the rental/ownership markets (e.g. French Duflot and Pinel laws).

Investment levels in the **non-residential sector** have experienced a significant decline since the onset of the crisis, lingering below the pre-crisis level in the majority of the 10 Member States. Two main trends emerge: policies to address poor quality non-residential buildings for public use by supporting investment from municipalities and local authorities (e.g. Italy) and initiatives for the revival of non-residential building investments, namely with regard to commercial and retail properties. The available budgets committed vary considerably between Member States (e.g. EUR 155.4 million for the Romanian National Programme for Public or Social Buildings, EUR 1.6 billion for the Swedish healthcare investment projects, or EUR 15 billion per year for the German National Investment Pact for Municipalities).

Trends in **infrastructure investments** across the sample analysed indicate that infrastructure development is currently still suboptimal and that investors tend to concentrate the bulk of their investments in new infrastructure construction projects. Conversely, in countries where transport infrastructure is typically better developed, infrastructure investment tends to focus predominantly on maintenance. France and Germany are leaders in terms of investments in road infrastructure, having invested EUR 12.1 billion and EUR 11.7 billion in 2013, respectively, the highest among the analysed countries and in the EU-28. Nevertheless, the two countries are currently facing investment difficulties in the maintenance of their well-developed but ageing infrastructure. Indeed, France only invested EUR 2.9 billion in 2013 in the maintenance of its road infrastructure, and it is estimated to require an additional investment of EUR 50 billion per year until 2020 for this purpose. Financing of infrastructure can take many different forms and often benefits from EU support through different financial instruments.

Since 2014, the construction sector in the EU has given signs of stabilisation, and the outlook is generally considered positive for the years ahead, with growth forecasts of up to 3% per annum. Investment in construction is also witnessing a positive development. After a slowdown over the past years, 2014 marked an inversion of the trend, with investment growing by 0.8%, accompanied by net job creation. Total investment in construction amounted to EUR 1.37 trillion in 2014.

1. Introduction

The importance of the construction sector in Europe

The construction sector is of strategic importance for the European Union, being a pillar for both the economy and society. It generates almost 9% of gross domestic product (GDP) in the European Union and provides 18 million direct jobs, having a direct impact on the safety of persons and on the quality of life[4]. The financial crisis has particularly affected the construction sector, resulting in severe drops in demand, especially in the private residential and infrastructure market. In some EU countries, the burst of the housing bubble was one of the triggers and has continued to significantly reduce activity in the sector. In others, the sector suffers particularly from the contraction of credit markets.

The constraints on public spending due to the crisis will put further pressure on investments in infrastructure works. Some countries have invested in stimuli packages as a response to the crisis, for example with up-front investments in infrastructure projects, a reduced VAT rate for new construction and/or renovation of buildings, preferential interest rates for mortgages, etc[5]. However, only those approaches that include measures aiming to upgrade skills and qualifications, innovation and a 'green' economy will ultimately have long-lasting effects on the competitiveness of the sector. This highlights the need for an appropriate policy formulation that stimulates investment and growth in the short term, but also a restructuring of the construction sector in the long term[6].

Construction 2020 Strategy

In order to achieve sustainable and cohesive growth across the EU, the Europe 2020 Strategy set an overarching framework for a future strategy for construction, focusing on the following three priorities:

- Smart growth: developing an economy based on knowledge and innovation;
- Sustainable growth: promoting a more efficient, greener and more competitive economy;
- Inclusive growth: fostering a high-employment economy delivering social and territorial cohesion.

In 2012, as a part of Europe 2020 Strategy, the European Commission issued a Communication on the "Strategy for the sustainable competitiveness of the construction sector and its enterprises"[7], aimed at facilitating sustainable growth and development in the construction sector. This Communication was accompanied by an Action Plan, commonly known as "Construction 2020", which aims to support the construction sector in its adaptation to key upcoming challenges and to promote the sustainable competitiveness of the sector.

Construction 2020 is focusing on the identification and implementation of measures that help fostering sustainable competitiveness in the construction sector in the short, as well as in the medium to long term. It intends to define sound conditions on a general level for investment, research, innovation, entrepreneurship, higher resource efficiency and work environment. It also encourages actions to reassure and ameliorate the functioning of the Internal Market and help remove barriers to trade and business at international level.

The Construction 2020 Action Plan is organised around **five key strategic objectives**[8]:

---

4 European Commission, The European construction sector: A global partner. March 2016. http://ec.europa.eu/growth/tools-databases/newsroom/cf/itemdetail.cfm?item_id=8753&lang=en&title=The-European-construction-sector%3A-a-global-partner

5 Commission Staff Working Document accompanying the document Communication from the Commission "Strategy for the sustainable competitiveness of the construction sector and its enterprises"

6 European Commission, Communication from the Commission to the European Parliament and the Council, Strategy for the sustainable competitiveness of the construction sector and its enterprises. July 2012. http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52012DC0433&from=EN

7 European Commission, Communication COM (2012) 433 final.

8 High Level Tripartite Strategic Forum, Report on follow-up actions on the Communication and Action Plan Construction 2020. February 2014.

1. Stimulating favourable investment conditions
2. Improving the human-capital basis of the construction sector
3. Improving resource efficiency, environmental performance and business opportunities
4. Strengthening the Internal Market for construction
5. Fostering the global competitive position of EU construction enterprises

Thematic Objective 1 - Stimulating favourable investment conditions

Thematic objective 1 "Stimulating favourable investment conditions" is the subject of further analysis of this analytical report. TO1 aims to increase the inflow of public and private investment into the sustainable construction sector. The focus of the TO1 is on building renovation and Trans-European Networks projects, which are expected to revitalise the growth of the construction sector, while helping reach the objectives of the European Energy, Transport and Cohesion Policies. This is expected to be achieved through a set of short and medium-to long–term measures.

Short-term measures focus mainly on building renovation and infrastructure maintenance, particularly in terms of resource efficiency. They put specific emphasis on the implementation and enforcement of the Directive on Energy Performance of Buildings, as well as the implementation of the new Late Payment Directive to strengthen the financial capacity of the construction market. The short-term measures also foresee the promotion of fiscal incentives and financial support initiatives though national schemes, EU and private funds, as well as the introduction of financial instruments to optimise the leverage effect.

Medium to long-term measures are putting greater emphasis on supporting investments related to EU climate and energy targets (e.g. ESI Fund's shift towards investments in the low-carbon economy). They foresee a wider implementation of engineered financial instruments (e.g. project bonds) in energy efficiency and renewable energy investments in urban infrastructure and the building sector. Long-term measures focus on the creation of a framework for the development of Trans-European Networks for Transport (TEN-T) and development of innovation strategies for smart specialisation, boosting smart growth in regions. The latter is expected to be achieved through the transformation of research and innovation activities into market based demand-side instruments, in order to accelerate the transition from research to the exploitation of innovative solutions.

Based on the specific focus of the Thematic Objective 1, **this analytical report aims to**:

1. Provide an overview of the investment trends in and by the construction sector of 10 EU Member States[9];
2. Identify policies that have an effect on strengthening investment in the construction sector, particularly in residential, non-residential and infrastructure markets in the analysed Member States;
3. Analyse financial schemes and financial instruments used to boost investment in construction;
4. Link structural issues that limit investment in and by construction to best policy practices and lessons learned from the specific policy experience of Member States;
5. Provide an outlook on the further development of the construction sector in Europe.

European Construction Sector Observatory in the context of the Construction 2020 Action Plan

This analytical report is part of the **European Construction Sector Observatory (ECSO)**, a COSME[10] initiative aiming to provide an up-to-date analysis and comparative assessments of the market conditions and policy developments related to the construction sector in the EU-28 with respect to the different elements of the Construction 2020 Strategy.

[9] This Analytical report is based on the results of the analysis of the construction markets in 10 EU Member States: Germany, France, Hungary, Ireland, Italy, Poland, Romania, Spain, Sweden and the United Kingdom. The report will be updated upon completion of the analysis of the remaining 18 countries.

[10] COSME, http://ec.europa.eu/growth/smes/cosme/

ECSO delivers an analysis of the construction sector environment though country-specific assessments, presented in the form of Country Fact Sheets, and brief analyses of specific policy initiatives though Policy Fact Sheets. The analysis presented in this Analytical Report is based on the findings of both Country Fact Sheets and relevant Policy Fact Sheets for 10 EU Member States: Germany, France, Hungary, Ireland, Italy, Poland, Romania, Spain, Sweden and the United Kingdom. All specific Country Fact Sheets and Policy Fact Sheets, along with the Analytical Report, benefited from consultation with relevant country experts, and are publicly available on the webpage of the European Construction Sector Observatory[11].

2. Investment landscape in the construction sector

This chapter sets the scene of investment in the construction sector by looking at the key performance indicators (output, construction costs, gross operating surplus, business confidence) and factors that affect investment. In a second step, the emerging trends in investment are discussed, taking into account the main construction markets as well as geographic trends. Finally, important structural aspects affecting investment are analysed, namely access to finance and late payments.

Factors affecting investment in the construction sector

The investment landscape in the construction sector is varied across the 10 MS analysed. The effects of the economic crisis are still looming on a number of MS, while austerity is reducing investment in public infrastructure across the EU. Numerous factors affect investment in the construction sector, which can be related to the wider economy or are specific to the construction industry. Notably, the output of the construction sector is an important indicator of the health of the construction sector, and thus contributes to higher rates of investment. It brings an understanding of the underlying factors affecting competitiveness. Furthermore, business confidence in the construction sector can also provide insight into the investment climate for the sector.

Output of the narrow construction sector

In the following section, the output of the narrow construction sector as a share of GDP is analysed in order to draw conclusions on the relative size of the narrow construction sector in each of the 10 MS. **Comparing construction output to the GDP** shows that the narrow construction sector plays a significant role in each of the 10 MS amounting to 4.9% of GDP at the lower end of the spectrum in Ireland and Hungary, and to 13.2% of GDP at highest end in Sweden. On average, the share of the narrow construction sector in the GDP is 8.8% for EU-28.

Northern Europe showed some multidirectional trends in in this respect. The highest construction output as a share of GDP was recorded in the Sweden (13.2%) and Germany (10.1%). Ireland scored the lowest in absolute and relative terms, with its construction output reaching only 4.9% of GDP or EUR 9 billion in monetary terms (Figure 1).

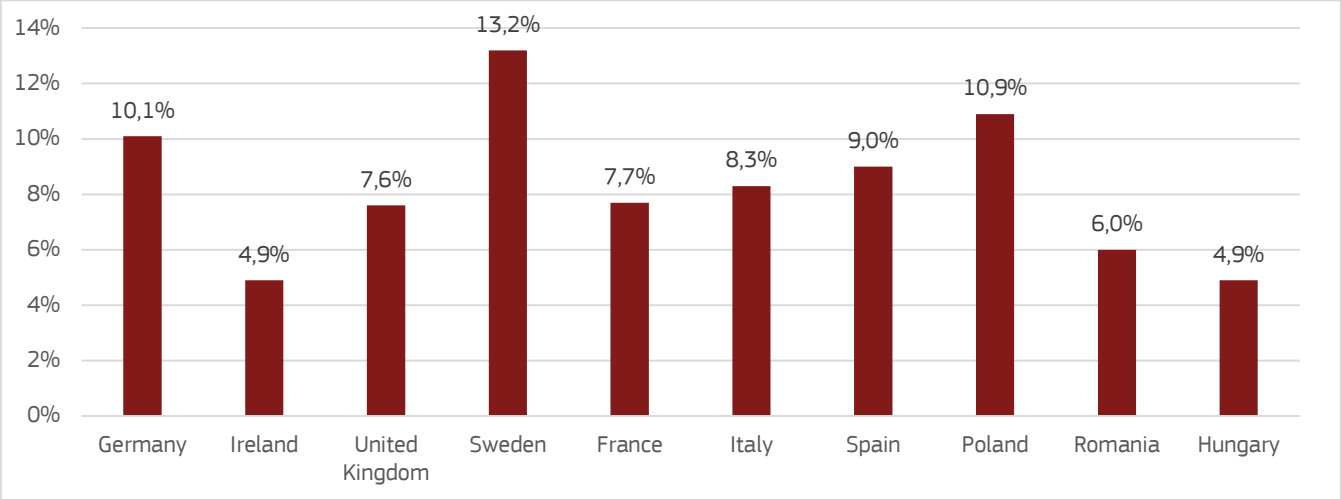
Central and Eastern European countries, namely **Poland, Hungary and Romania, showed the relative importance of the narrow construction sector in the economy, however, scoring the lowest among the countries analysed.** Poland has the highest share of construction sector in the economy in the analysed sample (10.9%), followed by Romania (6.0%) and Hungary (4.9%). In the absolute terms, Hungary and Romania have shown the lowest output of narrow construction in absolute terms from ten courtiers analysed, reflecting the lower size of their economies compared to other countries.

Overall, the narrow construction sector **plays a strong role in the Southern European construction market** both considering output in monetary terms and relative to GDP**.** France leads in the region in terms of output of narrow construction in absolute terms, as in 2014 the French narrow construction sector was expected to reached a output of EUR 164 billion. However, in the relation to the GDP this amount reflects only 7.7% of the GDP, the lowest in the region. In terms of narrow construction output as a share of GDP, it is highest in Spain accounting for 9.0% of Spanish gross domestic

[11] European Construction Sector Observatory (ECSO) http://ec.europa.eu/growth/sectors/construction/observatory/

product or EUR 95 billion. The narrow construction market is sizeable in Italy too, where construction output accounts for 8.3% of Italian GDP (EUR 135 billion).

Figure 1: Output of the narrow construction sector as a % of GDP in 2014 (%) [12]



Source: FIEC, 2015

Construction costs of new residential buildings

The overall construction costs including material and labour costs and of the construction sector have an impact of the overall profitability of the market and are therefore carefully monitored by investors. For the majority of countries, construction costs have experienced modest growth over the past years, as shown in Figure 2[13] for the construction costs of new residential buildings.

Most of the countries in **Northern Europe** (UK, Sweden and Germany) showed similar trends in the development of the construction cost index for residential buildings, growing steadily between 2006-2013 by about 10 index points. Thus, rising costs are putting increasing pressure on the profitability of the construction sector. This is partly linked to the numerous company defaults resulting from the crisis, which are leading to shortages in the market with respect to skilled employees and qualified sub-contractors[14]. Conversely, Ireland has reported significant changes in the cost index, growing fast in 2006-2007, followed by a sharp decline in 2008-2011, as a result of the housing bubble and financial crisis. The construction cost index has started to recover since 2012.

Countries in **Southern Europe** (France, Italy and Spain) experienced similar trends of gradual growth in construction costs for residential buildings over the past years, not showing major signs of vulnerability. This gradual increase of prices is based on the economic situation, market conditions and mild inflation.

The situation in **Central and Eastern Europe** was quite multidirectional in the last decade. In Poland, construction costs of residential buildings have fluctuated in the years 2010 to 2013, subsequently rising in 2011-2012 due to the increased demand and concentration of the public contracts in this period. The ensuing decline of costs was influenced by decreasing marked demand and low prices of public contacts dominating the market. Such fluctuations have caused considerable

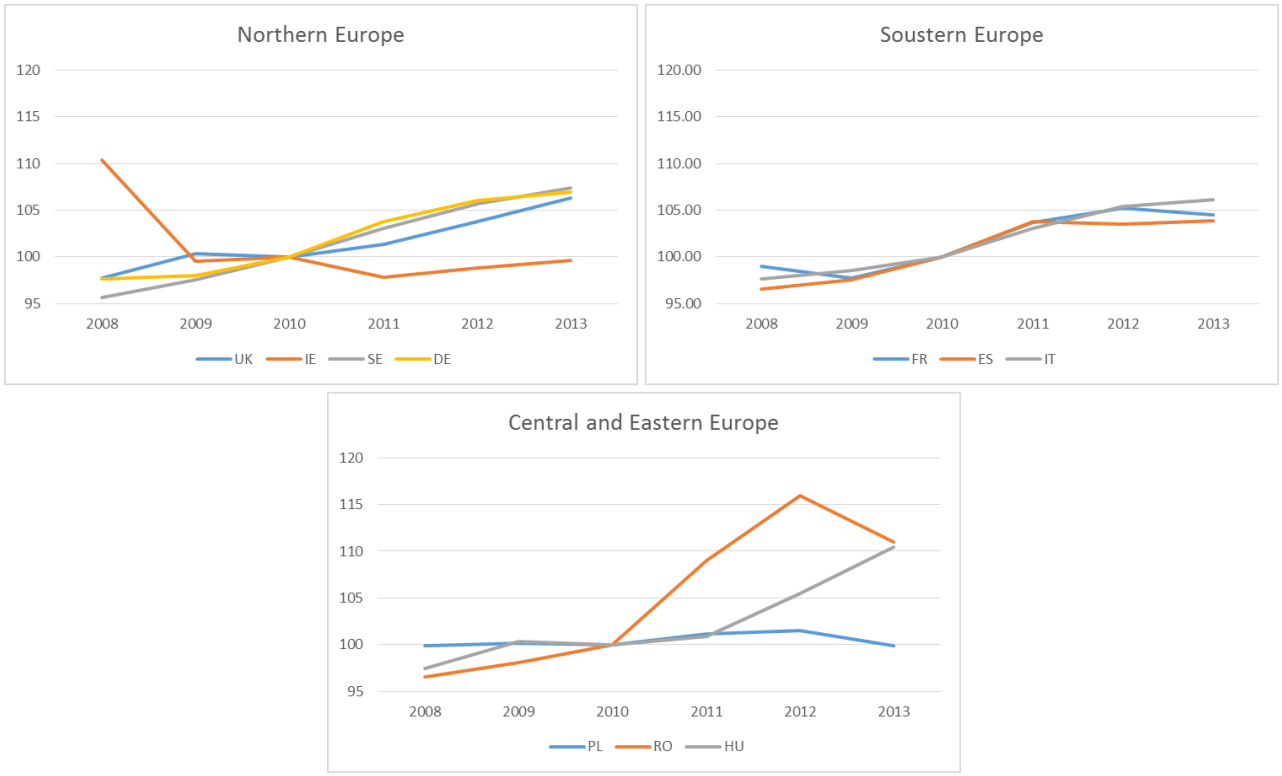
[12] Forecasted values for 2014

[13] The following analysis is based on the construction cost index (CCI) of residential buildings except residencies for communities (in national currency).

[14] Deloitte, European Construction Monitor, Trends for 2013-2015: Supply chain pressure in recovering markets: an isolated case or an emerging trend? December 2014. http://www2.deloitte.com/content/dam/Deloitte/de/Documents/real-estate/Deloitte_Deutschalnd_Construction_Monitor.pdf

financial stress for Polish construction companies, affecting their profitability and putting them at risk of insolvency[15]. Construction costs have increased significantly in recent years in Hungary and Romania. In fact, Romania has seen its construction costs skyrocketing since the 2000s. Hungary also experienced a rapid rise in its construction costs since the 2000s albeit from a higher starting point. Costs have continued to rise over 2011-2013.

Figure 2: Construction cost index for new residential buildings in 2008 - 2013 (national currency, 2010=100)



Source: Eurostat, 2015

Gross operating surplus

The **gross operating surplus**[16] gives an indication of the profitability of the construction sector, which has an impact on the attractiveness of the sector for investment. While gross operating surpluses vary substantially across the sub-sectors and MS analysed, some trends have affected the overall profitability of the sector. For instance, competition is considered fierce in Southern and Eastern Europe. Furthermore, the observed trend of increase in construction costs in the UK and Ireland may further squeeze profits in industries that are recovering from the crisis.

As a general tendency, turnover and gross operating surpluses follow a similar pattern, with the leading countries in terms of turnover having relatively high surpluses, and the laggards also accounting for small surpluses. The highest surplus across all four sub-sectors was reached in 2012 by Germany in the real estate sector, amounting to EUR 61 billion. Real estate enjoys large surpluses also in France (EUR 26 billion) and the UK (26 billion). The narrow construction sub-sector overall generates the highest surpluses, particularly in the UK (EUR 45 billion), Germany (EUR 22 billion) and in Italy (EUR 21 billion).

The **profitability** in the construction sector could be estimated by the **gross operating rate,** which corresponds to the share of gross operating surplus in turnover. Thus, real estate activities in **Northern European countries** (UK, Ireland, Sweden and Germany) in 2012 proved to be the most profitable, with the operating surplus rates varying from 29% in

[15] COFACE, Panorama: Poland construction sector. January 2015.

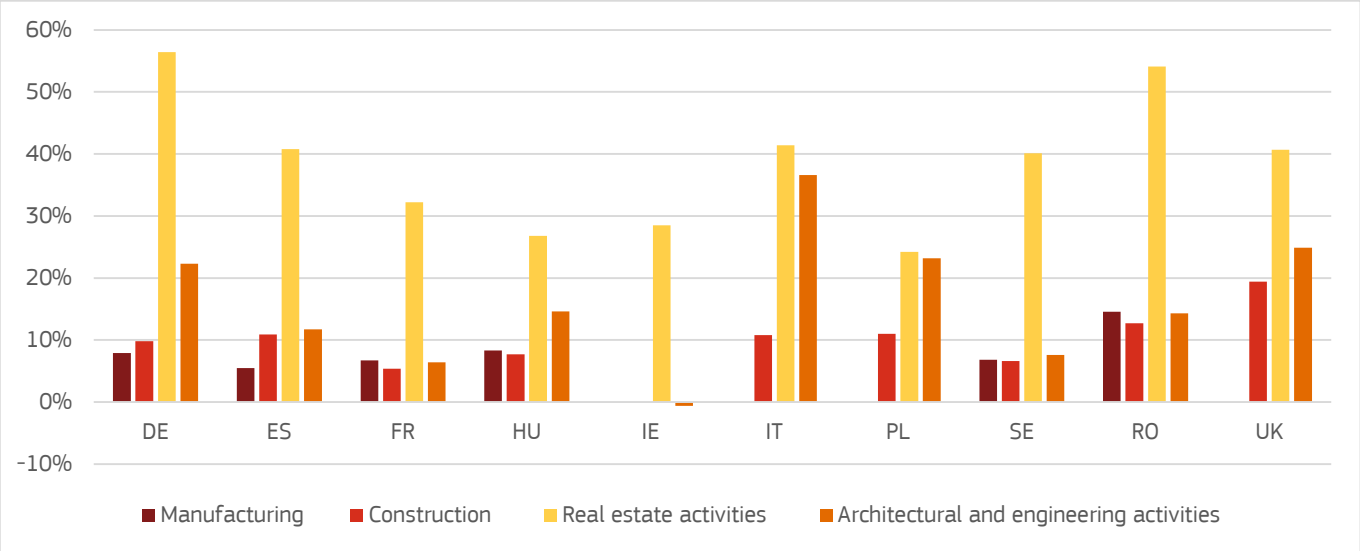
[16] The gross operating surplus is the surplus generated by operating activities after the labour factor input has been recompensed.

Ireland to 56% in Germany. Moreover, Germany's gross operating surplus was the highest in absolute terms among the countries analysed. Architectural and engineering activities in this region, despite having low surpluses in absolute terms, had a relatively high profitability, from 8% in Sweden to 25% in the UK, with the exception of Ireland, with a negative gross operating rate (-1%). Narrow construction had on average a profitability of 7%-19%, while manufacturing had a profitability of 7%-8% in Sweden and Germany.

In 2012, the gross operating rate in the construction sector of **Southern Europe** showed similar trends for France, Italy and Spain. In these countries, real estate activities proved to be the most profitable, with a gross operating rate of 32% in France and 41% in Spain and Italy. In monetary terms, however, France's gross operational surplus was more than 2 times higher than the one of Spain. Italy showed high gross operating rate for architectural and engineering services (37%), much higher than in other countries of the region. The profitability of the construction sub-sector in the region was rather low, varying from 5% in France to 11% in Italy and Spain. Italy's surpluses in the construction sub-sector were second highest (EUR 21 billion) among the countries analysed, whereas its construction turnover is the fourth highest, thereby indicating a highly profitable sector.

Profitability in the construction sector in **Central and Eastern Europe** differs from country to country. Real estate activities were the most profitable in Romania in 2011 (54%), while architectural and engineering activities were performing the best in Poland (23%). In Hungary, the profitability of construction sub-sectors was rather low, varying from 8% in the construction to 27% in the real estate. In absolute terms, all countries of the region showed low gross operating surpluses across the subsectors compared with other countries analysed.

Figure 3: Profit margin on sales (gross operating rate) in construction sub-sectors for 2012[17]



Source: Eurostat, 2015

Business confidence in the construction sector

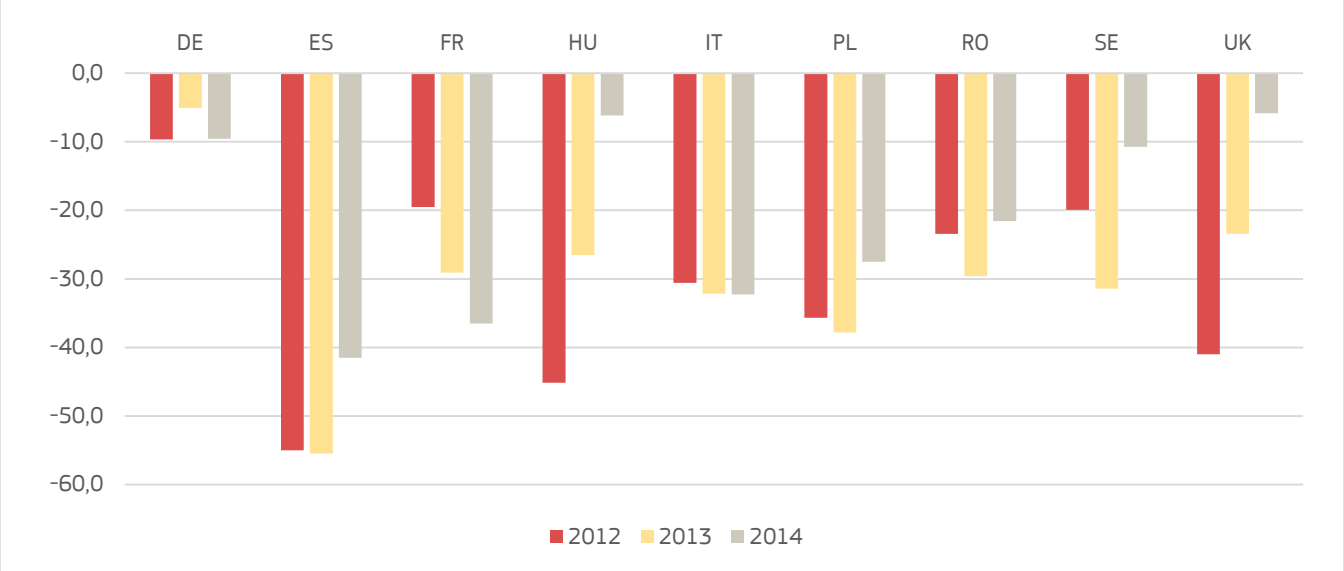
While growth in construction has been picking up since the plunge due to the economic crisis, **business confidence in the sector remained in negative territory** for the 10 countries analysed, indicating that the aftermath of the crisis is still a disruptive force. Changes in business confidence can have a considerable influence on investment decisions. Uncertainty about the future can reduce confidence, and means that investors may postpone their investment decisions until confidence returns. Weakened government spending across most of the EU Member States also dampens the business confidence in the sector.

[17] Data for manufacturing sub-sector in Ireland, Italy, Poland and UK are not available. Data for the narrow construction for Ireland is not available.

Nevertheless, in the majority of countries (ES, HU, PL, RO, SE, UK) business confidence showed a positive trend over 2012-2014 (Figure 4) indicating that the construction sector, on the whole, is set on a recovery path. This includes countries that were particularly hit by a construction slump, such as Spain and Hungary. Spain recorded the lowest confidence levels in all three years from 2012 to 2014, but confidence has improved somewhat in 2014. Nevertheless, prospects for the construction sector in Spain are still lower compared to its peers, due to reduced public sector investment and slow recovery of the housing market.

Prospects appear to have significantly improved in Hungary, the UK and Sweden, where low business confidence in 2012-2013 grew substantially in 2013 and 2014. In fact, the UK has one of the strongest outlooks for construction investments in 2015 according to the EPoC survey[18], spurred among others, by efforts to revive the housing market. Sweden is also positively affected by investment in housebuilding[19]. Sweden has shown the signs of the recovery of business confidence since 2013. Hungary marked impressive economic growth rates in 2014. However, a further fast growth trajectory appears unlikely to be sustainable[20]. In Poland, confidence in the construction sector remains relatively low, albeit with a positive trajectory. The large inflow of EU Funds over the 2014-2020 is expected to drive investments in Polish infrastructure. In 2014, the German **investment ratio** was 20%, the highest since 2009 and almost comparable to the 2008 level (20.1%), demonstrating a positive business confidence in the economy. However, the German construction sector indicator was the lowest among nine countries analysed on average during the three-year period. Finally, confidence in construction worsened in France and Italy over 2012-2014. Both these markets declined in 2014, which contributes to a stagnating outlook. Particularly, the housing market in France is on a declining path despite government efforts to revive it.[21]

Figure 4: Construction sector confidence indicatory 2012-2014*



** 'Data not available for Ireland'*

Source: DG ECFIN, 2015

[18] Deloitte, European Construction Monitor, Trends for 2013-2015: Supply chain pressure in recovering markets: an isolated case or an emerging trend? December 2014. http://www2.deloitte.com/content/dam/Deloitte/de/Documents/real-estate/Deloitte_Deutschalnd_Construction_Monitor.pdf

[19] FIEC, Construction activity in Europe. 2015

[20] Ibidem.

[21] Ibidem.

Investment trends in different construction markets

As a general trend, investment in the broad construction sector has gone hand in hand with investment in the total economy during the period 2008-2014. In countries such as Romania, Ireland, Spain, Hungary, France and Italy, cuts in the national budgets have affected the share of GDP dedicated to investments. For instance, in Italy, investments accounted for 16.9% of GDP in 2014, compared to 21.6% prior to the crisis[22]. Thus, gross fixed capital formation in the total economy dropped significantly since the onset of the economic crisis, and had still not recovered to the 2008 pre-crisis levels by 2014. Investment in the total economy experienced a particular fall in 2009 in Spain (-16.9%), Ireland (-19%) and Romania (-36.6%). In parallel, investment in construction residential, non-residential and civil engineering decreased by 16%, 31% and 42% in these three countries in 2009, respectively, and was below the pre-crisis level by 2014 (see Investment in construction
).

Conversely, despite being affected by the crisis in 2009, the strongest macroeconomic context in the United Kingdom, Sweden and Germany provided a buffer against the recession. For this reason, investment in the total economy in these countries recovered to the pre-crisis level by 2014. Investment in the total economy in Poland even exceeded the pre-crisis level, with its gross fixed capital formation in 2014 being 16.2% above the 2008 value. Indeed, the country became the fastest growing economy in the EU in the last decade, owing to the substantial inflow of foreign investment and EU development funds. Similarly, in 2014, gross fixed capital formation in the total economy in Germany was 3.6% above 2008. However, this relatively moderate increase is correlated to the public investment backlog, especially at municipal level, which has been affecting Germany in recent years (see Maintenance of existing infrastructure). The positive trend in gross fixed capital formation in the total economy is reflected in investment in construction that, in 2014, was 25% and 12.5% above the 2008 level in Poland and Germany, respectively.

