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Responsible Person: Boštjan Vasle, MSc, Director

Editor: Rotija Kmet Zupančič, MSc
Assistant Editor: Matevž Hribernik, MSc

Authors of the Development Report 2017:
Marijana Bednaš, MSc, Jure Brložnik, Tanja Čelebič, MSc, Aleš Delakorda, MSc, Janez Dodič, Lejla Fajić, Barbara Bratuž Ferk, MSc, Marko Glažar, PhD, Marjan Hafner, MSc, Matevž Hribernik, MSc, Slavica Jurančič, Alenka Kajzer, PhD, Rotija Kmet Zupančič, MSc, Mojca Koprivnikar Šušteršič, Mateja Kovač, MSc, Valerija Korošec, PhD, Janez Kušar, MSc, Urška Lušina, Jože Markič, PhD, Helena Mervic, Ana Murn, PhD, Tina Nenadič, MSc, Janja Pečar, Mitja Perko, Jure Povšnar, Matija Rojec, PhD, Urška Sodja, Metka Stare, PhD, Dragica Šuc, MSc, Branka Tavčar, Ana Tršelič Selan, MSc, Ana Vidrih, MSc, Eva Zver, MSc.

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Language Editing: Amidas d.o.o.

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Table of contents

Index of tables

Index of figures

Index of boxes

Index of maps

Introductory remarks

The Development Report analyses the economic, social and environmental dimensions of Slovenia's development in order to evaluate progress on determinants of the welfare of the population. In previous years the Report also monitored the fulfilment of the strategic guidelines for Slovenia's development in these areas. At a time when a new strategy for Slovenia's development is being drafted, this year's Report shows the baseline situation and the development challenges of the country, not only in terms of ensuring macroeconomic stability and the long-term sustainability of economic, social and environmental development, but also in terms of meeting the country's international commitments (e.g. within the Europe 2020 strategy, the Stability and Growth Pact and the mechanism for detecting excessive imbalances).

The Development Report analysis is based on selected indicators of development and focuses attention on areas that represent a particular development challenge for Slovenia. The findings rely on official data released by domestic and foreign institutions until 31 March 2017. This year's Report therefore presents a review of trends up to 2016, i.e. up to the last year for which data are available. In areas where no relevant indicators exist owing to a lack of data, we have also consulted other sources, particularly analyses by national and international institutions and reports on the implementation of sectoral strategies and programmes. In the analyses conducted, Slovenia is mainly compared with other EU Member States. Where we did not have data for the entire EU, the average of those EU Member States for which data were available was used. Slovenia is also occasionally compared with OECD countries, usually with the average of the 21 EU Member States that are also OECD members. The terms "European average" or "EU average" refer to the EU-28 group, while the term "new Member States" means the EU-13 countries that joined the EU in the enlargements after 2004 (or the EU-12 without Croatia).

The Development Report is divided into two parts. The findings of the analysis are summarised in the main body of the Report, which is then followed by a detailed report on progress by individual indicators for Slovenia's development. The subject matter is divided into four sections: macroeconomic framework; competitiveness factors; demographic trends and the welfare state; and environmental, regional and spatial development.

Summary

Following the setback during the crisis, Slovenia has been making progress in terms of economic development and the welfare of its population in recent years; it has also reduced pressures on the environment. The Development Report analyses the economic, social and environmental dimensions of Slovenia's development in order to measure its progress on determinants of the welfare of the population. The relatively rapid economic growth in the previous decade was followed by a sharp GDP fall during the crisis, which gravely disrupted economic stability and negatively affected welfare. Since 2014 the economic picture has been improving, and Slovenia is again catching up with economically more advanced countries. The recovery has led to an overall improvement in the material situation of the population, while quality of life is also being favourable affected by the relatively good access to a large part of public services. Despite the rising economic activity, the movements of key environmental indicators have remained favourable in the last few years. However, owing to the significant fall in GDP during the crisis, Slovenia still lags significantly more behind the EU average than before the crisis in terms of economic development and the living standard of its population.

Economic activity has strengthened, but faster convergence with more developed countries is impeded by low productivity growth. In 2016 GDP rose for the third consecutive year and came close to the level recorded before the crisis. Economic growth in this period has been significantly affected not only by rising foreign demand but also by measures and reforms in the domestic environment that have improved export competitiveness and the investment climate. In addition to banking system stabilisation, the financial and ownership restructuring of the corporate sector, and labour market reform, the improvement has also been the result of adjustments of the corporate sector, particularly deleveraging and improvement in cost competitiveness. The consequently higher profitability, coupled with better access to sources of finance, has led to a rebound in corporate investment. Productivity growth, an increasingly critical factor for further convergence with economically more advanced countries, particularly in view of demographic change, nevertheless remains noticeably below the pre-crisis average. To boost productivity growth, Slovenia will have to improve particularly those structural factors that have a long-term impact on productivity.

Long-term drivers of productivity growth, which are related to the strengthening of human capital, have been gradually improving, but innovation activity remains low. The level of educational attainment of Slovenia's population has improved notably in recent years; the structure of enrolment by field of education has started to change towards a better match with labour market needs, and this could gradually reduce the existing mismatches between workforce supply and demand. However, given the falling supply of working-age people as a result of demographic change, it will nevertheless become increasingly difficult to ensure an appropriate size and structure of, in particular, the workforce with higher education. This is also important from the perspective of innovation activity of enterprises, which remains low. The business sector has otherwise significantly increased R&D investment since the beginning of the crisis, but the collaboration between businesses and the research sector is modest. Furthermore, the still small share of people with tertiary-level education in the business sector is slowing enterprises' response in implementing new technologies and digitalisation. The share of high-growth enterprises has stagnated at an exceptionally low level for several years. R&D investment of the public sector has also been cut for several years, which is another cause for concern, as it makes it more difficult for research institutions to keep up with new knowledge development.

Slovenia has restored the stability of public finances and the banking system in the last few years; the corporate sector has become less dependent on bank sources of finance. The general government deficit had declined to 1.8% of GDP by 2016. General government debt as a share of GDP also dropped considerably for the first time in seven years, which was also due to the nominal decline of debt. Positive developments were attributable not only to favourable macroeconomic conditions but also to measures to contain expenditure growth and increase revenue. However, long-term fiscal sustainability remains a challenge, given the temporary nature of some measures from previous years and demographic change, which increases upward pressure on general government expenditure. After repairing banks' balance sheets, Slovenia also restored the stability of the banking system. Bank performance improved and in 2016 the decline in bank lending slowed. After relying primarily on domestic bank financing before the crisis, enterprises have diversified funding sources in recent years, but the level of non-banking financial sector development nevertheless remains low.

The material situation of the population is also improving amid the improvement in economic conditions; in the years to come, the quality of life will increasingly depend not only on the strengthening of the economy's growth potential, but also on Slovenia's ability to adjust to demographic change. As a result of growth in employment and earnings, household disposable income has risen for the third consecutive year. The risk of social exclusion, which otherwise remained lower than in the EU even during the crisis, has started to decrease. Income inequalities have remained low, but the segmentation of the labour market is still high, which is a problem that mainly affects the young generation. Thanks to the extensive network of public institutions and predominantly public financing, accessibility of public services is still relatively high by international standards, but it is decreasing. The quality of life in this regard will be increasingly affected primarily by social protection systems not having been adjusted to demographic trends. Regarding the pension system, the key issue is ensuring a decent level of pensions, while a decline in the accessibility of health services is indicated by rising waiting times. Moreover, the affordability of long-term care services is deteriorating and the system of care at home remains poorly developed. All of this increases pressure on the fiscal sustainability of social protection systems. Amid an efficient adjustment to demographic change, a further improvement in quality of life will also depend on Slovenia's ability to increase its economic potential to ensure further growth in household income and the provision of funding for long-term care, health-care and education systems.

Slovenia has made progress in terms of reducing the environmental burden over the last few years, but a more sustainable improvement will be required, particularly in view of faster economic growth. Greenhouse gas emissions and energy consumption have declined. Both have also fallen per unit of GDP but remained higher than the EU average. The significant negative impact of increasing road transport is particularly problematic and the absence of measures to effectively address this issue is of concern. Despite the improvement, Slovenia also lags behind the EU in terms of the consumption of raw materials per unit of GDP. More efficient raw material and energy consumption would not only help reduce the environmental burden but also increase the competitiveness of the economy. As a result of favourable natural assets, the shares of renewable energy sources and organically farmed areas are larger than the EU average, but nevertheless still below the targets. The quantity of municipal waste generated per person is also smaller than the EU average, despite an increase in the last few years, and its management has also improved significantly. However, for a transition towards a green economy, which will help increase the competitiveness of the economy and the welfare of the population without degrading the environment, Slovenia will nevertheless have to pursue more sustainable production and consumption patterns.

Institutional competitiveness, which shows how efficiently the government supports and promotes development, is still low. In the last few years Slovenia has made progress in improving government efficiency, for example in terms of reducing the administrative burden and improving insolvency legislation; it has also increased the efficiency of its judiciary. However, a comprehensive reform and modernisation of public administration have yet to be carried out. The efficiency of the government in decision-making and the execution of key development decisions also remain low. Some countries have made bigger and faster steps towards changing regulations and cutting unnecessary red tape in recent years, which has reduced the relative competitiveness of the business environment in Slovenia. This is also indicated by international indicators of the competitiveness of the government and its institutions, which point to the poor functioning of public institutions, inefficient government spending and the high burden of government regulation. People also have little trust in government institutions.

For Slovenia to achieve sustainable and balanced development, which will be reflected in higher welfare of the population, priority measures should be focused on:

— ***Raising productivity by efficient use of technological progress and know-how.*** For this to be achieved, it is necessary to (i) improve the efficiency of the innovation system by measures to increase the collaboration between the public research sector and enterprises, taking into account all types of innovation and the specific features of innovation in small enterprises; (ii) provide an encouraging and predictable business environment, in particular by ensuring a stable access to

sources of funding, a more effective siting of buildings and activities in the landscape and removal of administrative barriers; (iii) ensure a sufficient size of appropriately educated workforce by making the educational system more responsive to changes in the labour market, by lifelong learning and by incentives for attracting in-demand labour force to Slovenia; and (iv) improve state asset management.

— ***A comprehensive adjustment to the changing demographic structure of the population:*** (i) labour market and migration policy: increasing the participation of young and older people; creating conditions for immigration of labour force and reducing emigration (particularly of people with higher education); (ii) social protection systems: implementing reforms that will ensure social and income security of people and access to medical services and long-term care; (iii) education and training: promoting lifelong learning and continuous on-the-job training and intergenerational knowledge transfer; (iv) promoting adjustment of work processes and better age management in the workplace; (v) encouraging healthy lifestyle habits; and (vi) adjusting housing conditions and the transport network with the support of ICT and technological solutions.

— ***Ensuring a faster transition towards a green economy by moving towards more sustainable production and consumption patterns.*** It is essential to: (i) promote sustainable and efficient exploitation of natural resources, which will also contribute to productivity growth; (ii) accelerate research and innovations that also benefit the environment; (iii) improve sustainable mobility and increase the competitiveness of rail transport; and (iv) improve the cooperation between sectoral policy areas to align their measures.

— ***Increase the efficiency of the government and its institutions to support and promote development*** by (i) reforming and modernising public administration (more efficient organisation and digitalisation); (ii) increasing the accountability, expertise and transparency of government bodies; and (iii) restructuring general government revenue and expenditure towards greater emphasis on development and efficiency.

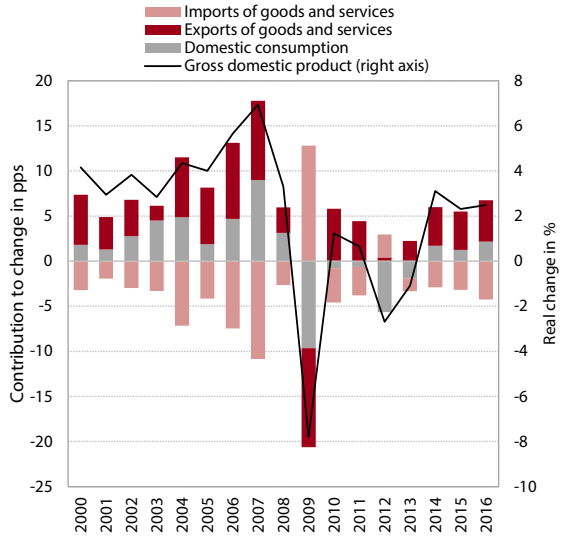
1 The macroeconomic framework

A stable macroeconomic environment is vital in order to rapidly improve competitiveness factors, generate sustained economic growth and create new jobs. After a considerable decline in macroeconomic indicators since the onset of the crisis, the situation has improved in recent years. In 2016, GDP increased for the third year in a row. Alongside exports, domestic consumption has been gradually increasing, although it is still below the pre-crisis level. This is indicated by the large excess of savings over investment, which reflects, in particular, the extensive deleveraging of companies and commercial banks since the onset of the crisis and improved export competitiveness. The corporate debt level has been reduced to that seen before the accelerated credit growth in 2005, which reduces the vulnerability of companies to potential financial shocks. The government deficit has been below 3% of GDP since 2015 and continues to gradually fall, but sustainable fiscal consolidation, which in the long term would facilitate the covering of increasing expenditure related to demographic trends, remains a challenge. The development lag of the financial system behind the EU average in the areas of banking and the capital market has increased. A particular challenge in this area is the strengthening of non-banking segments. In addition to sources for financing economic development, this will also be of key importance for the sustainable financing of expenditure related to ageing.

1.1 Macroeconomic stability and economic growth

Economic activity has been on the rise since 2014, primarily due to exports, although the contribution of domestic consumption has also been increasing. Following a considerable decline in 2012 and 2013, the growth of GDP recorded in the last three years is related to various factors in the international and domestic environments. Foreign demand, together with the improved competitiveness of exporters, facilitated the relatively high export growth. Uncertainty in the domestic environment has lessened considerably in this period, mainly as a result of economic policy measures, particularly the recovery of the banking system and gradual fulfilment of commitments in the fiscal area, which improved the perception of Slovenia on financial markets. In this environment good export results have gradually resulted in better conditions also in the segments of the economy focused on the domestic market. Economic growth has also led to the improvement of labour market conditions (see Chapter 3.1). This, in addition to improved consumer confidence, has had a favourable impact on the growth of private consumption, which had fallen considerably in 2012 and 2013. Since 2014, private investments in machinery and equipment have also been on the rise. This was facilitated by improved business results and lower corporate indebtedness amid increased orders and higher capacity utilisation (see Chapter 1.3). The dynamics of infrastructural (public) investments were greatly affected by the transition to the new financial perspective: after increasing significantly in 2014 and 2015 due to the accelerated drawing of EU funds, public investments fell sharply in 2016 due to stagnation in the drawing of new funds. With the relaxation of austerity measures adopted in 2012 and 2013, government consumption has also increased in the last couple of years. Nevertheless, in 2016 Slovenia was still one of the few EU countries with GDP in real terms below the pre-crisis level.[1] Final consumption and exports in particular have already exceeded this level, but investments were still considerably lower than in 2008.[2]

Figure 1: **The structure of GDP growth (expenditure side of GDP)**



Source: SURS; calculations by IMAD.