Investment in construction[23]

Overall, the four countries in the **Northern European** area displayed higher levels of investment in construction, compared to other regions, and were generally affected to a lower extent by the crisis (Figure 5). Indeed, Germany and the UK have been the largest construction markets in the EU since 2012. By 2013, the UK and Sweden had almost fully recovered to the 2008 level, whereas Germany was the only country in the group with investment above the pre-crisis level, reaching absolute amount of EUR 291.8 billion (+12.5%). This is related to its strong macroeconomic environment, such as the growing GDP, but also to more specific factors, such as the volume of new orders, which reached EUR 58 billion in 2014, the highest since 2001[24]. It is to be noted that Ireland is the outlier in the group, reporting levels of investment in 2008 that were almost double those of the other countries. This is symptomatic of the housing bubble in the country until 2008. Indeed, following the crisis, investment in the Irish construction market experienced a collapse, dropping by 50% between 2008 and 2014.

The situation in **Southern Europe** is undeniably bleaker compared to Northern Europe. Although investment in construction in Spain, Italy and France was higher than Northern European countries in 2008, this region was more severely hit by the crisis. Thus, between 2008 and 2014, investment in construction dropped by 13.0% in France reaching absolute volumes of EUR 254.2 billion. Italy and Spain recorded a decline of 32.8% and 45.6% respectively, staying far below the pre-crisis level. The strict budget consolidation measures adopted by these countries, coupled with a lack of any decisive policy intervention related to the credit crunch, have affected investments in the construction sector, and will continue to undermine their recovery in the immediate future.

---

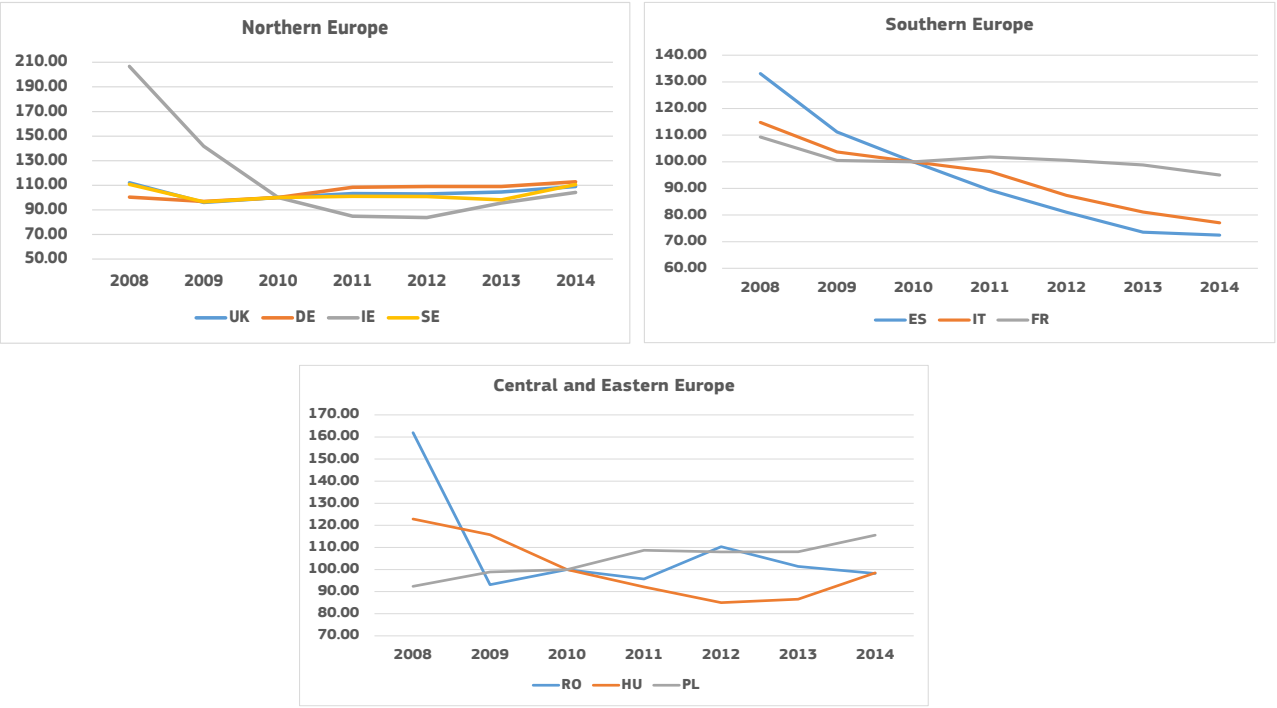
22 Il Sole 24 Ore, Five-year-long decline in investments started to taper in 2014. July 2015. http://www.italy24.ilsole24ore.com/art/business-and-economy/2015-06-29/gross-fixed-115023.php?uuid=ACT08cI

23 This is reflected in the gross fixed capital formation in construction (index), Figure 5. This indicator is the sum of the gross fixed capital formation for dwellings (Figure 8) and the gross fixed capital formation for non-residential construction and civil-engineering (Figure 9).

24 European Construction Industry federation (FIEC), Construction activity in Europe. 2015.

Construction investment in countries in **Central and Eastern Europe (CEE)** is more heterogeneous in terms of intensity and trends. For instance, in 2008, Romania was the most affected by the crisis, falling by 39% between 2008 and 2014. This is possibly linked to the speculative bubble in 2002-2008, which led to unjustified price inflations, subsequently collapsing in 2009. Similarly, Hungary reported a 19.8% drop in construction investments over the same period, reaching an investment level of EUR 10.5 billion in 2014. Investment in Poland did not show any significant slowdown following the crisis, despite a slight decline in 2011. On the contrary, despite reporting the lowest investment across all 10 Member States in 2008, it experienced a sustained growth over the years, being 25% above the pre-crisis level by 2014. This substantial increase has been fuelled by rising demand across all sub-sectors (see below), but also by the foreign direct investment flows in the Polish construction market, which have increased from EUR 416 million in 2009[25] to EUR 759 million[26] in 2014.

Figure 5: Investment in construction (Gross fixed capital formation, index 2010=100)



Source: AMECO, 2015.

Investment in construction across the Member States analysed was funded mostly by the real estate activities, supplying from 23.7% (Hungary) to 64.1% (Germany) of investments in the sector in 2013, as shown in the Figure 7. Despite the high levels of investment from the real estate sector and non-financial sector, the investment from narrow construction and households are marginal in the countries identified. Narrow construction contributed to on average 1.5% of investment in the sector among the countries analysed, with the highest share of 4.6% in Spain (EUR 4.9 billion) and supplying only 0.2% of gross investment in France (EUR 0.6 billion). The structure of investment by source of funding across the countries analysed have been stable in 2008-2013. Compared with the structure of investment in 2008 (Figure 6), significant changes were found only for Hungary. The share of investments by the real estate activities in 2008-2013 dropped from 41.4% to 23.7% confirming sharp decrease of residential demand. At the same time, investment carried out by public administration and non-construction industry picked up, with both these investors increasing their share by 9% each.

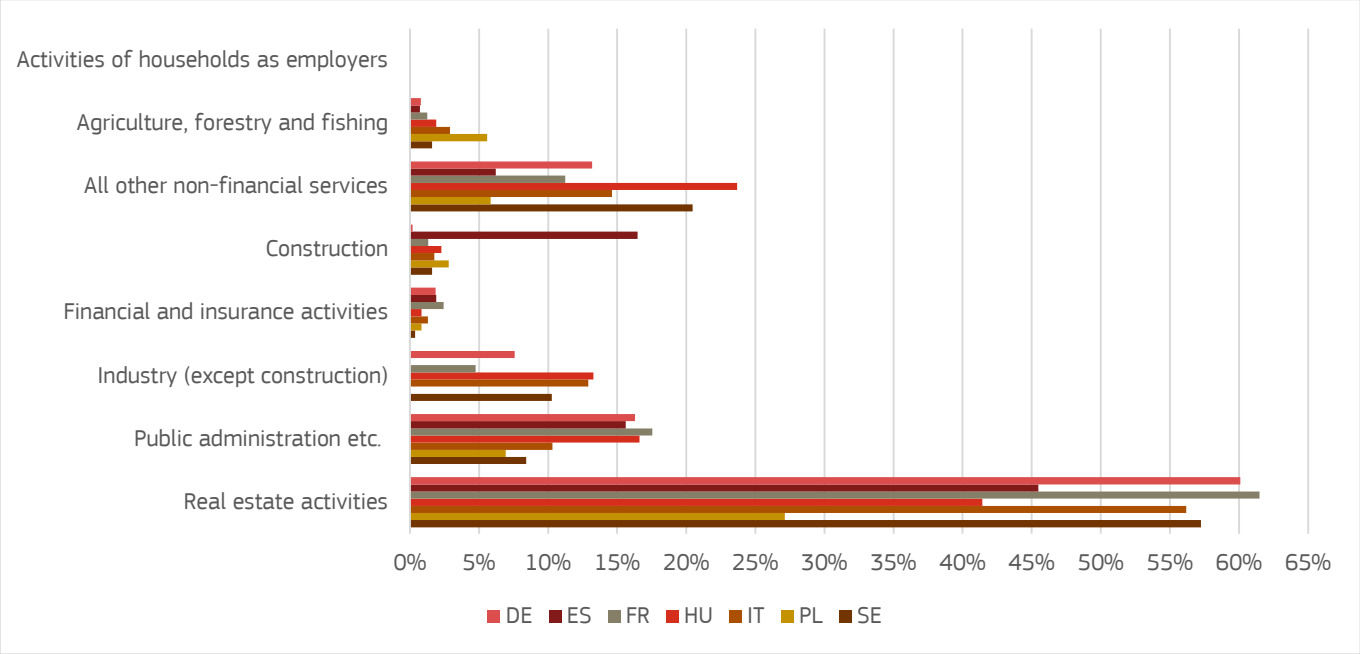
Households (activities of households as employers) were not shown to be investing directly in the construction sector in the countries analysed, as their investments are handled through the real estate developers (as reflected in another categories,

[25] Narodowy Bank Polski, Foreign direct Investment in Poland in 2009. http://www.nbp.pl/publikacje/zib/zib2009.pdf

[26] Narodowy Bank Polski, Foreign Direct Investment in Poland – Data for 2014 (EUR). http://www.nbp.pl/homen.aspx?f=/en/publikacje/ziben/ziben.html

such as real estate or public administration). This is due to the specific methodologies of data analysis, used by National Statistical Offices and Eurostat. However, even if not represented, it is expected that households' investment represent a major part of investments made by the real estate agencies.

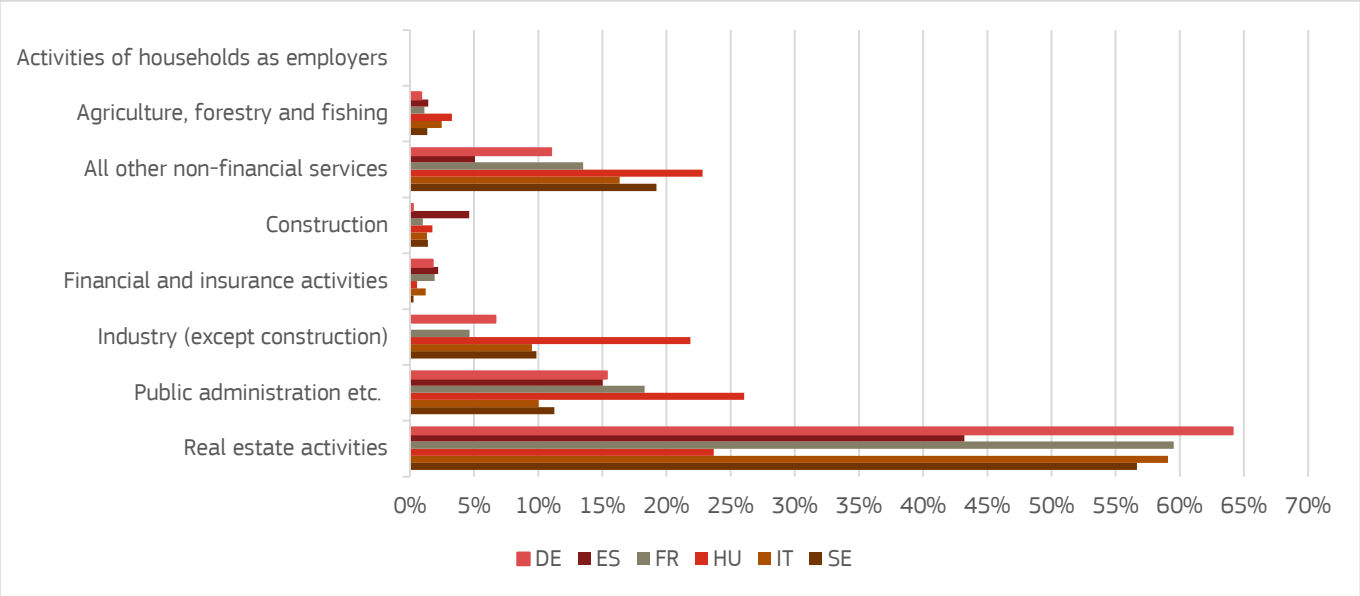
Figure 6: Investment in construction by source of funding, %, 2008[27]



Source: Eurostat, 2016

[27] Data For Ireland, Romania and the United Kingdom was not available

Figure 7: Investment in construction by source of funding, %, 2013[28]



Source: Eurostat, 2016

In absolute terms, investment volumes provided in construction by the real estate activities varied significantly between countries, being the highest in Germany (EUR 177.8 billion) and the lowest in Hungary (EUR 2.3 billion), according to the size of the country and the size of the domestic construction market. The public sector investments[29] in construction constituted significant share of investment in the sector in 2013, varying from 10.0% in Italy to 26.1% in Hungary. The latter could be explained by the active involvement of government in the construction market, significantly subsidising the residential market. However, in absolute terms, investment by public sector was the highest in large and developed countries, such as France and Germany, amounting to EUR 45.5 billion and EUR 48.1 billion respectively, whereas Hungary had the lowest absolute volumes of EUR 2.5 billion.

Non-construction sector and other non-financial sector are investing substantially in construction sector. The role of these groups of investors are most visible in Hungary, varying between 21.9% and 22.8% of investment in the sector. Italy and Sweden also rely on the non-financial sector investing, which provides 16.3%-19.2% of investment. In absolute terms, again, investment from the non-construction sector and the non-financial sector is highest in Germany and France due to the overall size of the construction sector in both countries.

The portfolio of investors in the construction sectors varied by country, however allowing to draw a general trend. The analysis revealed that the countries with strong and well developed economy (e.g. Germany, France, Italy and Sweden) had a similar structure of investors in the construction sector in 2013. Those markets are characterised by the high share of investment from the real estate (on average 59.7% of total investment), followed by similar share of non-financial sector (15.0%) and public sector (13.8%), with marginal contribution of other investors. In contrast, emerging markets, like Hungary, have a more balanced structure of investors, with the shares 22%-26% of the investment for real estate, public sector, non-construction sector and non-financial sector for a total 96.7% of all investment in the construction sector. The structure of investment in the construction sectors of other Member States is presented in the Annex 1.

[28] Data For Ireland, Poland, Romania and the United Kingdom was not available

[29] Public administration, defence, education, human health and social work activities

Investment in dwellings

Investment in construction of dwellings[30] has generally experienced a decreasing trend across the majority of the 10 Member States since 2008 (Figure 8). The country that was hit the hardest by the crisis was Hungary, where investment in construction of dwellings fell by 66.5% between 2008 and 2014, the lowest among all 10 Member States analysed. This was followed closely by Ireland (-66.3%), Spain (-49.4%) and Italy (-30.4%), in line with their macroeconomic situations and declining investments in the economy. In Italy, residential investment was particularly affected by the very low number of construction permits issued, which had fallen to 58,000 by 2013, one of the lowest values recorded since the 1930s[31]. Notably, **Ireland and Hungary** reported the highest level of investment in construction of dwellings in 2008, but were hit the hardest by the crisis. This is one of the effects of the housing bubble in the two countries prior to the crisis, which had resulted in a 264% increase in house prices in Hungary alone between 1998 and 2007[32], thus increasing the sensitivity of the residential sector to the economic crisis. Moreover, the mortgage crisis resulting from the fall of the forint (HUF) after 2008 that largely affected homeowners led to a high share of non-performing loans, further burdening the housing market.

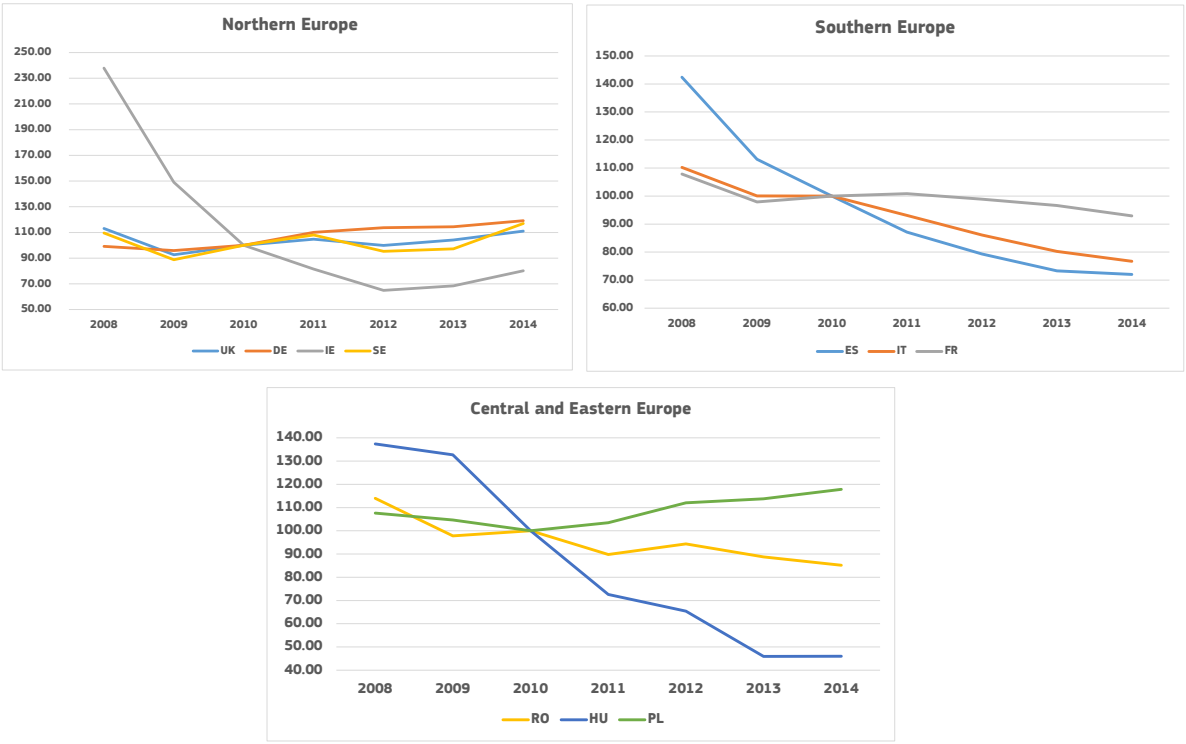
Conversely, investment in **Germany** was the lowest across all 10 Member States in 2008, strongly linked to the very low number of residential dwellings approved for construction. However, it underwent a remarkable growth over time, being 20% above the 2008 level by 2014 and the highest among the analysed countries. This increase is correlated with the 118% increase in the number of approved units in 2014, as well as the positive net migration into larger urban areas and the sharp decline in mortgage rates, making investments in residential buildings more attractive. Similarly, despite an initial decline, **Poland** has recorded a steady increase in investment since 2010, which was 9.5% above the pre-crisis value in 2014. **Sweden** was the third country to experience a positive trend in investment in construction of dwellings, growing by 6.7% between 2008 and 2014. However, 250,000 new units per year are estimated to be required until 2020 to address the current housing shortage in Sweden, and policy intervention is therefore required to further boost investments in home-building. In this respect, the Stimulus for increased construction (*Stimulans för ökat byggande*), introduced by the government in 2015, seeks to stimulate construction of new rental properties through a budget allocation of SEK 3.2 billion (EUR 345 million) per year, particularly in urban areas (Stockholm, Göteborg and Malmo).

[30] This is reflected in the gross fixed capital formation in construction of dwellings (index), Figure 8. Dwellings are defined as 'Buildings that are used entirely or primarily as residences, including any associated structures, such as garages, and all permanent fixtures customarily installed in residences. Examples include residential buildings, such as one and two-dwelling buildings and other residential buildings intended for non-transient occupancy. Dwellings acquired for military personnel are included because they are used, as are dwellings acquired by civilian units, for the production of housing services. http://aei.pitt.edu/52185/1/1995.pdf

[31] Edilizia e Territorio, Costruzioni, nessuna ripresa: investimenti giù del 2,5% anche nel 2014. July 2014. http://www.ediliziaeterritorio.ilsole24ore.com/art/infrastrutture24/2014-07-08/costruzioni-nessuna-ripresa-investimenti-114248.php?uuid=AbHyfy0J&refresh_ce=1

[32] Global property guide, Housing market in Hungary recovering. June 2015. http://www.globalpropertyguide.com/Europe/Hungary/Price-History

Figure 8: Investment in dwellings (Gross fixed capital formation, index 2010=100)



Source: AMECO, 2015.

Similarly to investments in the construction sector, investments in dwellings were funded almost exclusively by the real estate sector, supplying 76.2%-100% of investment in the residential buildings in the countries analysed in 2013. This could be explained by the fact that real estate sector represents the main developer for residential building projects, accumulating and investing the funds from households, narrow construction or public sector. Only in Spain, among the countries analysed, it was shown that the narrow construction sector supplied 15.1% of the investment in dwellings (EUR 7.0 billion) in 2013, with financial and insurance services investing another 4.5% (EUR 2.1 billion).

In absolute terms, in 2013, Germany invested the most in dwellings, with investment totalling EUR 163.7 billion, followed by France with EUR 128.7 billion, Italy with EUR 77.9 billion and Spain with EUR 46.5 billion. Sweden, Ireland and Hungary invested the least in absolute terms, i.e. EUR 15.3 billion, EUR 3.4 billion and EUR 1.5 billion respectively. In Germany, France, Hungary, Ireland, Italy and Sweden, real estate was the only investor in dwellings, as the main developer in the sector[33].

Investment in non-residential buildings and civil engineering

In line with the picture painted above, investment in non-residential buildings[34] and civil engineering[35] (infrastructures) had not recovered to the pre-crisis levels in most of the analysed Member States. Countries in the **Northern European** area

[33] The high share of investments by the real estate sector is also affected by the National Statistical practices, which assign the investments of households to the real estate sector in most of the countries analysed.

[34] Buildings other than dwellings, including fixtures, facilities and equipment that are integral parts of the structures and costs of site clearance and preparation. Examples include warehouse and industrial buildings, commercial buildings, buildings for public entertainment, hotels, restaurants, educational buildings, health buildings, etc.

[35] Structures other than buildings, including the cost of streets, sewers and site clearance and preparation other than for residential or non-residential buildings. Examples include highways, streets, roads, railways and airfield runways bridges, elevated highways, tunnels and subways, waterways, harbours, dams and other waterworks, long-distance pipelines, communication and power lines, local pipelines and cables, ancillary works, constructions for mining and manufacture.

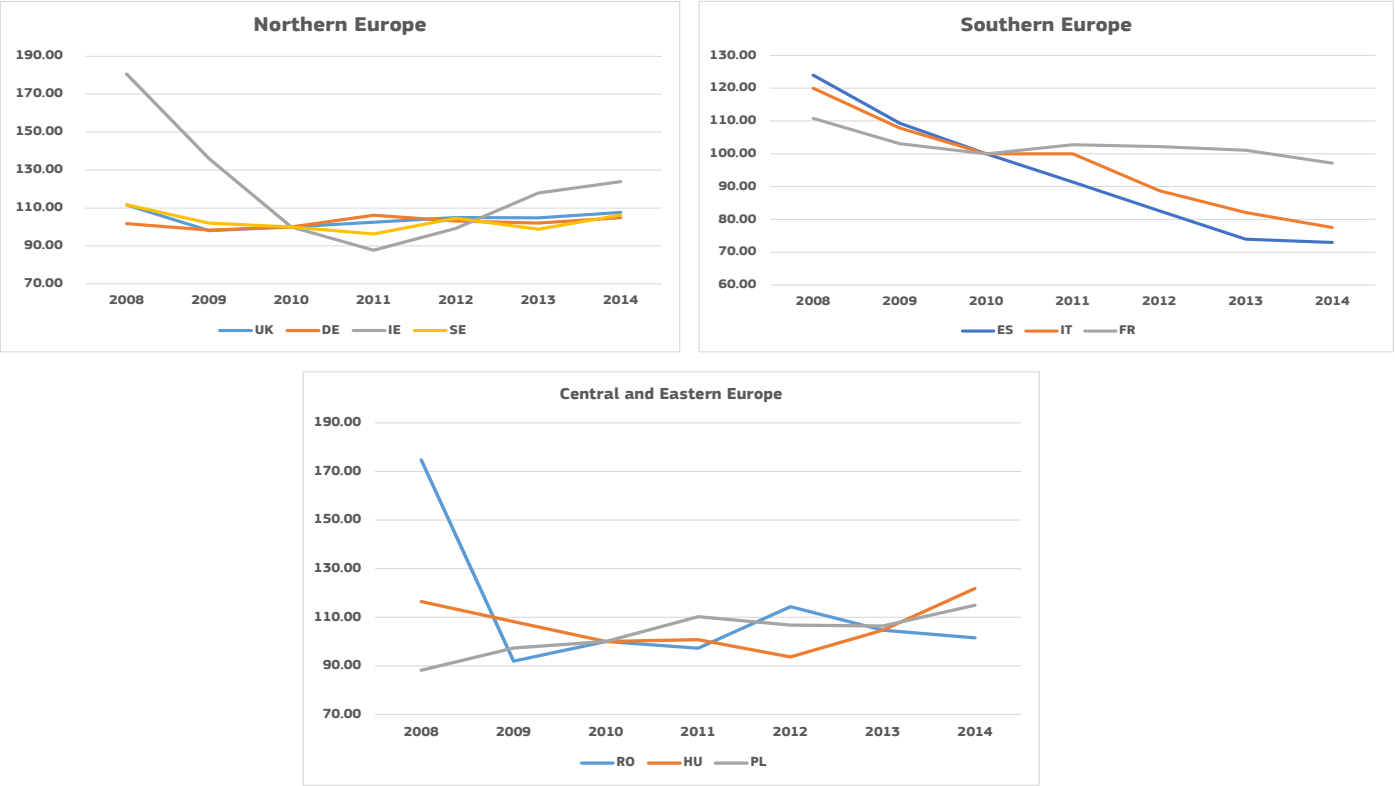
were not spared by the crisis, with investment in the UK and Sweden being 4% and 4.9% below the 2008 value in 2014 (Figure 9). Ireland, which reported the highest investment of all countries in 2008, experienced a 31% decline by 2014. Germany was the only country in the group where investment in non-residential construction and civil engineering recovered and exceeded the pre-crisis level by 2014, being 3% above the 2008 value. For the non-residential sector, this was mainly a consequence of the construction of new offices and administrative buildings, which picked up over the last couple of years, following a drop due to the economic recession[36]. In absolute terms, in 2013, the investment in the non-residential sector was the highest in Germany (EUR 113.5 billion), followed by the United Kingdom (EUR 107.7 billion). Sweden and Ireland showed much lower volumes of investment in the sector at EUR 23.2 billion and EUR 7.4 billion, respectively. **Southern European** countries were more severely affected by the crisis, with investment in non-residential construction and civil engineering decreasing considerably in France, Italy and Spain since 2008. Thus, in 2014, investment in these countries was below the pre-crisis value by 12.3%, 35.4% and 41.1%, respectively. In Italy, the main cause of underfinancing in this sector is the fact that a significant amount of state funds for civil engineering works are blocked or left unused (about EUR 57 billion as of 2014)[37]. As for 2013, the absolute investment in non-residential construction has reached EUR 132.2 billion in France, EUR 67.4 billion in Italy and EUR 59.2 billion in Spain.

The situation in **Central and Eastern Europe** portrays a brighter prospect compared to the other regions. With the exception of Romania, Hungary and Poland were the two countries reporting the highest increase in investment in non-residential construction and civil engineering, with the substantial influx of EU funds constituting one of the main drivers for this. Romania experienced the most severe drop in investment until 2014 (-41.9%), due to a combination of public investment cuts and one of the lowest absorption rates of EU funds in Europe (51.3%). Thus investment in other building and structures in Romania in 2013 accounted for EUR 13.4 billion. Conversely, investment in Hungary increased by 4.6% between 2008 and 2014, reaching a value of EUR 8.1 billion in 2013. Similarly, the situation in Poland showed a remarkable improvement, with investment growing by 30.4% over the same period. This was driven by the increasing demand for office space in larger Polish cities, as well as the high priority of transport infrastructure in the Polish political agenda. Thus, by 2014, the average investment in non-residential construction and civil engineering in the CEE region had overtaken that of Northern Europe.

[36] DIW Berlin, Construction in Germany: Structural Data on Production and Employment – 2013 Calculations. http://www.bmub.bund.de/fileadmin/Daten_BMU/Download_PDF/Bauwirtschaft/strukturdaten_bau_studie_kurz_en_bf.pdf

[37] Edilizia e Territorio, Costruzioni, nessuna ripresa: investimenti giù del 2,5% anche nel 2014. July 2014. http://www.ediliziaeterritorio.ilsole24ore.com/art/infrastrutture24/2014-07-08/costruzioni-nessuna-ripresa-investimenti-114248.php?uuid=AbHyfy0J&refresh_ce=1

Figure 9: Investment in non-residential buildings and civil engineering (Gross fixed capital formation, index 2010=100)



Source: AMECO, 2015.

Investment in non-residential market by source of funding was diversified across Member States analysed (Figure 10).

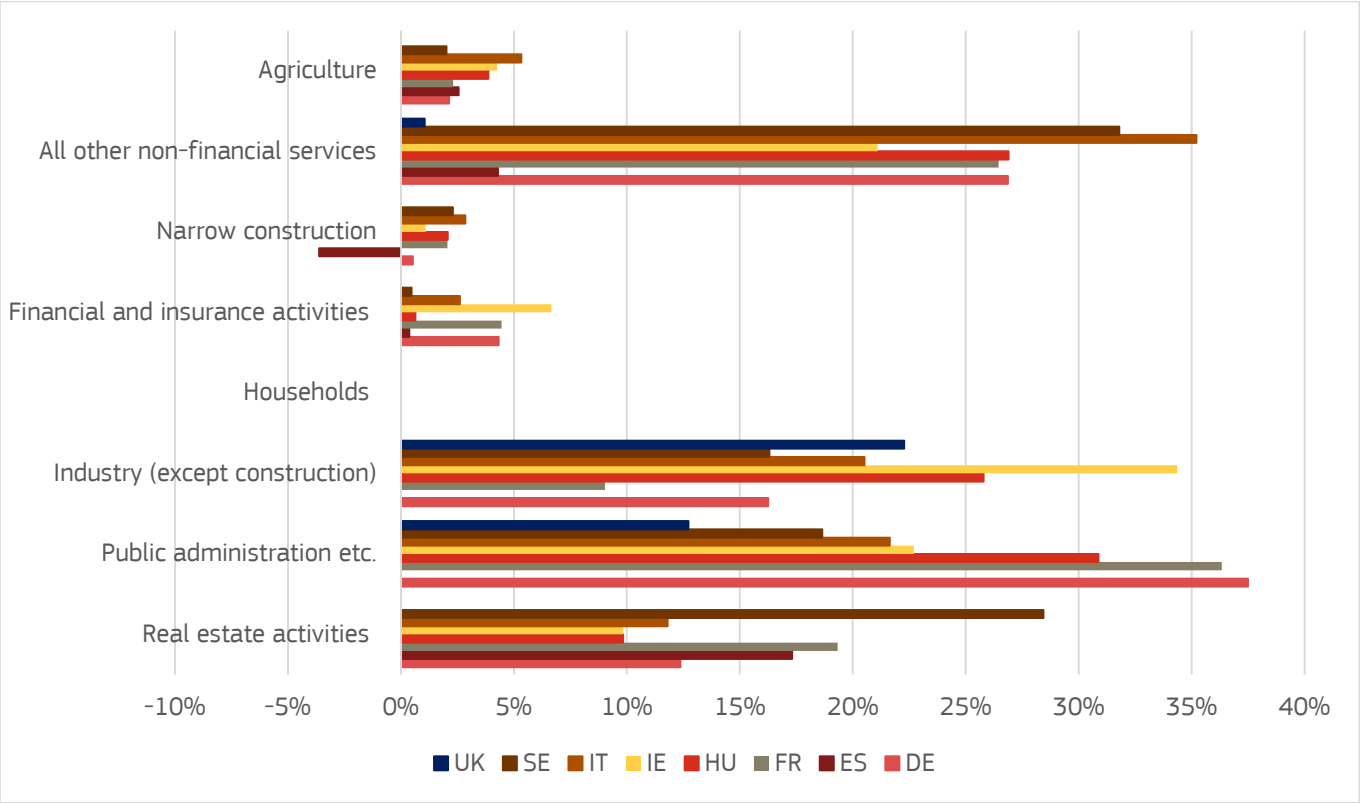
Investment from the public sector (public administrations) took the biggest share in Germany, France and Hungary, representing 37.5%, 36.3% and 30.9% respectively, and suggesting a large amount of public programmes and policies supporting development of non-residential construction sector. In Italy and Ireland, the share of public financing was also quite high, varying between 21.6%-22.7%. The UK and Sweden had the lowest share of public support, around 12.7%-18.7%, respectively.

Investment from industry was found to be another important source of investment in non-residential construction, especially in Ireland, Hungary and the UK, with the share of financing varying from 22.3% to 34.4%. Conversely, in France the role of this group of investors is considerably lower, representing only 9.0% of investments. In absolute terms, investment made by industry was the highest in the UK, accounting for EUR 24.0 billion in 2013.

The non-financial services sector was the major investor in the non-residential market in Italy and Sweden, supplying 32.5% and 31.8% of all the investments in these countries in 2013. Germany, France and Hungary relied heavily on this group of investors, obtaining from them more than a quarter of investments. In contrast, in Spain and the UK, the share of investment by the non-financial sector was low, amounting to 4.3% and 1.1%, respectively.

The investment by the real estate sector into non-residential construction was much lower across Europe compared to investment in residential construction in 2013. The share of investment from real estate varied from 9.8% in Ireland and Hungary to 19.3% in France. However, the share in Sweden was higher at 28.4% or EUR 6.6 billion.

Figure 10: Investment in other buildings and structures by source of funding, 2013, %[38]



Source: Eurostat, 2016

Investment by the construction and real estate sectors

Investment made by the construction sector in Europe was heavily influenced by the general economic trends in the recent years and was affected by the economic crisis. Investment made by the construction sector could be analysed through the prism of investment made by narrow construction and the real estate sector.

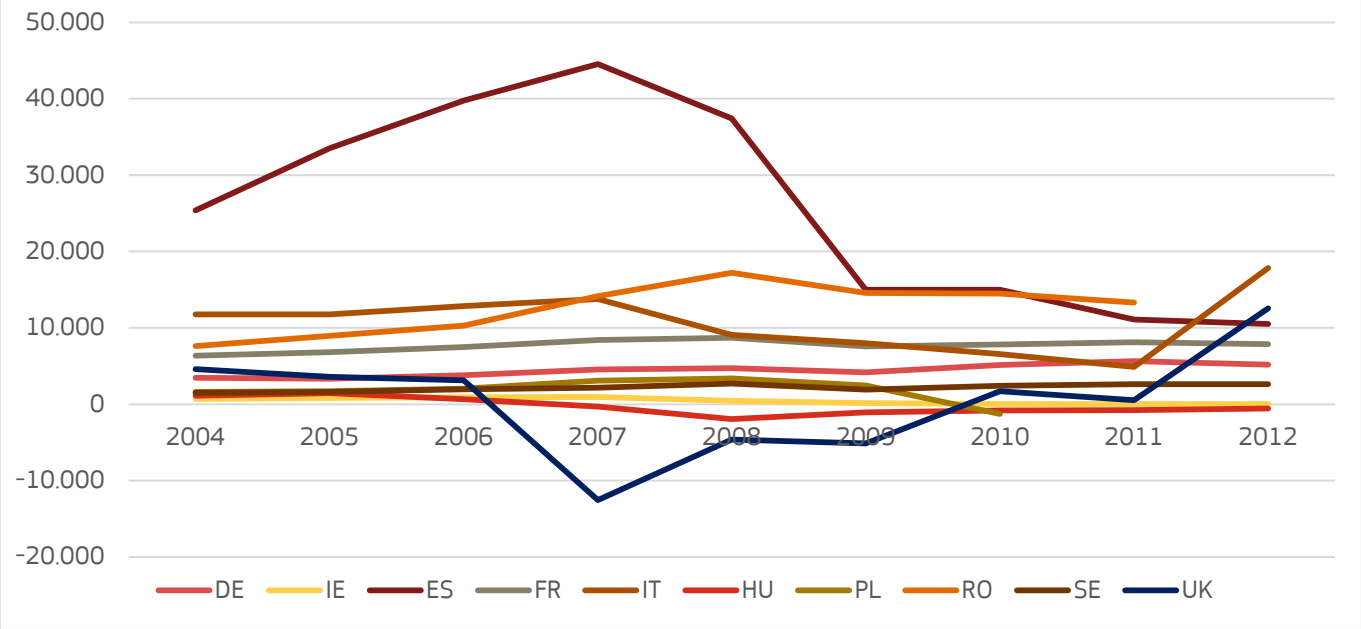
Investment by the narrow construction sector has been steadily decreasing across Member States analysed since 2004, as shown in Figure 11. On the other hand, Ireland and Spain were the outliers of the narrow construction investment, with a continuing decreasing trend. Spain was the EU 10 leader in the investment by the narrow construction in 2007, reaching the investment of EUR 44.5 billion. However, severely hit by the economic crisis, the narrow construction was not able to recover its investment capacity till 2012, with the investment reaching EUR 10.5 billion and continuing to decrease. Ireland's investment by the narrow construction sector lost 98% of the volume since 2008, leaving a marginal amount of EUR 9 million of investment in 2012.

Germany, France and Sweden have maintained stable investment volumes in 2008-2012, with investment by the narrow construction sector amounting to EUR 5.2 billion, EUR 7.9 billion and EUR 2.6 billion, respectively. In those countries investment by the narrow construction sector almost fully recovered to the previous levels, reaching 109.7%, 90.1% and 97.7% of the 2008 investment level.

The situation was brighter for the narrow construction sector in Italy and the UK, which managed not only to recover from the crisis, but also to significantly increase the investments made by this sector. Thus, investment in Italy has increased by 96.8% between 2008 and 2012 with investment spiking in the year 2011/2012, reaching the volume of EUR 17.9 billion. Similarly, investment in the United Kingdom increased rapidly in 2012, reaching EUR 12.6 billion and, thus, exceeding the 2008 levels by almost four times.

[38] Data for Poland and Romania was not available

Figure 11: Investment by the narrow construction sector, 2004-2012, EUR m[39]



Source: Eurostat, 2016

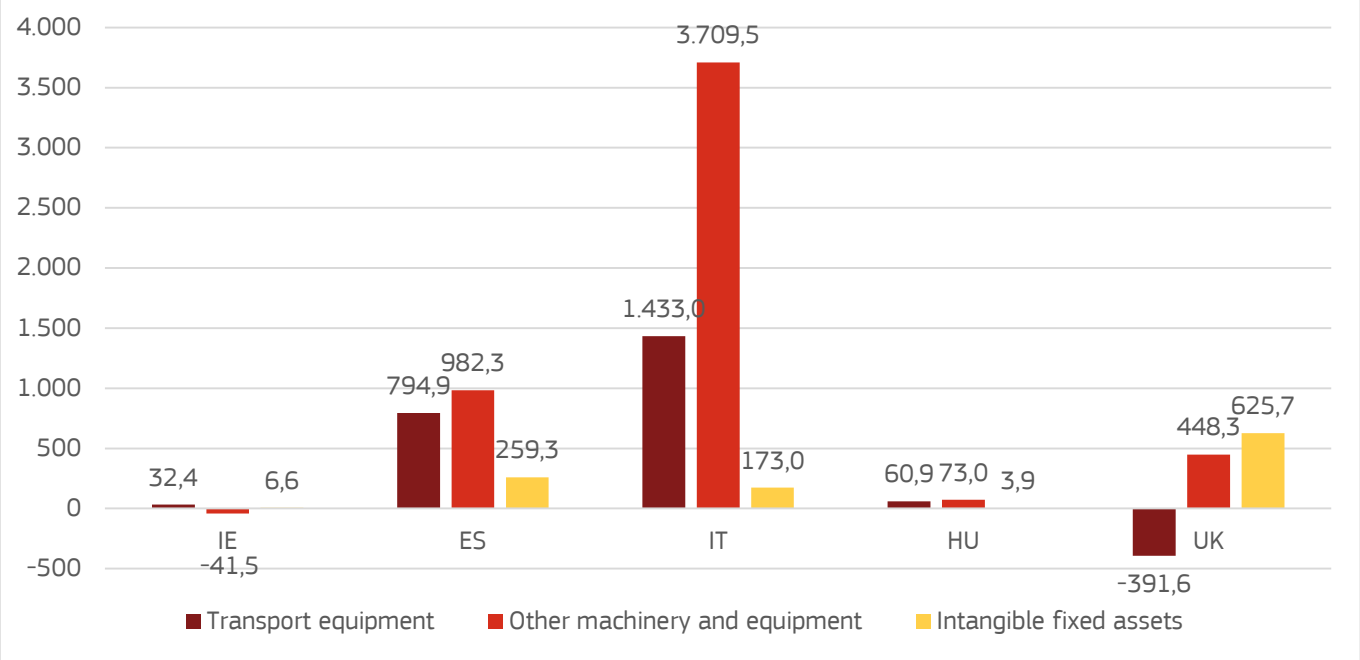
In terms of specific investments into assets types, the category **'other machinery and equipment'** takes a prominent role of the investment by the narrow construction sector, particularly in Italy, Spain and the UK (Figure 12), which have each invested EUR 3.7 billion, EUR 982 million and EUR 448 million in 2012, respectively. Notably in Italy, investment in machinery and equipment represented 44% of investment in total fixed assets in 2012. On the other hand, in Spain and the UK, investment in machinery and equipment represented a more modest share of investment in total fixed assets (9.5% and 3.6%, respectively). In Hungary, investment in machinery was comparably small in absolute terms (EUR 73 million), but represented a sizeable share of investment by the construction sector in total fixed assets (34.2%). In contrast, the Irish construction sector divested from machinery for an amount worth EUR 41.5 million.

Transport equipment also is an important area of investment for the sector. In 2012, most investment came again from Italy (EUR 1.4 billion) followed by Spain (EUR 795 million), Hungary (EUR 61 million) and Ireland (EUR 32 million). Conversely, the UK construction sector heavily divested from transport equipment (EUR -392 million).

Finally, investments into **intangible assets**, notably computer software, play a significant role, particularly given the increasing importance of digitisation in the sector. The UK leads investment in this field with EUR 627 million spent on intangible assets in 2012. Substantial investment also comes from Spain (EUR 259 million) and Italy (173 million), while Ireland and Hungary invest more modest sums (EUR 6.6 million and 3.9 million, respectively). However, the Irish construction sector leads in terms of investment into intangible assets as a share of total fixed assets with 38.8% of its investment directed to this asset class.

[39] Data for Romania was not available

Figure 12: Investment by the narrow construction sector in selected assets, 2012, EUR m[40][41]



Source: Eurostat, 2016.

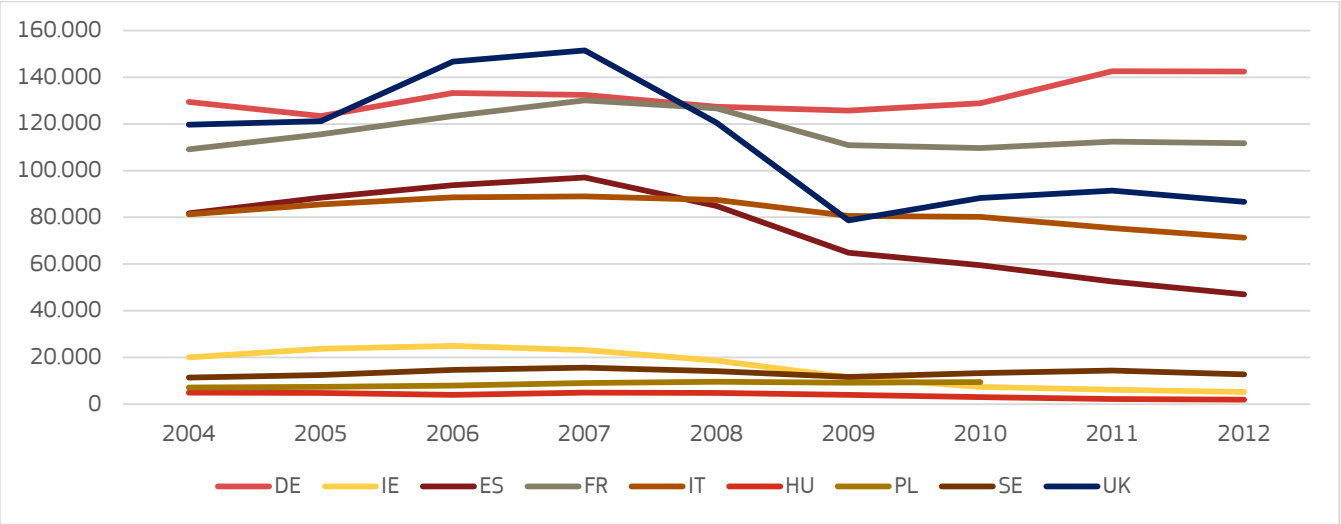
Investment by the real estate sector, i.e. developers and real estate agencies, has also shown mostly a decreasing trend across the countries analysed (see Figure 13 below). Germany has seen the highest volumes of investment in the overall economy by the real estate sector, reaching EUR 142.4 billion in 2012, a 12% increase since 2008. The real estate sector in Poland and Sweden was also close to recover its volumes of the investment, with Poland reaching 98.9% of 2008 level of investment in 2010 and Sweden recovering 91.1% of its investment capacity in 2012. Investment in France and Italy also was picking up, with the real estate sector investing EUR 111.7 billion and EUR 71.2 billion in 2012, equal to 88.2% and 81.2% of the pre-crisis levels, respectively.

On the other hand, similar to the investment by narrow construction, investments by the real estate sector in Ireland and Hungary were continuing to fall. By 2012, Ireland's real estate sector had recovered only 27.8% of its investment power of 2008, reaching EUR 5.2 billion, suggesting difficulties in the financial situation in the sector. Additionally, real estate investment in Hungary was only about 40% of pre-crisis level in 2012, accounting for EUR 1.9 billion in the real economy.

[40] Data not available for Germany, France, Poland, Romania, Sweden

[41] Negative values typically include disposals of fixed assets, e.g. through selling or surrendering assets including surrendering assets as capital transfers in kind.

Figure 13: Investment by the real estate sector, 2004-2012, EUR m



Source: Eurostat, 2016

Overall, all 10 countries analysed have shown a decreasing trend of investment by the real estate sector in the recent years, with just some of them recovering to the pre-crisis levels of financing.

Access to finance in the construction sector

For an industry often characterised by relatively low profit margins, low-price procurement, and strained supply chains, access to finance for the construction sector has traditionally presented a challenge, particularly for small businesses. In fact, difficulties in accessing finance are often considered one of the main constraints for the development of the construction sector. With the financial crisis, credit conditions have worsened throughout the EU, thereby severely damaging access to finance to construction companies. While banking activity has picked up again and it appears that "debt is not a problem for a grown-up business" according to the Emerging Trends in Real Estate survey[42], structural difficulties in financing construction firms still remain.

Enterprise finance

Enterprise finance is key for the healthy development of construction businesses, as it allows companies to financing the running of operations as well as to invest in their growth. With credit conditions improving, lack of finance is slightly less of a pressing challenge but still affects the construction sector. The situation, however, differs widely between SME and major construction companies.

Lack of funding is a recurring challenge for SMEs — the backbone of the construction sector – with credit conditions being tighter for SMEs than for larger companies due to the risk-averse approach of financial institutions. Indeed, construction SMEs often have weak equity ratios (the amount of equity used to finance a company's assets), limited financial scope and lack of specialised knowledge in financial management. Thus, limited access to finance subsequent to the global financial crisis, led to a plunge in investment and to the insolvency of a large number of companies.

According to the Survey on the Access to Finance of Enterprises (SAFE) of 2015, it emerges that SMEs in construction consider access to finance most pressing compared to other industries, albeit to a lesser degree than in 2014. In fact, SMEs appear more confident to being able to fulfil their financing needs in 2015 compared to the previous year. Nevertheless, only 35% of respondents saw no obstacles in future access to finance, which is lower than the EU-28 average across

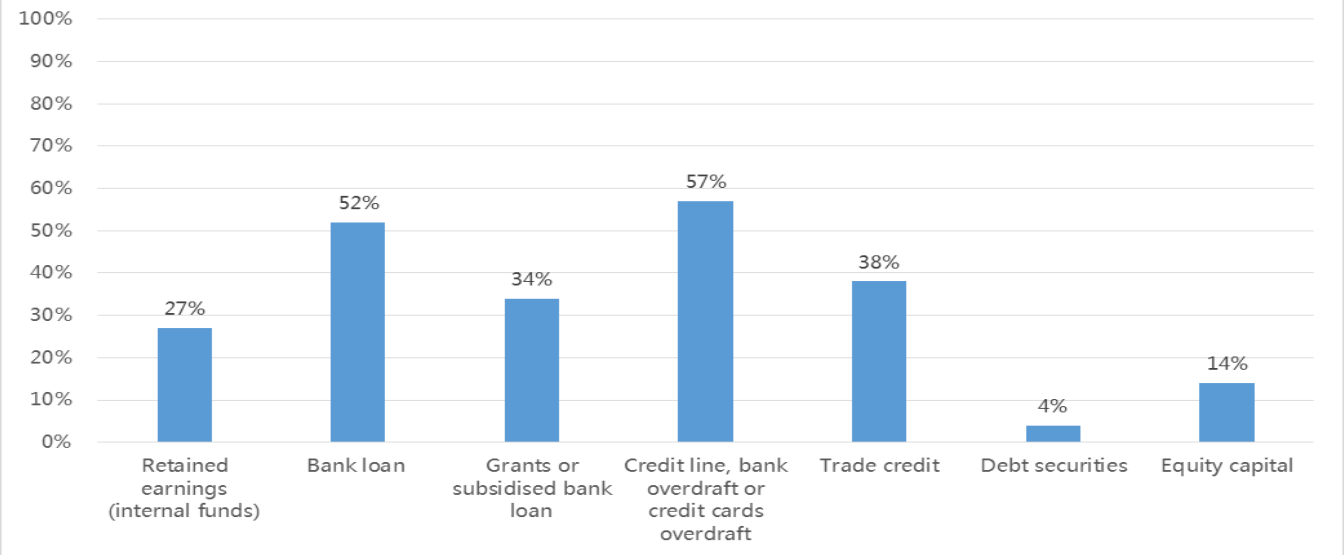
[42] PwC, Emerging Trends in real estate in Europe, 2015. https://www.pwc.lu/en/real-estate/docs/pwc-emerging-trends-in-real-estate-2015-europe.pdf

industries (41%). Overall, a majority of SMEs in construction see the outlook for their sector as stable and expect neither improvement nor deterioration.

The main barriers to financing in construction are considered insufficient collateral or guarantee (17%) and high interest rates (15%). In terms of factors needed for accessing future finance, respondents see the need for policy intervention. Tax incentive, facilitating access to public measures such as subsidised loans, grants and similar are considered the most important elements in terms of policy support. Availability of guarantees for loans is also viewed as critical by surveyed SMEs in construction.

SMEs in construction are relatively conservative when considering financing options. Indeed, bank loans are one of the most important source of funding according to the SAFE survey, which plays a role in over half of the interviewed SMEs (Figure 15). Also credit lines, bank overdrafts and credit cards overdraft are relevant for 57% of SMEs in construction. Grants or subsidised loans, as well as trade credit appear to be an important source of financing for 34% and 38% of respondents, respectively. In contrast, the issuance of debt or financing through equity seem to play an overall marginal role in fulfilling financing needs of SMEs.

Figure 14: Relevant types of finance for SMEs in construction



Source: ECB, SAFE survey, 2015

Financing of the large construction enterprises presents other characteristics and challenges compared to SMEs. Established companies such as the top EU construction companies are generally less hurdled by access to finance but may equally be affected by squeezing profit margins. As a general tendency, construction firms require relatively little external financing, if they focus on construction as their core business. Typically, the construction business is characterised by low levels of investment, low margins and low working capital. As such, construction requires relatively low financing. Among the top 20 European companies in construction, the ones that are not strongly diversified have relatively low levels of debt[43].

Conversely, higher levels of debt often correlate with activities outside the scope of construction only, as these require greater capital. If construction companies engage in public-private partnerships, project finance, or mergers and acquisitions (M&A) activities, the need for financing rises. In fact, among the 20 largest construction companies in Europe, higher rates of indebtedness correlate with activities outside the construction domain. Nevertheless, it is important to note that these companies have paid increasing attention to improving the sustainability of their debt levels by reducing total net debt by

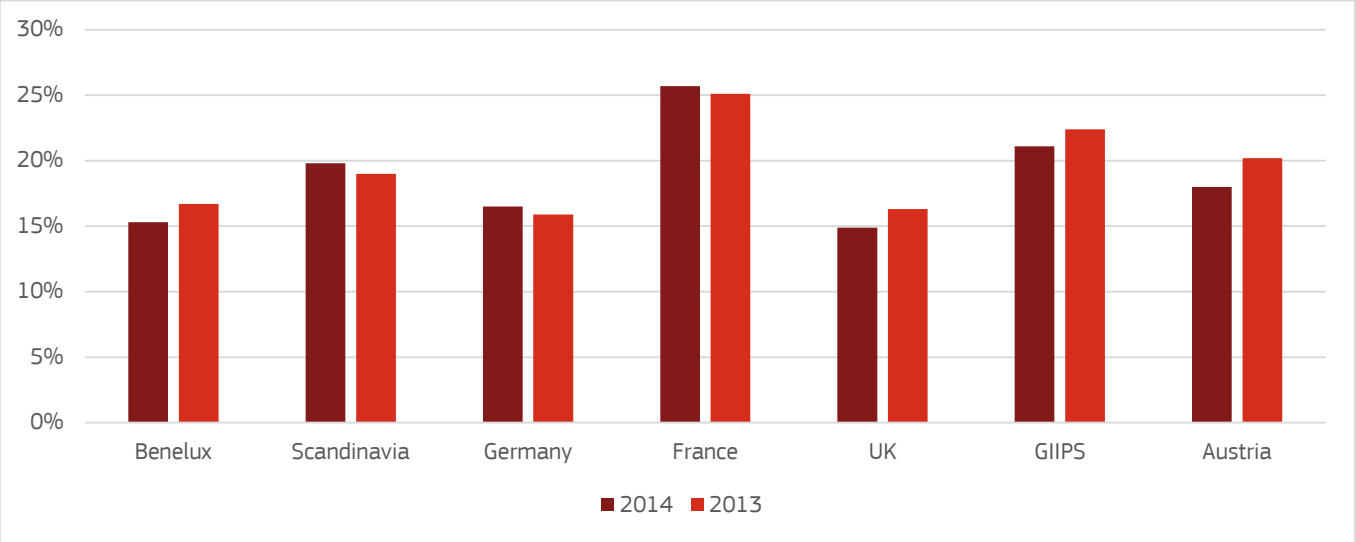
[43] Deloitte, European Powers of Construction, 2014. http://www2.deloitte.com/ie/en/pages/real-estate/articles/EPoC-2014-European-Powers-of-Construction.html

11%[44]. Despite the diversification of activities and debt levels, the construction sector in Europe is oriented generally towards EU-owned companies. The recent study[45] shows that around 78% of annual M&As are within the EU, while only 12%, of the 139 M&As that took place in 2013 (involving EU companies), were of an EU construction company being bought by a non EU company. Roughly, same proportion applied to EU companies acquiring non-EU companies. Roughly the same proportion applied to EU companies acquiring non-EU companies. It was found that non-EU companies are less interested in EU construction companies, as they consider EU as a highly competitive market and thus prefer other destinations. Therefore, EU construction market could be concluded as EU-driven, with companies prefer direct exporting rather than M&A for local subsidiary.

Specific issues- Non-performing corporate loans

The construction sector has contributed to 20.6% of business insolvencies in the Western Europe in 2014. Although the total number of insolvencies is declining across Europe, the share of construction sector insolvencies remains stable, with some differences across EU countries and regions (Figure 15). In absolute numbers, corporate insolvencies in the general economy in 2010-2014 were declining in France, Germany, Ireland and the UK. Conversely, Spain showed continuous growth in the number of insolvencies compared with 2010, however improving the results of 2013. As for the Central and Eastern Europe, the number of corporate insolvencies was growing in Hungary and to the lower extend in Poland, while Romania has shown a decrease in the number of business insolvencies[46].

Figure 15: Business insolvencies in the narrow construction sector in Europe, 2013-2014, %



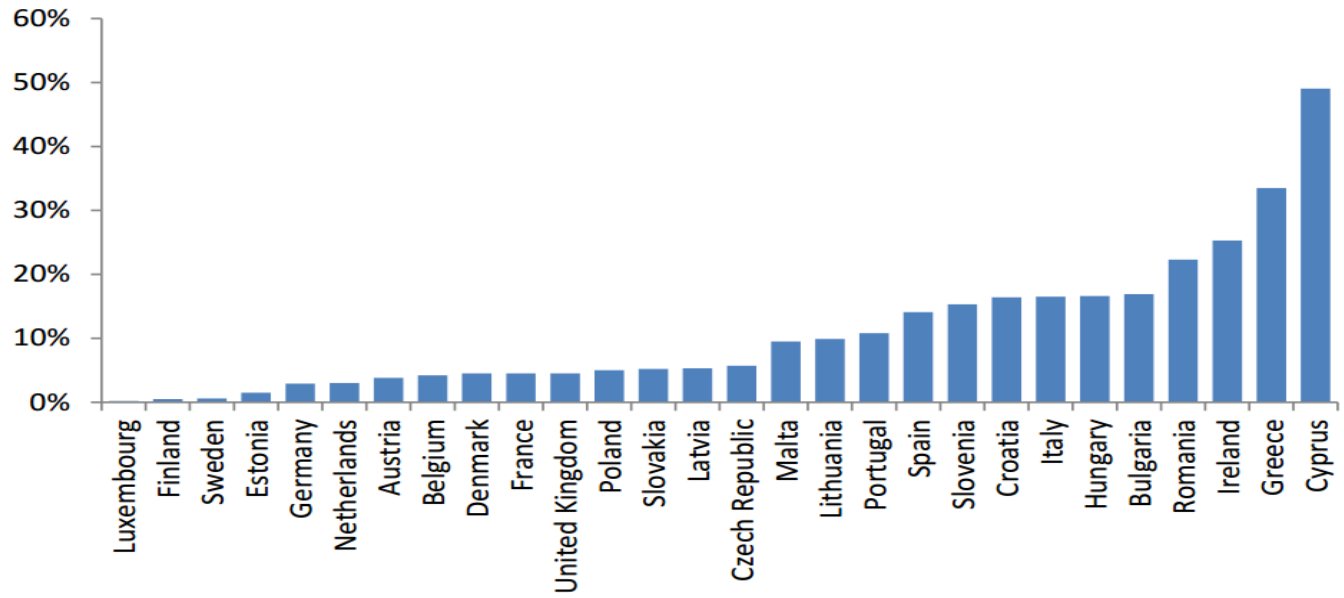
Source: Creditreform, 2016

As a result of the economic crisis and high level of business insolvencies, banks have been increasingly burdened with non-performing loans (NPL). Since 2009, the stock of NPLs in the Euro area has more than doubled, to EUR 800 million. Most of this increase has taken place in crisis hit Euro area countries. According to data from the IMF and central banks (Figure 16), NPLs are accounting for around 50% of total gross loans in Cyprus, 34% in Greece and 25% in Ireland. Throughout OECD countries, the share of NPL increased over the time period from 2007 to 2010. Furthermore, the share of NPL more than doubled for Sweden and the UK, while it passed the 10% mark in Hungary, Italy and Spain. The share of NPL loans is growing across CEE, especially in Romania, Bulgaria and Hungary. The majority of NPLs so far stem from non-financial corporations and real estate loan portfolios; however the quality of household related exposures has also deteriorated. In

44 Ibidem.
45 Ecorys, The European construction value chain: performance, challenges and role in the GVC. 2016
46 Creditreform. Corporate insolvencies in Europe 2014-2015. 2016

the coming years the share of NPL in the general economy is expected to remain high, supported by the weak economic environment and high private sector indebtedness[47].

Figure 16: Non-performing loans over total gross loans by country, EU



Source: Latest available data from IMF (FSI), except for Cyprus (Bank of Cyprus, July 2014), Spain (Bank of Spain, May 2014), the UK (S&P 2013), Finland and Germany (World Bank 2012).

The construction sector was particularly affected by NPL. In Spain, loans to real estate and construction companies recorded NPL ratios of 35%, the largest across industries[48]. In Hungary, due to the mortgage crisis following the fall of the forint, banks' balance sheets have been burdened by NPL collateralised by commercial real estate assets such as offices, hotels, retail outlets as well as warehouses and similar. Such "bad" commercial real estate loans make up approximately 50% of all non-performing corporate loans. It is expected that commercial banks will take a shift from selling non-performing commercial and real estate loans towards performing loans, non-strategic residential and SME loans. The sale of real estate non-performing loans (residential and commercial) is expected to be high in Italy, Spain, CEE and SEE and Nordic countries[49].

NPL have important implications for bank lending, particularly for SME finance. Higher ratios of NPL curtail lending activity, especially to SMEs, that are considered more risky. Incidentally, a disproportionate number of NPL come from SMEs. This trend is exemplified by Italy and Spain: both economies have among the highest rates of NPL and at the same time suffered most from access to finance. Indeed, in 2014, only 14% of all bank financing was granted to construction companies in Italy, compared to 30% in 2007. Similarly, in Spain, the total volume of loans to construction firms has been drastically decreasing, reaching EUR 54.3 billion in 2014, 65% below the 2008 level.