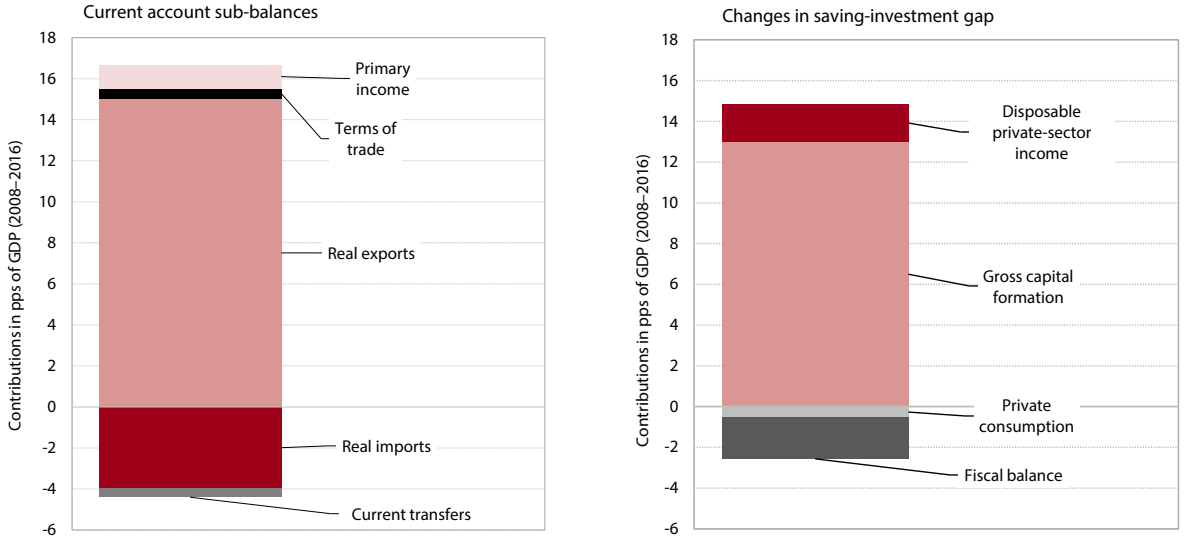
In recent years price trends have been greatly affected by commodity price dynamics. Following a few years of stagnation or reduction, consumer prices increased slightly year on year at the end of 2016. The reversal in the trend in commodity prices on the world markets and consequently import prices had a great impact in this regard. Import prices started to rise at the beginning of 2016, thus raising the prices of energy goods and food in Slovenia. During that year, the import prices of non-energy goods also started to slowly rise, but on average no rise in the prices of these goods has yet been observed in Slovenia. This is partly related to the delay in the transfer of higher commodity prices (directly and indirectly)[3] on the markets for these products. Stronger demand has already resulted in the slightly higher rise of prices in the service or no-tradable sector (see Indicator 1.2). The absence of greater price pressures in the economy in 2016

[1] GDP was 2% lower in real terms compared to 2008.

[2] Gross fixed capital formation in 2016 was 40% lower than in 2008.

[3] More in IMAD's Spring Forecast of Economic Trends 2017 (Box 1).

Figure 2: **Changes in the current account of the balance of payments, Slovenia**



Sources: SURS, BS, Eurostat; calculations by IMAD.

was also related to the still low level of domestic demand. This is indicated by the estimates of the output gap, which has been closing but remains negative.

The surplus in the current account of the balance of payments is partly due to the fall in commodity prices in recent years but mostly reflects the process of deleveraging of banks and companies and the fall in domestic consumption. In 2016, the surplus reached 6.9% of GDP. The transition from the large pre-crisis deficit (−5.3% of GDP in 2008) to the surplus was attributable to many processes and changes related to the crisis and responses to the crisis. While exports quickly recovered, as early as by the middle of 2009, imports declined for several years due to the fall in domestic consumption. In the first few years, this was due to a large reduction in investments, which was related to the high level of corporate debt and limited sources of funding on the one hand (see Chapter 1.3) and low capacity utilisation amid the fall in demand on the other.[4] As labour market conditions deteriorated and the necessary fiscal consolidation was carried out, both private and government consumption also fell considerably in 2012 and 2013. Although domestic consumption has been growing again in recent years, it is still well below the pre-crisis level and the gap between the volumes of exports and imports remains wide. Since 2013, this has been due to improved terms of trade related to the fall in the prices of energy products and raw materials and to much higher growth in the volume of exports than of imports (see Indicator 1.3). Private sector deleveraging abroad also contributed to the decline in total net interest payments abroad, this despite the rising costs of external government debt financing. All sectors, but particularly the corporate sector, contributed to the surplus of savings over investments. A similar change or turnaround in the current account balance resulting in a surplus has been recorded in a number of euro area countries since the beginning of the crisis. As in Slovenia, the main reasons lie in a lower level of domestic consumption and greater savings in the economy as a whole.

Gross external debt has been decreasing in the last two years; at the end of 2016, it was EUR 2.9 billion higher than in the pre-crisis period; its structure, in which the government share is now more than half, has changed radically in this time. The government share has increased to 54.3% (44 pps more than in 2008), mostly due to extensive long-term borrowing abroad with the aim of financing the government deficit and measures for the resolution of domestic banks. In contrast, commercial banks and companies have been deleveraging abroad. Within the private sector only the debt of Slovenian affiliates to parent companies abroad has increased. The government external debt was rising at a considerably slower pace in 2015 and 2016 (see Chapter 1.2), which, together with further deleveraging, partly also through the outflow of non-resident deposits from Slovenian banks, contributed to the reduction of the total gross external debt from its highest level in 2014.

The decrease in gross external debt amid the growth of foreign claims has contributed to the improvement of the net international investment position, particularly in 2015 and 2016; however, its relatively high negative value indicates the vulnerability of the economy to potential financial shocks from the international environment. Slovenia's net international investment position had already deteriorated severely in the pre-crisis period. At first this was due to the borrowing of

[4] The conclusion of the construction of the motorway system just before the onset of the crisis had an additional negative impact on the dynamics of investment activity. However, the high pre-crisis growth would have been checked in any case, as there were no large investment plans in place.

Box 1: **Assessment of Slovenia in the European Commission's excessive imbalance procedure**

According to the assessment of the European Commission, the imbalances in Slovenia have no longer been excessive since 2015. However, ensuring the long-term sustainability of public finances remains a challenge. In the excessive imbalance procedure carried out by the European Commission, Slovenia was classified among the countries with excessive macroeconomic imbalances in 2013 and 2014[1]. With the improvement of the economic situation and the competitiveness of the economy and the adoption of measures related to bank recovery and the restructuring and privatisation of the financial and corporate sectors, the indicator values had improved considerably by 2015 (most recent data available)[2]. Slovenia only exceeded the limit values in two out of fourteen indicators (in 2013 and 2014 in six and five respectively). During the last in-depth review[4], the European Commission established that the situation in the key areas where monitoring is required due to the risk of imbalances (the banking sector, corporate debt and fiscal risks) are improving. The European Commission considers that further activities are not necessary, particularly not in relation to long-term fiscal sustainability and improvement of the business environment.

Table: **Results of the macroeconomic imbalance indicators for Slovenia**

	Indicator/Limit value		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
External imbalances and competitiveness	Current account, % of GDP (three-year average)	+6/–4%	–1.8	–2.1	–2.6	–3.8	–3.3	–2.0	–0.2	0.9	2.5	4.5	5.4
	Net international investment position, % of GDP	–35%	–11	–17	–26		–44	–47	–45	–50	–47	–44	–39
	Real effective exchange rate (HICP deflator), three-year increase	+/–11%	0.9	–2.8	–1.2	2.1	5.2	1.2	–1.1	–4.5	-0.7	1.2	0.6
	Share of the world market (goods and services), five-year increase	–6%	30.0	21.4	23.6	16.3	9.8	–1.3	–5.4	–20.4	–17.8	–12.4	–3.6
	Nominal unit labour costs, three-year increase	+9%	9.7	6.3	5.4	10.6	18.5	16.1	8.3	0.6	0.4	–0.1	–0.6
Internal imbalances	Real estate prices, annual increase	+6%	12.0	14.1	18.8	1.3	–10.3	–1.3	0.9	–8.2	–6.0	–6.6	1.5
	Private sector borrowing, inflow in % of GDP	15%	12.4	13.6	21.5	15.5	2.9	1.9	0.4	–2.9	–4.0	–4.7	–5.1
	Private debt, % of GDP	160%	76	83	96	106	114	115	113	113	108	98	87
	General government debt, % of GDP	60%	26	26	23	22	35	38	47	54	71	81	83
	Unemployment rate, three-year average	10%	6.5	6.3	5.8	5.1	5.1	5.9	7.1	8.1	9.1	9.6	9.6
	Financial sector liabilities, unconsolidated, annual growth in %	16.5%	17.7	13.8	28.6	6.6	7.7	–3.4	–1.2	–0.7	–10.3	–0.2	–3.4
Labour market	Employment rate (15–64), three-year change in pp	–0.2	2.9	3.8	1.5	1.1	0.9	0.2	–1.5	–1.4	-1.0	0.6	1.4
	Long-term unemployment rate (15–74), three-year change in pp	0.5	–0.4	–0.6	–1.1	–1.2	–1.1	1.0	1.7	2.5	2.0	1.7	0.4
	Youth unemployment rate (15–24), three-year change in pp	0.2	–0.6	–3.4	–6.0	–5.5	–0.3	4.6	5.3	7.0	6.9	4.5	–4.3

Source: Eurostat Portal Page – Macroeconomic imbalance procedure statistics, 2016.
Note: Indicators found to exceed the threshold value in the EU excessive imbalance procedure are marked in grey.

[1] Countries are classified into four categories according to the results in the set of macroeconomic imbalance indicators (see table) and the in-depth analysis conducted by the European Commission: countries without imbalances, countries with imbalances, countries with excessive imbalances and countries with excessive imbalances requiring corrective action plans.
[2] Alert Mechanism Report 2016, 2015; Alert Mechanism Report 2017, 2016.
[3] Alert Mechanism Report 2017, 2016.
[4] Country Report Slovenia 2017, 2017.

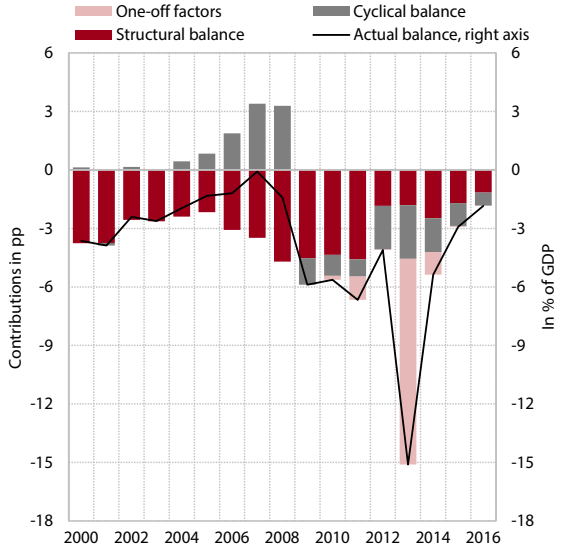
commercial banks abroad, but in 2008 it exceeded the indicative limit of the EU indicator for net international investment position (35% of GDP) due to the drop in the value of investments in securities. In the 2009–2014 period, it deteriorated further and went well beyond 40% of GDP, the most in 2012. This was mainly due to the government borrowing abroad. The indicator value in relative terms was also affected by the fall in GDP. The value of the indicator then started to improve, at first mostly due to the growth in foreign claims (investments in foreign securities, cash and deposits abroad), then also due to the decrease in the gross external debt. Since 2014, the indicator value in relative terms has also been positively affected by GDP growth. At the end of 2016, the net international investment position demonstrated a net debt external position amounting to EUR 13.7 billion or 34.5% of GDP.

1.2 Stability and quality of public finances

The fiscal situation has been gradually improving in recent years. The government deficit has been on a downward path since 2013. In 2015 it fell below 3% of GDP, meaning that Slovenia corrected the excessive deficit and exited the corrective arm of the Stability and Growth Pact.

In 2016, the deficit declined further, to 1.8% of GDP. The reduction in the deficit has also halted the distinct trend of rising debt which started in the middle of 2008. In 2016 the debt was substantially reduced (by 3.4 pps to 79.7% of GDP), also as a result of the nominal reduction in debt, which amounted to EUR 31.7 billion at the end of the year. The improved situation in the Slovenian economy facilitated active debt management amid favourable borrowing conditions on international financial markets. Furthermore, average debt maturity has become longer and borrowing costs are falling, which is reflected in the decrease in the implicit interest rate.

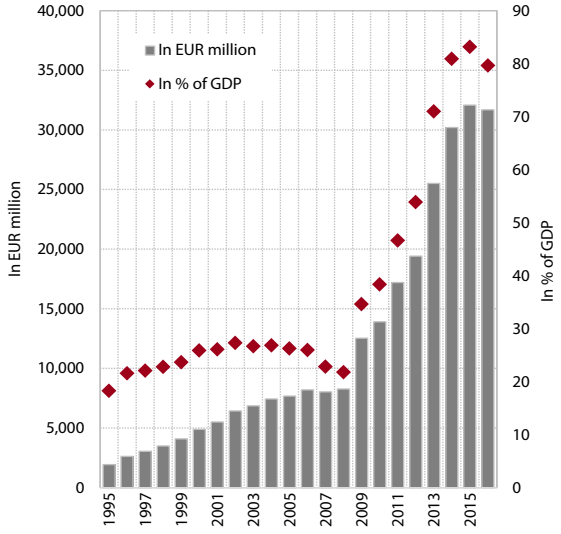
Figure 3: **Actual and structural general government balance, Slovenia**



Source: SI-STAT Data Portal – National Accounts – General Government Accounts – Main Aggregates of the General Government, 2017; calculation of the structural balance by IMAD.