Specific issues- Non-performing household loans

In addition to non-performing corporate loans, banks have been burdened by sharp increases in non-households, notably mortgages. However, EU MS have experienced diverging trajectories with respect to indebtedness and related non-performing loans, according to the overall economic situation and health of

[47] European Investment Bank, Unlocking lending in Europe. October 2014
[48] OECD, Financing SMEs and Entrepreneurs 2015: An OECD Scoreboard. April 2015
[49] Deloitte, Deleveraging Europe 2015-2016, 2016

system. Indeed, no clear trend can be identified from the 10 MS in terms of their share of non-performing households loans (.

Figure 17). This is related to the fact that the levels of household indebtedness and a troubled mortgage market are closely linked to the local specificities of the housing market. For instance, credit to households grew rapidly in Central and Eastern Europe after the fall of communism due to the privatisation of the housing stock and the increased availability of credit. Yet, not all CEE countries developed in the same way, as illustrated by the emergence of a foreign-currency mortgage crisis only in some CEE countries, including Hungary and Poland.

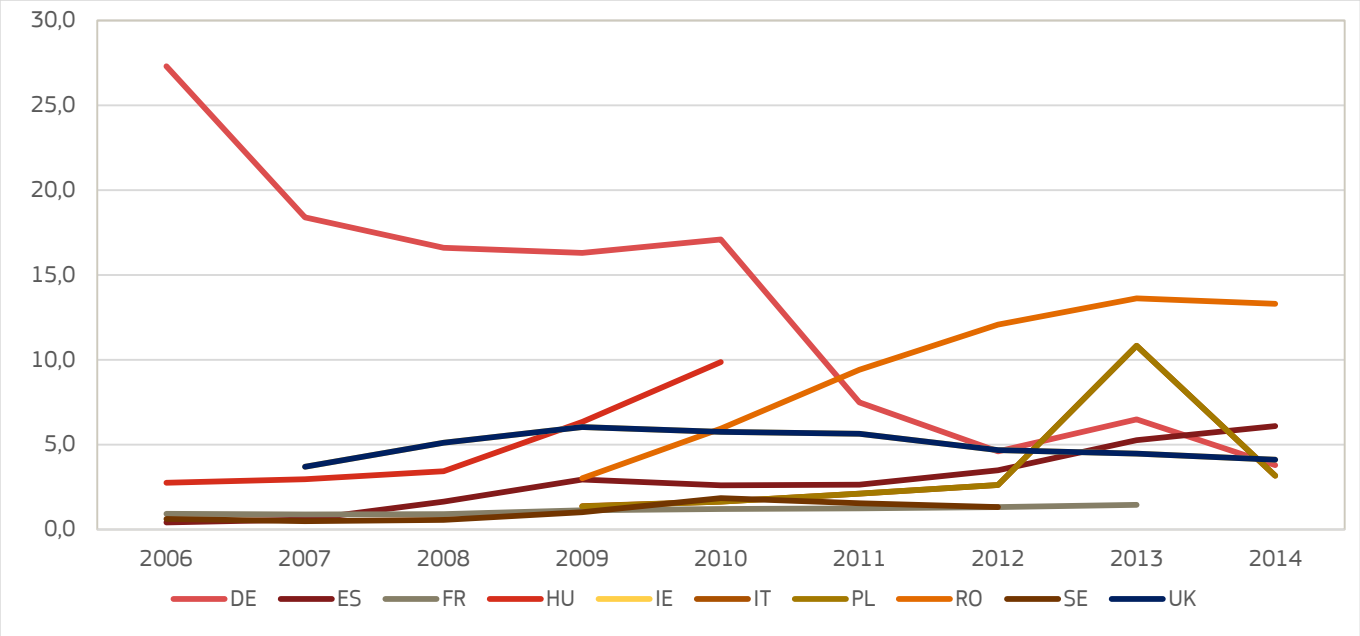
Both in Hungary and Poland households took on loans denominated in foreign currency prior to the economic crisis, which were cheaper as compared to the local currency. Yet, the proportion of foreign-currency mortgages varied significantly between these two countries, standing at 40% for Poland and 70% for Hungary[50]. As the local currencies fell, mortgages became more expensive, making it more difficult for households to service their debt. In Hungary, this led to a rapid increase in the share of non-performing mortgage loans. To stabilise the mortgage market, the Hungarian government took the following actions: in 2012, it set up the National Asset Management Company (NAMC)**,** which purchases foreclosed properties with non-performing loans and offers the former debtor the option to rent the dwelling at a reduced rent; in 2014, it converted all foreign-denominated loans into forint. In Poland, mortgage defaults were less marked than in Hungary, but foreign currency fluctuations put mortgage holders at greater risk. In response to these developments, Polish bank regulators have imposed tighter underwriting rules for foreign-currency loans[51].

[50] OECD, Household debt in OECD countries: Stylised Facts and Policy Issues, February 2016

[51] Ibidem.

Furthermore, MS that experienced a housing bubble such as Ireland and Spain have also seen higher shares of NPL and increasing default rates. In Ireland, credit to households expanded fuelled by rising housing prices. The burst of the housing bubble was accompanied by high levels of mortgages in arrears, which peaked in 2013 at 17.3% of the total value of the outstanding stock of mortgages. Since then, this value decreased to 12.1% in 2015[52]. In contrast, household debt was comparatively low in Spain, yet NPL increased. Finally, the countries that were affected by the economic crisis but had a more stable housing market, i.e. Italy and Portugal, have also seen increases in defaults, albeit at a more modest rate[53].

Figure 17: Non-performing mortgage loans as a share of mortgage loans, %



Source: Financial Conduct Authority, Narodowy Bank Polski, Banco De Espana, Banca Nationala A Romaniei, Bank of Sweden, Bundesbank, MNB

Alternative sources of financing – trade credit

Despite the current dominance of bank loans as the main source of financing for SMEs, trade credit is an important financing alternative in the general economy, and to the construction sectors of many of the analysed Member States. According to the Survey on the Access to Finance of Enterprises, 38% of SME considered it a relevant financing source in 2015 compared to 20.2% use of trade credit in 2009, indicating an important increase in its relevance over the past years[54]. In general, this type of financing practice is more established in countries such as the UK, Ireland, Hungary, Sweden, Spain and Italy, whereas it is less widespread in Germany and Romania, although the overall weight of trade credit in the total economy is not always reflected in the construction sector.

According to a recent survey, trade credit is used predominantly in business-to-business (B2B) transactions and is granted preferably to domestic customers. This is the case in the UK, Sweden and Ireland, where an average of 52.1%, 53.3% and 54.0% of the value of domestic B2B sales in the general economy is made on credit, respectively, compared to the average of 44.9% in Western Europe[55]. However, in Ireland, trade credit is also common in foreign B2B sales. Conversely, Hungary displays a stronger inclination for trade credit for foreign B2B sales, with 76.6% of the total value of foreign B2B sales being transacted on credit, compared to 67.3% of domestic sales.

---

52 Central Bank of Ireland, Household Credit Market Report, 2016

53 OECD, Household debt in OECD countries: Stylised Facts and Policy Issues, February 2016

54 Survey on the Access to Finance of Enterprises (SAFE) 2015; 2009

55 Atradius, Payment practices barometer UK. April 2015. https://group.atradius.com/publications/payment-practices-barometer-great-britain-2015.html

Trade credit terms are granted to a few sectors in the economy (such as consumer durables, chemicals, electronics, business and financial services) with construction being one of them. In the construction sector, trade credit consists of a "cascade" system among the various tiers of sub-contractors, whereby lower tier constructors[56] receive credit from outside the sector, which they pass on to the next level of contractors, and ultimately to the client. In the UK, trade credit is recurrent across the entire construction supply-chain, from contractors to construction products manufacturers. Its importance as a proportion of the balance sheets of UK construction firms is higher compared to companies in the general economy. This applies to both credit taken from suppliers and credit granted to customers. Indeed, trade credit and debit account for 32% and 20% of the balance sheets of UK construction companies, respectively, compared to 11% and 8% for other firms[57].

Conversely, the situation in Spain indicates that the importance of this financing practice is less marked among construction SMEs. Indeed, although trade credit in the Spanish economy amounted to 33% of the GDP in 2014, construction and real estate SMEs had a trade debtors-to-total assets ratio of about 8% and a **trade creditors-to-total liabilities ratio** of about -2.5% in 2013, showing the lower weight of trade credit in their balance sheets. In comparison, these values in industries like wholesale/retail trade, accommodation and food were about 18% and -18%, respectively. A similar situation is observed in Italy, where trade credit is not a widespread financing option among Italian construction companies, despite accounting for 55.7% of the total value of domestic B2B sales[58].

Contrary to the countries above, trade credit in the German economy is not as common, with only about 26.8% of the value of domestic B2B sales being transacted on credit terms, and demonstrating the general risk-averse approach to this practice, possibly due to the increase in overdue payments over the past couple of years (see Late payments). Indeed, the share of trade credit on the balance sheets of companies active in the construction sub-sector and the construction machinery sector was 29% and 13.9% between 2002 and 2009, respectively.

Specific issues-Innovative financing

Innovative financing instruments such as credit guarantee schemes and other instruments for risk-sharing are being implemented in order to boost lending to SMEs and other companies. Even though credit guarantees decreased in monetary terms in 2013, the number of guarantees given out went up. This indicates that more companies have benefited from such schemes and such instruments are increasingly relevant for SMEs[59].

At EU level, innovative financing instruments are implemented predominantly by the European Investment Bank (EIB) Group[60]. The EIB Group is active in supporting SMEs and large companies throughout Europe with financing instruments in order to foster growth and innovation.

An important source of finance for innovation is the joint initiative by the EIB Group in cooperation with the Commission **"InnovFin – EU Finance for Innovators"**. It is composed of a number of complementary financing tools as well as advisory services to foster investments by both innovative small and large companies. Over the period 2014-2020, InnovFin is expected to provide over EUR 24 billion to innovative companies unlocking EUR 48 billion of R&I investments. Among the specific instruments available, the InnovFin SME Guarantee Facility aims at improving SMEs' access to loan finance by providing guarantees and counter-guarantees in a range between EUR 25,000 and EUR 7.5 million[61]. The InnovFin SME Guarantee Facility builds on pilot Risk-Sharing Instrument (RSI) implemented during 2007-2013.

---

[56] Lower tier constructors are often smaller companies further down the construction supply chain, which take on smaller scale projects.

[57] Department for Business, Innovation and Skills, Trade credit in the UK construction industry. July 2013. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/210964/bis-13-956-trade_credit-in-uk-construction-industry-analysis.pdf

[58] Atradius, Payment practices barometer Italy. April 2015. https://group.atradius.com/publications/payment-practices-barometer-italy-2015.html

[59] EIB, Investment and finance in Europe, 2015. http://www.eif.org/news_centre/research/investment_and_investment_finance_in_europe_2015_en.pdf

[60] The EIB Group includes the European Investment Bank (EIB) and the European Investment Fund (EIF)

[61] EIF, "EU and EIB Group join forces to support up to EUR 48 billion in R&I investment", June 2014. http://www.eif.org/what_we_do/guarantees/news/2014/innovfin.htm

In addition to InnovFin, the EIF supplies equity, debt and microfinance instruments to micro-businesses and SMEs through a wealth of initiatives. The EIF's debt instruments are most interesting for construction SMEs given that their financing profile is often classified as 'debt-finance' or 'mixed-finance' involving a larger share of debt (72%) and a sizeable amount of equity (24%)[62]. While none of the initiatives by the EIB and the EIF are specific to construction, the following instruments may be applicable for construction companies, particularly SMEs:

- **Mezzanine Facility for Growth**: This is a fund of funds worth EUR 1 billion that has the mandate to invest in hybrid debt/equity funds providing alternative financing to companies and SMEs.

- **The SME Initiative**: It is a joint financial instrument by the European Commission and the EIB Group co-funded by COSME, Horizon 2020, European Structural and Investment Funds and resources from MS and the EIB Group. The SME Initiative provides financial intermediaries in MS with two products, namely an uncapped portfolio guarantee instruments and a securitisation instrument.

- **COSME – Loan Guarantee Facility (LGF)**: This programme is the successor to the CIP SME Guarantee Facility – It has an estimated budget of EUR 660 million for the 2014-2020 period. The LGF is implemented through financial intermediaries at national level. The instruments supplies capped portfolio guarantees and counter-guarantees aimed at supporting further SME risk-taking. It also offers a securitisation on mezzanine tranches. The predecessor instrument of LGF, the so-called SME Guarantee Facility (SMEG) signed 73 agreement for EUR 18.6 billion, which correspond to aggregate budget of EUR 587.6 million[63].

- **Technical Assistance**: the EIB Group provides technical assistance via grants to enhance the development impact of its projects and strengthen the capacity of its financial counterparties and final beneficiaries. The grants can be used to sponsor feasibility and market studies that accompany and reinforce the efficiency of individual projects, underpinning the initial project preparation stage. Energy efficiency in the residential buildings project, supported by the EIB, provided the best practice example of an innovative approach by French regions of "tiers financement". It was established to provide technical and financial assistance to homeowners and homeowner associations for energy efficiency retrofit. The project involves public and public-private entities as well as commercial banks to provide long-term funding to final beneficiaries.

National financing schemes

Initiatives for innovative financing are also developing at national level. In Italy, for instance, a trade credit network (*Circuito di Credito Commerciale*) has been operational across 10 regions since 2010. It consists of a network of enterprises that purchase goods and services by providing their own services to the rest of the network, free of interests. This scheme operates in parallel with traditional bank loans, and has been attracting hundreds of construction companies and industry professionals, accounting for an increasing share of the total value of the network's transactions.

In Ireland, the **lending platform Activate Capital** was set up as an innovative financial instrument to provide lending to house builders and thus stimulate the construction of new homes. Activate Capital was created as a EUR 500 million joint venture by the Irish Strategic Investment Fund (ISIF), a sovereign wealth fund with a mandate to achieve economic impact in Ireland, and KKR, a global investment firm[64]. The lending approach of Activate Capital consists in providing senior loans starting from EUR 10 million to fund up to 90% of the total financing requirements. Targeting prime locations in Ireland's urban areas, funding by Activate Capital covers the purchase of the site, the construction and professional fees.

---

62 EIF, Financing Patterns of European SMEs: An Empirical Taxonomy, Working Paper 2015/30, November 2015.

63 EIF, CIP Competitiveness & Innovation Programme: Data as of 30th September 2014, http://www.eif.org/what_we_do/guarantees/single_eu_debt_instrument/cosme-loan-facility-growth/2015-03-03-cip-cosme-outlook-at-30th-sept-2014.pdf

64 Activate Capital, http://www.activatecapital.ie/about-us/

Late payments

Geographical trends

Long average payment terms and late payments are a recurring issue affecting the investment landscape in the construction sectors of all Member States analysed. The situation appears to be worse across countries in **Central and Eastern Europe**, particularly in Romania and Poland. In fact, the average time to collect receivables in the Romanian construction and real estate sectors amounts to 168 days, well above the average in the national economy. In addition, the average payment term to settle short-term debt reached 272 days in 2014, due to a combination of liquidity problems but also procurement transparency issues. Thus, the Romanian construction and real estate sectors were responsible for 16% of the total overdue payments in 2014. A similar situation is encountered in Poland, which reports an average invoice payment time of about 144 days, with 30% of invoices being paid late. Late payments between Polish construction contractors result in a considerable financial burden, with an ensuing debt estimated to amount to PLN 200 million (EUR 48.2 million). This is particularly aggravated by the inefficient management of public contracts by public administrations, as well as the public procurement selection practice of the lower-price bidder (see Specific issues – Delays from Public Administration). Conversely, Hungarian construction and real estate companies display a comparatively better payment discipline, with an average payment delay of 29 days and 28 days, respectively. However, this is above the national average, and 34% of invoices were paid late in 2014, although there has been an improvement compared to previous years.

Late payment practices are also a burden across Western Europe, although **Northern European** countries generally performed better with regard to average invoice payment terms and delays than their Southern counterparts. For instance, invoice payment terms and delays average 23 and 26 days in the German construction sector, respectively, with the share of overdue invoices amounting to 43% of the value of the sector's trade credit sales. In the UK, over 20% of construction contractors are paid in more than 60 days. In addition to being associated with financial and liquidity issues, late payments are also linked to other structural issues, such as employment. As an example, 9% of Swedish construction companies and 19% of real estate firms ascribe employee dismissals to late payments, and 12% of construction companies and 35% of real estate firms cite late payments as a main barrier to personnel recruitment.

Among **Southern European** countries, France performed slightly better than Spain and Italy. In 2014, the country's construction companies reported an average payment period of 55 days to pay their suppliers. However, they are paid over an average period of 63 days by their clients. In addition, 47.3% of construction firms pay their suppliers with delays below 30 days, whereas another 6.9% of firms settle their suppliers' invoices with delays of over 30 days[65]. As for Spain, the average payment terms required by construction and real estate SMEs to pay their suppliers reached 80 days from the invoice date, the longest in the general economy. The supplier payment period for larger construction and real estate firms is even higher than for SMEs, averaging at 160 days in 2013. The Spanish construction sector is also responsible for 37.2% of all overdue payments in the national economy.

Specific issues – Delays from Public Administration

Late payments in the construction sector do not only occur between contractors, but also originate from Public Administrations when public works are involved. This issue is being encountered in several countries, particularly in Southern and Central and Eastern Europe. In Italy alone, 78% of construction enterprises reported delays in payment from Public Administrations at the beginning of 2015. Companies involved in public contracts are paid after an average of 177 days, with delays of over 18 months frequently reported. The monetary burden of these delays is estimated at EUR 8 billion, with detrimental consequences on the financial viability of the firms concerned. Similarly, Public Administrations in Spain pay contractors and self-employed workers with an average term of 103 days and 86 days, respectively. As for Poland according to the European Construction Industry Federation (FIEC), the payment of about PLN 10 billion (EUR 2.5 billion) worth of completed infrastructural projects (especially roads) by the General Directorate for National Roads and Highways (GDDKiA) is estimated to be still under negotiation or litigation. Moreover, even accepted invoices are not being paid in due

[65] Observatoire des délais de paiement, Rapport annuel de l'Observatoire des délais de paiement 2015. February 2016. http://www.economie.gouv.fr/files/files/PDF/observatoire_delais_paiement_rapport_annuel_2015.pdf

time by the GDDKiA. This issue is also greatly influenced by the lowest price criterion on which the selection of tenderers for public infrastructural works is based. In fact, this led to many unexperienced companies being awarded the contracts, resulting in poorly executed works. As a consequence, the final projects are often rejected by the public administration, and the contractors not paid, further exacerbating payment and liquidity issues.

There are still cases of Member States where national legislations go against the timely payment of invoices. An instance is Italy, where delays from the Public Administration are further exacerbated by the split payment practice, in force since 2015, whereby Public Administrations only reimburse the amount of the invoice excluding VAT. The state then reimburses the remaining VAT to the contractors. As a result, it is estimated that full payment takes on average 470 days, with an ensuing financial burden of EUR 1.3 billion per year.

But also on the other hand, some Member States have introduced national measures to combat late payments, both in the general economy and specifically in the construction sector. In Ireland, in order to address the lack of formal contractual arrangements and improve the cash flow within the sector, particularly among sub-contractors, the Construction Contracts Act 2013 was implemented. The Act sets a series of legal provisions aiming to improve and accelerate the resolution of disputes, and requires all construction contracts to include appropriate instruments to establish the amounts due and payment intervals. Similarly, the Consumption Law (*Loi Consommation*) was adopted in 2014 by the French government. It introduces a set of provisions to accelerate payment practices and bring down delays from 60 to 45 days after the date of the invoice. Penalties of up to EUR 2 million are also foreseen in case of late payment. Another country which has taken steps in this direction is Hungary, which set up a Performance Certificate Compliance Expert Body to preside over unpaid construction debts, ensuring that they are settled on time and facilitating the resolution of construction disputes[66].This measure has been associated with the generally improving payment discipline in the country.

3. Residential buildings market

Housing remains a critical issue for many Europeans, with 11.4% of the total population in the EU-28 spending more than 40% of their disposable income on housing costs[67], and with housing exclusion (measured by housing deprivation and number of homeless) increasing in most of the EU Member States. The residential building market has been declining substantially since the economic crisis, and has only recently been on a recovery path. To support residential construction, governments have put in place a number of policies that can foster renting, buying, constructing or adapting houses. Despite the illusion created largely through de-regulation in the financial sector in the 2000-2008 period, no country has fully managed to provide a structural solution to the challenge of meeting affordable housing demand.

In this context, the EU tries to avoid the permanent low growth scenario by providing new instruments to help SMEs and others to invest in projects with high job creation and growth potential. Once again, after the first EU economic recovery plan of 2008-2009, housing enters in the big picture as one key area to invest in. Housing is therefore on the EU agenda, not only because it has been part of the problem the EU is facing, but also because supporting public, cooperative and social housing is part of the solution. It remains to be seen if these new instruments will help address housing needs[68].

It remains unclear, however, whether the European Fund for Strategic Investment (EFSI) and the EU guarantee attached to it will be adapted to facilitate investment in social housing. Long-term loans with low interest rates are what is needed to invest in this sector, which is complex in terms of the capital it requires, but low risk in terms of return on investment. Despite the announcement of President Juncker at the end of 2014, neither the Parliament nor the Council seem willing to

---

66 Baker & McKenzie, Hungary legal insights. 2013. http://www.bakermckenzie.com/files/Uploads/Documents/EMEA/EMEALIB/Sept%202013/nl_emea_hungarylegalinsights_sep13.pdf

67 The percentage of the population living in households where the total housing costs ('net' of housing allowances) represent more than 40 % of disposable income ('net' of housing allowances) is known as 'Housing cost overburden rate'. http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Housing_cost_overburden_rate

68 Housing Europe, The state of housing in the EU. 2015

include a specific reference to the use the EFSI in the fund regulations to support key economic and social infrastructures like affordable housing. Beyond the EU Investment plan, in countries where sufficient capital is not forthcoming, the public, cooperative and social housing sector is looking for cooperation with and support from the EU financing instruments, in particular the European Investment Bank (EIB)[69].

The housing policies introduced in the EU Member States are focusing in general on **three aspects of housing issues in Europe:**

- Regulatory policies focusing on establishing and enforcing the legislative and regulatory landscape for the development of the housing market in the country;
- Rental housing policies aiming to boost social rental housing for the young and socially vulnerable population;
- Policies focusing on promoting home-ownership through buying dwellings on the primary and secondary market.

As these three types of policies require different approaches and target different social groups, they are analysed separately in the following sections.

Improving the regulatory environment for residential building market

The dwellings market has been identified across the 10 MS as an area in need of policy intervention. A number of factors are contributing to this development. In some countries, housing construction in recent years has not been keeping up with demographic trends. This is leading to significant housing shortages, concentrated around the main urban centres and in the most economically attractive regions. As an underlying trend, urbanisation is accelerating in virtually all EU countries, with people increasingly moving to the largest cities such as London and Paris. This is notably the case in the UK, where about 245,000 new dwellings per year are needed in England alone, while only half of this amount is being built. There is already a shortage of rental housing of up to 156,000 dwellings in Sweden, especially in Stockholm and in the big university cities such as Göteborg and Malmö. There is strong demand-side pressure in metropolitan areas of Germany, such as Munich and Hamburg, which are leading to an increase in prices and rents[70].

Smaller centres are also experiencing an influx of people, creating an increasing need for housing in urban areas. However, as a result of the financial crisis, housing markets imploded, particularly—but exclusively—in the countries that experienced a housing bubble, such as Ireland and Spain. For instance, the supply of new dwellings in Ireland drastically fell from 80,000 in 2006 to 20,000 in 2012. Construction of housing in Hungary also went down from 43,900 units in 2004 to around 12,700 in 2011[71]. Structural aspects related to regulatory and investment conditions may hamper the flow of investment to the housing sector. Thus, governments across the 10 MS analysed have taken action to stimulate construction in the housing market by implementing various regulatory policies.

A number of MS have implemented policies to address the housing shortage by simplifying the **planning process** and **building rules,** as well as **introducing guidelines**. For instance in Sweden, the UK and Ireland, the lack of affordable housing is considered a pressing issue due to a combination of limited supply and the crash of the housing market. Moreover, construction is often hampered by complex regulation and lack of transparency. In order to counteract this issue, the Swedish government amended the Planning and Building Act (2010:900) in 2013 through the Government Bill 2013/14:126, which simplifies and streamlines the planning and building process[72]. Among others, the amendment introduces a standard procedure for drawing a development plan. Furthermore, it limits the ability of municipalities to introduce stricter technical requirements than those stipulated by the Swedish National Board of Housing, Building and Planning, thereby reducing the burden on residential construction. Also, the transparency in the allotment of land at local level has been improved with the adoption of guidelines for land allocation (Swedish Code of Statutes SFS 2014:899),

[69] Housing Europe, The state of housing in the EU. 2015.
[70] Ibidem.
[71] Hungarian Association for Residential Construction, Europe needs an active housing policy. October 2012. http://www.lakasepitesert.hu/upload/Europe%20needs%20an%20active%20housing%20policy_2012%2010%2019_TLE.pdf
[72] Swedish Government, Government Bill 2013/14:126. March 2014. http://www.regeringen.se/contentassets/181e872ad41c4501a5fe3a41b2361178/en-enklare-planprocess-prop.-201314126

whereby the municipalities need to spell out basic conditions for land allocation[73]. As part of the UK's 2015 budget, the 'Fixing the Foundation' package lays down planned actions to speed up residential construction[74]. Notably, the UK government plans to introduce automatic permission to develop brownfield sites, ensure that local authorities take greater action in putting in place local plans, as well as 'fast-track' major housing projects. With the view to boost housing supply in Ireland, the National Apartment Planning Guidelines were introduced to drive down the costs of homes by standardising the approach to residential construction.

Other policy initiatives have focused on aspects related to the **financing of residential buildings**. Ireland has been very active in this respect, by introducing a legislative framework for Real Estate Investment Trusts (REITs) to be traded on its stock market (see Box below). Policies may also provide financing directly to home-building companies in order to boost the supply of new residential buildings. Notably, the Irish Strategic Investment Fund created a Home-Building Investment Finance Joint Venture called Activate Capital, which provides loans to companies that operate in residential development.

Finally, some of the policies introduced by the MS provide **tax incentives** to the housing sector. Notably, France aimed to stimulate the supply of housing by introducing the Duflot and Pinel laws, which grant tax reductions when investing in new rental buildings. The Duflot and Pinel laws are meant to lead to the construction of 55,000 new dwellings. Indeed, housing shortage is a particularly acute in France, as it is estimated that the construction of 500,000 homes a year is needed. Similarly, Hungary is expecting to revive its weakened housing sector through the reduction of its VAT rates in 2016, from 27% to 5% on the sales of newly built residential property. This measure will last until 2019 and is expected to increase the number of new dwellings[75]. Indeed, the some of the effects of this policy have been visible during the course of 2016. Notably, in the first half of 2016 the number of dwellings built increased by 11% compared to the previous year. Moreover, the construction of 5,434 residential buildings is planned (based on the request for building permits), which represents a 79% increase compared to the same period in 2015[76].

While some of the policies introduced by the MS tackle the wider framework for residential construction and address a variety of stakeholders, some other government actions in the regulatory domain have a more precise target in terms of **beneficiaries**. For instance, construction companies and investors may directly benefit from some of the residential construction policies discussed above. This is the case with the joint venture Activate Capital in Ireland, which benefits companies operating in the home-building business. Furthermore, the Irish Real Estate Investment Trust (REIT) regime facilitates investment in the housing market and is thus beneficial for investors too. Moreover, the tax incentives provided by the Duflot and Pinel laws in France are targeted to investors in residential property markets. The VAT discount in Hungary, on the other hand, has no specific targeted beneficiaries other than homebuyers.

Best practices and lessons learnt

Regulatory initiatives to boost investment in the residential construction vary among EU countries. The Irish REIT regime represents a policy experience that fosters private investment in the housing market[77] though special organisational and market arrangements, as discussed in Box 1 below.

---

73 European Commission, Sweden's national reform programme 2015. http://ec.europa.eu/europe2020/pdf/csr2015/nrp2015_sweden_en.pdf

74 HM Treasury, Fixing the foundations: Creating a more prosperous nation. July 2015. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/443898/Productivity_Plan_web.pdf

75 Ministry for National Economy, Recently adopted lower VAT rate on newly-built homes to ignite the property market. December 2015. http://www.kormany.hu/download/8/93/90000/Recently%20adopted%20lower%20VAT%20rate%20on%20newly-built%20homes%20to%20ignite%20the%20property%20market.pdf

76 Hungarian Central Statistical Office, More newly built homes, a sharp rise in construction sentiment, July 2016. http://www.ksh.hu/docs/eng/xftp/gyor/lak/elak1606.html

77 REITs aim to spur investments both in the residential and non-residential markets, depending on the typology of properties in their portfolio. This box specifically focuses on an instance of residential REIT. An instance of a non-residential REIT is illustrated in 'Non-residential building market'.

Box 1: REIT regime in Ireland

With the Finance Act 2013, Ireland introduced a regime allowing the establishment of Real Estate Investment Trusts (REITs) as investment structures to boost investment in the property market, which was severely weakened by the burst of the housing bubble in 2007/8.

With the introduction of the REIT regime, the Irish government aimed to particularly attract foreign capital to the Irish property market and contribute to its stabilisation. A secondary goal of the policy was to divert bank financing from property markets to other sectors of the economy to generate further growth. Finally, the REIT regime is meant to offer an alternative instrument for property investment[78].

In essence, a REIT is a publicly listed company in charge of the ownership and management of property-related assets. Shares of a REIT can be bought and traded on the stock market. REITs generate value for shareholders through rental income and capital growth related to the value of the REIT and its property assets. This financial architecture provides an attractive instrument for property investment, which in turn is meant to spur the growth of the residential market.

The introduction of the REIT regime has shown positive developments since its launch, with substantial capitals being raised. As one of Ireland's REITs, the Irish Residential Properties (Ires) was introduced in 2014 focusing entirely on the residential market. Already in 2014 it was operating 1,204 residential units with almost full occupancy[79]. In 2015, Ires portfolio counted 1,566 apartments, and its first semester pre-tax profits amounted to EUR 14.8 million[80].

The benefits of REITs can be summarised as follows. Firstly, REITs provide an attractive investment opportunity for investors wishing to enter the property market through the purchase of shares. Additionally, REITs diversify risks related to the property market via collective investment across a portfolio of various real estate assets. The favourable tax treatment also contributes to the appeal of the scheme. Secondly, tenants of REIT-owned properties benefit from professional management and long-term investment in residential property, which helps securing supply of high quality, safe and affordable rented housing. Thirdly, partly due to the standardisation and international recognition of REITs as financial products, REITs are successful in attracting foreign investment to the Irish market. This contributes to the growth of the sector, particularly after its implosion in 2007/8. Finally, with the introduction of REITs, the property market is provided with alternative means of financing. This reduces dependence on bank financing, allowing banks to provide credit to other sectors, thereby also benefitting the overall economy.

Policies supporting the rental market

EU Member States face problems of different magnitude regarding rental housing. While the **older EU countries have a historically lower level or ownership, the proportion of rented property is higher**. The metropolitan areas, however, are lacking affordable rental housing, as the costs there are pushed up by the market demand and limited supply.