According to IMAD, one-half of the government deficit remains structural. Its reduction in recent years was influenced by both temporary and permanent measures.[5] The government deficit reduction in 2014 and 2015 was the result of the impact of favourable macroeconomic conditions, the reduction in expenditure after the recapitalisation of banks and the effect of mostly temporary measures. After the partial relaxation of austerity measures adopted in the preceding years (see Indicator 1.6) that have not been replaced by systemic measures, the flexible expenditure components played an important role in the reduction of deficit in 2016. The reduction was recorded in investments, i.e. their co-financing when drawing from EU funds. Capital transfers related to the operation of the BAMC were also substantially lower.[6] The assessment of IMAD shows that, in addition to cyclical trends, almost half of the improvement in the government balance in 2014–2016 was due to structural adjustment, as the structural deficit was reduced from approx. 2% of GDP to around 1% of GDP in this period. Under conditions of an estimated negative output gap, the fiscal policy had a slightly restrictive effect, but economic growth was not significantly hindered due to the strengthening of exports, private consumption and investments on the part of companies (see Chapter 1.1). With this reduction in the structural deficit, Slovenia mostly fulfilled the requirements arising from the preventive arm of the Stability and Growth Pact in the short term[7]. However, more permanent measures are needed for the sustainable removal of the structural deficit by 2020.

Figure 4: **General government debt, Slovenia**



Source: SI-STAT Data Portal – National Accounts – General Government Accounts – General Government Debt, March 2017.

The possibilities for fiscal stimulus have narrowed considerably due to a substantial increase in the debt during the crisis and particularly due to demographic pressures. The room for manoeuvre in fiscal policy is restricted by requirements related to the reduction of debt and structural adjustment under the rules of the Stability and Growth Pact. Projections based on demographic changes indicate an increase in public expenditure due to the ageing population in the medium term (after 2020), which will additionally shrink the fiscal manoeuvring space in the future. Although the favourable financing conditions and active debt-managing policy will reduce interest costs in the

[5] The most important permanent measures are as follows: increasing the VAT rate; amending the legislation on social transfers related to income and property; and implementing the pension reform that entered into force in 2013.

[6] The BAMC as a unit of general government has a pronounced impact particularly through the valuation of the write-off of claims and the conversion of bad loans into equity holdings in companies manged by the BAMC. This is reflected in capital transfers, which were very high in 2015.

[7] Countries within the preventive arm of the pact, among which Slovenia has been included since 2016, are required to reduce their structural deficit by 0.6 ppsper year during times of normal economic cycle (with estimated output gap within ±1.5% of GDP) and with the government debt of more than 60% of GDP (see Boxes 4 and 6 in Economic Issues, 2016).

following years, the adopted documents defining fiscal policy for 2017 and 2018[8] show that these savings will be used to increase expenditure that has been curbed in recent years due to temporary measures. The attainment of fiscal objectives on the expenditure side should therefore, as in 2016, be supported particularly by limiting flexible expenditure and a further planned reduction of capital transfers (BAMC). The challenge for the next few years thus remains the continuation of consolidation by moving from interventions in flexible categories of expenditure to longer-lasting structural adjustments, which would also contribute to more sustainable consolidation in the medium term.

In order to ensure a sustainable fiscal consolidation, effective measures need to be adopted in several areas in the following years. These are, in particular, i) the restructuring of revenue and expenditure towards more development-oriented priorities and greater efficiency. With regard to revenue, such restructuring could include a move towards property taxation and further expansion of tax and contribution bases, which is particularly important in times of increased global uncertainty. With regard to expenditure, systemic rationalisations will be needed based on detailed reviews of expenditure at all general government levels and directing expenditure towards priority needs that ensure economic efficiency and social justice. Another measure is ii) the reform of social security systems and their adjustment to demographic changes, the key component being the formation of a set of measures which will both maintain quality of life and be financially sustainable. If the favourable financing conditions continue, there are still some possibilities for iii) active debt management with a view to reducing the debt and interest burden. In addition to this, iv) improved asset management would increase the return on state-owned assets and reduce the risk of potential capital increase with public funds. The enhancement of growth potential is also important for increasing tax revenue. For this purpose, a sound and coordinated range of measures for sustainable increase in mid-term economic growth is essential, in addition to the provision of a more efficient institutional basis for strong performance of the economy.

The restructuring of public finances would be supported by the strengthening of the institutional framework, particularly through the amended budget planning process. Such strengthening would transform mid-term planning and establish a system for effective prioritisation in public expenditure and adjust the procedure of adopting or amending the state budget so that it is not focused on the setting of individual budget expenditure components. This is the direction taken by the draft Public Finance Act, which is currently the subject of public discussion.[9] The Fiscal Council elected in March 2017 will play an important role and could contribute to the formulation of suitable fiscal decisions for Slovenia and cooperate with the European Fiscal Board formed in 2016 in wider discussions and the forming of fiscal policy at the EU level.

1.3 Financial system and corporate sector indebtedness

1.3.1 The situation regarding the financial system

The structure of the financial system has gradually changed in recent years; the share of non-banking segments has increased, albeit mostly due to the shrinking of the banking sector. The fall in total assets of Slovenian banks since the onset of the crisis was one of the greatest in the EU and the lag behind the EU average has increased. The development of non-banking segments of the financial sector, which is important for ensuring sustainable sources for financing the economy, has been modest. Since the onset of the crisis, the lag behind the EU average in the area of the capital market has increased, while in the area of insurance it is similar to that before the crisis, this including the substantial lag in life insurance.

Following the recovery in 2013 and 2014, the operating results of the banking system have improved, but the contribution of net interest income was lower than in the pre-crisis period. The profit in 2015 and 2016 was largely due to the decline in the creation of provisions and impairments. Since the lending activity of banks has further decreased and interest rates are low, the net interest income of banks has fallen. Assessments indicate that they have fallen particularly in the financing of non-financial companies which have continued to deleverage. The low interest rates have already substantially reduced the profitability of banks not only in Slovenia but in the entire euro area. The non-recovery of loans to companies is related to several factors. On the one hand, there are changes in banks due to (i) the commitments adopted upon the recovery of the banking system with state aid[10], (ii) the significant volume of government securities with high return in bank balance sheets and (iii) a relatively high share of non-performing claims, which fell considerably in 2016 but is still slightly above the EU average.[11] On the

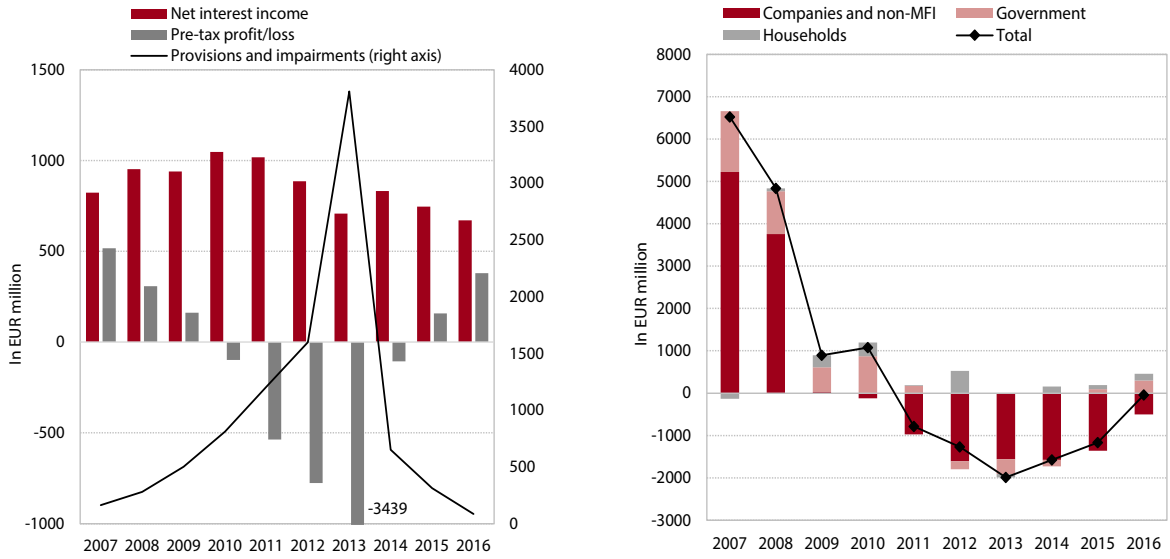
[8] Amendments to the Budget of the Republic of Slovenia for 2017, Budget of the Republic of Slovenia for 2018, Draft Budgetary Plan 2017.

[9] The draft Public Finance Act, EVA 2002-1611-0120.

[10] The commitments given to the European Commission with regard to the required rate of return for new loans to companies in the banks receiving state aid are an important limiting factor on the supply side, as they have become unattainable due to low interest rates (Financial Stability Report, December 2016).

[11] At the end of 2016, the volume of non-performing claims in the Slovenian banking system reached the value this indicator (without the data for Finland, Luxembourg and Germany) had in 2015 in the EU. Assuming that the share of non-performing claims in Germany stayed the same as in 2014, the share of non-

Figure 5: **Net interest income and operating results of the banking system (left) and lending activity of banks (right)**

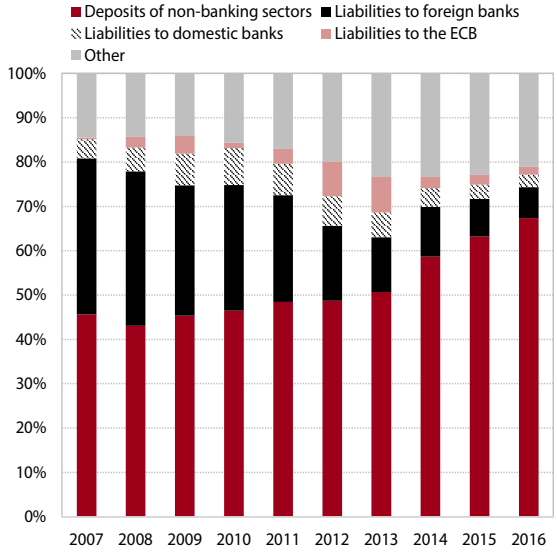


Source: Bank of Slovenia.
Note: The impact on the transfer of claims to the BAMC was eliminated from the data on companies and non-monetary financial institutions.

other hand, the demand for loans among non-financial companies is relatively low. Financially stable companies are increasingly financed from other sources, enabled by an increase in the extent of own sources arising from better operating results. Because of the above-average costs of borrowing from domestic banks, they also use other sources, such as borrowing from foreign banks and non-banking sources (i.e. capital markets). The activity of banks is to a great extent focused on lending to households, which are customers with a relatively low risk owing to their low indebtedness and the favourable situation on the labour market. Consumer loans have thus also been increasing, in addition to housing loans, which have been on the rise since the end of 2013.

The structure of sources of bank financing is going through great changes. The term structure of these sources is shortening, which can limit the lending activity of banks. Until the onset of the crisis, banks depended heavily on foreign, mostly bank, sources of financing. In the second half of 2008, these sources started to diminish and banks were deleveraging abroad throughout the period until 2016.[12] The shortfall of foreign bank sources was partly replaced by non-bank sources of financing, particularly deposits, which has turned out to be the most stable financing source in recent years. Such deposits have been increasing continuously since 2008 (with the exception of 2013, when uncertainty related to bank recovery and the impact of the Cyprus banking crisis was greatest). In addition to household deposits, corporate deposits have also increased considerably, in particular since 2013, and reached EUR 5.8 billion at the end of 2016, which is the highest amount to date. Since lending activity has been modest, the ratio between loans and deposits of non-banking sectors was reduced by half in 2016 compared to 2008, while in 2014 deposits exceeded the volume of loans for the first time since 2004. The low interest rates had greater impact on the term structure of deposits, which has shortened and worsened the maturity mismatch of assets and liabilities, than on the amount of deposit inflows to banks. Overnight deposits thus represent approximately 40% of all deposits of non-banking sectors.

Figure 6: **Structure of bank sources of financing**



Source: Bank of Slovenia.

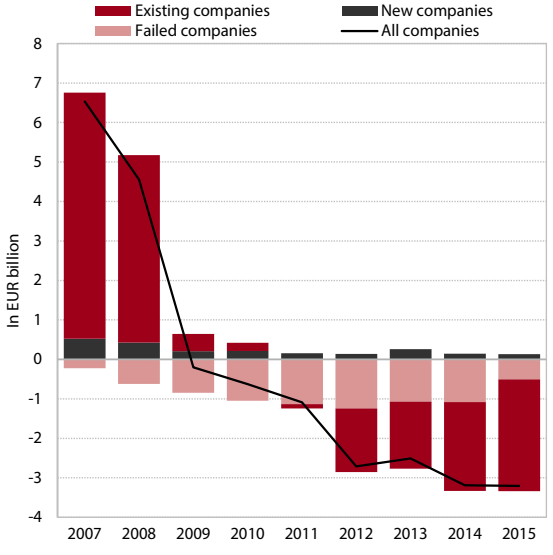
performing claims in the EU would be lower than in Slovenia by half of a percentage point.

[12] By the end of 2016, the volume of loans from foreign banks had fallen to EUR 2.7 billion or 7% of the total banking system assets, which is approximately EUR 15 billion less than in the second half of 2008.

1.3.2 Indebtedness of the corporate sector

In the 2013–2015 period, the indebtedness of the corporate sector decreased noticeably, returning to the level before the acceleration of loan growth. The ability of companies to repay debts also improved significantly. The high indebtedness and over-indebtedness[13], which according to the majority of indicators reached a peak at the onset of the crisis, were related to the strong pre-crisis dependency of companies on debt financing, particularly bank financing, and to the suddenly very limited access to loans when the financial crisis broke. Indebtedness then started to decline after 2009, at first mostly due to the winding-up of companies and from 2012 onwards increasingly due to an increase in bank debt repayment (partly also due to the transfer of bad claims to the BAMC), which in 2014 and 2015 was the most intensive to date. By 2015, bank debt was already at the same level as in 2005 (total debt was at approximately the same level as in 2006). The improvement in indebtedness indicators was noted in the majority of activities and in all size groups of companies (though it was greater in large companies). Among the less and the least indebted companies, a particular increase was noted in the number of export-oriented companies[14], which more than doubled compared to 2008. The increase in the ability of companies to repay debts was also noticeable in 2013–2015 and the indicators then reached the most favourable values of the entire measuring period (since 2006)[15]. In addition to deleveraging, this was also due to the improvement in operating results. Improvement was recorded in the majority of activities, although holding and leasing companies, where the leverage is extremely high (61.5 years) despite the noticeable improvement in the last year, remain problematic.

Figure 7: **Change in bank debt of the entire corporate sector**



Source: AJPES; calculations by IMAD.
Note: Existing companies – the change in the debt of companies operating in two consecutive years; New companies – the increase in debt at the end of two consecutive years, due to new companies (i.e. companies that have been newly established in the last consecutive year); Failed companies – the reduction of debt at the end of two consecutive years, as a result of the winding up of companies; All companies – the aggregate change in the debt at the end of two consecutive years (New companies + Failed companies + Existing companies).

In 2015, over-indebtedness also approached the level of 2006 and the financial debt of over-indebted companies was very concentrated. Since 2009, over-indebtedness has halved, amounting to EUR 13.4 billion in 2015. The improvement occurred in the majority of activities, which have already reached pre-crisis levels. Over-indebtedness problems remain concentrated in companies with low or negative cash-flows from operations, as they cannot currently finance their debt. The structure of over-indebtedness shows that in 2015, almost 50% of the financial debt of over-indebted companies was incurred by the 50 most indebted companies. As regards activities, more than 20% of total indebtedness was concentrated in holding and leasing companies and more than 10% was in trade, real estate activities, and transport and storage. With regard to size, micro, small and medium-sized enterprises (SMEs) predominate among the over-indebted companies. Their share in the over-indebted group has been greater than in large enterprises since 2011 and was 59% in 2015.[16]

SMEs also experience greater difficulties in repaying debts. At first, the measures for financial restructuring were aimed at large enterprises, whose non-performing claims were resolved by master restructuring agreements (MRAs[17]). Due to the fragmented claims and the need for banks to take a different approach, the SME measures were mostly developed in the last two years. In December 2015, the Bank Association of Slovenia and the Bank of Slovenia issued guidelines for the management of non-performing claims of SMEs (Restructuring Guidelines for Micro, Small and Medium-Sized Companies) to assist bank managements in a thorough restructuring of SMEs. Due to the greater focus on the domestic market, more restricted access to financial resources and the late development of measures, SMEs are facing a relatively greater share of non-performing claims and greater difficulties in repaying debts. The limited access to financial resources of these enterprises is mitigated by: (1) the already

[13] More on the definition of indebtedness in Indicator 1.15.

[14] Export-oriented companies are those companies whose sale revenues on foreign markets exceed the sale revenues on the domestic market.

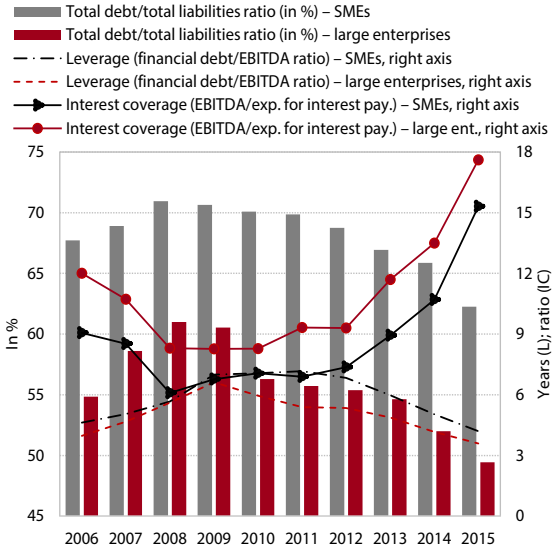
[15] The indicators for the total debt and bank debt in liabilities (which can be compared with the situation before 2006) reached levels equal to those in 2004.

[16] More on the structure of over-indebtedness with regard to the size and activities of over-indebted companies in 2015 in EO 4/2016.

[17] Master Restructuring Agreement. According to the Bank of Slovenia, these agreements covered 72 companies during the project period (from the beginning of 2015 to the middle of 2016) (Financial Stability Report, June 2016).

established instruments of the Slovenian Export and Development Bank (the SID Bank: guarantees and loans), (2) the measures of financial engineering the SID Bank is implementing in cooperation with the MGRT and (3) the instruments of the Slovene Enterprise Fund (guarantees and micro loans).

Figure 8: **Indicators of ability to repay debts by company size**



Source: AJPES; calculations by IMAD.
Note: SMEs = micro, small and medium-sized enterprises Note: L – leverage; IC – interest coverage.

Deleveraging resulted in the smaller shares of bank and business sources among company sources of financing.[18] The majority of companies substituted the lost sources with other financial liabilities, particularly financial liabilities to group companies, which was typical for large companies.[19] The share of long-term financing sources, such as capital and debt securities, in non-financial companies has increased. This was also due to the continuation of privatisation and the related higher inflow of capital from abroad. In Slovenia, the share of capital and debt securities of non-financial companies constitutes slightly less than one-half of financial liabilities. It is almost 10 ppshigher in the EU as a whole.

[18] Business sources remain more important for SMEs than for large enterprises.

[19] Micro, small and medium-sized enterprises increased the remaining financial liabilities to banks in comparison with 2008 differently: small enterprises did not at all, medium-sized enterprises only increased their financial liabilities to group companies, while micro enterprises increased only other financial liabilities.

2 Factors of competitiveness

Slovenia is counted among the medium-developed countries of the EU, with a substantial lag in productivity behind the most developed countries. Since 2013, the lag in GDP per capita (in purchasing power standards) behind the EU average has been gradually declining; however, it is still considerably greater than at the onset of the crisis. In recent years, as the investment environment has improved, the investments needed to increase productivity have gradually been increasing. However, greater changes, supported by entrepreneurial innovations, digital transformation, and the cooperation and progress of companies in global value chains, will be needed to eliminate the differences in economic development. A particular challenge will be to ensure appropriate human capital and an encouraging and predictable environment for business, investments and innovations. The low institutional competitiveness shows that it is essential to improve the capacity and efficiency of public administration.

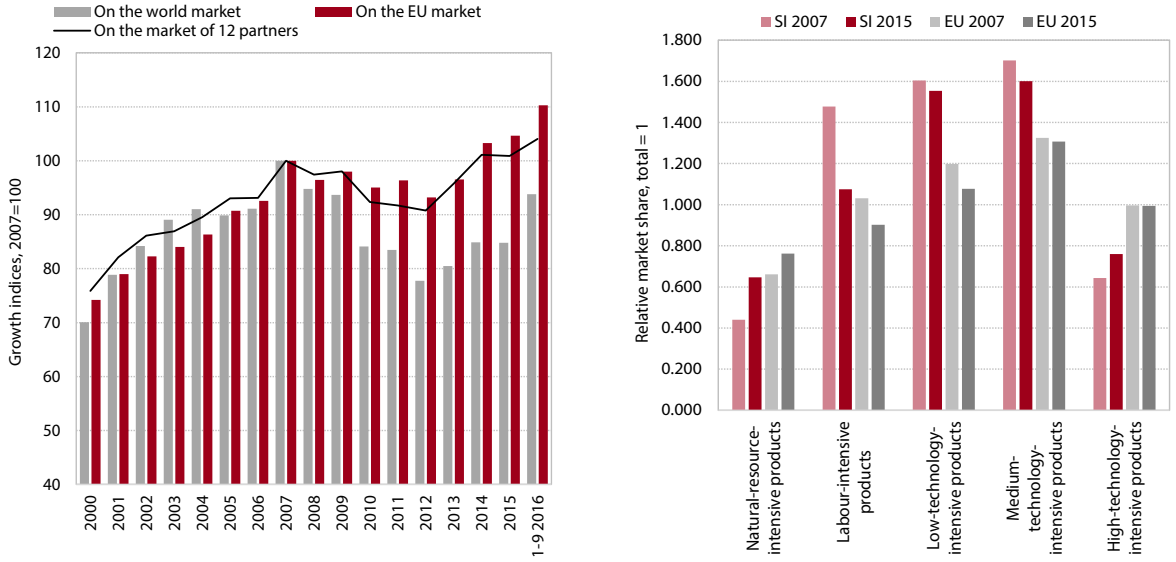
2.1 Competitiveness of the corporate sector

The export competitiveness of the Slovenian economy has improved considerably in the last few years and the export market share exceeds the pre-crisis levels on the key geographic markets. After a fall during the crisis, the export market share (goods) has been on the rise since 2013. Its growth was also among the highest in the EU in 2016 and was recorded in the majority of main export markets with regard to the geographic and product structure of exports. The greatest increases in market shares have been on the largest export markets (Germany, Italy, Austria and Croatia), where they now considerably exceed their pre-crisis levels. In addition to the consolidation of position on traditional markets, the fast growth on less important export markets in the EU indicates the diversification of exports within the European Single Market. In terms of product composition, the market share of high-technology-intensive products has reached the pre-crisis level[20], and since 2012, when industrial production in the EU recovered, the shares of medium- and low-technology-intensive products, which are usually intermediate products in the global supply chains, have also been increasing.

The growth of export market share is the result of the improved factors in the domestic economic environment as well as of the relatively fast growth on the product and geographic markets important for Slovenian exports. In recent years, the cost and price factors of competitiveness have improved in the

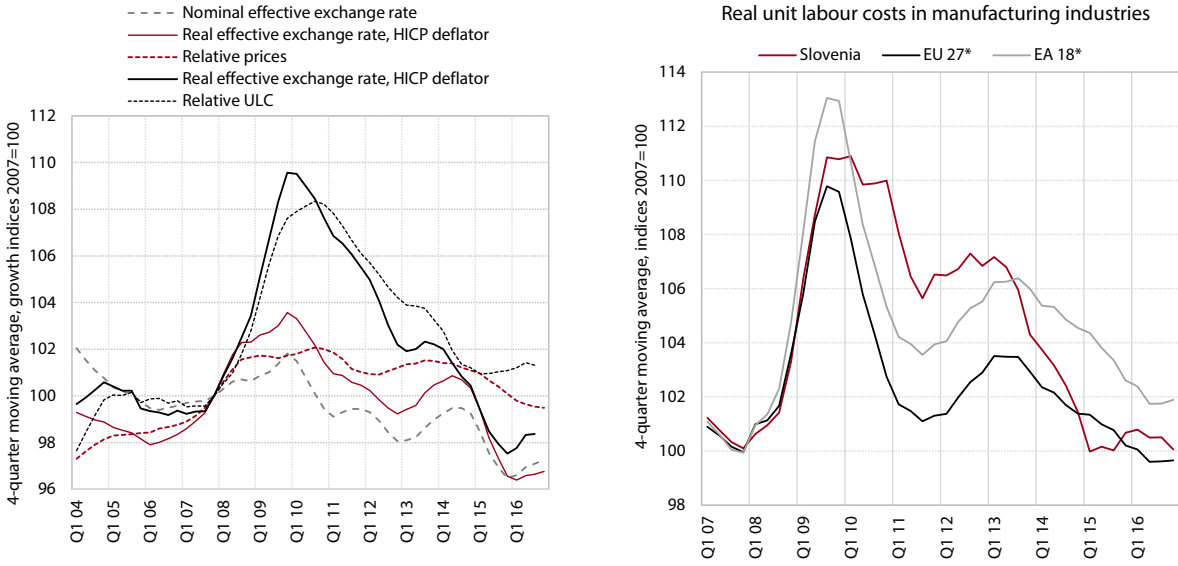
[20] Compared to 2007, only the market share of natural-resource-intensive products is higher, which is mostly due to the rise in the international trade in energy products (i.e. to exports of previously imported products).

Figure 9: **Slovenia's goods export market share on foreign markets (left) and relative export market shares on the world market by structure of goods exports according to factor intensity (right)**



Sources: UN, UNCTAD, SURS, Eurostat, WIIW, WTO, 2017; calculations by IMAD.
Note: *A relative market share is the market share of a specific group of products compared to the total share of such goods on the world market.
Legend: The important products in terms of factor intensity by export share in 2015: natural-resource-intensive products – oils, electricity, gas, aluminium, worked wood, milk and dairy products, animal feed; labour-intensive products – furniture and furniture parts, paper and cardboard, yarn, mineral products, footwear, clothing; low-technology-intensive products – base-metal products, alloy steel products, construction and construction parts, wire, iron and steel profiles, hand and machine tools; medium-technology-intensive products – passenger cars, motor vehicle parts and equipment, electric machinery and appliances, household equipment, industrial machinery, pumps and compressors, plastic and rubber products; high-technology-intensive products – medicinal products, pigments, coatings and varnishes, perfume, cosmetic and toiletry products, telecommunications equipment, measuring and control instruments.

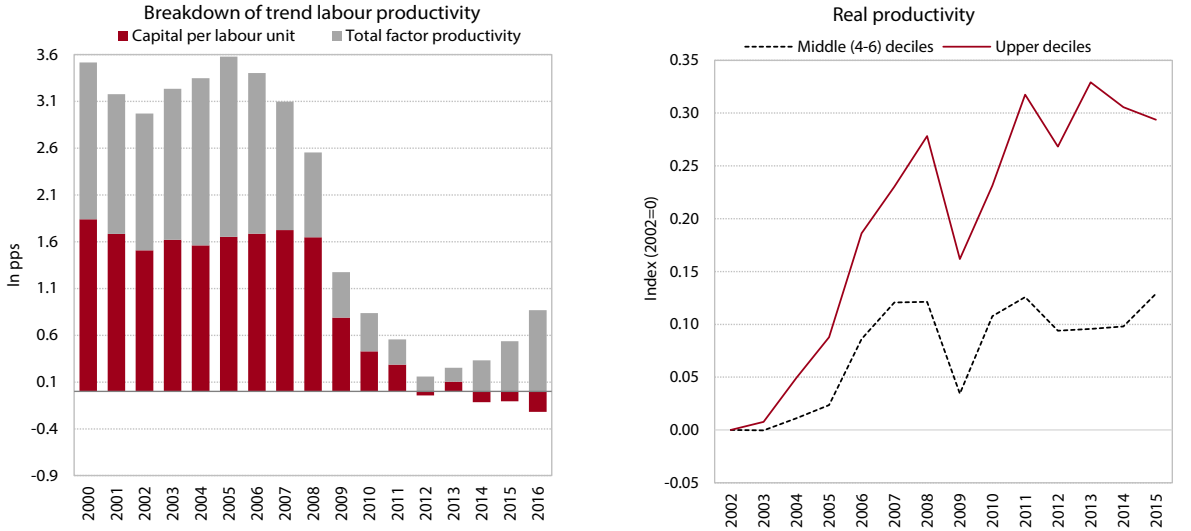
Figure 10: **Indicators of price and cost competitiveness of the economy (left) and manufacturing (right)**



Source: ECB, Eurostat Portal Page – National Accounts, 2017; calculations by IMAD.
Note: *The averages of the EU and euro area without Ireland, where there was a break in the data series due to the extensive GDP review.

domestic environment and the burden of corporate debt level has been lessened substantially. The resulting higher profitability, together with the improved access to financing sources for companies, contributed to the gradual growth in the investments of the corporate sector. Since 2013, foreign direct investments inflows have also increased substantially. In addition to these factors, which affect competitiveness at the level of companies, the structure of exports also had a positive impact on the growth of aggregate market share after 2012. The import demand on the markets important for the Slovenian exports (the EU market in particular) has been increasing faster than on less important markets. The composition of Slovenian exports has also changed since the onset of the crisis. The share of less competitive labour-intensive products has decreased, while the share of technology-intensive products has increased, although it is still much smaller than in the EU as a whole

Figure 11: **The breakdown of trend productivity into capital contribution and total factor productivity (left) and the productivity of the upper and middle decile of companies (right)**



Source: IMAD calculations.
Notes: The calculations of the breakdown of trend productivity are based on the national accounts statistics, while the calculations of productivity trend by deciles are based on the AJPES data on companies. Companies with regard to which data on real added value is absent, negative or zero and companies with five or fewer employees have been excluded from the sample.