78 PwC, 2013 Finance Act. https://www.pwc.ie/media-centre/assets/publications/2013_finance_act.pdf

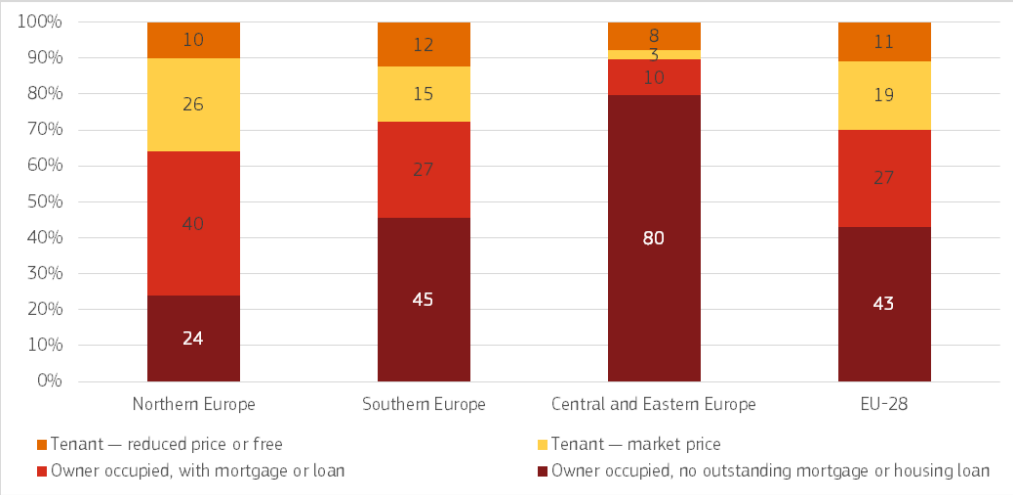
79 Irish National Parliament, Written Answers Nos. 1-30. http://oireachtasdebates.oireachtas.ie/debates%20authoring/debateswebpack.nsf/takes/dail2015020400069#WRA00700

80 Irish Times, Ires Reit reports pre-tax profits of €14.8m in first half. August 2015. http://www.irishtimes.com/business/commercial-property/ires-reit-reports-pre-tax-profits-of-14-8m-in-first-half-1.2312332

In 2014, 70% of population in the EU-28 lived in owner-occupied dwellings, while 19.1% were tenants with a market price rent, and 10.8% were tenants in reduced-rent or free accommodation[81] (Figure 18). The fraction of population renting their accommodation varies between regions.

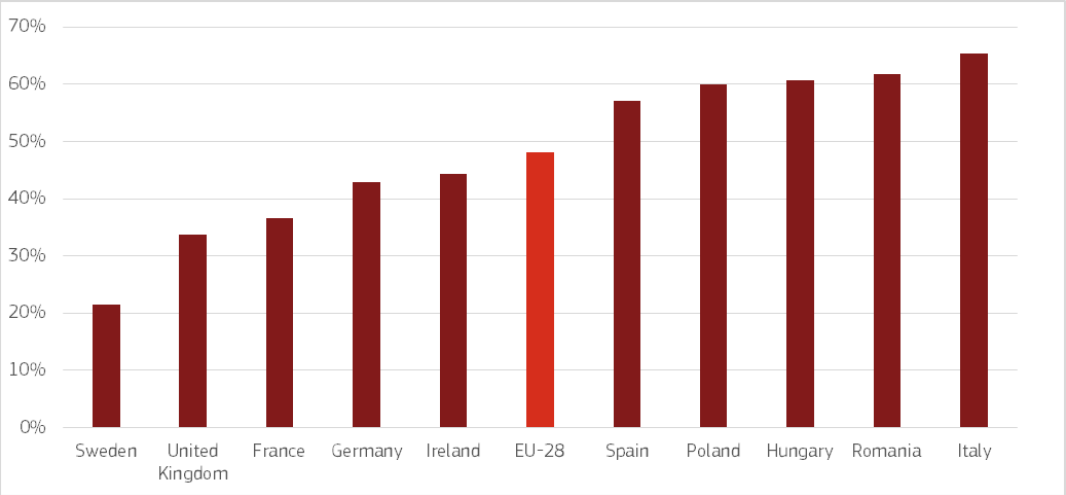
Northern European countries have the highest fraction of rented housing (36%), followed Southern Europe (27%). **Central and Eastern European countries** have historically high level of home ownership (90%), with the rental market being limited (10%). Despite the high rate of ownership, there is a high need for additional housing for young people, as those countries are among the leaders in EU for the share of young people living with their parents (Figure 19).

Figure 18: Distribution of the population by tenure status, 2014[82]



Source: Based on the data from Eurostat.

Figure 19: Share of young adults aged 18-34 living with their parents in the EU, 2014



Source: EU SILC, 2015

81 Under this situation, no rent is to be paid, such as when the accommodation comes with the job, or is provided rent-free from a private source. http://ec.europa.eu/eurostat/documents/1012329/6070906/Household+data+-+housing+data%2Bchange+in+HH071.pdf/087d4911-ec67-4caf-802a-6ad442b7c012

82 Western Europe is referred as: Germany, France, Belgium, Luxembourg and Austria; North Europe: UK, Ireland, Sweden, Finland, Denmark, Netherlands, Estonia, Latvia; South Europe: Spain, Portugal, Italy, Greece, Malta, Cyprus; Central and Eastern Europe: Poland, Lithuania, Hungary, Slovakia, Slovenia, Romania, Bulgaria, Czech Republic and Croatia

The lack of and the increasing need for housing, including social housing, for young people has pushed policy initiatives towards the development of rental housing options for socially sensitive groups of population. The progressive dilution of private rental markets in the EU was heavily affected by the alignment of market and policy incentives favouring ownership as the best option to meet accommodation needs (taxation benefits, easing of financing conditions, expectations frenzy, etc.). Biased incentives towards ownership fostered demand for owned housing (both new and second-hand), leading to rapid increases in house prices relative to rentals. Price-to-rental ratios reached an all-time high for most EU countries in 2007-08, signalling potential overheating pressures in housing markets, since under an equilibrium situation households should be indifferent between buying and renting[83].

Despite the differences between the countries, the national governments are implementing a set of policies aimed at increasing the affordability and the amount of rental housing across Europe.

Social housing is provided for rent in most of countries analysed, but the sale of dwellings is also possible in many. In Romania, for example, the Housing Rental Units for Young People (*Programul de construcții locuințe pentru tineri, destinate închirierii)* programme addresses the issues of housing affordability and lack of social housing. The programme entails the construction of rental dwellings for young people who cannot afford to buy or rent a property at the market price. The units are raised on lots offered by city councils, and can be bought by the tenants after minimum one year of lease. According to the implementation body, there were more than 150,000 requests from young people, and 88,000 apartments were allocated in 2014.

Moreover, some countries offer provision for **intermediate tenure**, a shared ownership solution where tenants buy a share of the dwelling from the housing associations and pay a rent for the remainder, as has been increasingly adopted in the UK. In Poland, rental housing policies are focusing on the refurbishment and new construction of rental social housing, and support payments of rents to boost the affordability of lodging (Fund of Apartments to Rent). Fund for Rental Housing is an initiative taken by the Bank Gospodarstwa Krajowego, aiming to offer attractive quality and affordable apartments for rent in the largest Polish cities. Hungary, in turn, purchases the properties with non-performing loans via Rent-to-Own scheme managed by the National Asset Management Company (NAMC) and offers them for reduced rent to the former owner as a measure to reduce excessive indebtedness due to the mortgage crisis in the country. By the end of 2014, almost 25,000 housing units were purchased by the programme, paying the banks 35-55% of each property's market value.

Other countries, including some Mediterranean ones (such as Cyprus, Greece and Spain), have provided social housing as low-cost housing for sale[84]. In Spain, two programmes under the State Housing Plan (*Plan Estatal de Vivenda*), led by the Ministry of Public Works, provides a targeted direct support with **partial payment of the rental fees**. The subsidy under one such programme accounts for 40% of the annual rent (with ceiling EUR 2,400 per dwelling) (see Box 2 for details). Similarly in Italy, the Housing Plan (*Piano Casa*) facilitates access to housing by subsidising part of the rent through the National Fund to support access to rented properties, boosting the availability of social housing and making the lodging accessible.

Analysis of the **target groups** for rental housing policies revealed that they focus mostly on people with low incomes that are lacking access to housing or are not able to pay the market price for rent (Italy, Spain, Poland). Thus, Romanian Housing Rental Units for Young People programme was targeted to the young population of 18-35, whereas in Hungary the Rent-to-own policy was focused on the vulnerable categories, such as families with children. Most of the rental policies analysed, had a wide range of households with low income.

Investment in rental housing policies varies between EU-28 MS and does not always reflect the severity of the housing problems in the country. Thus, in Romania, despite the long duration of the Housing Rental Units for Young People programme, the annual budget foreseen by the National Housing Agency was only EUR 17.5 million in 2014. Conversely, the budgets of the 'National Fund to support access to rented properties' under *Piano casa* (Italy) and *Plan Estatal de*

[83] European Commission, Rental Market Regulation in the European Union. 2014. http://ec.europa.eu/economy_finance/publications/economic_paper/2014/pdf/ecp515_en.pdf

[84] European Parliament, Social Housing in the EU. January 2013. http://www.europarl.europa.eu/RegData/etudes/note/join/2013/492469/IPOL-EMPL_NT(2013)492469_EN.pdf

Vivenda (Spain) varied between EUR 200 million for the former, and EUR 2.5 billion for the latter[85]. However, due to the administrative burden, some of the budget is expected to be unspent.

Most of the rental housing policies include **subsidy schemes** providing direct support for the beneficiaries in the form of partial coverage of the rental fees (*Plan Estatal de Vivenda,* Spain, Rent-to-Own, Hungary, *Piano Casa*, Italy). Some of the policies take over the construction of the housing that will be rented to people who cannot afford to pay rent at the market price (Housing Rental Units for Young People, Romania).

Government rental housing policies are using a set of **financial instruments**, aiming to increase the effectiveness of investments and limit the burden to the budget. Those initiatives are mostly funded via national budgets, European funds (especially for Central and Eastern Europe, where national budgets are weaker) or a mix of both. Some of the policies are financed from the credit, provided nationally by public development entities or at EU level by the EIB. Thus, EIB is financing in this way the Polish rental policies, aiming at refurbishment and construction of rental social housing. However, the uptake by MS of more innovative financial instruments for financing rental housing loans are still rare in Europe.

Best practices and lessons learnt

The rental housing policies analysed above differ in their scope and scale. The majority of them was targeting the social rental market by providing a direct subsidy to the beneficiaries in the form of a reduced rent or a partial coverage of the rent. The State Housing Plan, reflecting this model in Spain, allows to draw some lessons learnt from the implementation and management of complex housing policies in residential rental sector.

[85] This figure (EUR 2.527 billion), refers to the total budget of the Plan Estatal de Vivienda.

Box 2: State Housing Plan (*Plan Estatal de Vivienda*, Spain)

After the crisis, Spain was lacking a balance between the construction of new buildings and the development of rental housing. The country was looking for a solution to reactivate the construction sector, generate employment, obtain cost savings and promote energy efficiency, in line with European Directives.

The biggest initiative implemented in recent years to reactivate the construction sector is the State Housing Plan 2013-2016, which has a budget of EUR 2,527 million, to be allocated in two annuities in the form of grants and funding for rental housing, building renovations and urban renewal. The plan is funded by the Ministry of Public Works – Secretary for Architecture, Housing and Land (EUR 2,311 million) and the Autonomous Regions (EUR 216 million). The total public investment is EUR 2,527 million.

The Plan's measures related to rental housing included: i) Rental Housing Assistance: up to 40% of the annual rent with a maximum of EUR2,400 per dwelling; ii) Promotion of public rental housing stock: up to EUR 250 per useful m^2 of housing, up to 30% of the cost of the building with a maximum of EUR 22,500 per home.

Additionally, the Plan foresees government support for the promotion of building renovations, urban regeneration and renewal, supporting the implementation of the buildings evaluation report, promoting sustainable and competitive cities.

The Government expects the Plan to award 200,000 rental housing support grants (the figure was 80,000 at the end of the previous plan) and 230,000 grant subsidies, to support the renovation of 50,000 homes, and to create 36,000 new jobs in 3 years. The ministry signed 109 agreements throughout the national territory pursuant to that plan, involving the renovation of 9,271 homes, the renovation of 1,609 rental homes and the construction of 113 rental homes. That equates to a total of 10,993 houses affected, with a total investment of EUR 280.19 million, of which the Ministry provided EUR 85.85 million.

At the time, the State Housing Plan was the biggest government programme that supported rental market in Spain. It brought significant inflow of capital to the market and allowed to boost the rental market and to comply with the social liabilities of the government. The Plan was putting ambitious goals and, so far, not all of them have been achieved.

While the government position on the results of the policy implementation is quite positive, industry stakeholders remain sceptical. The complex policy faced issues related to poor management of grants by some regions, the delay in implementing the measures, the financial and regulatory fragility, and the slow award process. Management by the regions makes it difficult to measure the success of the Plan at national level, but data shows that, in most regions, success has not been as expected and has not led to a significant change in the sector.

Based on the analysis of the rental housing policies, some general observations regarding the design and implementation of such initiatives were made.

Firstly, the housing rental policies should be of a considerable scale to be able to make a sustainable difference. **Secondly,** sound management of large policy implementation should be put in place at the central and regional levels at the stage of the programme design, allowing efficient communication and monitoring process. **Thirdly,** the political and regulatory landscape requires stability and predictability in order to set up targets for the medium to long term and be able to achieve them. **Finally,** the use of innovative financial instrument is vital to ensure the inflow of private capital to the policy initiatives and thus limit the financial burden on the national budgets and tax payers.

Policies supporting home ownership

The financial crisis has had a deep impact on the residential market, particularly with regard to access to housing loans and home ownership. High unemployment rates and tightening lending conditions from financial institutions have led to a drop

in loans granted and in the number of ensuing residential transactions. Indeed, across the EU-28, gross residential loans dropped from EUR 1,377 billion in 2007 to EUR 863 billion in 2014[86], representing a 37% decrease. Thus, fewer people resulted credit-worthy enough to secure a mortgage to buy properties, and this is especially the case for younger generations. Overall, this has put a brake to the broad construction sector as whole.

To offset this trend and address the sluggish investment in the purchase of residential properties, a variety of policies has been introduced in the analysed Member States. In terms of specific purposes, a common trend among policy schemes in these countries it to focus predominantly on **reinstating purchasing power and ownership among young people and families** for the acquisition of a first dwelling. Examples of this type of initiative can be found in Italy, Poland, Romania and the UK.

In fact, lending conditions in these countries have proved to be restrictive, particularly for young people and larger families. In Italy, families have seen a substantial decrease in financial support available to them for the purchase of homes. Italian banks only granted mortgages for a total value of EUR 21.4 billion in 2013, compared to EUR 63 billion in 2007, constituting a 66% drop. At the same time, the Loan-to-Value ratio (LTV) on mortgages declined from about 72% in 2011 to less than 55% in 2013, requiring families to put a larger down payment on the property. This has resulted in a 53.6% decrease in the number of residential real estate transactions between 2007 and 2013. Similarly, in Poland, the financial supervisor imposed stricter mortgage lending criteria to diminish associated risks following the crisis, as a response to the very low interest rates and uncontrolled lending tendencies prior to the crisis. Consequently, mortgage seekers need to have a significant cash input when applying for a housing loan. Lending conditions in Romania followed a similar pattern, with LTV ratios decreasing considerably, from 99.5% in 2008 to 58.2% in 2012. In the UK, gross residential loans to households fell by 51.5% between 2007 and 2014, from EUR 530 billion to EUR 257 billion.

In this context, national governments took action to address this market failure. The Italian government introduced the First Home Guarantee Fund (*Fondo di Garanzia Prima Casa*), offering young families a state guarantee on their mortgages, for the purchase of their first home. The initiative gives banks and other credit institutions access to liquidity in case the mortgager should no longer be able to repay the instalments of the loan. Similarly, Poland launched the Apartment for Young People (*Mieszkanie dla Młodych –MdM*), a State aid scheme providing young people with financial aid in the form of co-financing of a mortgage for a first apartment. In Romania, the government implemented the First Home Programme (*Programul Prima Casă* - PPC), under which the state issues guarantees on the mortgages granted by adhering financial institutions, thus covering half of the risks associated with housing loans. In the UK, the Help-to-Buy Equity Loan Scheme and the Help-to-Buy-Mortgage Guarantee Scheme provide a state loan and guarantees on the mortgage, respectively.

In Ireland, a second trend related to home-ownership policies can be identified. The country has suffered from a severe housing bubble up until 2008, characterised by exuberant investment and mortgage lending, resulting in high levels of mortgage debt ratios and household indebtedness. For this reason, the Central Bank introduced macro-prudential measures for residential lending to **protect the banking and household sectors** from fluctuations in the property market and reduce risks. These put a restriction on loan-to-value (LTV) ratio (80% for non-first time buyers and 90% on the first EUR 220,000 of the value of the property for first-time buyers). Moreover, loan-to-income (LTI) ratios have a maximum ceiling equal to 3.5 times the gross annual income.

In terms of **targeted beneficiaries**, home-ownership policies in the analysed countries put the focus on young people and families, initially setting more restrictive requirements with respect to age, income bracket and number of children. However, these eligibility criteria have often been amended and expanded, to facilitate access to the schemes. For instance, the First Home Guarantee Fund (*Fondo di Garanzia Prima Casa*) in Italy has been modified and opened to anyone, regardless of their age and income, although priority is given to young couples below the age of 35, single parents and other vulnerable categories of beneficiaries. Similarly, the Polish Apartment for Young People (*Mieszkanie dla Młodych – MdM*), initially supporting only beneficiaries under 35, has lifted this requirement for families with at least three children. In addition, the amended scheme also extends its support to beneficiaries with three or more children who already own a property, unlike the Italian counterpart. The Romanian First Home Programme (*Programul Prima Casă* - PPC) is more

[86] European Mortgage Federation (EMF), Hypostat 2015. September 2015. http://www.hypo.org/PortalDev/Objects/6/Files/Hypostat_2015.pdf

permissive, since it is open to anyone, without setting an age limit and allows the beneficiaries to be owners of a prior property. Similarly, the UK Help-to-Buy Scheme is open to all potential and existing homeowners, with no salary cap or joint income limits.

Regarding the investments foreseen by home-ownership programmes in the analysed Member States, the **available budgets** range from a total of EUR 670 million for the First Home Guarantee Fund, to a total of EUR 850 million for Apartment for Young People and EUR 1.68 billion for the First Home Programme.

In general, concerning the type of **financial support** available for home-ownership programmes, it can be noted that **financing** appears to play an important role. Namely, state guarantees on mortgages are a widespread instrument to facilitate access to housing loans and promote ownership. This system, in place in Italy, Romania and the UK, alleviates the risk associated to mortgage lending, giving the opportunity to financially precarious individuals who would not be creditworthy under actual market conditions to obtain financial support through a risk-sharing mechanism. The magnitude of the guarantees varies across countries, with the Italian and Romanian schemes covering up to 50% of the value of the mortgages, whereas under the UK Help-to-Buy-Mortgage Guarantee Scheme the government can underwrite up to 15% of the mortgage. Another type of financing option is offered in the UK through the provision of an equity loan of up to 20% of the cost of the property, under the UK Help-to-Buy Equity Loan Scheme. Conversely, **funding** seems to be a less frequent form of financial support for home-ownership policies. An instance is the Polish Apartment for Young People, which takes the form of co-funding of a share of the down payment on the property.

Best practices and lessons learnt

The following box provides an example of a successful home-ownership programme in Romania, showcasing its strengths and weaknesses.

Box 3: Romania's First Home Programme (*Programul Prima Casă*)

The First Home Programme (Programul Prima Casă - PPC) was launched in June 2009 by the Romanian Ministry of Public Finances. Approved and implemented through Law no. 368/2009 and Government Decree no. 717/2009, it is managed by the Government's National Guarantee Fund for Loans to Small and Medium Enterprises (Fondul Național de Garantare a Creditelor pentru Întreprinderile Mici şi Mijlocii - FNGCIMM). The programme aims to facilitate the acquisition and/or construction of dwellings by issuing state guarantees covering up to 50% of the value of the mortgages taken by beneficiaries from adhering credit institutions. This risk-sharing mechanism was introduced to counteract the risk-averse approach to lending of the Romanian banking system following the crisis, and to respond to the ensuing decreasing LTV ratios, which were putting a brake to access to housing finance. Thus, under the programme, beneficiaries can be granted a mortgage with a LTV of up to 95% of the value of the property, requiring only a 5% initial down payment. Guarantees can be applied to loans with a maximum value of EUR 57,000 (for existing dwellings) and EUR 66,500 (for construction of new dwellings). The budget of the programme is defined yearly, with the total ceiling for guarantees reaching RON 2.98 billion (EUR 667.4 million) for 2014, RON 2.84 billion (EUR 635.9 million) for 2015 and RON 1.69 billion (EUR 378.6 million) for 2016. Since its inception, and up to November 2015, about 163,000 guarantees were issued, for a total value of about RON 13.9 billion (EUR 3.2 billion). The programme has seen a positive uptake and evolution in terms of dwellings purchased and financing granted under it (Figure 20).

Figure 20: Dwellings purchased and housing loans granted under the Programul Prima Casă

Source: FNGCIMM, 2015.

One of the key strengths of the PPC is its advantageous credit conditions compared to other housing loan options available on the market. For instance, the initial deposit (5%) required to apply for a mortgage under the programme is much less than that required for traditional mortgages, which is usually around 20-30% of the value of the property. Secondly, because guarantees under the PPC are granted only in lei (RON), the programme contributed to the long-term asset development in national currency.

However, one of the main weaknesses of the PPC resulted from the limit set on the maximum value of the loans on which guarantees can be issued. These limits skewed demand towards properties in the EUR 60-70,000 price range, pushing developers to force down the prices of newly-built residential dwellings so that they could eligible under the programme. This depreciation of newly built properties resulted in profitability issues for developers and in a drop in new residential projects.

In conclusion, the PPC and the other national initiatives discussed above provide a series of useful key aspects that could be taken into consideration when devising similar policies in the EU. Namely, one of the main factors that influence the success of this type of initiative is the uptake by the beneficiaries, which is in turn dependent on the involvement of financial institutions. Therefore, it is crucial to design the policy in such a way as to be advantageous for the beneficiaries, without deterring banks and credit institutions from adhering. Thus, in order to fulfil the former caveat, **facilitating the access** to the policy instrument (for instance, guarantees on mortgages) by relaxing eligibility requirements (in terms of age and income) has been recognised as a key success factor. However, relaxing eligibility criteria excessively may have the

consequence of creating very high demand for the scheme, which may not be met by sufficient supply due to budgetary constraints. Secondly, such schemes should allow the issuing of mortgages with a **higher LTV** compared to traditional housing loans, so as to provide a real alternative for beneficiaries. As for the second caveat, adhesion by financial intermediaries should be secured by ensuring that the policy instrument is not exceedingly risky or unprofitable. This can be achieved by applying **market interest rates** on the mortgages covered by guarantees, as opposed to artificially low interest rates, in order to avoid discouraging banks from offering the scheme to beneficiaries.

4. Non-residential building market

Policy initiatives supporting the non-residential building market

As discussed in the section on
Investment in non-residential buildings and civil engineering, investment levels in the non-residential sector have experienced a significant decline since the onset of the crisis, lingering below the pre-crisis level in the majority of the 10 Member States analysed. Namely, there has been an investment backlog with respect to public buildings for social use, such as schools and community centres, since this is highly dependent on the state of public finances, and was often one of the first areas that underwent budget cuts during the crisis. As a result, the condition of these facilities has significantly deteriorated, an issue affecting most of the analysed countries in Southern, Central and Eastern but also Northern European countries. The situation is further aggravated by the lack of interest from private investors in these areas, as well as the waning private investment in commercial and retail properties.

For this reason, a number of policies has been put in place to revive investments in non-residential construction. A first common purpose that can be identified in national initiatives across the analysed Member States is to address the poor quality of **non-residential buildings for public use** by supporting investment from municipalities and local authorities. Examples of these schemes can be found in countries such as Italy, Sweden, Romania and Germany.

Drivers for state intervention in supporting investments in non-residential public sector buildings can be diverse, depending on the country. In Italy for instance, more than half of all public schools (about 44,500) was built without any anti-seismic safety measures, and about 30% requires urgent maintenance. Moreover, fewer than 40% of these buildings are in possession of a certificate of habitability/viability[87]. In Sweden, the forecasted population increase and the growing proportion of elderly people have highlighted the need for investment in construction of healthcare establishments. In Germany, municipal investment levels have been lagging behind in the past years, with the investment rate dropping by about 50% since 1991 and net investment[88] being negative since 2003[89].

In light of the above, the Italian Ministry of education, University and Research has launched several initiatives aiming to support investment in school construction, such as the Miur Plan (*Piano Miur*) and the School Construction Plan (*Piano di ediliza scolastica*). The former foresees over 6,000 interventions for renovation and safety improvements of schools, as well as construction of new buildings, such as sports complexes and student accommodation. The latter consists of three programmes (#ScuoleNuove, #ScuoleSicure and #ScuoleBelle), involving the construction of new schools and major renovation works, safety improvements, and small maintenance/décor interventions, respectively. The Swedish government is focusing on several investments in healthcare, such as the construction of the New Karolinska Solna University Hospital in Stockholm, to be completed in 2018, and the refurbishment and extension of three hospitals in Södermanland by 2023. In Romania, the National Company for Investment (*Compania Națională de Investiții* – CNI), under the Ministry of Regional Development and Public Administration, manages the National Programme for Public or Social Buildings (*Programul*

[87] Ministry of Education, University and Research, Scuola, presentata l'Anagrafe dell'Edilizia Scolastica. August 2015. http://hubmiur.pubblica.istruzione.it/web/ministero/cs070815

[88] The balance of investment and depreciation.

[89] DIW Berlin (German Institute for Economic Research), Municipal infrastructure in Germany requires significant strengthening. October 2015.
http://www.diw.de/en/diw_01.c.517464.en/topics_news/municipal_infrastructure_in_germany_requires_significant_strengthening.html

național de construcții de interes public sau social), which finances the construction of public buildings, such as cultural institutions, hospitals, educational institutions, sports halls and swimming pools. As for Germany, the Federal government's National Investment Pact for Municipalities aims to increase investment in public sector construction, such as schools and community centres.

A second trend related to the revival of non-residential building investments can be identified, namely with regard to **commercial and retail properties**. In Ireland, due to the cautious approach of private investors over the last years, the Department of Finance introduced a Real Estate Investment Trust (REIT) Regime (see Box 1) in the Improving the regulatory environment for residential building market for the creation of a more favourable legal/tax environment to attract private (and particularly foreign) investment in the country's real estate and construction sectors. REITs are publicly listed companies owning and managing property-related assets, predominantly offices, shopping centres, warehouses and commercial sites, and aiming to generate returns on investments. As a result of the legislation, the Green REIT and the Hibernia REIT were created, boasting a commercial property portfolio of EUR 968 million and EUR 739 million, respectively, and a rental income of EUR 55.7 million and EUR 73.7 million, respectively.

A further trend with respect to commercial and retail properties is observed in some Central and Eastern European countries, such as Hungary and Poland, which have taken action to specifically protect and support investment in local retail and commerce through dedicated legal frameworks. In Hungary, a law from 2012 banned the construction of shopping centres above a specific size. The law, initially set to expire at the beginning of 2015, was amended and extended in December 2014, so that as of February 2015 the construction of retail spaces over 400 m^2 has to be cleared by a competent authority. This measure, affecting predominantly foreign-owned retail chains in favour of local ones, is however predicted to slow down construction of large retail spaces. Similarly, Poland introduced policies restricting the development of retail properties with sales areas exceeding 2,000 m^2 unless they appear in the general municipal zoning documents.

In terms of the magnitude of investments, the **available budgets** foreseen by national governments to support non-residential building policies vary considerably between Member States, depending on the breadth of required interventions. These range from RON 695.75 million (EUR 155.4 million for 2015) for the Romanian National Programme for Public or Social Buildings, to SEK 14.5 billion (EUR 1.6 billion) and SEK 3 billion (EUR 323.6 million) for the Swedish healthcare investment projects, to EUR 15 billion per year for the German National Investment Pact for Municipalities. Italian support to school construction varies from EUR 1.1 billion for the School Construction Plan to EUR 3.7 billion for the Miur Plan.

With respect to the type of **financial support** available for non-residential building investment schemes, it can be noted that both funding and financing play an important function. For instance, in Italy, school construction schemes make use of both types of instruments, with the School Construction Plan employing mainly grants (funding), whereas the Miur Plan is based on a combination of both. Indeed, out of the total EUR 3.7 billion of planned investments under the latter scheme, up to EUR 940 million originate from loans provided by the European Investment Bank. A further financing trend can be observed in countries such as Germany and Romania. Although the policies implemented in these Member States target primarily public administrations and are based on public financial resources, they put the emphasis on the importance of **involving private actors** also in projects of public interest. Thus, the German National Investment Pact for Municipalities seeks to increase the level of private investment in public sector non-residential buildings (such as schools, nurseries, and sports halls). Similarly, the Romanian National Programme for Public or Social Buildings can be financed through state sources (the budgets of the Ministry of Regional Development and Public Administration and local authorities), but also from private contributions (either form natural or juridical persons).

Best practices and lessons learnt

As discussed above, investment in non-residential buildings for public use is a major area of policy intervention across the analysed Member States. The following box provides an example of a successful measure in this domain, allowing to draw a series of lessons learnt.

Box 4: Italy's School Construction Plan (*Piano di edilizia scolastica*)

The alarming condition of Italy's extensive school building stock has led the government to identify school construction interventions as a key investment priority, ultimately benefiting both staff and students, as well as the national construction sector. Within this context, the Ministry of Education, University and Research (Miur) launched the School Construction Plan (Piano di edilizia scolastica) in July 2014, with an initial budget of EUR 1.1 billion, subsequently increased through various amendments to over EUR 1.3 billion.

The Plan entails a series of interventions on more than 21,200 schools, falling under three main pillars, namely #ScuoleNuove, #ScuoleSicure and #ScuoleBelle. The first programme entails the construction of new school buildings and major renovation works, with a total budget of EUR 344 million for over 920 interventions. Financial support for this area of the Plan originates from the unlocking of the beneficiaries' (local authorities) own resources from the constraints of the Stability Act. The second programme involves over 2,300 works to improve the safety of school buildings, such as asbestos removal, funded through state grants to provinces and municipalities, for a total of EUR 550 million. The third pillar supports over 17,900 small maintenance works (7,801 for 2014 and 10,160 for 2015), functional restoration and décor interventions, with total available resources amounting to EUR 450 million in the form of direct grants to schools.

As of October 2015, 425 interventions out of the planned 920 and 1,118 interventions of the planned 2,300 were completed under #ScuoleNuove and #ScuoleSicure, respectively. As for #ScuoleBelle, 7,235 interventions out of the planned 7,801 for 2014 were concluded between July 2014 and December 2014, with all available funds being utilised. As of July 2015, the first 5,290 interventions under #ScuoleBelle had been financed (out of the total 10,160 for 2015), with the remaining 4,870 due for completion in the first semester of 2016.