(see Indicator 2.5). The positive effect of the geographic and product composition of exports on the market share growth was relatively strong in 2013–2015[21], after being strongly negative in the first years of the crisis.

The growth in productivity remains modest and will be the main challenge in the further strengthening of corporate sector competitiveness. The improvement in cost competitiveness after 2010 was mainly the result of the adjustment of the labour market (through wages and employment rate) to the lower economic activity. The greatest adjustments were made in the tradeable sector, more precisely in manufacturing, where by 2015 the unit labour costs had fallen to the pre-crisis level and thus reached a similar ratio to the EU as before the crisis. Growth in productivity, which is essential for maintaining competitiveness when the labour market is recovering and wages are rising, however, is still lower than the long-term average prior to the crisis. The cost competitiveness indicators of the tradeable sector and manufacturing remained at relatively favourable levels in 2015 and 2016. However, if the low growth in productivity continues, the increase in wages could start to exert pressure on the competitive position of companies, particularly in circumstances of rising cost pressures related to the prices of raw materials on the world market. The competitiveness of the tradeable sector could also be adversely affected if the growth in unit labour costs growth in the non-tradeable sector, which started again in 2016, persists (e.g. through higher prices of services).

There are cyclical and long-term structural factors behind the modest productivity growth. During the crisis, the contribution of capital to productivity growth has declined sharply and remained far below the pre-crisis level. In addition to the cyclical decline in investments, it was also affected by structural factors, such as inappropriate capital allocation before the crisis. At the same time, there was a considerable reduction in the contribution of total factor productivity, which should reflect the impact of all other factors, i.e. except capital, and is usually associated with the long-term factors affecting innovation activity and entrepreneurial dynamics. With regard to innovation activity, Slovenia has slipped since the onset of the crisis (see Chapter 2.3) and lags behind the more developed countries. The number of high-growth companies has also declined sharply during crisis and has remained at exceptionally low levels since 2010 (see Indicator 2.9). Even the frontier companies[22], which until 2008 had been the drivers of productivity growth, did not maintain the pre-crisis tempo of productivity growth. The increase in the share of early-stage entrepreneurs in 2016 due to identified business opportunities (following several years of stagnation) and shifts in start-up entrepreneurship, on the other hand, might indicate that entrepreneurial dynamism is going to improve in the coming period.[23]

Increasing productivity is a challenge for any sector; since the crisis the greatest progress has been made by manufacturing. Productivity in Slovenia is lower than the EU average by approximately one-fifth[24]. The major part of the lag is due to the lower productivity at the

[21] 58% of the average annual growth in market share in 2013–2015 was the result of the impact of the geographic and product composition of exports in the base year.

[22] Companies in the upper decile in terms of productivity level.

[23] 2016 Progress Report, 2016.

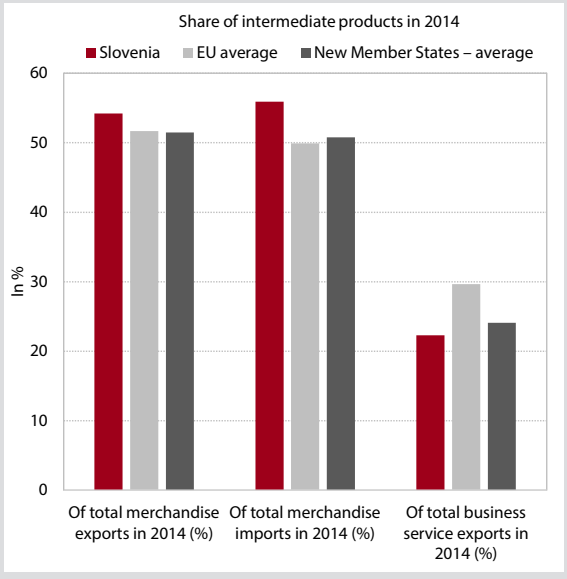
[24] Measured in GDP per employee in purchasing power standards.

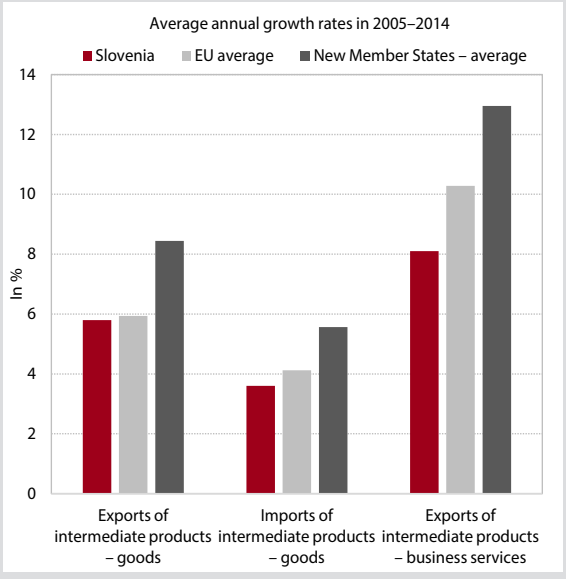
Box 2: **Foreign trade in intermediate products**

The inclusion of a country in global value chains can be assessed on the basis of international trade in intermediate products. In modern conditions, the rate of international integration of an economy is increasingly dependent on its inclusion in global value chains (GVCs). However, the accurate assessment of the inclusion of an economy in GVCs requires input/output tables, which are only available with a considerable time lag. In the interim, foreign trade in intermediate products is a fairly good and considerably more up-to-date approximation of the economy's inclusion in GVCs: the greater the share of intermediate products in foreign trade, the greater the integration of the economy in GVCs.

Slovenia's integration in GVCs is above average in terms of foreign trade in goods and below average in terms of trade in business (knowledge-based)[1] services. The share of intermediate products in Slovenian merchandise foreign trade exceeds the EU average and the average of the new EU Member States in both exports and imports, while the opposite applies to the share of intermediate products in the exports of business services. In terms of dynamics, the increase in Slovenia's foreign trade in intermediate products in the last decade (2005–2014) lagged considerably behind the EU average and even more behind the average of the new EU Member States. In 2014, Slovenia ranked fifth with regard to the share of intermediate products in merchandise exports, sixth with regard to the share of intermediate products in merchandise imports and eleventh with regard to the share of intermediate products in the export of business services among the new EU Member States (13 countries).

Figure: **Share of intermediate products in foreign trade and its growth**





Source: Trade in Value-Added and Global Value Chains: Statistical Profiles (WTO), 2016.

[1] In accordance with WTO methodology, these include telecommunication, computer and information services and other business services (i.e. a group of knowledge-intensive non-financial market services; see also Indicator 2.6).

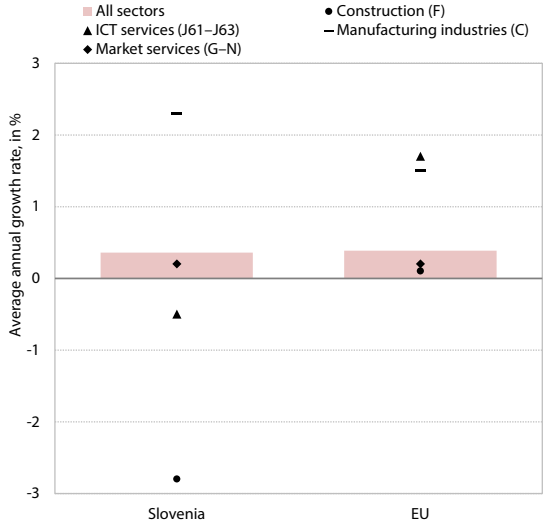
sector level and only a small part to differences in the structure of the economy.[25] The dynamics of productivity improvement since the onset of the crisis vary significantly among different sectors (see Indicator 2.2). Only manufacturing has reduced the lag behind the EU average in comparison with that before the crisis level. Its growth is related to the strong export orientation and inclusion in global value chains, particularly on the EU market, which has recovered since 2013. The increase in the share of technology-intensive industries has also had a positive impact on aggregate productivity growth in the sector. However, despite the progress made, the lag of manufacturing behind the EU average is still great, particularly in some technology-intensive industries, which in more developed and highly innovative economies achieve the highest levels of productivity.

The progress made in services, particularly in knowledge-intensive services was more modest. The traditional services (trade, hotels and restaurants and transport) made the best progress, while the knowledge-intensive services (see Indicator 2.6), which have great potential for productivity growth, have been slower in reducing the lag behind the EU. Such trends are the result of their predominant focus on the domestic

[25] 5% of the lag in productivity behind the EU in 2014 (in 2010 it was 10%) could be explained by differences in the economic structure between Slovenia and the EU as a whole.

market, which has been slow to recover since the crisis. The productivity of these services is also hindered by the poor innovation activity of mostly small service enterprises (see Chapter 2.3) and in telecommunications also by the delay in the privatisation of the largest operator. Analyses[26] show that a long-term positive impact on productivity would also be achieved by deregulating the most regulated professional services[27] and reducing administrative obstacles, which place a larger burden on small than large companies.[28] The rise in the exports of knowledge-intensive services over several years is a positive trend, but it has yet to be reflected in the increase in their export market share.

Figure 12: **Average annual productivity growth rate in 2008–2014**



Source: Eurostat Portal Page – Economy and Finance, 2017; calculations by IMAD.

The acceleration of integration into global value chains will offer opportunities for faster breakthroughs in the field of productivity and development. Companies can improve their efficiency through their own innovation activity and by transferring technologies and knowledge and reducing costs through participation in global value chains (GVCs). They can enter GVCs through foreign direct investments or on a contractual basis by creating their own GVCs or as suppliers entering the GVCs of other companies[29], preferably with products and services with the highest possible value added. The Slovenian economy is a small, open economy with an above-average share of foreign trade in GDP and high inclusion in GVCs in terms of trade in intermediate products. However, this only applies to trade in goods. With regard to the integration of knowledge-intensive services in GVCs, Slovenia lags behind both the EU average and the average of new EU Member States. Furthermore, it also lags, particularly behind the average of new EU Member States, in terms of the speed of inclusion in GVCs with regard to both goods and services (see Box 2). Since 2013, foreign direct investments (FDI) inflow has increased considerably due to the renewal of privatisation and shareholding restructuring of companies and the expansion of existing companies with foreign capital in Slovenia. These are positive shifts confirmed by survey expectations regarding further expansion of companies with foreign capital in Slovenia in 2017. Due to the low starting position, however, Slovenia continues to be ranked among the countries with the lowest FDI stock compared to GDP.

2.2 Human capital

The level of education of Slovenia's population has improved considerably in recent years. The share of persons with higher education in the corporate sector is still relatively small. The share of adults with tertiary education is high and has been above the EU average since 2014 (see Indicator 2.10), but their employment rate by sectors is fairly uneven. By international comparison, a relatively large share of persons with tertiary education is employed in the public sector. Their employment rate in the private sector, on the other hand, remains below the European average, which indicates an underutilised potential of human capital for increasing added value and the competitiveness of companies. The employment rate of highly educated persons in the corporate sector could be increased by more closely integrating education programmes with the requirements on the labour market. The demand of companies for highly educated personnel is restricted by the considerable progressivity of labour tax. The reduction of the tax burden on high incomes introduced at the beginning of 2017 is one of the ways to increase the employment rate of highly educated persons in the private sector.

It has become increasingly important to balance the demand and supply of labour, this also due to demographic trends resulting in a gradual decline in labour supply. According to the PIAAC survey, there is a mismatch in terms of level of education in a little more than one-fifth of employed persons and a mismatch in terms of field of education in approximately three-tenths of employed persons, while 12–14% of employed persons do not have appropriate literacy or numeracy skills. With regard to upper secondary education, the mismatches have been gradually decreasing, though the number of students enrolled in vocational education and their structure are still not in line with the demand of employers.[30] In recent years, the structure of students enrolled in tertiary education has also changed towards a better balance between fields of education and demand

[26] Assessing the Effects of Some Structural Measures in Slovenia (IMAD), 2016.

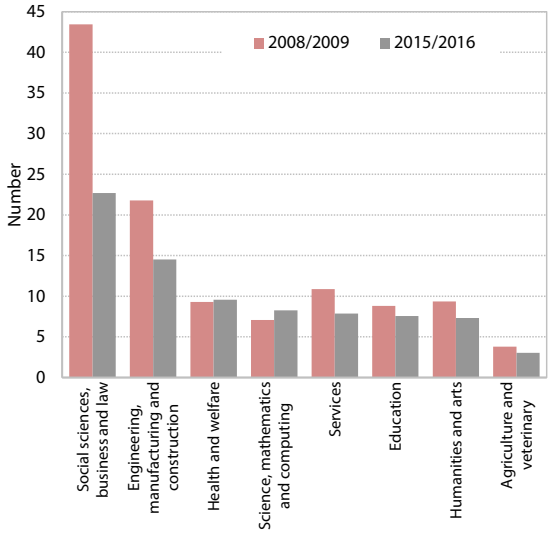
[27] According to the OECD assessment, these are architectural, legal, accounting and technical services (Koske *et al.*, 2015).

[28] Aussilloux *et al.*, 2017.

[29] Development Report 2014 (IMAD), 2014.

[30] There has been a demand for personnel with technical qualifications for quite some time (see the results of the Employment Forecast 2016/II survey).