The School Construction Plan has generally proved to be successful, with all three programmes having achieved encouraging completion rates and efficient resource utilisation. This is due to improvements in the accessibility and governance of the available resources compared previously existing initiatives in this area, as well as measures to accelerate the procurement and realisation of interventions. For instance, the introduction of a Mission Structure (Struttura di missione) to facilitate the coordination of the financing, simplify the bureaucratic procedures and improve the utilisation of resources was one of the key strengths of the Plan, together with the unlocking of financial resources from the constraints of the Stability Act. However, criticisms in relation to the effectiveness of #ScuoleBelle and the allocation of available funds have been raised by the main beneficiaries (parents, consumer associations, construction industry), which would like to see the resources of this sub-programme redirected towards safety improvement interventions under #ScuoleSicure.

In conclusion, from the policies discussed before, two main **success factors** can be derived, which can be applied at the broader EU level. Firstly, taking into account that interventions in non-residential construction often entail public investments, it is important to consider transparency and bureaucracy when designing policy schemes, since such interventions are often subject to sub-optimal use of public funds. Therefore, the integration of measures in the policy to simplify and accelerate public procurement practices and improve the utilisation of available resources is crucial, particularly in countries such as Spain, Italy and Romania. A good instance is the introduction of dedicated bodies that oversee the implementation of the policy, coordinate the foreseen activities and ensure the efficient utilisation of the budget. Deadlines for the submission of projects to be procured is also a good initiative in this respect, having the potential to considerably reduce procurement timeline and speed up the realisation of the policy's objectives.

Secondly, policies should envisage a financing model that foresees the involvement of private investors, as a way to address the investment backlog (e.g. Germany). To this end, the previously suggested measures that relieve the burden of bureaucracy (e.g. bodies overseeing the implementation of the policy, introduction of deadlines for project submission) would play a decisive role in attracting private investment, which is often deterred by the intricacy of the regulatory

environment. Moreover, schemes to reinstate the confidence of private investors in the non-residential sector and leverage on foreign capitals should be further encouraged, as is the case in Ireland.

5. Infrastructure development

Policy initiatives supporting the infrastructure market

EU transport infrastructure is an area of utmost importance for investment, since a well-developed transport infrastructure network is the basis for competitiveness, cohesive territorial development and enhanced market opportunities. It has been estimated that the total cost of developing EU transport infrastructure amounts to EUR 1.5 trillion for the period 2010-2030[90]. However, the EU has been suffering from a financing gap following the crisis, mostly due to the fact that financial support for this sector originated predominantly from state budgets. Moreover, private investment in infrastructure has not been sufficiently encouraged, and its contribution is therefore only limited. Within this context, Member States are introducing comprehensive overarching strategies to stimulate investment in infrastructure, specifically transport. Indeed, most of the analysed countries across the main geographical regions have foreseen ambitious medium to long-term budgets to counteract the decline in infrastructural investment. Several trends for policy action in this domain can be identified, which provide the main drivers for relevant infrastructure strategies across Member States.

Trends in infrastructure investment policies

Construction of new infrastructure

In general, Member States where infrastructure development is currently still suboptimal tend to concentrate the bulk of their investments in **new infrastructural construction projects**. This is particularly the case in Central and Eastern European countries, such as Hungary and Romania. Hungary ranks 41st globally in terms of its overall infrastructure quality, according to the 2014-2015 Global Competitiveness Report, although it ranks 58th for its road infrastructure[91]. Indeed, investment in road infrastructure amounted to EUR 401 million in 2013, the lowest across the analysed Member States[92]. In this framework, the Hungarian government has put the emphasis on developing new transport infrastructure, which will be supported by investments of HUF 1,100 billion (EUR 3.5 billion) in the coming years, eventually reaching a total investment of up to HUF 2,800 billion (EUR 9 billion) by 2020. As part of the immediate investments, HUF 670 billion (EUR 2.2 billion) will already be used in 2016 for the construction of about 300 kilometres of new roads and 370 kilometres of railways, with a value of HUF 520 billion (EUR 1.7 billion) and HUF 600 billion (EUR 1.9 billion), respectively[93]. The situation in Romania is particularly alarming, with the country ranking 88th internationally for the quality of its overall infrastructure and 121st for the quality of its roads. Indeed, public investments in infrastructure declined by 23% between 2013 and 2014 alone. Thus, the Ministry of Transports proposed a revised General Master Plan for Transport (*Master Planul General de Transport)* in May 2015, detailing a series of strategic transport infrastructure interventions worth EUR 45.5 billion. The Plan foresees the construction of 1,300 kilometres of new highways by 2030, especially relevant considering that the country only had 644 kilometres of motorways in 2013. In comparison, Germany boasts a network of 12,949 kilometres motorways as of 2014[94]. In addition, Romania's Plan foresees the construction of over 1,800 kilometres of expressways and over 3,200 kilometres of Trans Regio and Trans Euro roads. The total investment planned in the road infrastructure sector therefore amounts to about EUR 25.6 billion. As for new railways, Romania only invested EUR 208.9 million in 2013, the

[90] European Commission, Attracting investments towards transport infrastructure - potential lines for action. September 2014. http://ec.europa.eu/transport/themes/infrastructure/ten-t-guidelines/doc/10_09_financingpaper2014.pdf

[91] World Economic Forum, The Global Competitiveness Report 2014-2015. http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2014-15.pdf

[92] OECD, Data – Transport Infrastructure investment. https://data.oecd.org/transport/infrastructure-investment.htm#indicator-chart

[93] Ministry of National Development, HUF 1100 billion to be spent on Hungarian transport development. January 2016. http://www.kormany.hu/en/ministry-of-national-development/news/huf-1100-billion-to-be-spent-on-hungarian-transport-development

[94] Eurostat, Road, rail and navigable inland waterways networks by NUTS 2 regions. http://ec.europa.eu/eurostat/web/products-datasets/-/tran_r_net

lowest across all analysed Member States[95]. The Plan consequently allocates EUR 14.4 billion to the railway sector, for projects including the development of over 1,000 kilometres of high-speed railway lines[96]. The rehabilitation of over 2,800 kilometres of railway and the electrification of a section of the TEN-T core network also fall under the planned investments in this area.

Maintenance of existing infrastructure

Conversely, in countries where transport infrastructure is typically better developed, national strategies tend to focus predominantly on **maintenance**. This is often the case in Western Europe, in countries such as France, Germany, Sweden and Ireland. For instance, France and Germany are leaders in terms of investments in road infrastructure, having invested EUR 12.1 billion and EUR 11.7 billion in 2013, respectively, the highest among the analysed countries and in the EU-28[97]. This is also reflected in their international standing, with Germany ranking 7th and France 8th for their infrastructure, according to the World Economic Forum[98]. Nevertheless, the two countries are currently facing investment issues in the maintenance of their well-developed infrastructure. Indeed, France only invested EUR 2.9 billion in 2013 in the maintenance of its road infrastructure, and it is estimated to require an additional investment of EUR 50 billion per year until 2020 for this purpose. Similarly, Germany has been suffering from severe underfinancing and insufficient maintenance of public infrastructure, especially roads and railways, coupled with very low investments through Public Private Partnerships (PPPs). Indeed, only EUR 8.5 billion was raised for construction and civil engineering through PPPs over 2002-2014. Thus, a substantial maintenance backlog has accumulated over the years, with an additional EUR 2.7 billion per year estimated to be required to face this issue[99]. In parallel, sluggish municipal investment in Germany has resulted in a backlog of EUR 132 billion in 2014. Similarly, investment in maintenance of transport infrastructure in Ireland has been lagging behind, with current funding levels being able to cover only 53% of the required road maintenance interventions, and the shortfall in capital amounting to EUR 146 million per year[100].

In this context, countries are funnelling increasingly higher amounts of resources towards infrastructure maintenance. In Germany, the 2003 Federal Transport Infrastructure Plan (FTIP) had a total budget of about EUR 150 billion for road, rail and waterway infrastructure for 2001-2015, of which around EUR 83 billion was earmarked for the structural maintenance of existing infrastructure. This share (about 55% of the total funding), increased from 46% under the previous FTIP[101]. However, in order to offset the severe underfinancing of public infrastructure maintenance, the German Federal government announced the plan to further increase investments in transport infrastructure from the current annual average of EUR 10.8 billion to EUR 13 billion in 2017, under the new FTIP launched in March 2016. The new FTIP further focuses on defining clear financial prospects for project finance, setting priorities to develop the principal transport arteries and removing bottlenecks, as well as including the participation of a broad stakeholder base[102]. Moreover, a municipal Investment Promotion Fund worth EUR 3.5 billion set up by the government will support local authorities in stepping up their level of spending on the maintenance, repair and upgrade of local infrastructure between 2015 and 2018. A similar trend is observed in Sweden where, under the 2014-2025 National Transport Plan, SEK 86 billion (EUR 9 billion) and SEK 155 billion (EUR 17 billion) out of the total budget of SEK 522 billion (EUR 56 billion) will be allocated to the maintenance and operation of the rail network and roads, respectively. Similarly, to address its underinvestment in transport, the Irish

95 OECD, Data – Transport Infrastructure investment. https://data.oecd.org/transport/infrastructure-investment.htm#indicator-chart

96 Ministry of Transports, General Transport Master Plan, approved by the Government. February 2015. http://gov.ro/en/government/cabinet-meeting/general-transport-master-plan-approved-by-the-government

97 OECD, Data – Transport Infrastructure investment. https://data.oecd.org/transport/infrastructure-investment.htm#indicator-chart

98 World Economic Forum, The Global Competitiveness Report 2014-2015. http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2014-15.pdf

99 European Commission, Attracting investments towards transport infrastructure - potential lines for action. September 2014. http://ec.europa.eu/transport/themes/infrastructure/ten-t-guidelines/doc/10_09_financingpaper2014.pdf

100 Department of Public Expenditure & Reform, Capital Investment Plan 2016-2021. http://www.per.gov.ie/en/capital-investment-plan-2016-2021/#

101 Federal Ministry of Transport and Digital Infrastructure, 2003 Federal Transport Infrastructure Plan. http://www.bmvi.de/SharedDocs/EN/Artikel/G/federal-transport-infrastructure-plan-2003.html

102 Federal Ministry of Transport and Digital Infrastructure, Dobrindt: 2030 Federal Transport Infrastructure Plan – modernize, interlink, step up, March 2016. http://www.bmvi.de/SharedDocs/EN/Pressemitteilung/2016/035-federal-transport-infrastructure-plan.html?linkToOverview=EN%2FPress%2FPressReleases%2Fpress-releases_node.html%23id201790

government introduced the new Capital Investment Plan 2016-2021, with a total budget of EUR 42 billion[103]. Transport projects will be granted EUR 10 billion, EUR 4.4 billion of which will be spent on road upgrades. Thus, an average of EUR 730 million per year will be dedicated to road infrastructure maintenance, compared to the meagre EUR 129 million investment in 2013[104].

Transport infrastructure as a driver for economic and urban development

Transport infrastructure is a strategic area of investment, with the potential to strengthen **economic and urban development**. For this reason, transport infrastructure investment strategies are increasingly designed so as to be anchored in the broader political, social and economic context of the country, focusing on the role of effective and efficient transport networks in addressing socio-economic issues. For instance, in Spain, which ranks 9th globally for the quality of its infrastructure[105], the government introduced the Strategic Infrastructure and Transport Plan 2005-2020 (*Plan Estratégico de Infraestructuras y Transporte*). The strategy considers infrastructure as a means to boost economic growth and competitiveness, social and territorial cohesion, and focuses on improving the efficiency and sustainability of the infrastructure network. The total budget of the plan amounts to EUR 249 billion, with the main investment focuses being railway infrastructure (43.7% of the budget), road transport infrastructure (25.2%) and urban transport (13%). Sweden, despite its stable macroeconomic context, ranks 22nd internationally for its infrastructure, with railroad infrastructure presenting the lowest score[106]. For this reason, and in light of its problematic housing situation, the Swedish government has identified transport infrastructure as a priority for investment, with potentially positive spill over effects on residential construction. Thus, the 2014-2025 National Transport Plan entails a budget of SEK 522 billion (EUR 56 billion), 20% greater than that of the previous plan. Of this, SEK 281 billion (EUR 30 billion) will be channelled towards new transport projects, including a high-speed rail line between Stockholm and Linköping, and the expansion of other railway tracks[107]. Indeed, investments in roads, railways and metro lines will enhance connectivity and facilitate commuting between urban centres, improving accessibility to new areas and providing opportunities for new residential developments, thus alleviating the current housing shortage.

Financing of infrastructure investment policies

In terms of **financial support**, all the strategies discussed above rely on a complex combination of national resources, as well as EU financing (see EU financial involvement in infrastructure investment). Furthermore, the need to leverage on private investment through PPPs to complement public funding has emerged as a recurring trend in countries like Spain, Ireland, France and Germany, which are currently seeking to actively involve private investors in their infrastructure financing strategies. In France for instance, the substantial infrastructure maintenance investment gap has led the Movement of French Enterprises (*Mouvement des Entreprises de France* – MEDEF), France's largest entrepreneur network, to look for new approaches in financing infrastructure. To this end, the organisation has set up a committee that will investigate on how to leverage PPPs, for instance through the establishment of regional platforms to clearly present the pipeline of projects to private investors. In Spain, the Strategic Infrastructure and Transport Plan 2005-2020 (*Plan Estratégico de Infraestructuras y Transporte*) relies on both budget and off-budget financing, depending on whether the source of the funding is the taxpayer (in case of the former) or the user/direct beneficiary (in case of the latter)[108]. Budget financing includes direct investment - whereby the infrastructural project is paid for through public funds - deferred investment, indirect investment and European funds. Conversely, off-budget financing entails a series of mechanisms to raise funds for infrastructural projects from the private market, mainly by charging the final user. Such instruments include the award of concessions for public works and the *ad-hoc* creation of public entities for the construction and operation of

[103] Department of Public Expenditure & Reform, Building on Recovery: Infrastructure and Capital Investment 2016-2021. September 2015. http://www.per.gov.ie/en/capital-investment-plan-2016-2021/#

[104] OECD, Data – Transport Infrastructure investment. https://data.oecd.org/transport/infrastructure-maintenance.htm#indicator-chart

[105] World Economic Forum, The Global Competitiveness Report 2014-2015. http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2014-15.pdf

[106] World Economic Forum, The Global Competitiveness Report 2014-2015. http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2014-15.pdf

[107] Global Construction Perspectives, Global Construction 2025 - A global forecast for the construction industry to 2025. 2013.

[108] Ministerio de Fomento, The PEIT's economic and financial framework. http://www.fomento.es/NR/rdonlyres/14284BA0-DF5B-4F2B-91E2-D4F7133C6808/19578/PEIT2005Cap091.pdf

an infrastructure. Moreover, the Plan also foresees the partnership between public and private sectors (PPPs). In Ireland, the EUR 42 billion budget of the Capital Investment Plan 2016-2021 originates from direct investment by the Irish Exchequer, amounting to EUR 27 billion, as well as PPP investments of about EUR 500 million. A third component entails non-Exchequer investment of around EUR 4.5 billion by State-owned companies, although transport infrastructure projects will mostly be supported by Exchequer investments[109]. As for the Romanian General Transport Master Plan, its final version was approved in July 2015 by the European Commission, which introduced two scenarios for the financing and implementation of the strategy. The best-case scenario depends on whether a clause of structural reform will be accepted by the Commission, entailing the exemption of Romania from the deficit of 0.5% per year, from 2017 to 2020. Such an exemption would give the country access to additional financing of EUR 8.3 billion for its transport infrastructure, in the form of external loans, complementing EU funds and the national budget for infrastructure[110]. This optimal situation would therefore enable the realisation of a greater number of projects. Conversely, should the reform be rejected, the Plan would be based merely on the national budget and EU funds, with negative repercussions on the implementation of projects. Namely, only 1 out of the 6 planned highways would be built, since the majority of resources would be channelled towards finalising currently existing but incomplete infrastructures, instead of financing the construction of new ones[111]. The Master Plan was approved by the Romanian government in September 2016, and its approval also represents an ex-ante conditionality for the financing for Romania's transport infrastructure under the Large Infrastructure Operational Programme[112].

EU financial involvement in infrastructure investment

The optimal functioning of European transport infrastructure is considered a key element for the realisation of the Single Market, as well as a means to strengthen the EU's economic, social and territorial cohesion. As such, transport policy has long featured in the financial priorities at the EU level. Dedicated instruments for European transport policy have been evolving since the 1980s, which have focused on creating an intermodal Trans-European Transport Network (TEN-T). The TEN-T is also central for achieving the goals of Europe 2020 Strategy. To raise to the challenge of infrastructure investments, the EU's financial envelope dedicated to transport, energy and ICT has been substantially increased in the 2014-2020 Multiannual Financial Framework with the budget of the Connecting Europe Facility (CEF) reaching EUR 33.3 billion and further EUR 11.3 billion from the Cohesion Fund[113]. Indeed, the 2014 budget allocation for infrastructure under the CEF is 30.8% higher than in 2013[114].

Connecting Europe Facility and Trans-European Transport Network (TEN-T)

The EU's main involvement in infrastructure is through the **Trans-European Transport Network (TEN-T)**, an EU-wide transport infrastructure policy. The **Connecting Europe Facility (CEF)** is the funding instrument for the realisation of inter-connected EU infrastructure policy in the field of transport, energy and digital services.

The development of TEN-T is the main priority under the CEF, as EUR 22.4 billion is earmarked for transport projects out of the EUR 30.4 billion total budget of the CEF[115]. The financial envelope for transport policy was tripled in the programming

---

[109] Department of Public Expenditure & Reform, Building on Recovery: Infrastructure and Capital Investment 2016-2021. September 2015. http://www.per.gov.ie/en/capital-investment-plan-2016-2021/#

[110] Hotnews, OFICIAL Bruxelles-ul a acceptat varianta finala a Master Planului de Transport. Scenariul optimist cere Romaniei reforme si aduce 6 autostrazi, scenariul pesimist pastreaza haosul din Transporturi si aduce doar Sibiu - Pitesti si un ciot de drum expres. July 2015. http://monitorizari.hotnews.ro/stiri-infrastructura_articole-20316755-oficial-bruxelles-acceptat-varianta-finala-master-planului-transport-scenariul-optimist-cere-romaniei-reforme-aduce-6-autostrazi-scenariul-pesimist-pastreaza-haosul-din-transporturi-aduce-doar-sibiu-p.htm

[111] Capital, Planul optimist al guvernanților: cu 8 mld. euro dublăm rețeaua de autostrăzi. March 2016. http://www.capital.ro/planul-optimist-al-guvernantilor-cu-8-mld-euro-dublam-reteaua-de-autostrazi.html

[112] Finantare, A fost aprobat de Guvern Master Planul General de Transport al Romaniei. September 2016. http://www.finantare.ro/a-fost-aprobat-de-guvern-master-planul-general-de-transport-al-romaniei.html

[113] European Commission, 12 highlights from the MFF 2014-20, http://ec.europa.eu/budget/mff/highlights/index_en.cfm#footnote-8

[114] European Commission, Multiannual financial framework 2014–2020 and EU budget 2014, 2013. http://bookshop.europa.eu/en/multiannual-financial-framework-2014-2020-and-eu-budget-2014-pbKV0413055/?CatalogCategoryID=mpgKABstFogAAAEjbIUY4e5K

[115] European Commission, Connecting Europe Facility. https://ec.europa.eu/inea/en/connecting-europe-facility

period 2014-2020, underscoring the importance of infrastructure as a lever for competitiveness and reflecting the infrastructure-financing gap due to tight national public budgets.

The primary objective of TEN-T is to create a pan-European network of transport corridors aiming to remove bottlenecks, upgrade infrastructure and streamline cross-border transport in the EU. To this end, nine TEN-T "core network corridors" are defined, which connect EU MS through roads, railways and other infrastructures. As part of TEN-T, revised guidelines and methodologies for the construction of transport infrastructure guarantee a harmonised legal and financial framework for the implementation of projects.

The implementation and funding of the TEN-T core network corridors can be supported by different sources of EU and national funding. While the CEF Transport is dedicated specifically to TEN-T, the **European Structural and Investment Funds (ESIF)** and other EU grants may also provide funding to TEN-T related projects. Moreover, TEN-T projects are also eligible for financing by the **European Investment Banks (EIB)**. In this respect, the **Loan Guarantee Instrument for TEN-T Projects (LGTT)** has been devised as a new financial instrument for TEN-T Projects, and will be funded by the EU and the EIB.

Examples of TEN-T implementation

The TEN-T core infrastructure is scheduled for completion by 2030. The boxes below provide instances of the implementation of some TEN-T projects across the MS.

Poland, is part of two of the nine core network corridors, namely the **North Sea-Baltic Corridor** and the **Baltic Adriatic Corridor**. The **European Regional Development Fund (ERDF)** and the **Cohesion Fund (CF)** are contributing to the development of these corridors with ten major projects worth EUR 3.3 billion for the construction of 330 km of express roads. Specifically, four major projects approved in Lower Silesia and Lubuskie are part of the Baltic-Adriatic TEN-T and receive a EUR 776.2 million contribution from the CF. Another EUR 493.3 million from the ERDF will co-finance the express road S7 as part of the Baltic Adriatic TEN-T corridor. Finally, inter-regional connections on the Via Baltica receive EUR 441.3 million in co-financing from the CF[116].

Cross-border projects are also key for the development of TEN-T infrastructure and may be particularly challenging to finance. The increased EU transport budget and co-financing rate in the 2014-2020 programming period, as well as the increased coordination through European Coordinators offer incentives for implementation, also in cross-border cases. The Brenner Base Tunnel project linking Italy to Austria can be considered a success story of cross-financing applied to a large infrastructural project. The two MS agreed on the cost of the project, i.e. EUR 7.46 billion, as the starting point for the construction of the base tunnel, initiated under the lead of the project promoter BBT SE. It is expected that the tunnel will be completed and operational by 2026[117].

The **EIB** has long been involved in the financing of infrastructure and TEN-T projects. This is for instance the case in Hungary, where the EIB contributed EUR 184 million in 2014 to co-finance the rehabilitation and reconstruction of TEN-T railway lines. The EIB's involvement contributes to financing projects with a total cost of EUR 1.2 billion, aiming to enhance the attractiveness of rail transport in Hungary[118]. In Spain in 2014, an EIB EUR 650 million loan was provided for the building and upgrading of a section of the **Mediterranean Corridor**[119].

[116] European Commission, 330 kilometres of new express roads in Poland to overcome bottlenecks in trans-European infrastructure - Press Release. March 2016. http://europa.eu/rapid/press-release_IP-16-842_en.htm

[117] European Commission, Attracting investments towards transport infrastructure - potential lines for action. September 2014. http://ec.europa.eu/transport/themes/infrastructure/ten-t-guidelines/doc/10_09_financingpaper2014.pdf

[118] European Investment Bank, EIB continued supporting Hungary's growth prospects with EUR 756 million in 2014. April 2015. http://www.eib.org/infocentre/press/releases/all/2015/2015-089-eib-continued-supporting-hungarys-growth-prospects-with-eur-756-million-in-2014.htm

[119] European Investment Bank, The EIB in Spain in 2014. http://www.eib.org/attachments/country/factsheet_spain_2014_en.pdf

European Structural and Investment Funds (ESIF)

ESIF are the EU's primary policy instruments, aimed at delivering investment in priority areas linked to the Europe 2020 Strategy for a smart, sustainable and inclusive EU. Some MS, such as Romania and Poland, have implemented dedicated Operational Programmes dedicated to infrastructure. ESIF are co-funded with national funding and typically implemented via grants.

Romania introduced the Large Infrastructure Operational Programme (LIOP) for the 2014-2020 programming period, worth EUR 9.5 billion in ESIF co-financing, which represents almost half of the country's total ESIF allocation[120]. The LIOP will invest in transport, environment and energy projects and is a major vehicle to implement the national Master Plan on Transport, which foresees a large-scale expansion of Romania's road and railway infrastructure, as discussed in the section above. Similarly, in Poland, EUR 609 million from ESIF is earmarked for road and urban transport, including TEN-T corridors[121].

EFSI

The **European Fund for Strategic Investments (EFSI)** is an additional EU financing instrument relevant for transport infrastructure. It takes the form of a EUR 16 billion guarantee from the EU budget. In contrast to other EU instruments such as ESIF, EFSI aims to mobilise private sector investment. Projects applying for EFSI are screened and approved by the EIB on the basis of their bankability. As of March 2016, 10 projects have been launched under the EFSI umbrella in the transport sector[122].

As an example of an innovative infrastructure investment, a EUR 300 million financing agreement has been approved to the benefit of Italian state railway company Trenitalia. The agreement takes the form of a bond subscription that is also guaranteed by the EFSI. Trenitalia will use the financing for the acquisition of new regional trains[123]. It remains unclear, however, whether the EFSI and the EU guarantee attached to it will be adapted to facilitate investment in social housing. Long-term loans with low interest rates are what is needed to invest in this sector, which is complex in terms of the capital it requires, but low risk in terms of return on investment.

Other Financing Instruments

Innovative financing instruments have been devised at the EU level to strengthen the financial viability of TEN-T and infrastructure projects, which often face difficulties in attracting private-sector funding due to the relatively high levels of revenue risk at the project's early stages. The **Loan Guarantee Instrument for TEN-T (LGTT),** a joint instrument of the European Commission and the EIB, is designed to attract private sector investment for TEN-T projects. The LGTT is an EIB guarantee on capital provided in favour of commercial banks investing in high risk projects. The LGTT is financed with a capital contribution of EUR 1 billion, which is intended to support up to EUR 20 billion of loans to the private sector. The LGTT guarantee can be claimed by the investor in case of unexpected reductions in traffic income and related financial returns during the initial ramp-up period of the operation, in order to sustain financial returns[124]. However, so far, only a limited number of projects have made use of the LGTT instrument[125].

---

120 European Commission, EU will invest nearly €9.5 billion in Romania for transport, environment and energy. July 2015. https://ec.europa.eu/commission/2014-2019/cretu/announcements/eu-will-invest-nearly-eu95-billion-romania-transport-environment-and-energy_en

121 European Commission, €609 million from EU Regional Funds to improve Poland's road and urban transport. March 2015. http://ec.europa.eu/regional_policy/en/newsroom/news/2015/03/eur609-million-from-eu-regional-funds-to-improve-poland-s-road-and-urban-transport

122 European Commission, The Investment Plan for Europe State of Play. March 2016. http://ec.europa.eu/priorities/sites/beta-political/files/ip-eu-state-of-play-march-2016_en.pdf

123 European Investment Bank, Juncker Plan: EUR 300 million loan to Italian state railways for regional trains. December 2015. http://www.eib.org/infocentre/press/releases/all/2015/2015-318-bei-piano-juncker-300-milioni-a-ferrovie-per-i-treni-regionali.htm

124 European Investment Bank, The Loan Guarantee Instrument for Trans-European Transport Network Project. 2008. http://www.eib.org/attachments/press/2008-005-fact_sheet_en.pdf

125 European Commission, Attracting investments towards transport infrastructure: potential lines for action. September 2014. http://ec.europa.eu/transport/themes/infrastructure/ten-t-guidelines/doc/10_09_financingpaper2014.pdf

The **Project Bond initiative** is another key initiative by the EIB and the European Commission to stimulate capital from financial markets for infrastructure financing. The Project Bond Initiative foresees the provision of loans for infrastructure projects in a two-stage manner, using subordinated and senior loans. Senior loans represent the biggest part of the external investment (at least 80% of borrowed costs) coming from a large pool of private investors attracted to medium revenues and predictable risk infrastructural projects. The subordinated loan is a part of the investment (up to 20% of borrowed costs) financed by the EIB in the form of a loan or a credit line (Project Bonds), that has to be returned after all the other loans. For investors, Project Bonds function as a "first loss piece" that they do not have to cover, or a form of a guarantee on their investments. Project bonds are mostly relevant in the context of public private partnerships (PPP) as infrastructure project promoters[126].

Best practices and lessons learnt

The box below provides an example of the implementation of the Project Bond initiative in Germany.

Box 5: EIB project bond operation in Germany

As the first operation under the European Project Bond Initiative in Germany, the EIB is providing EUR 170 million in the form of project bonds for the renovation and expansion of the A7 motorway, connecting Denmark and Germany, and is part of the TEN-T Scandinavian-Mediterranean corridor.

As a result of the project, the A7 motorway will be extended by 65km and will be widened to eight lanes. Worth over EUR 600 million, this deal is the largest PPP motorway infrastructure project in Germany to date, financed and carried out by a partnership between the public partner DEGES (Deutsche Einheit Fernstraßenplanungs- und -bau GmbH) as the project promotor, and a private consortium led by the construction company Hochtief as the contractor.

The EIB's involvement through the Project Bond Credit Enhancement (PBCE) is to provide a subordinate loan of EUR 90 million. This amounts to approximately 20% of the volume of the senior debt issued, thus optimising the risk profile of the investment and increasing its attractiveness for institutional investors. The EIB and the European Commission share the risk and benefits of the instrument on a portfolio basis. The European Investment Bank is also one of the key investors in the project bond, on the same level as other capital investors.

The A7 motorway project between Bordesholm and Hamburg in Germany is one of the pilot projects for the Project Bonds Initiative. The EIB will finance 5 to 10 projects during the test phase. In case of success, the Project Bonds can provide an alternative to financing projects through bank loans or public sector grants, and contribute to closing the infrastructure financing gap.

While project bonds were relatively widespread as an alternative source of infrastructure financing prior to the global economic crisis, particularly in the US, their significance vastly diminished with the collapse of global financial markets. In recent years, however, projects bonds have seen a revival. The public sector is looking for **greater participation of private sector** to finance much needed infrastructure investments. They are becoming increasingly interesting for investors, as bank lending has been tightened due to stricter Basel III regulations. Instruments such as the Project Bond Credit Enhancement (PBCE) are able to make the financial vehicle even more attractive. On the downside lie the greater risks inherent to the construction sector, partly due to the long-term development of projects.

[126] Deutsche Bank, Project Bond Initiative. 2013. https://www.dbresearch.com/PROD/DBR_INTERNET_EN-PROD/PROD0000000000320937/Project+Bond+Initiative%3A+Project+selection+the+key+to+success.pdf

6. Outlook

Since 2014, the construction sector in the EU has given signs of stabilisation, and the outlook is generally considered positive for the years ahead, with growth forecasts up to 3% per annum[127]. The optimism, however, needs caution. Eurostat findings from the first quarter of 2015 show a decrease in production in the EU-28 compared to the same period in 2014, indicating that the construction sector and particularly SMEs are still vulnerable in the aftermath of the crisis[128].

Macro-trends such as the growing urbanisation rate, climate change and the rise of digital technologies point at many opportunities for the construction sector in the coming years. However, some challenges are still dampening growth prospects. Governments across the EU are likely to be constrained in their spending on public infrastructure and housing. Furthermore, the ongoing credit crunch and late payment practices are taking a toll on companies in the sector. Nevertheless, the overall improving economic climate, combined with initiatives at the national level to boost investment and involve private investors, will be key drivers of the recovery of the construction sector.

General outlook – GDP growth and construction output

Accounting for about 8.8% the EU's total GDP, the construction sector's outlook is closely linked to the overall health of the EU economies[129]. According the European Commission, forecasts in the EU foresee positive developments, with economic growth picking up in most MS and across the Union and reaching 1.9% in both 2015 and 2016[130]. These growth rates are underpinned by decreasing oil prices, a weak Euro, as well as the expansionary monetary policy of the European Central Bank (ECB). On the other hand, the recovery is most likely uneven among MS, with a number of economies performing better (e.g. UK, Spain and Poland) while other lag behind (e.g. Germany, France and Italy)[131].