Figure 13: **Number of students enrolled in tertiary education by field of education, Slovenia**



Source: SURS.

for labour, as the share of students enrolled in social sciences, business and law has fallen substantially. There is still the problem of employing the many cohorts of students who completed their education before that, however. During the crisis, the unsuitable past structure of enrolled students resulted in a considerable increase in the share of young persons (aged 25–34) employed in professions for which tertiary education is not required.[31] The past structure of enrolment also resulted in shortages for some occupations (e.g. in ICT, electronics and automatization). In view of the expected increase in demand for persons with tertiary education[32] on the one hand and increasingly smaller generations of young people for enrolment on the other, it can be expected that the provision of qualified personnel, particularly in certain fields (e.g. science and technology), will become an even greater problem given continuous technological changes. The emigration of people with tertiary education could also have an impact on the availability of personnel.[33]

Due to the expected limited supply of labour force (due to demographic changes) and increased needs for highly educated personnel as the economy and society develop, actions in this area should be stepped up. Some measures for stronger links between higher education and companies have already been adopted[34], while some are provided for in the Act Amending the Higher Education Act adopted in 2016.[35] The adjustment of education programmes and enrolment places and a resulting reduction in the skill mismatches could be accelerated by setting up a system for forecasting skill needs. There is also some room for improvement in the quality of education (e.g. in relation to the ratio between the number of students and teaching staff and to the efficiency of evaluation and accreditation procedures in higher education[36]). In order to ensure, as soon as possible, that there is a sufficient number of persons with tertiary education to meet the expected requirements, it is also important to improve the efficiency of study (i.e. the level and speed of study completion). All of the above, in addition to the adjustment of the network of higher education institutions and study programmes to the needs of companies, would contribute to a more efficient use of public expenditure on tertiary education (see Indicator 2.11). In order to provide the personnel required, appropriate measures in migration policy have to be developed.

The greatest possible participation in lifelong learning is also important for the greater competitiveness of companies and the adjustment of the society to global trends. Unlike young people, who achieve good results in international comparisons in reading, mathematical and science literacy[37], adults (particularly the low-skilled and older people) and employed persons lag behind in literacy and numeracy skills and in the skills needed for successful functioning in the digital society.[38] This could be improved by greater participation of adults in lifelong learning. The various mismatches would thus be reduced and the existing labour force could be better utilised, particularly in times of demographic changes. Participation in lifelong learning is low, particularly in the private sector and among older and low-skilled people, in terms of achieving greater competitiveness of companies and in terms of the response of society to global trends (digitalisation, climate change, the ageing population, etc.) that require new skills.

[31] In the 2008–2015 period, their share increased by 13.2 pps(to 24%). On average, the increase was greater than in the EU as a whole.

[32] Slovenia: Skills forecasts up to 2025, 2015.

[33] The number of emigrated citizens of the Republic of Slovenia with tertiary education is increasing. In 2015, 2,225 people left the country, which was 142% more than in 2011. In the age 25–34 group, 1,238 people emigrated in 2015, which was 228% more than in 2011.

[34] For example, in 2013 the measure supporting the obtaining of practical experience in companies.

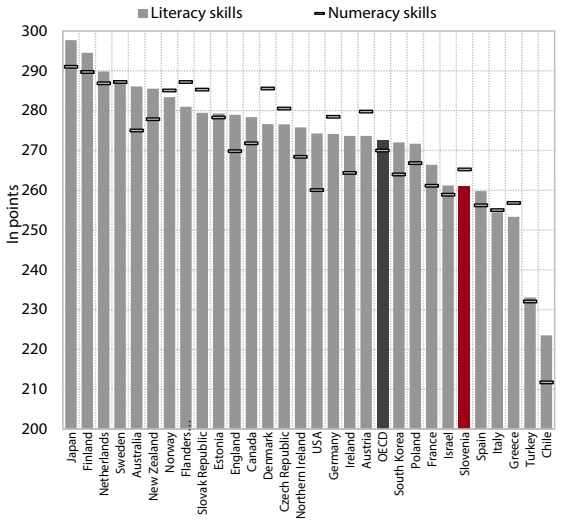
[35] The Act Amending the Higher Education Act (ZVIS-K) of 2016 provided for the setting up of a system for monitoring the employability of students and graduates. The employability of graduates will be taken into account in the financing of higher education institutions from the budget. According to the new arrangements, a study programme will be accredited only once, following which the higher education institution will be able to change the mandatory components of study programmes, which will facilitate faster changes in study programmes and their adjustments to the needs of companies.

[36] The Court of Audit pointed out that the evaluation and accreditation procedures, by which the Slovenian Quality Assurance Agency for Higher Education implements the external quality assurance in higher education, are inefficient (Audit Report on Procedures for Evaluation, Accreditation and Concession Granting in Higher Education, 2016).

[37] According to the data gathered in the international survey of fifteen-year-olds PISA 2015, which indicates that the quality of initial education is good (PISA 2015, TIMSS 2015 and TIMSS Advanced 2015).

[38] According to the PIAAC survey.

Figure 14: **Literacy and numeracy skills of employed persons, 2012 and 2015**



Sources: OECD, PIAAC, 2012 and 2015.

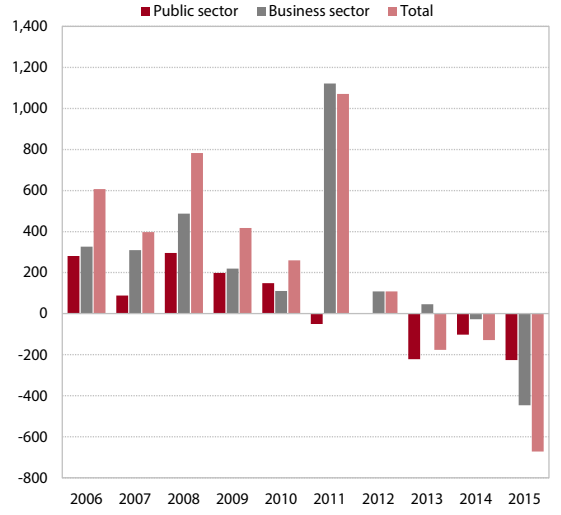
2.3 Innovation capacity

Expenditure on research and development (in terms of share of GDP) is above the EU average, but the investments of the public sector have been declining since 2012. By 2015, they had fallen to the level of 2006, which shows that economic policy does not take sufficient account of the importance of these investments for increasing productivity and competitiveness. In 2015, the investments of the business sector also fell after a decade of rise. At the same time, the volume of tax relief claims related to R&D increased in this sector. It is encouraging that the number of companies claiming tax relief is on the rise. The ICT sector, which plays a key role in increasing the efficiency of other sectors, does not invest sufficiently in R&D. Its share in total R&D investments is considerably lower than the EU average.[39] Cooperation between the public and the private sector and the transfer of R&D results into practice is hindered by the weak cross-financing of R&D between sectors. This has become a particularly pressing problem with the expiry of certain incentive mechanisms aimed at increasing cooperation between the public and the private sector, which were partially financed with EU funds, due to slow implementation of the Research and Innovation Strategy of Slovenia (RISS)[40] and the delay in the implementation of the Smart Specialisation Strategy, which provides for measures to enhance the transfer of knowledge from public research institutions and universities to companies.

The number of researchers has increased since the onset of the crisis, but there is no continuous approach to the efficient use of their potential. While the number of researchers rose considerably in the business sector, it fell by 600 persons in the public sector between 2010 and 2015 due to lower R&D investments on the part of the public sector. There was a partial outflow of public-sector researchers to the private sector, particularly between 2010 and 2013, when EU funds were used to finance competence centres, centres of excellence and development centres. Since 2014, the number of researchers in the private sector has also been declining. Some researchers work in jobs that do not require a doctorate, are employed temporarily or leave the country. The researchers who have lost their jobs are mostly young people who have recently finished their studies and have the latest knowledge[41]. They are also more open to cooperation with companies, research commercialisation and the establishment of spin-off companies.[42] In 2016, the public tender ensured the funds for employing researchers at the beginning of their careers in the 2017–2020 period, which should mitigate this problem and contribute to the strengthening of cooperation between public research institutions and companies.

Innovation activity of companies is weak and stagnating. According to the most recent data for the 2012–2014 period, approximately 46% of companies were innovation-active, which is slightly less than in the previous three-year period. Large enterprises have a higher degree of innovation activity than the EU average[43], but small enterprises remain problematic, as

Figure 15: **Annual fluctuations in the number of researchers, Slovenia**



Source: Eurostat – Portal Page – Science and Technology – Research and Development, 2017.

[39] According to the most recent data for 2013, companies in the ICT sector in the EU invested 17% of all business sector funding in R&D, while in Slovenia they only invested 8%.

[40] Of the 69 planned measures, only 10 have been implemented. Report on the implementation of the RISS in 2012–2014, 2016.

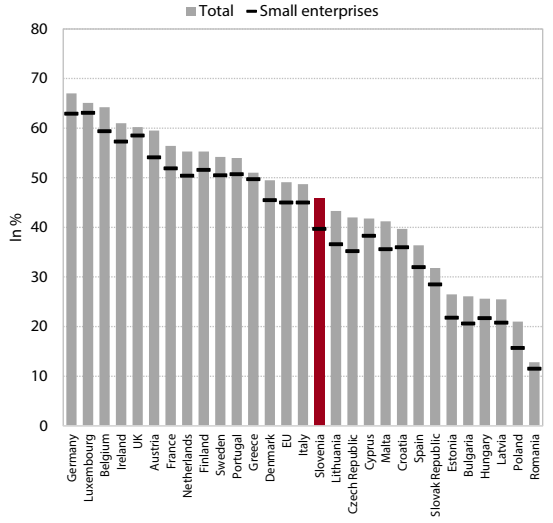
[41] Bučar, Verdesoto, 2017.

[42] Bučar *et al.*, 2014.

[43] This may be partly due to the fact that because of the limited domestic market, large enterprises must direct their business to foreign markets, which in view of fierce international competition can only be achieved by continuous innovation.

less than 40% of them are innovation-active and their share is declining[44] (see Indicator 2.13). As educated labour force is one of the key factors of innovation capacity, emposing high taxes on highly educated labour force hinders the increase in innovation activity, particularly in small enterprises. Furthermore, various measures for the promotion of innovativeness are mostly focused on research and development and the enhanced use of technological solutions, while in many service companies these factors play only a minor role in the innovation process. The inclusion of small enterprises in the innovation processes of large enterprises can also contribute to the strengthening of the innovation activities of both. Trends in the EU indicate that in the 2010–2014 period, only the most developed countries, with a few exceptions, increased the share of innovation-active enterprises, this particularly among small enterprises, which is related to the comprehensive and coordinated functioning of their innovation systems.[45]

Figure 16: **Innovation-active companies, 2012–2014, in % of all companies**



Source: Eurostat Portal Page – Science and Technology – Community Innovation Survey, 2017

Human capital for digitalisation is strengthening, but it is not sufficient for greater utilisation of digitalisation potential and advanced use of information and communication technologies (ICTs). On the one hand, Slovenia has a slightly higher share of ICT specialists among its employed persons and a higher share of science and technology graduates than the EU average, but on the other, the basic and advanced skills for using digital technologies in the population are poorer. There is a distinct lag in the inclusion of older and less educated people in the digital society (see Indicator 2.17). ICTs are also underexploited in companies, which could be one of the reasons for the stagnation of innovation activity (see Indicator 2.13), as ICT and mobile applications experience the most dynamic innovation development and introduction of new business models based on these innovations. The share of investments of the business sector in ICTs shrunk considerably between 2011 and 2014[46], which may further limit the capacities of companies for digital transformation and reduce their competitiveness. The use of simpler public e-services is comparable to the EU average. However, the use of more advanced e-government services lags behind considerably. In 2016, the ranking of Slovenia among the EU Member States with regard to the digitalisation of public services was even worse[47], which can be attributed to the slow implementation of e-services and digitalisation of processes important for the operation of companies and the introduction of e-services for citizens.

2.4 The role of the state and its institutions

Institutional competitiveness is gradually improving, but it continues to lag behind the pre-crisis level. International competitiveness indicators show that the institutional competitiveness of Slovenia deteriorated significantly during the crisis due to the slow response to the changed circumstances it caused and accumulated deficiencies in the operation of the legislative, executive and judicial branches of power. However, since 2014 business confidence in most areas has improved, in particular because of better economic conditions, a more favourable labour market situation and improvements in the area of public finance. International institutions (the IMD, WEF and World Bank) continue to underline the business sector's dissatisfaction with the operation of public institutions, in particular the Government, the National Assembly and the Central Bank, and point out the wastefulness of public spending and the high burden of government regulation, which contribute to Slovenia's relatively low ranking in comparison with other countries. Slovenia remains one of those countries ranking worse than before the crisis with respect to their institutional competitiveness. According to Eurobarometer data[48], trust of the Slovenian people in national institutions remains very low (and below the EU average).

According to the business sector, the main obstacles to doing business in Slovenia are primarily related to taxes and tax policy. The results of international

[44] The study of innovation activity aligned with the international methodology of the OECD (the Oslo Manual) does not cover enterprises with fewer than 10 employees. These enterprises and start-ups, which introduce innovations in high-technology and business models, are excluded from the study.

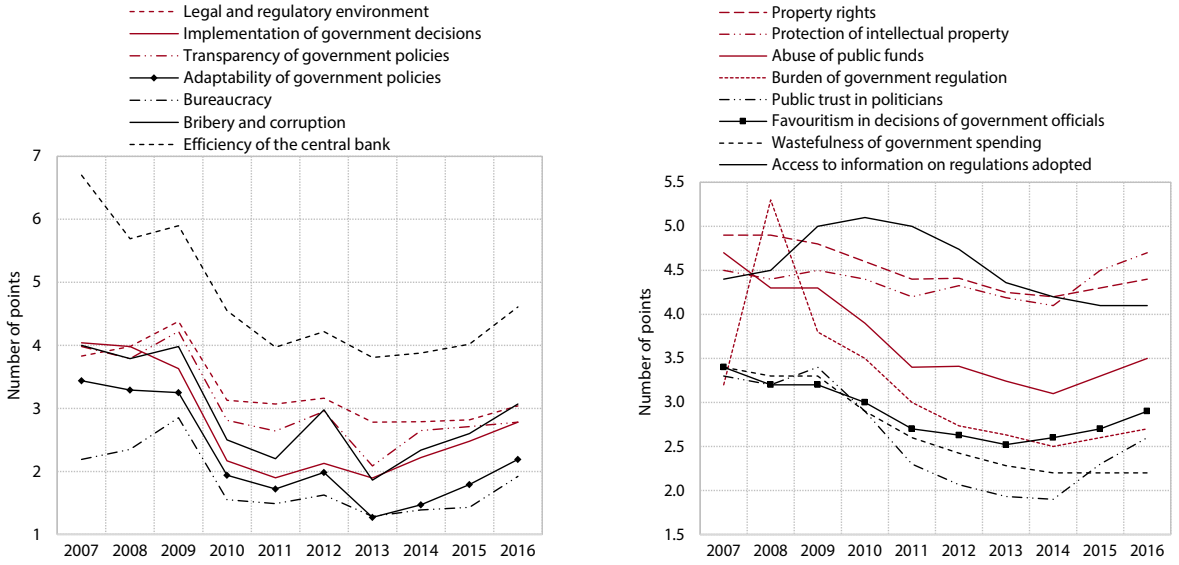
[45] This involves coordinated action and cooperation among the actors of the education system, R&D and innovation activity in the private and the public sector and supporting institutions with the aim of creating synergies and increasing innovation performance.

[46] Zupan, 2016.

[47] Digital Economy and Society Index (DESI), 2016.

[48] Eurobarometer 86, 2016.

Figure 17: **State efficiency according to the IMD (left) and WEF (right)**



Source: IMD, WEF.
Note: Higher scores are better; the maximum scores are 10 and 7 on the IMD (left) and WEF (right) scales respectively.

competitiveness surveys (by the IMD and WEF) show that in the last two years, the business sector has been drawing attention mainly to structural problems and, in addition to tax rates and tax legislation, to ineffective public administration and restrictive labour legislation. In this regard, high social security contributions and labour costs were highlighted in particular (see also Indicator 1.9). According to the World Bank, the main factors hindering business activities in Slovenia are access to funding for business operations and lengthy judicial contract-enforcement procedures. Nevertheless, Slovenia ranks relatively high according to the survey on the Ease of Doing Business [49], the lag behind the top-ranking countries having been significantly reduced in recent years. This was spurred primarily by changes in insolvency legislation, which, *inter alia*, reduced significantly the length of bankruptcy proceedings, and the continuation of the programme to reduce administrative barriers. However, a cause for concern is the fact that some other countries have made greater and faster steps than Slovenia in changing labour market regulations and reducing unnecessary bureaucracy, this having an impact on the competitiveness of the business environment and the attractiveness for foreign investments in the international environment.

2.4.1 The withdrawal of the state from the economy

The adoption of the State Assets Management Strategy*[50] *in 2015 provided a legal and institutional framework for the withdrawal of the state from company ownership. In the Strategy, state assets are classified as strategic, significant and portfolio assets, enabling Slovenian Sovereign Holding (SSH) and the Bank Asset Management Company (BAMC) to carry out privatisation of companies. The European Commission has noted that strategic and significant assets include companies that in other countries are not usually subject to state ownership.[51] Also adopted was the Amending Act Regulating the Measures of the Republic of Slovenia to Strengthen the Stability of Banks,[52] which enables the BAMC more effective participation in procedures of restructuring of debtors and financing of companies in order to increase the economic value of claims. It also contains provisions for improving the management and supervision of the BAMC. The amended Act has retained the provision that the BAMC must sell at least 10% of the assessed value of acquired assets each year, while the envisioned period of operations of the BAMC itself has been extended to the end of 2022.

The withdrawal of the state from company ownership through the BAMC continued at an accelarated pace. The withdrawal of the state from company ownership through the BAMC is carried out in three ways: the sale of ownership interests in enterprises, the sale of receivables or non-performing loans to enterprises, and the sale of real properties that the BAMC acquired in the bank recovery process. Since its establishment in 2013 until the end of 2016, the BAMC created inflows by means of assets management totalling EUR 864 million, of which EUR 370 million in 2016, thus exceeding the statutory

[49] Slovenia is ranked 30th among the 190 countries assessed (15th among the European Union Member States).

[50] *Uradni list RS* (Official Gazette of the Republic of Slovenia) No. 53/2015.

[51] State-Owned Enterprises in Member States – Thematic Review Note, European Commission, 2015.

[52] The Amending Act Regulating Measures to Strengthen the Stability of Banks (ZUKSB-A), 2015.

requirement to divest a tenth of its assets per year. The BAMC Business Strategy 2016–2022 foresees that the assets under management will decrease to EUR 975 million by the end of 2017.[53]

In 2016, activities relating to the divestiture of state ownership interests in enterprises from the list of 15 state-owned assets which was authorised by the National Assembly in 2013 continued with lower intensity.[54] SSH has sold ownership interests in eight enterprises on this list[55] so far, of that only in Adria Airways in 2016. Sales procedures are currently underway in a further three companies[56], while in the remaining four, the procedures have been halted[57]. The sales procedure of Nova Ljubljanska Banka is also underway.

In 2017, a change in ownership of strategic and important companies is planned. At the beginning of January 2017, SSH managed ownership interests (assets owned by SSH and state assets managed by SSH) in 96 companies, while processes relating to sales (including those previously mentioned) are being conducted in 22 companies. Given the restrictions on the disposal of ownership interests in strategic and significant companies, SSH cannot meet its obligations related to the payment of compensation arising from denationalisation. Thus in 2017, an increase in the capital of SSH[58] is expected amounting to EUR 200 million; in exchange, ownership interests of SSH in strategic and significant companies will be transferred to the state, but the latter will continue to be managed by the SSH. SSH has increased the yield in recent years as the return on equity of SSH (ROE) amounted to 11.1% in 2014 and 2015; earnings before interest, taxes, depreciation and amortisation (EBITDA) were also higher.[59]

2.4.2 The functioning of public administration and the judiciary

Effective implementation of the adopted Public Administration Development Strategy 2015–2020 may contribute to the development and effective functioning of public administration. In June 2016, a two-year action plan for the Strategy was adopted; this represents the operationalisation of the set objectives and affects the organisation and operation of public administration.[60] Among the more important measures of the action plan is improving e-services and thereby upgrading e-administration, as compared with other EU countries, Slovenia ranks only around the average, with only a medium level of penetration and digitalisation.[61] In this respect, the national computer cloud is being established, which should enable national institutions to function faster and at lower cost. In the area of reducing corruption, identification of the past corrupt activities involved in banking transactions takes place in cooperation with the police. A new Public Procurement Act has been adopted; this lays down provisions for e-procurement, shortening of procedures, greater transparency of tendering and better control over public funds. The new system promotes the selection of contractors on the basis of the best price-to-quality ratio, explicitly prohibiting the use of price only as the sole selection criterion for specific services. Centralising public procurement in the public health sector (joint public procurement of medicines, medical devices and equipment), where resources were not used rationally enough in previous years, is continuing.[62]

In previous years, Slovenia achieved a visible reduction of administrative burdens, but there has been a delay in the implementation of announced measures for 2016. For the last ten years, numerous programmes aimed at eliminating legislative barriers have been implemented and, according to the Ministry of Public Administration, they succeeded in reducing administrative barriers by EUR 365 million by the end of 2015, while unimplemented and partly implemented measures represent approximately EUR 59 million of potential savings. This complies with the aim of the 2009 programme for reducing administrative barriers by 25% (when approximately EUR 1.5 billion of administrative burdens were recorded).[63] The actual framework programme in this field is the Single Document for Ensuring a Better Regulatory and Business Environment[64], adopted in 2013, while the Ministry of Public Administration draws attention to the low measure implementation rate for 2016, as only approx. 40 % of the announced measures were implemented.[65]

[53] At the beginning of 2016, the assets under BAMC management amounted to EUR 1,518 million, decreasing to EUR 1,228 million in the course of the year (BAMC, 2016a, 2016b, 2017).

[54] *Uradni list RS*, Nos 36/13 and 52/13.

[55] Adria Airways, Elan, Fotona, Helios, Aerodrom Ljubljana, Adria Airways Tehnika, Nova KBM and Žito.

[56] Paloma (final stage), Cimos (final stage) and Unior.

[57] Mariborska livarna Maribor, Cinkarna Celje, Telekom Slovenije and Gospodarsko razstavišče.

[58] The decision on recapitalisation of SSH was adopted at 115th regular session of the Government, held on 22 December 2016.

[59] Annual Report on the Management of Assets Owned by the Republic of Slovenia and SSH for 2015, 2016.

[60] Two-year action plan for the implementation of the 2015–2020 Public Administration Development Strategy for 2016 and 2017, 2016.

[61] eGovernment Benchmark 2016, European Commission, 2016.

[62] Third interim report of the Government of the Republic of Slovenia on the implementation of the Programme of Anti-Corruption Measures of the Government of the Republic of Slovenia for the Period 2015–2016 – Zero Tolerance for Corruption, 2016.

[63] Reduction in Legislative Burdens in the Period Between 2009 and 2015, 2016.

[64] The Single Document is being constantly upgraded and currently contains 318 measures, of which 19 are new. Overall, 57% of measures have been implemented since 2014.

[65] As of 31 December 2016, 48 measures for 2016 (60%) had not been implemented either fully or indeed at all. (Ninth report on the implementation of measures under the Single Database of Measures Aimed at Improving the Legislative and Business

Among the most important adopted measures was a test for small and medium-size enterprises introduced in the last year to support the preparation of regulations and measurement of their effect on the economy; furthermore, a Central Credit Register, which will contain data on indebtedness of natural persons and business entities, is being established. Slow progress in the implementation of priority measures, in particular in the areas of spatial legislation and the deregulation of professional services, was also pointed out by the European Commission.[66]

Court statistics indicate that the efficiency of courts is steadily improving, but trust in the judiciary remains low. The number of unresolved cases dropped in almost all courts in 2016, and in general, the number of cases resolved was greater than the number of incoming cases.[67] With the reduction of the number of judges and court staff[68], the average adjudication time for a case also continued to reduce and amounted to 2.3 months in 2016. The average time for the adjudication of cases of major importance has slightly increased; it significantly decreased in the last five years.[69] The aim is to reduce the average time for the resolution of cases of major importance to a maximum of 6 months by 2020. In this context, the Supreme Court highlights that the reduced average time must not compromise the rights of the parties or the quality of the work of the judiciary.[70] The length of proceedings for settling civil and economic litigations is similar to that in other EU Member States.[71] The level of public trust in the judiciary remains low and has decreased in the last two years[72]; nevertheless, more than 60% of respondents agree that court proceedings are fair.

Environment and Increasing Competitiveness, 2017).

[66] European Commission, 2017 Country Report Slovenia, 2017.

[67] The number of pending cases declined by 19% compared to 2015 and by 48% in the last four years. In 2016, the clearance rate indicator exceeded 100%, which means that courts resolved more cases than they received; it was 105% for all cases and 102% for cases of major importance.

[68] The number of judges per 100,000 population fell from 47.8 in 2012 to 43.6 in 2016.

[69] Between 2011 and 2015, the average time needed to resolve cases fell from 4.6 to 2.3 months and the average time needed to resolve cases of major importance fell from 8.7 to 7.7 months.

[70] Opening of the judicial year in 2017, 2017.

[71] EU Justice Scoreboard, 2016. The exceptions are bankruptcy proceedings, where the actual proceedings before courts are considerably shorter. The main reason for this is that bankruptcy-related cases are conducted before the court as unresolved until the proceedings before the court have been completed; the court has no direct influence on the course of the proceedings after the decision on initiating bankruptcy proceedings is issued.

[72] Public Satisfaction with Slovenia's Judiciary, 2016.

3 The labour market and welfare state

Preserving the welfare state while taking into account demographic trends is one of the important factors in terms of the quality of life and well-being of the population. With the improvement of the economic situation and recovery of the labour market, the financial standing of the population has been improving since 2014 while the risk of social exclusion has been falling; however, it remained at a lower level than in the EU area during the crisis. During the crisis, Slovenia has maintained a relatively high level of access to public services and low income inequality by international standards. The quality of life and well-being of its population are becoming increasingly dependent on the capacity to adapt the entire society to the results of demographic changes. Challenges are revealed particularly in terms of the long-term sustainability of social protection systems and the provision of adequate labour supply to ensure stable economic growth, one of the key conditions for the improvement of the living standard of the population. In addition to challenges concerning the ageing population, it is also necessary to address shortcomings of the labour market in connection with marked segmentation, which has been mostly been affecting young people.

3.1 The labour market

After a decline during the crisis, the employment rate has been on the rise for the third year in a row. In accordance with the structure of economic activity, employment in the last three years has been increased in particular by export-oriented activities and, along with the gradual recovery in private consumption, also by service activities. In 2016, employment growth further increased. In addition to the increased rate of employment in recent years, demographic trends are having a growing impact on the employment rate, since a decrease in the size of the working age population increases the total employment rate.[73] Though such a trend is typical of the majority of EU Member States, Slovenia is among those where this impact is particularly strong. The employment rate increased in all age groups in the period 2013–2016; compared to the pre-crisis level, it was higher only among older people (55–64 years) in 2016. It has been recently affected by pension reform, measures of active employment policy and demographic effects[74];

[73] In Slovenia, the employment rate of the population aged 15–64 increased by 1.2 percentage points in the period 2013–2015. This increase was primarily due to a decrease in the size of the working age population. Since the employment rate is calculated as the ratio between the number of employed persons and the size of the population, a decrease in the latter increases the employment rate. The decrease in the size of the economically active population had a reverse effect on the employment rate in the mentioned time period.

[74] This is the effect when generations with high employment

Table 1: **Breakdown of change in employment rate (15–64 years of age) between 2013 and 2015**

Period	Change in employment rate (in pp)	Contribution in ppsowing to a change in the number		
		Economically active population (+)	The unemployed (–)	Working age population (–)
Slovenia	1.2	–0.3	0.0	1.5
Slovakia	3.0	0.6	1.7	0.7
Czech Republic	3.7	0.4	1.4	1.9
Lithuania	5.2	–0.4	3.3	2.3
Latvia	5.1	–3.1	4.5	3.8
Italy	–0.3	0.4	–0.9	
Hungary	7.3	3.3	2.5	1.4
Germany	1.0	1.1	0.5	–0.7
Austria	–0.3	1.7	–0.7	–1.3

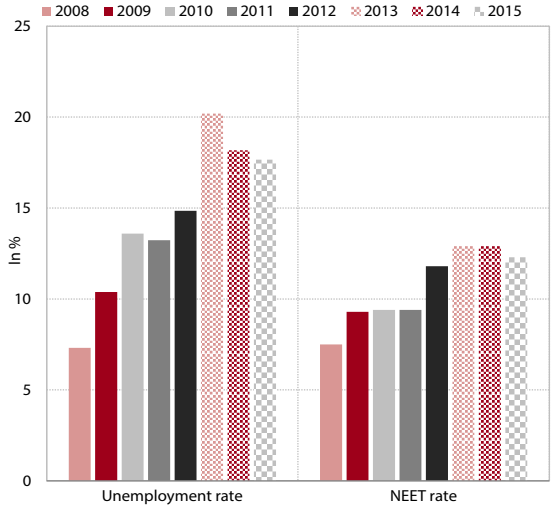
Source: Eurostat; calculations by IMAD.
Note: A change in the employment rate may be divided into the contribution of changes in the number of economically active persons, the number of unemployed persons and the size of the working age population. A decrease in the number of economically active persons makes a negative contribution to the employment rate, while a reduced number of unemployed persons or a reduced size of the working age population has an opposite effect (minus at the top of the table), thus increasing the employment rate. The decomposition is calculated as follows: [(Et – Et-1) / WAPt] + [(Et-1 / WAPt) – (Et-1 / WAPt-1)], where Et is defined as the size of the active population in year t and WAPt as the working age population. The first square brackets express the contribution of employed persons, the second the contribution of the working age population to the change in the employment rate. The contribution of employed persons can be further divided into the contribution of the change in the economically active population and unemployed persons (Et = At – Ut), where At is the size of the active population and Ut the number of unemployed persons. The methodology is taken from Employment and Social Developments in Europe: Annual Review (EC), 2016.

nevertheless, it still remains among the lowest in the European Union.