According to Euroconstruct, the **construction output** is expected to grow at 3% in 2016 and 2.7% in 2017. Growth expectations for 2018 are somewhat lower, at 2%. In terms of value, the estimates amount to EUR 1,412 billion for 2016, EUR 1,450 billion in 2017 and EUR 1,478 billion in 2018. However, these figures are still lower than the pre-crisis output of 2007. Growth in the construction sector is expected to be driven predominantly by the six biggest markets, namely Germany, the UK, France, Italy, Spain and Poland, as they are all predicted to register positive growth rates. Indeed, these markets are forecast to account for 75% of the construction growth generated in 2016[132].

Investment in construction is also witnessing a positive development. After a slowdown over the past years, 2014 marked an inversion of the trend, with investment growing by 0.8%, accompanied by net job creation[133]. Total investment in construction amounted to EUR 1.37 trillion in 2014. In 2016, this is expected to increase across all EU MS, with the exception of Hungary, underpinning the gradual recovery of the sector[134]. Rising disposable incomes, coupled with low mortgage rates, are likely to support this increase, despite the high levels of household indebtedness[135]. Consequently, confidence in construction is above its long-term average, pointing at a better outlook since the onset of the economic crisis[136].

---

127 Building Radar, European Construction Market Forecast from 2015 to 2020. July 2015 https://buildingradar.com/construction-blog/european-construction-market-forecast/

128 EBC annual report. 2015. http://www.ebc-construction.eu/fileadmin/Pubblications/Annual_reports/EBC-RA-2015-EN.pdf

129 FIEC, Construction activity in Europe. 2015

130 European Economic Forecast Winter 2016. http://ec.europa.eu/economy_finance/publications/eeip/pdf/ip020_en.pdf

131 FIEC, Construction activity in Europe. 2015

132 Euroconstruct, European Construction on a Steady Recovery Path. December 2015. http://www.euroconstruct.org/pressinfo/pressinfo.php

133 Deloitte, European Powers of Construction, 2014. http://www2.deloitte.com/ie/en/pages/real-estate/articles/EPoC-2014-European-Powers-of-Construction.html

134 Ibidem.

135 European Economic Forecast Winter 2016. http://ec.europa.eu/economy_finance/publications/eeip/pdf/ip020_en.pdf

136 European Economic Forecast Winter 2016. http://ec.europa.eu/economy_finance/publications/eeip/pdf/ip020_en.pdf

Residential building

Accounting for 19.4% of total construction activity in 2014, residential construction is an important determinant of the sector's growth[137]. The residential construction sector will be particularly impacted by the migration wave in a number of EU MS, namely Germany, the Netherlands, and Scandinavian countries. The large influx of people will put additional pressure on the housing situation, which is already tight in a number of countries. As a result, increasing demand for housing, and especially social housing, is expected to drive residential construction[138].

Positive signs for residential construction come from the increases in loans granted for house purchases, which have grown at about 2% in the Euro area. House price projections are also on the rise, which is often associated with higher rates of residential investment. Furthermore, rising asset prices are likely to have a positive effect on lending, as the assets serve as collateral. Looking at the trends in the issuance of building permits, it appears that Ireland, Sweden, Hungary and Poland are expanding their residential construction[139].

Additionally, policy schemes directed at the housing market have often contributed to the revival of the residential segment, and will constitute an important stimulus for further growth. For instance, much of the growth prospects in construction in the UK are fuelled by demand for private housebuilding, supported by successful policy interventions such as the "Help to Buy" and "Funding for Lending" schemes.

Non-residential building

After five years of almost continuous decline, the prospects for the non-residential sector are starting to improve. The contraction was due partly to reduced public spending for school buildings, hospitals and similar, as well as limited appetite from the private sector to invest. Signs of stabilisation were already underway in 2014 and 2015, with a number of MS experiencing a rebound, such as for instance Ireland, where urban renovation projects in Dublin financed by private investors are supporting growth in the sub-sector. However, limited public spending is taking a toll in France, Italy and Spain[140]. For 2016, prospects in the non-residential segment are optimistic according to Euroconstruct. For instance, improving access to finance in Italy is expected to have a positive impact on non-residential construction. However, among the Nordic countries, notably in Sweden, the forecast is less positive[141].

Infrastructure

Infrastructure has also been negatively affected by cuts in public investment, which considerably affected the output of the sector. In fact, in 2014 civil engineering performed worst compared to the residential and non-residential segments. Despite this, an improvement of the infrastructure sector is expected in the coming years, in line with overall positive outlook in construction. Increased investment coming from the EU, such as the Investment Plan for Europe and the Connecting Europe Facility, will likely support this development, particularly in Eastern Europe. Furthermore, positive developments are expected thanks to ongoing efforts to attract private investment. Thus, the growth rate of the infrastructure sector is estimated at 3.3% in 2015. Poland is projected to benefit the most from the influx of EU Structural Fund to its civil engineering sector and record double-digit growth throughout 2018. Overall infrastructure output is forecast to grow at 2.7% in 2016 and register a solid performance in subsequent years, growing by 4.2% in 2017[142].

---

137 FIEC, Construction activity in Europe. 2015

138 Euroconstruct, European Construction on a Steady Recovery Path. December 2015. http://www.euroconstruct.org/pressinfo/pressinfo.php

139 European Commission, European Economic Forecast Winter 2016. http://ec.europa.eu/economy_finance/publications/eeip/pdf/ip020_en.pdf

140 FIEC, Construction activity in Europe. 2015

141 Euroconstruct, European Construction on a Steady Recovery Path. December 2015. http://www.euroconstruct.org/pressinfo/pressinfo.php

142 Euroconstruct, European Construction on a Steady Recovery Path. December 2015. http://www.euroconstruct.org/pressinfo/pressinfo.php

Annex 1 – Legend

This Analytical report is based on the results of analysis of construction market in 10 EU Member States: Germany, France, Hungary, Ireland, Italy, Poland, Romania, Spain, Sweden and the United Kingdom.

The information presented in this report is in line with the country specific analysis presented in the Country Fat Sheets and the Policy Fact Sheets, published by the European Construction Sector Observatory (ECSO).

Definitions

Note - The Construction sector definition followed in the ECSO country databases and factsheets is based on the second, most recent (2008) revision of the NACE classification. NACE (from the French term "Nomenclature Statistique des Activités économiques dans la Communauté européenne") is the statistical classification of economic activities in the European Community. More information on the methodology of the classification, as well as a full list of the sector and subsector codes and their definitions, can be found here: http://ec.europa.eu/eurostat/documents/3859598/5902521/KS-RA-07-015-EN.PDF

The **Construction sector definition** adopted throughout the compilation of the database and fact sheet is as follows:

- **Narrow definition** of the construction sector: this refers to sector F - Construction, as defined by the NACE rev.2 classification:

  NACE F - Construction
  - F.41 - Construction of buildings
    - F.41.1 - Development of building projects
      - F.41.10 - Development of building projects
    - F.41.2 - Construction of residential and non-residential buildings
      - F.41.20 - Construction of residential and non-residential buildings
  - F.42 - Civil engineering
    - F.42.1 - Construction of roads and railways
      - F.42.11 - Construction of roads and motorways
      - F.42.12 - Construction of railways and underground railways
      - F.42.13 - Construction of bridges and tunnels
    - F.42.2 - Construction of utility projects
      - F.42.21 - Construction of utility projects for fluids
      - F.42.22 - Construction of utility projects for electricity and telecommunications
    - F.42.9 - Construction of other civil engineering projects
      - F.42.91 - Construction of water projects
      - F.42.99 - Construction of other civil engineering projects n.e.c.
  - F.43 - Specialised construction activities
    - F.43.1 - Demolition and site preparation
      - F.43.11 - Demolition
      - F.43.12 - Site preparation
      - F.43.13 - Test drilling and boring
    - F.43.2 - Electrical, plumbing and other construction installation activities
      - F.43.21 - Electrical installation
      - F.43.22 - Plumbing, heat and air-conditioning installation
      - F.43.29 - Other construction installation
    - F.43.3 - Building completion and finishing
      - F.43.31 - Plastering
      - F.43.32 - Joinery installation
      - F.43.33 - Floor and wall covering
      - F.43.34 - Painting and glazing
      - F.43.39 - Other building completion and finishing
    - F.43.9 - Other specialised construction activities
      - F.43.91 - Roofing activities
      - F.43.99 - Other specialised construction activities n.e.c.

- **Broader definition** of construction: this includes sector F, as well as other sectoral activities, namely real estate activities (NACE L), architectural and engineering activities and related technical consultancy (NACE M) and certain manufacturing sub-sectors (NACE C), related to the construction sector:

  NACE L – Real estate activities
  - L.68.1 - Buying and selling of own real estate
  - L.68.2 - Renting and operating of own or leased real estate
  - L.68.3 - Real estate activities on a fee or contract basis

NACE M - Professional, scientific and technical activities

- M.71.1 - Architectural and engineering activities and related technical consultancy

NACE C – Manufacturing

- C.16.2 - Manufacture of products of wood, cork, straw and plaiting materials
- C.23.3 - Manufacture of clay building materials
- C.23.5 - Manufacture of cement, lime and plaster
- C.23.6 - Manufacture of articles of concrete, cement and plaster
- C.23.7 - Cutting, shaping and finishing of stone
- C.25.1 - Manufacture of structural metal products

The **classification** of companies by R&D expenditure according to the 2015 EU Industrial R&D Investment Scoreboard is based on the industry structure and definitions of the ICB (industry Classification Benchmark). The construction-related companies considered for the CFS are classified as follows:

2000 – Industrials

2300 - Construction & Materials

- 2350 - Construction & Materials
  - 2353 - Building Materials & Fixtures: Producers of materials used in the construction and refurbishment of buildings and structures, including cement and other aggregates, wooden beams and frames, paint, glass, roofing and flooring materials other than carpets. Includes producers of bathroom and kitchen fixtures, plumbing supplies and central air-conditioning and heating equipment. Excludes producers of raw lumber, which are classified under Forestry.
  - 2357 - Heavy Construction: Companies engaged in the construction of commercial buildings, infrastructure such as roads and bridges, residential apartment buildings, and providers of services to construction companies, such as architects, masons, plumbers and electrical contractors.

2700 - Industrial Goods & Services

- 2750 - Industrial Engineering
  - 2753 - Commercial Vehicles & Trucks: Manufacturers and distributors of commercial vehicles and heavy agricultural and construction machinery, including rail cars, tractors, bulldozers, cranes, buses and industrial lawn mowers. Includes non-military shipbuilders, such as builders of cruise ships and ferries.
- 2790 - Support Services
  - 2797 - Industrial Suppliers: Distributors and wholesalers of diversified products and equipment primarily used in the commercial and industrial sectors. Includes builders merchants.

Construction cost index measures the development of costs incurred by the contractor to carry out the construction process.

Gross operating surplus is a measure of profitability of the sector. It represents the surplus generated by operating activities after the labour factor input has been recompensed (Eurostat).

Gross fixed capital formation is a measure of the net increase in fixed capital, i.e. of investments in construction (commercial and industrial buildings, residential dwellings, roads and railways), machinery and equipment.

Volume index of production is an index of value added by the construction sector, at constant prices (i.e. stripped out of inflationary movements).

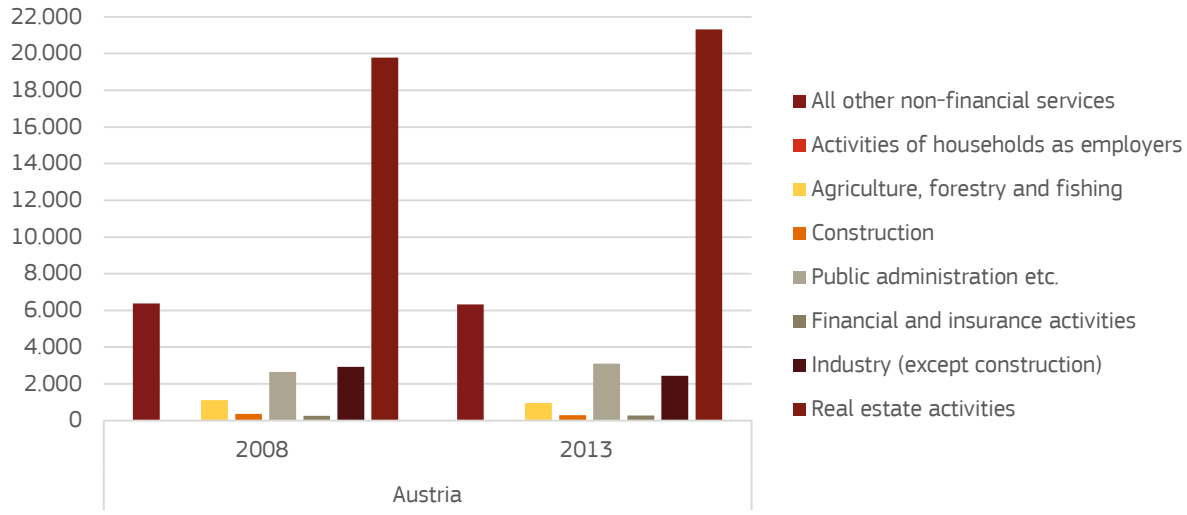
Intangible fixed assets consist of non-financial produced fixed assets such as computer software, entertainment, or literary or artistic originals, which are meant to be used for more than one year**.**

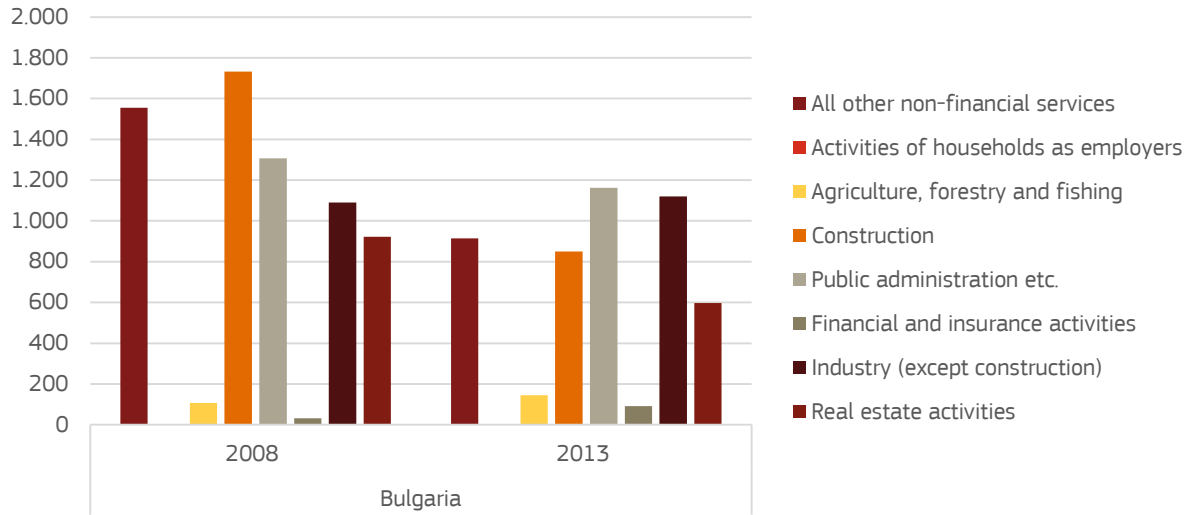
Fixed assets or tangible assets consists of assets that are acquired for longer term used and cannot be quickly converted into cash, such as for instance property or equipment.

Construction output relates to construction work carried by enterprises whose principal activity is classified as construction.

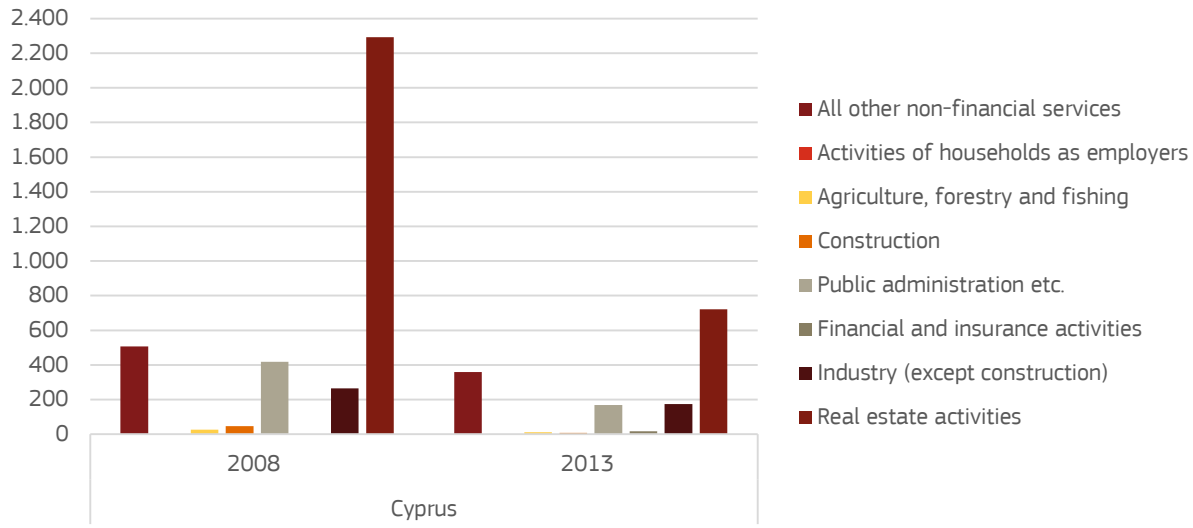
Annex 2 – Investment in the construction sector in the EU-28

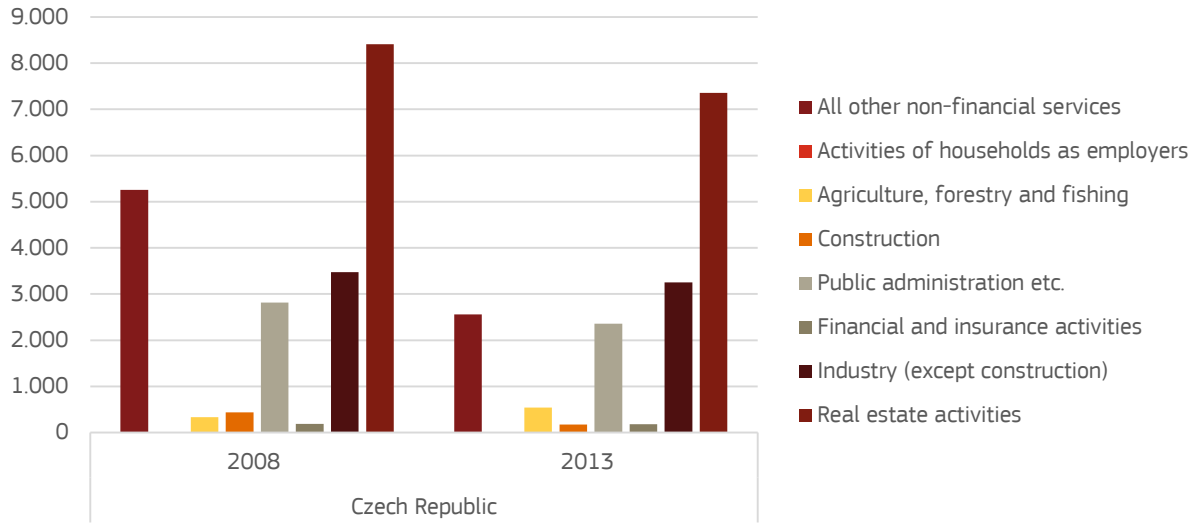
Investment in construction by source of funding in 2008 and 2013, EUR m[143]

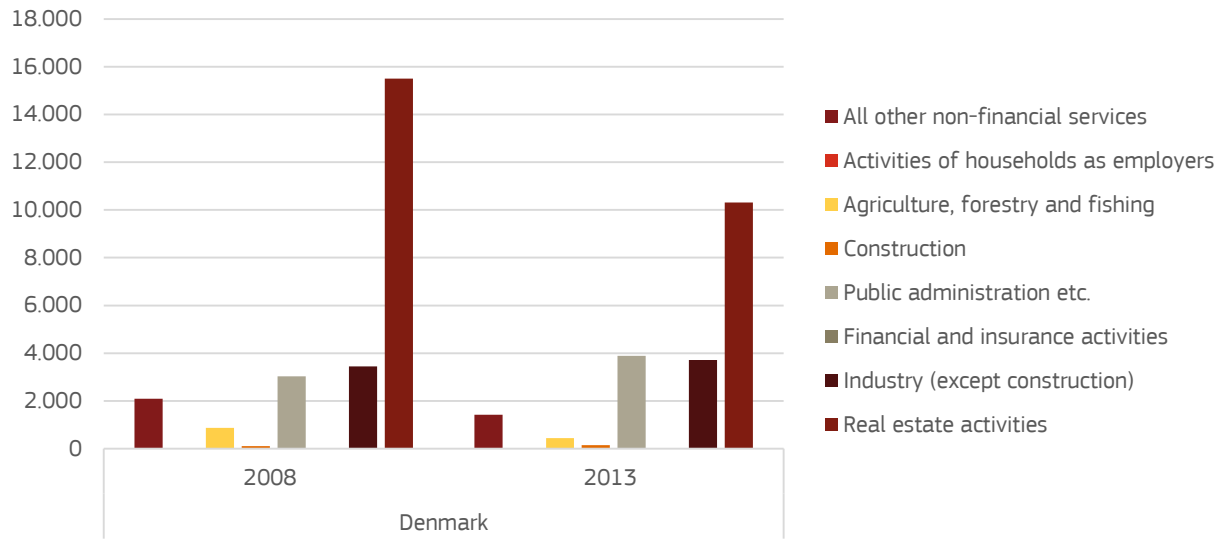


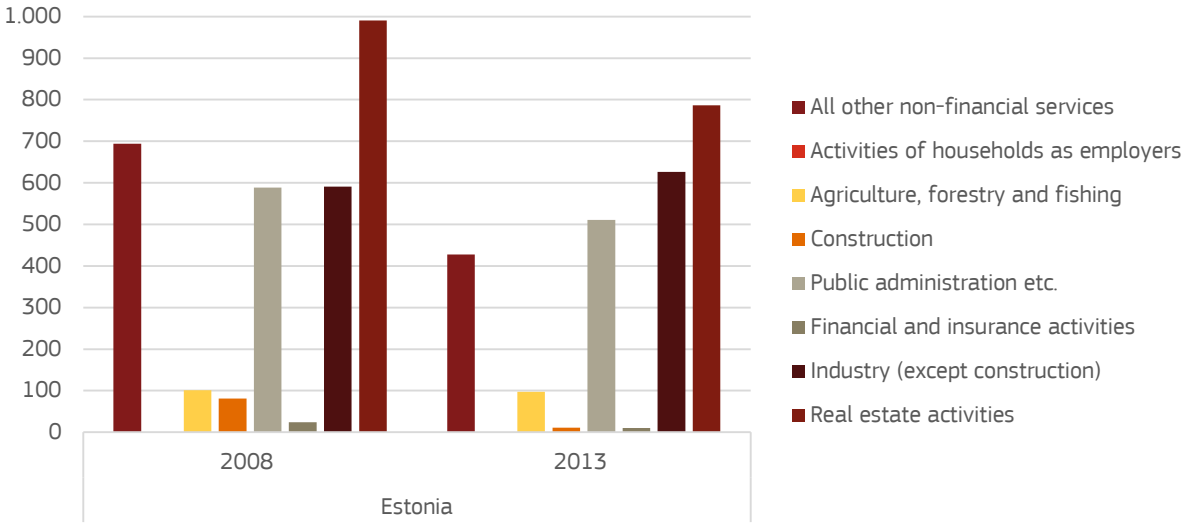


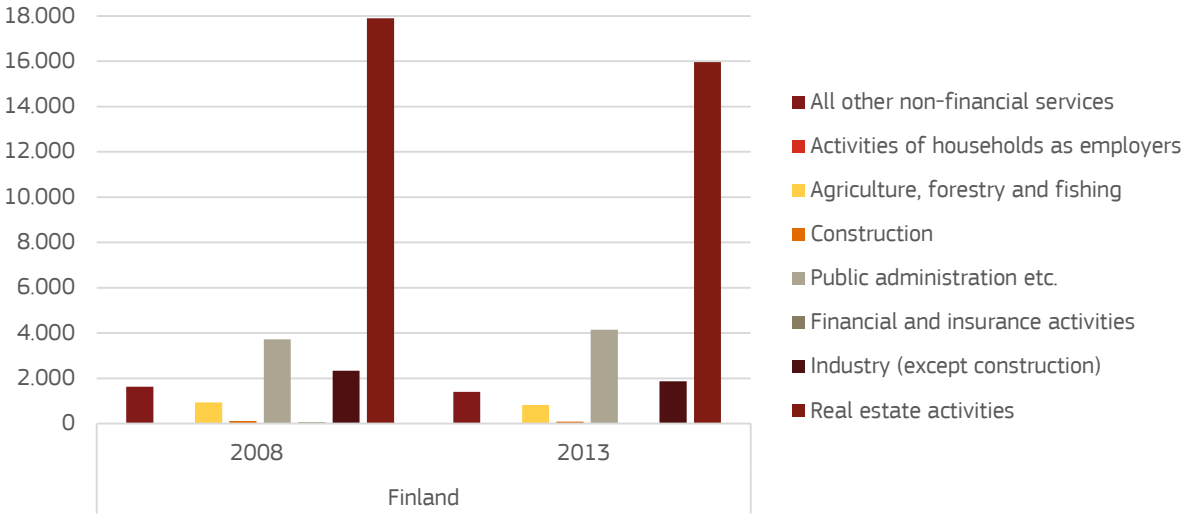
[143] The data for Belgium, Croatia, Ireland, Romania, and United Kingdom is not available

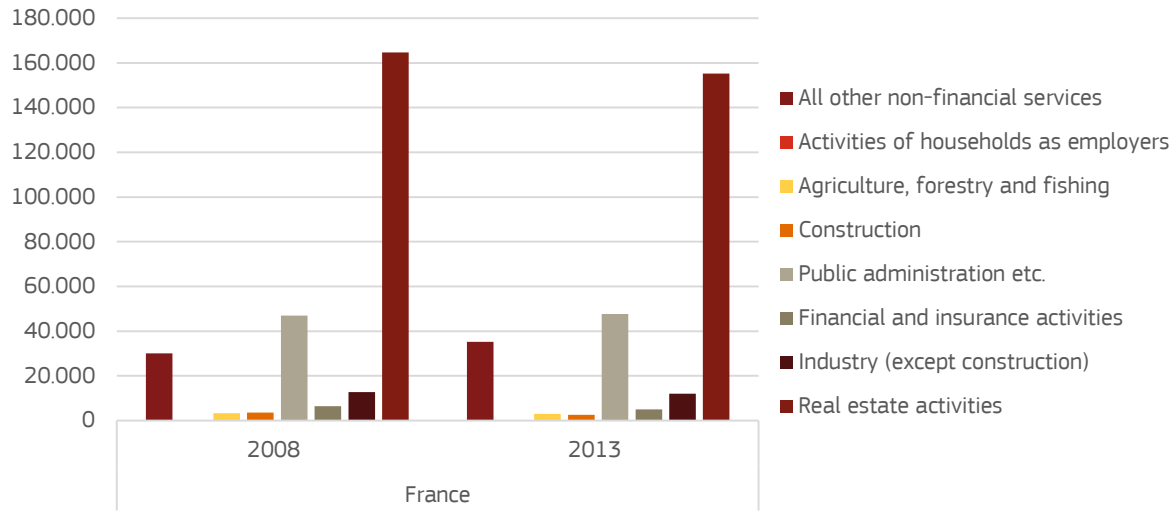

2.400
2.200
2.000
1.800
1.600
1.400
1.200
1.000
800
600
400
200
0
2008
2013
Cyprus
All other non-financial services
Activities of households as employers
Agriculture, forestry and fishing
Construction
Public administration etc.
Financial and insurance activities
Industry (except construction)
Real estate activities

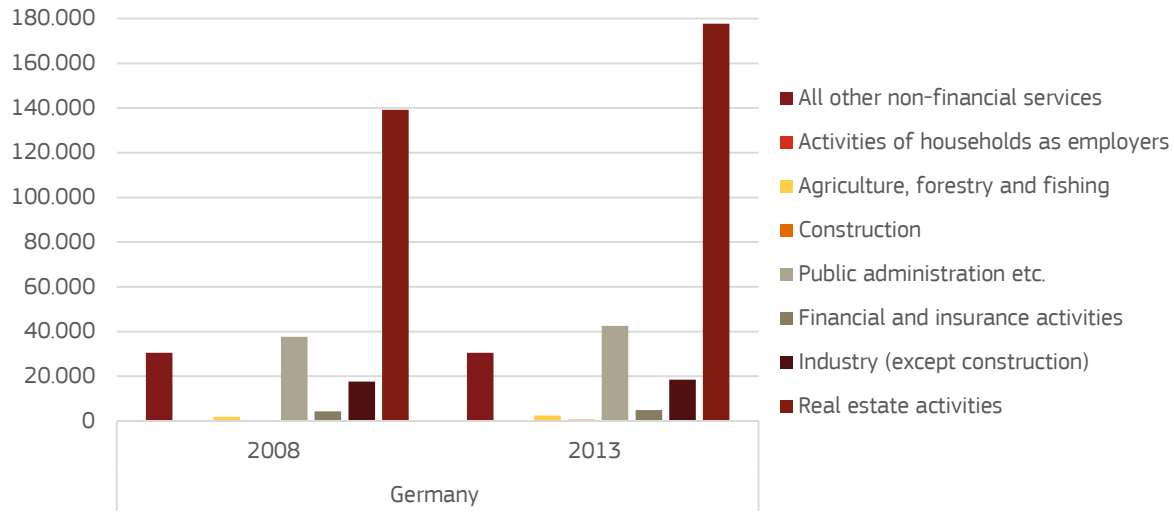

9.000
8.000
7.000
6.000
5.000
4.000
3.000
2.000
1.000
0
2008
2013
Czech Republic
All other non-financial services
Activities of households as employers
Agriculture, forestry and fishing
Construction
Public administration etc.
Financial and insurance activities
Industry (except construction)
Real estate activities

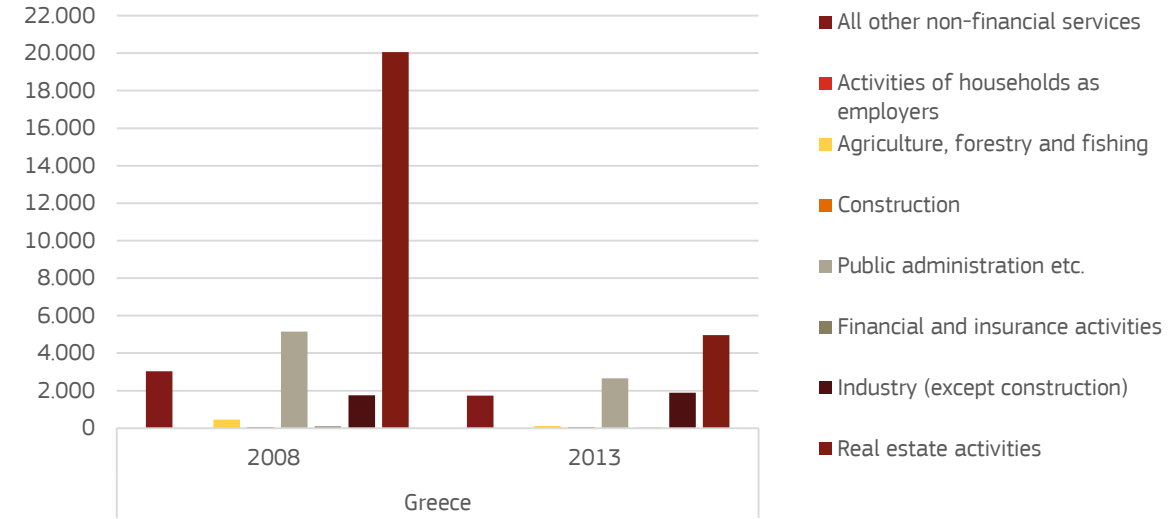

18.000
16.000
14.000
12.000
10.000
8.000
6.000
4.000
2.000
0
2008
2013
Denmark
All other non-financial services
Activities of households as employers
Agriculture, forestry and fishing
Construction
Public administration etc.
Financial and insurance activities
Industry (except construction)
Real estate activities

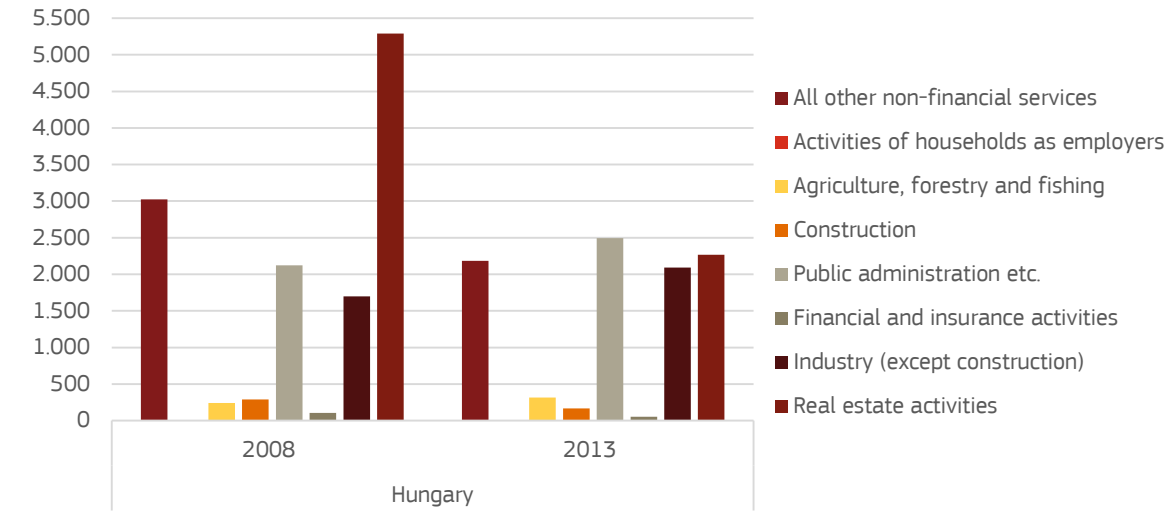

1.000
900
800
700
600
500
400
300
200
100
0
2008
2013
Estonia
All other non-financial services
Activities of households as employers
Agriculture, forestry and fishing
Construction
Public administration etc.
Financial and insurance activities
Industry (except construction)
Real estate activities

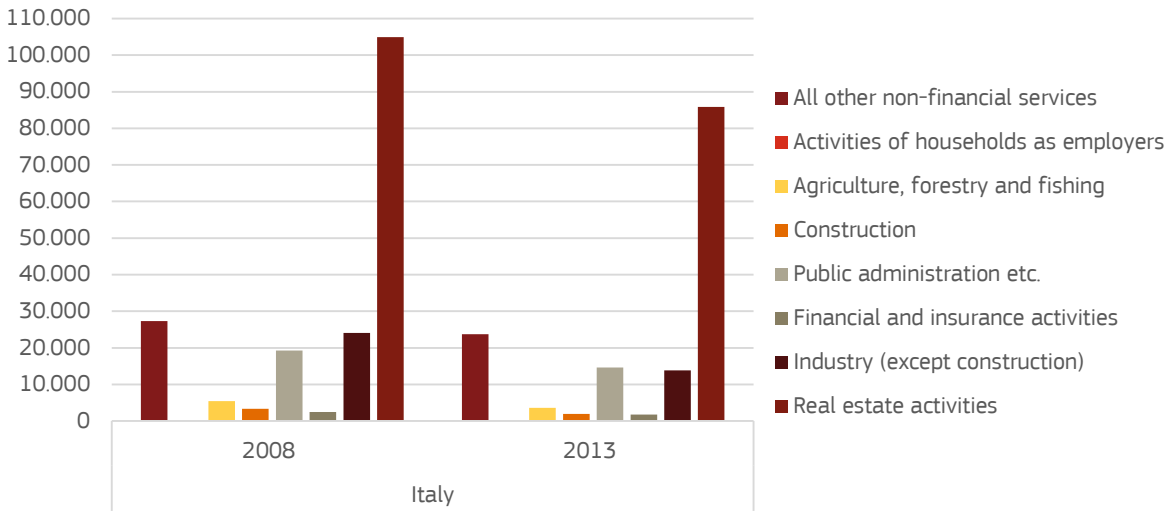

18.000
16.000
14.000
12.000
10.000
8.000
6.000
4.000
2.000
0
2008
2013
Finland
All other non-financial services
Activities of households as employers
Agriculture, forestry and fishing
Construction
Public administration etc.
Financial and insurance activities
Industry (except construction)
Real estate activities

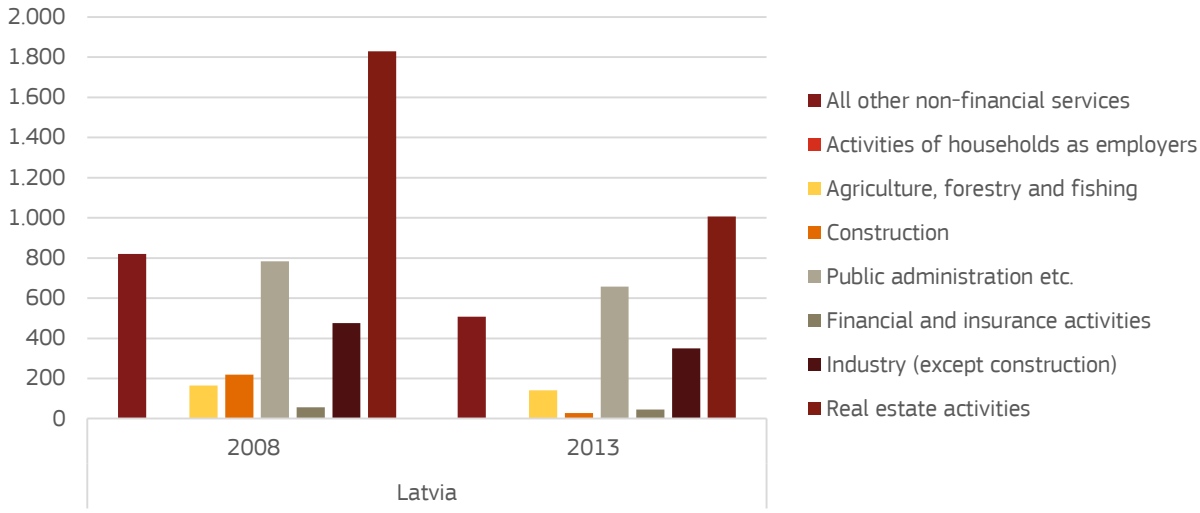

180.000
160.000
140.000
120.000
100.000
80.000
60.000
40.000
20.000
0
2008
2013
France
All other non-financial services
Activities of households as employers
Agriculture, forestry and fishing
Construction
Public administration etc.
Financial and insurance activities
Industry (except construction)
Real estate activities

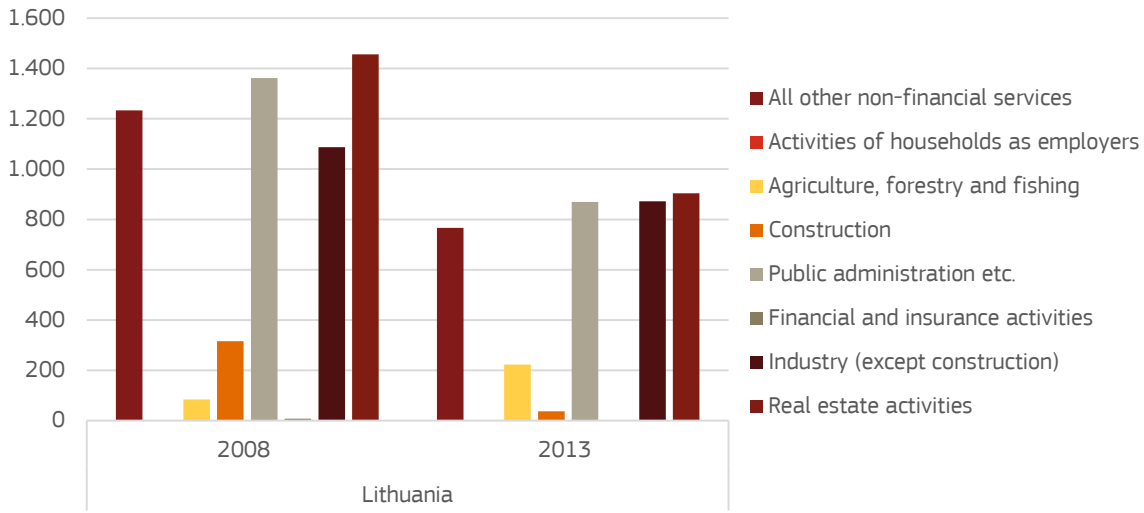

180.000
160.000
140.000
120.000
100.000
80.000
60.000
40.000
20.000
0
2008
2013
Germany
All other non-financial services
Activities of households as employers
Agriculture, forestry and fishing
Construction
Public administration etc.
Financial and insurance activities
Industry (except construction)
Real estate activities

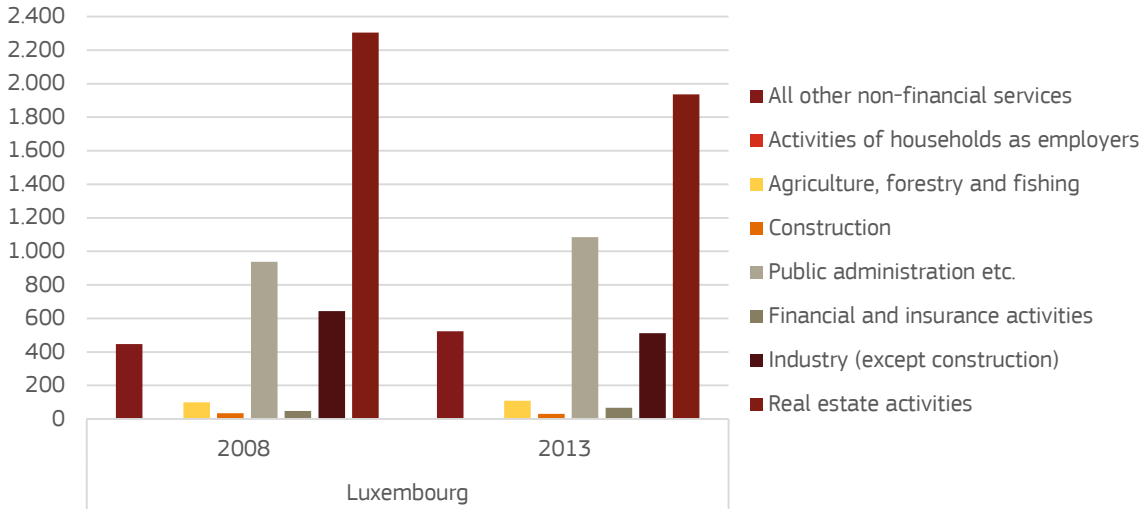

22.000
20.000
18.000
16.000
14.000
12.000
10.000
8.000
6.000
4.000
2.000
0
2008
2013
Greece
All other non-financial services
Activities of households as employers
Agriculture, forestry and fishing
Construction
Public administration etc.
Financial and insurance activities
Industry (except construction)
Real estate activities

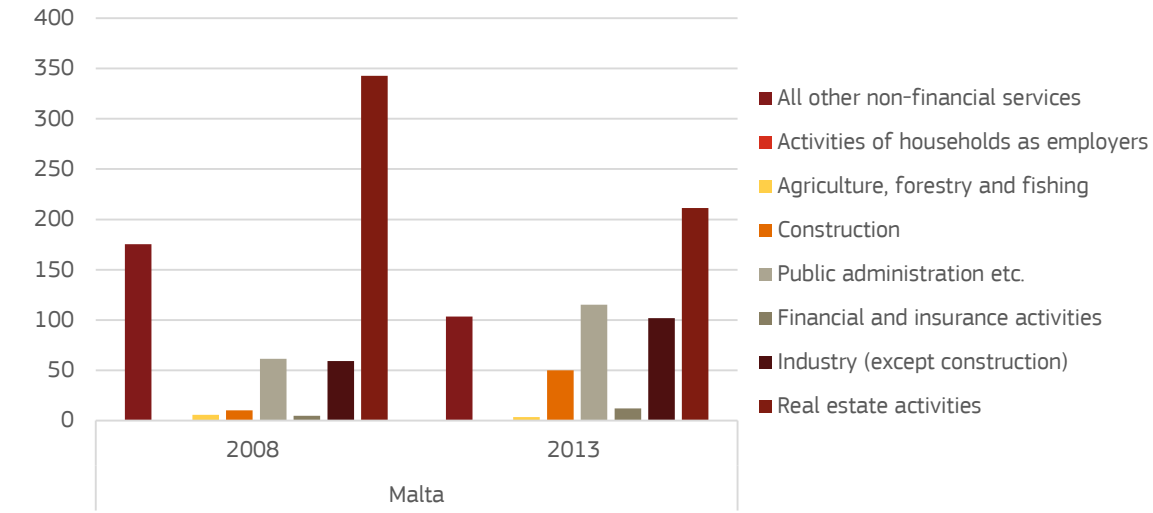

5.500
5.000
4.500
4.000
3.500
3.000
2.500
2.000
1.500
1.000
500
0
2008
2013
Hungary
All other non-financial services
Activities of households as employers
Agriculture, forestry and fishing
Construction
Public administration etc.
Financial and insurance activities
Industry (except construction)
Real estate activities

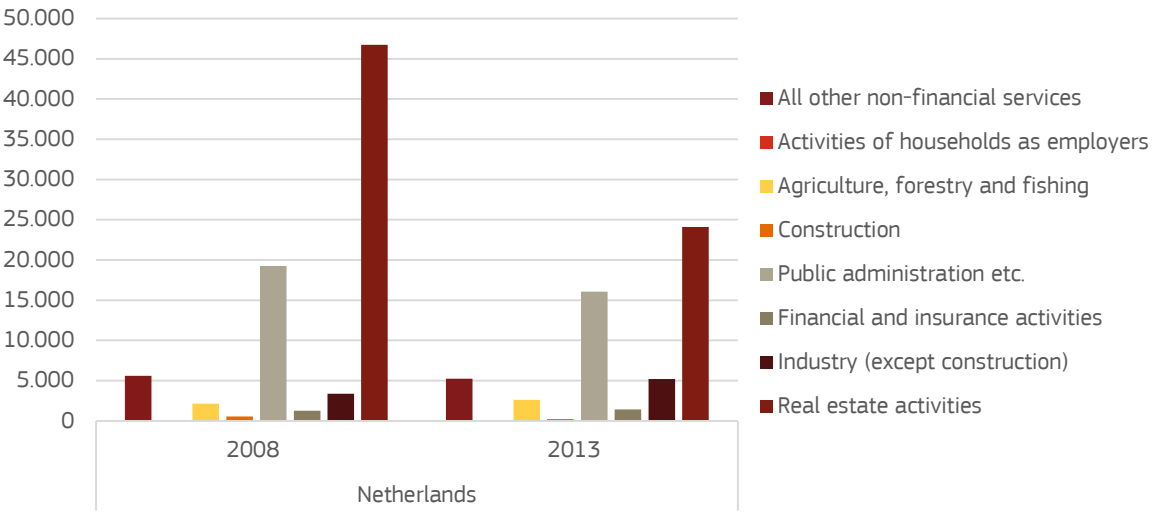

110.000
100.000
90.000
80.000
70.000
60.000
50.000
40.000
30.000
20.000
10.000
0
2008
2013
Italy
All other non-financial services
Activities of households as employers
Agriculture, forestry and fishing
Construction
Public administration etc.
Financial and insurance activities
Industry (except construction)
Real estate activities

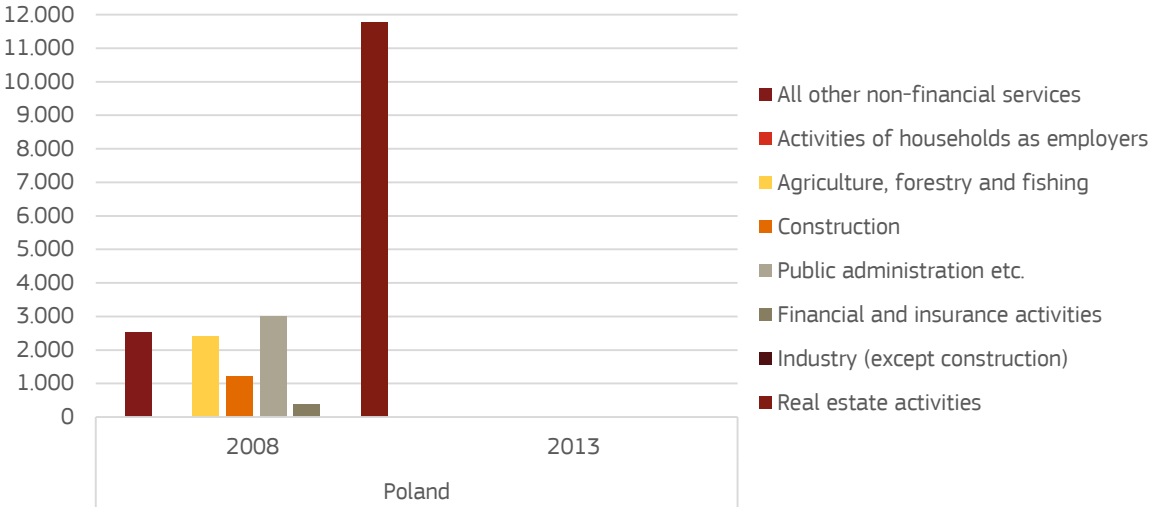

2.000
1.800
1.600
1.400
1.200
1.000
800
600
400
200
0
2008
2013
Latvia
All other non-financial services
Activities of households as employers
Agriculture, forestry and fishing
Construction
Public administration etc.
Financial and insurance activities
Industry (except construction)
Real estate activities

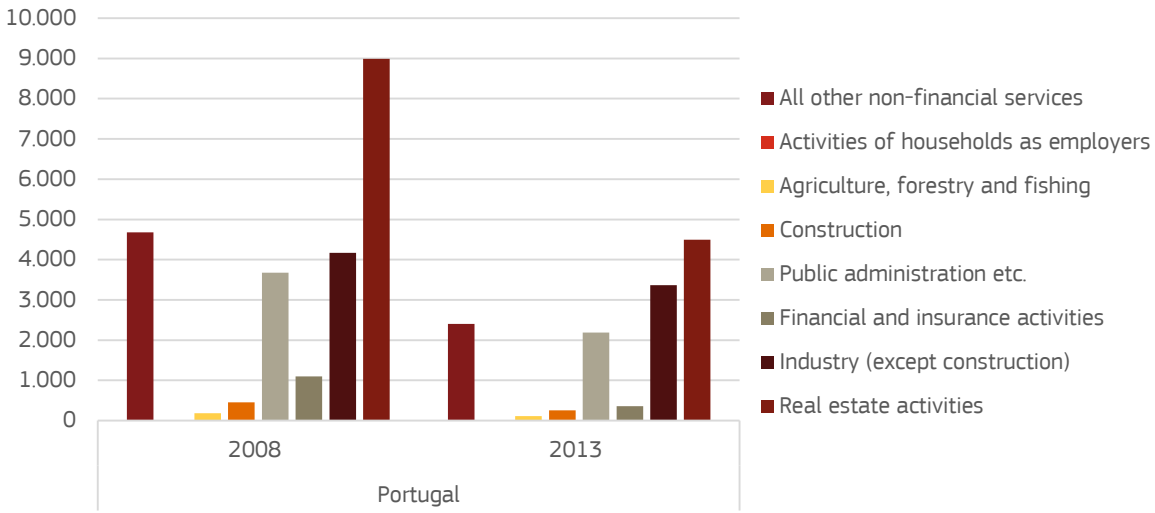

1.600
1.400
1.200
1.000
800
600
400
200
0
2008
2013
Lithuania
All other non-financial services
Activities of households as employers
Agriculture, forestry and fishing
Construction
Public administration etc.
Financial and insurance activities
Industry (except construction)
Real estate activities

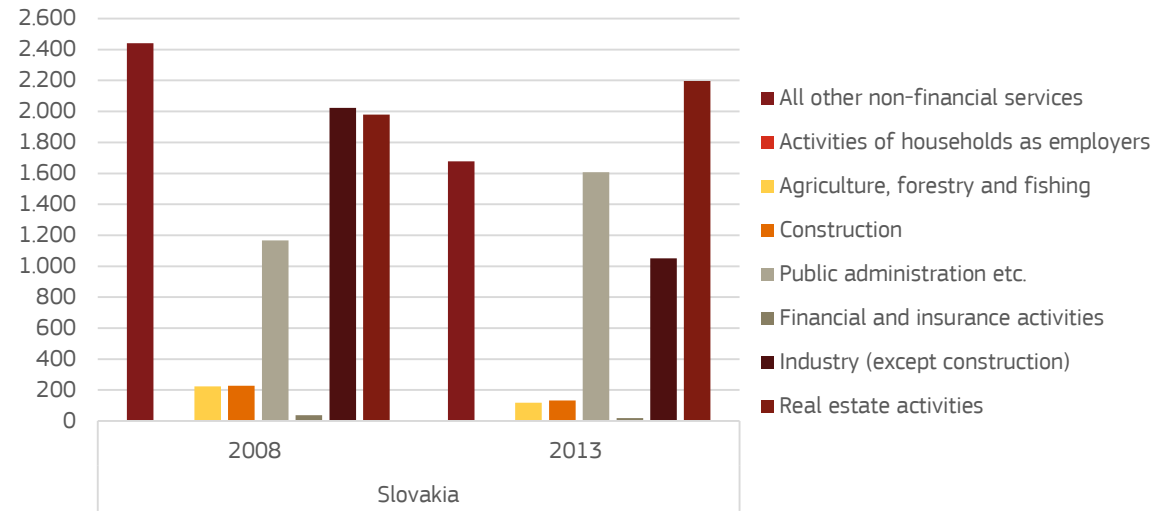

2.400
2.200
2.000
1.800
1.600
1.400
1.200
1.000
800
600
400
200
0
2008
2013
Luxembourg
All other non-financial services
Activities of households as employers
Agriculture, forestry and fishing
Construction
Public administration etc.
Financial and insurance activities
Industry (except construction)
Real estate activities

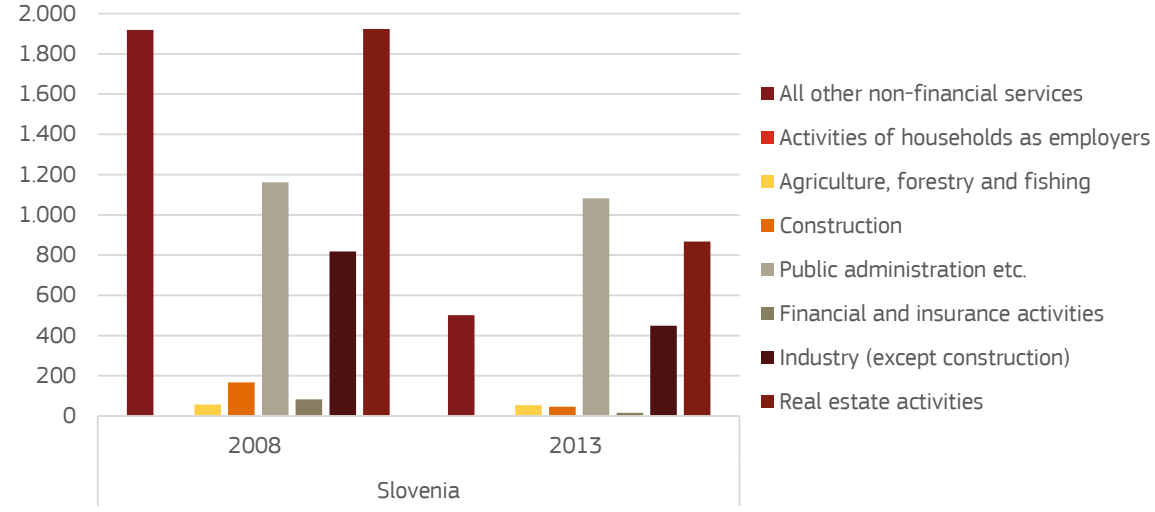

400
350
300
250
200
150
100
50
0
2008
2013
Malta
All other non-financial services
Activities of households as employers
Agriculture, forestry and fishing
Construction
Public administration etc.
Financial and insurance activities
Industry (except construction)
Real estate activities

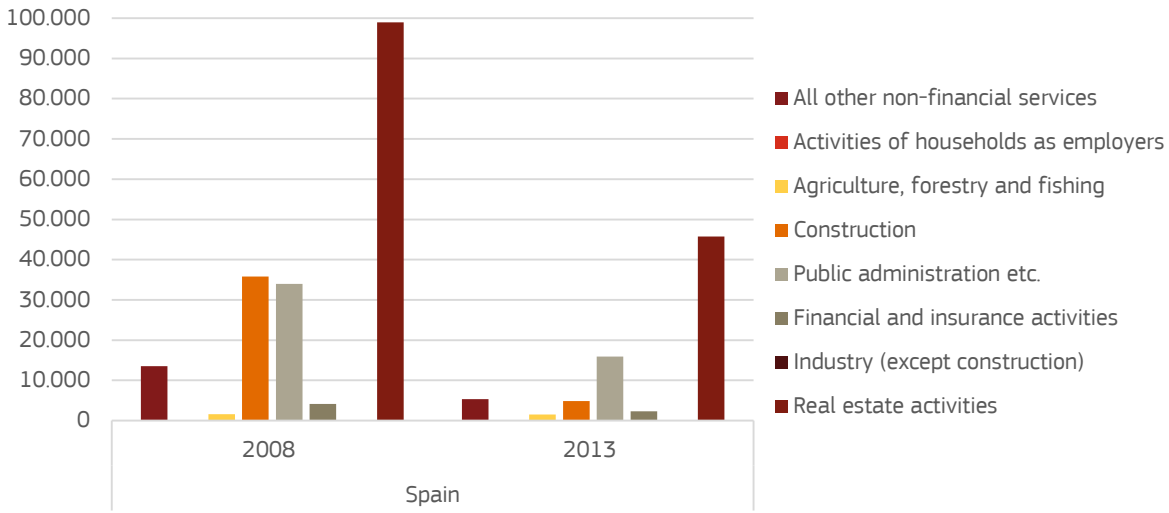

50.000
45.000
40.000
35.000
30.000
25.000
20.000
15.000
10.000
5.000
0
2008
2013
Netherlands
All other non-financial services
Activities of households as employers
Agriculture, forestry and fishing
Construction
Public administration etc.
Financial and insurance activities
Industry (except construction)
Real estate activities

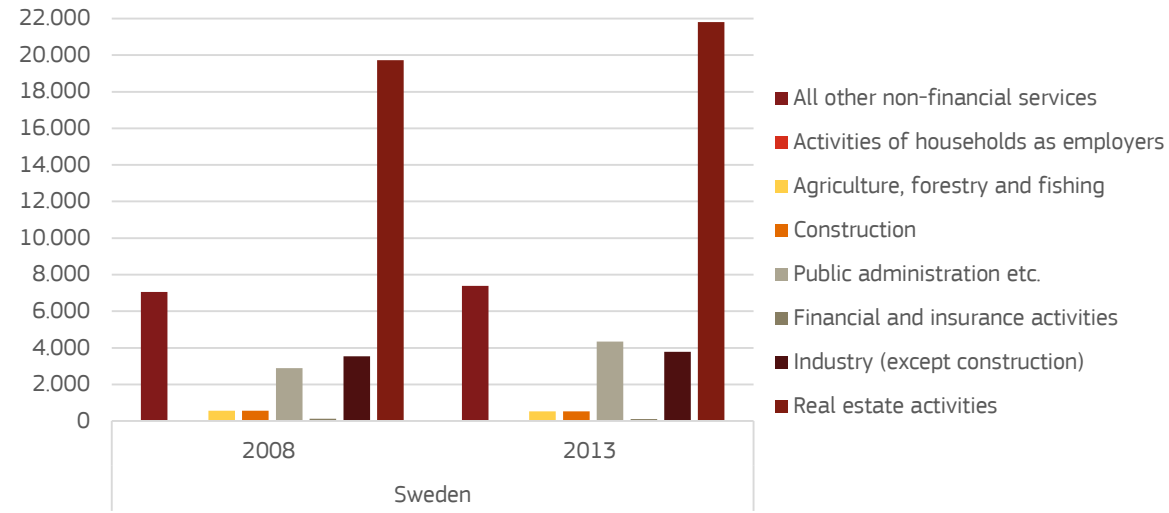

12.000
11.000
10.000
9.000
8.000
7.000
6.000
5.000
4.000
3.000
2.000
1.000
0
2008
2013
Poland
All other non-financial services
Activities of households as employers
Agriculture, forestry and fishing
Construction
Public administration etc.
Financial and insurance activities
Industry (except construction)
Real estate activities


10.000
9.000
8.000
7.000
6.000
5.000
4.000
3.000
2.000
1.000
0
2008
2013
Portugal
All other non-financial services
Activities of households as employers
Agriculture, forestry and fishing
Construction
Public administration etc.
Financial and insurance activities
Industry (except construction)
Real estate activities


2.600
2.400
2.200
2.000
1.800
1.600
1.400
1.200
1.000
800
600
400
200
0
2008
2013
Slovakia
All other non-financial services
Activities of households as employers
Agriculture, forestry and fishing
Construction
Public administration etc.
Financial and insurance activities
Industry (except construction)
Real estate activities


2.000
1.800
1.600
1.400
1.200
1.000
800
600
400
200
0
2008
2013
Slovenia
All other non-financial services
Activities of households as employers
Agriculture, forestry and fishing
Construction
Public administration etc.
Financial and insurance activities
Industry (except construction)
Real estate activities


100.000
90.000
80.000
70.000
60.000
50.000
40.000
30.000
20.000
10.000
0
2008
2013
Spain
All other non-financial services
Activities of households as employers
Agriculture, forforestry and fishing
Construction
Public administration etc.
Financial and insurance activities
Industry (except construction)
Real estate activities


22.000
20.000
18.000
16.000
14.000
12.000
10.000
8.000
6.000
4.000
2.000
0
2008
2013
Sweden
All other non-financial services
Activities of households as employers
Agriculture, forestry and fishing
Construction
Public administration etc.
Financial and insurance activities
Industry (except construction)
Real estate activities