The segmentation in the labour market*[75] *remains a problem, in particular for young people. High labour-market segmentation may increase inequality among workers and increase fluctuation in employment. At the same time, it may decrease the incentives to invest in employees on the part of enterprises.[76] The main factors in the frequent use of temporary employment are the possibilities for using temporary employees, the rigid regulation of hiring and dismissal, and the uncertainty in the economic environment. Since the beginning of the labour market recovery in 2013, a larger number of permanent than temporary jobs was created, but on average, the relative growth of the latter was higher in this period. Consequently, the share of temporary employment in total employment (which is also typical of the majority of EU Member States) increased slightly, since in the early stages of economic recoveries, enterprises display a certain level of caution in recruiting new employees. Legislative changes to reduce the segmentation of the labour market and enhance its flexibility[77] have only temporarily stopped the growing share of temporary employment (see Indicator 3.6), which still remains common among young people (of 15–24 years). This is largely due to the larger volume of student work, which has been gradually increasing despite the increase in costs (the introduction of payment of social security contributions). Consequently, the share of temporary employment among young people is still the highest in the EU.

In the last three years, the unemployment rate has continued to decline amid strengthening recruitment, in particular among young people. The unemployment

Figure 18: **Unemployment rate and share of young people neither in employment nor in education or training, Slovenia**



Source: Eurostat.

rate are entering the 55–64 year cohort and generations with low employment rate are leaving it, thus increasing the employment rate of older workers.

[75] Segmentation according to type of employment (temporary employment or permanent employment).

[76] Lepage-Sauier, 2013.

[77] In April 2013, the new Employment Relationship Act (ZDR-1) and amendments to the Labour Market Regulation Act (ZUTD-A) entered into force. The amendments reduced the level of employment protection, which, according to the OECD's estimate, is reflected in the decrease in the index of employment protection for regular workers against individual dismissal (EPR) from 2.39 to 1.99, which is below the OECD average. An analysis by Vodopivec *et al.* (2016) showed that legislative changes worked towards the improvement of transition from temporary to permanent employment for both existing and new employers; however, the transition to temporary employment has also strongly increased for vulnerable groups, for example the young and the old.

rate hit its lowest level in 2008 and then rose strongly to 2013 due to the economic crisis. Since then, with the increase in economic activity, it has relatively rapidly decreased, which is attributed to the improvement of competitiveness in this period, a more modest increase in the number of hours worked compared with employment growth and a moderate response to the growth of wages. This was typical[78] of the majority of EU Member States, especially those which were most severely affected by the crisis. The higher rate of transition from unemployment to employment and the higher employment rate indicate that prospects for employment have increased in the last year.[79] In the period 2008–2013, the situation of young people on the labour market deteriorated seriously, this mostly the result of a generally low labour demand and insufficient adjustment of the existing education system to the needs of the labour market and to the high prevalence of temporary forms of employment among young people (i.e. fixed-term jobs and student jobs[80]). Consequently, the unemployment rate among young people during the crisis rose more than the EU average. Since 2013, the unemployment rate has been reduced by more than a third, which we assess was due to the growing demand for student work, a stronger focus of the active employment policy[81] on young people and demographic trends.[82] The improvement of the position of young people in the labour market shows a decrease in the share of young people who are neither in employment nor in education or training (share of NEET) in 2015 (see Indicator 3.8).

Although the job prospects for long-term unemployed persons are very slowly improving, every second unemployed person is still unemployed for at least one year. Due to the crisis, the long-term employment rate in Slovenia strongly increased up to 2014. Despite a decrease in the last two years, the employment rate remains significantly higher than prior to the crisis (see Indicator 3.5). However, the rate of outflow from unemployment[83], which is on the increase for long-term unemployed persons, indicates that the employment prospects for the long-term unemployed persons have gradually improved. Despite the improved employment opportunities of long-term unemployed persons, their share in total employment remains high, which results in a high risk of material deprivation rate, also due to the low coverage of long-term unemployed with unemployment and social relief. Since long-term unemployed persons are in particular older people, who also constitute a vulnerable group on the labour market, there is a need for a programme for activating long-term unemployed persons, i.e. for employment measures and their labour market reintegration. It would be reasonable to change certain systemic solutions which may increase a long-term unemployment rate among older people.

Mismatches in supply and demand for labour force have not substantially changed since 2008. The movement of the Beveridge Curve, which measures the mismatches between labour supply and demand implies that such mismatches have not been intensified in recent years. The movement of the curve in recent years to the left and upwards shows a pro-cyclical and positive shift with a decrease in unemployment and an increase in the labour shortage indicator in line with economic recovery and a move towards a long-term balance such as prevailed in the years of stable economic growth. The estimate of the natural unemployment rate[84], which, besides the Beveridge Curve, is most frequently used for estimating the structural component of unemployment, shows only a modest increase in the natural unemployment rate during the crisis.[85]

In recent years, wage growth has gradually started to increase. Stronger economic activity has encouraged moderate wage growth in the private sector since 2014.

[78] According to the EC analysis (Labour Market and Social Developments in Europe: Annual Review, 2016), most EU countries' unemployment decreased more rapidly and to a greater extent than anticipated based on the historical empirical relationship between GDP and unemployment (Okun's Law).

[79] The employment rate may be interpreted as the probability of transition from unemployment to employment in a certain quarter. It is expressed as a quarterly average unemployment rate for persons who in a certain month entered from unemployment into employment.

[80] The volume of student work decreased by 35.7% in the period 2008–2013. In addition to the reduced demand for labour, the decrease in the volume of student work could be due to the increase in concession fees in mid-2012 and the restriction of student work in public service activities. In the period 2013–2016, the volume of student work increased by 14.6%, this despite the introduction of social contributions, which made this form of work more expensive in 2015.

[81] In 2016, AEP measures (education and training, employment incentives, and creation of new jobs) involved 6,222 young people (of 15–29 years), representing approximately a third of all those participating in the AEP.

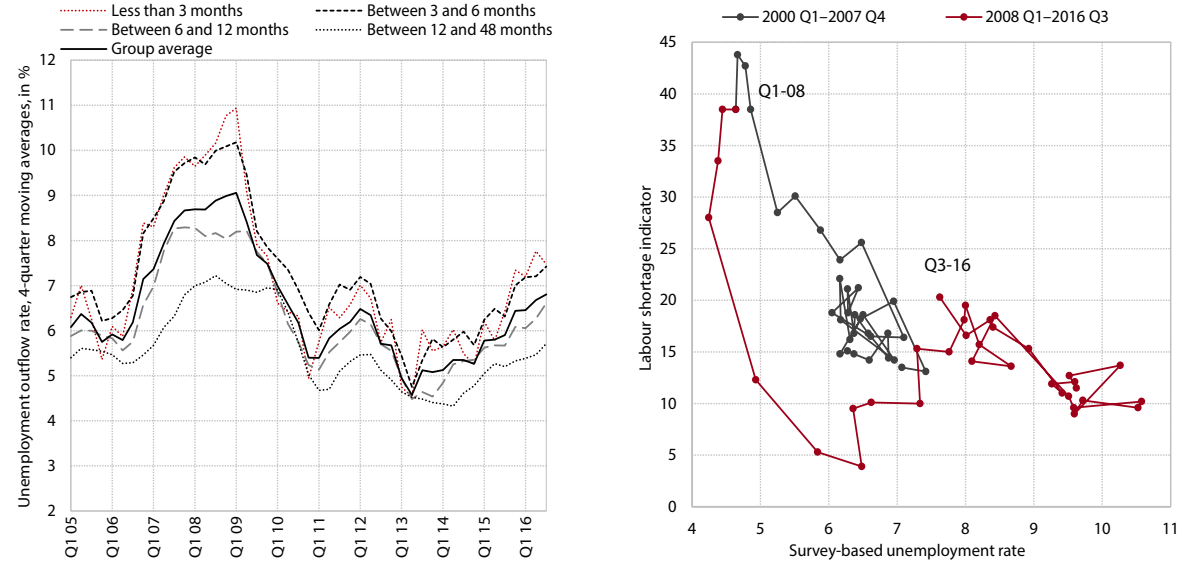
[82] According to data from the Labour Force Survey, the ratio of the number of employed people to the number of all young people in this age group, which represents the employment rate, has been increasing due to the gradual decrease in the number of young people and the increase (or smaller fall) in the number of employed persons among young people.

[83] The rate of outflow from unemployment is calculated on the basis of the monthly probability that an unemployed person might exit unemployment and is expressed by the share of all unemployed persons. The calculation is made by way of aggregate data calculated from the number of unemployed persons with respect to the duration of unemployment; these data are obtained from the LFS. For methodology, see Elsby *et al.*, 2011. The rate of outflow from unemployment is not the same as the employment rate, with the former being merely an indirect estimate of all outflows from unemployment, the latter taking into account exclusively actual inflows to employment.

[84] The natural rate of unemployment (NAWRU) is an unemployment rate which coincides with a stable inflation rate (stimulated by the growth in labour costs). It is estimated by using the New Keynesian Philips Curve method, which assumes a negative relationship between cyclical unemployment and the expected growth of real labour costs per unit of output.

[85] The unemployment rate increased from 6.5% in 2008 to 6.8% in 2015.

Figure 19: **Unemployment outflow rate with regard to unemployment duration (left) and the Beveridge Curve (right), Slovenia**

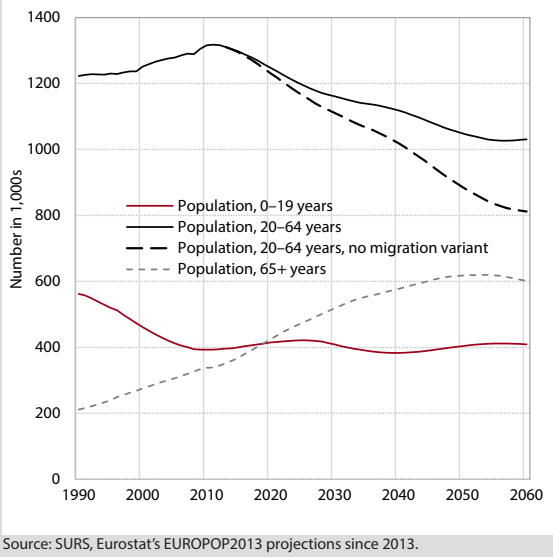


Source: Eurostat, SURS; calculations by IMAD.

Box 3: **Demographic changes**

Slovenia is facing demographic changes that require adaptation of the society as a whole. The changes are reflected in the increased number of people older than 65 years and in the reduced number of population in the 20–64 age group, which at present represents the main potential for the supply of labour. According to the baseline scenario of EUROPOP2013 projections, the size of the population in Slovenia will not change considerably in the coming years, whereas the share of persons aged over 65 will increase significantly and will amount to slightly less than 30% of the entire population in 2060. The population ageing trend, which we have already been facing for some time, will be more intense in Slovenia than in other EU Member States. The effects of this will be reflected in the labour market and education, in public expenditure on social protection systems, in the inclusion of the elderly in society, and in the quality of life of elderly people. The changing demographic conditions therefore require the application of different policies and processes of adaptation for all segments of society.

Figure: **Expected demographic situation – Baseline scenario EUROPOP2013**



Source: SURS, Eurostat's EUROPOP2013 projections since 2013.

The relatively weak response of wages in the private sector after the crisis in comparison to the employment rate is associated with a low level of adjustment to the crisis[86], the weak rise in prices and considerable slowdown in productivity growth. The still relatively high number of unemployed persons and the increased share of temporary employment, short-term employment and re-employment of long-term unemployed people entering the labour market with lower wages than prior to the loss of employment have, as elsewhere in the EU[87], hindered the rapid recovery of wages. Following the relaxation of certain austerity measures which were imposed during the crisis owing to the urgent need for consolidation of public finances[88], public sector wages have been on the increase since 2014. In accordance with the Wage Policy Agreement for the Public Sector, in the next two years there will be no job performance bonus, restricting the possibilities to implement a stimulating pay policy in this sector.

[86] The relatively high wage growth in the private sector during the first years of the crisis was mainly due to the changed structure of employment and the large increase in the minimum wage in 2010 (see Indicator 3.7).

[87] European Commission (2016): Labour Market and Wage Developments in Europe 2016.

[88] During the crisis, most stimulating pay policy elements were terminated and wages and other remunerations from employment were reduced.

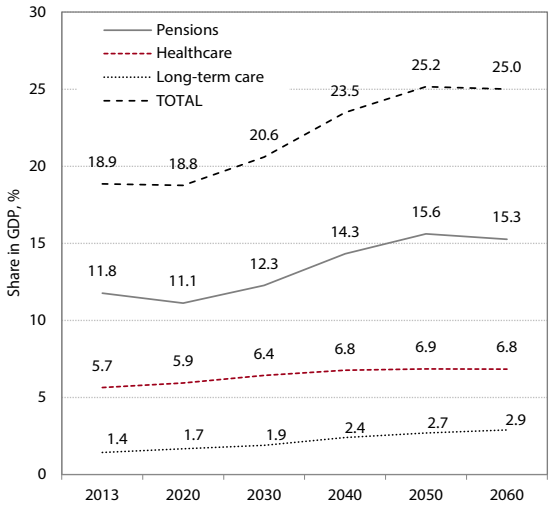
Demographic changes including the reduction and ageing of the labour force are increasingly affecting the labour market. Until 2012, demographic trends, primarily through the net positive immigration, had a favourable impact on the availability of labour force (aged 20–64), which facilitated a faster growth of employment particularly before the outbreak of the crisis. In the last few years, on the other hand, demographic pressures, i.e. reduction of the size of the population, have reduced the potential labour supply and increased its average age. During the crisis, these effects were not yet expressed as obstacles to increased employment or productivity owing to modest demand for labour force and higher unemployment, but they would be markedly expressed with the recovery of the economy in the years to follow. An assessment of demographic impact on the availability of the active population indicates that, on average, it decreases by 8,000 persons per year; however, the impact may slightly increase in the following years. In the context of an ageing labour force, the problem of achieving an appropriate growth in productivity could be more serious. The increasingly intense demographic pressures result in the increasing need for longer employment, effective migration policy, policy integration and management of different age groups to increase the long-term ability to provide and increase the welfare of the population.

3.2 Social protection systems and their long-term sustainability

Under unchanged policies and systems, the ageing of the population leads to difficulties in ensuring stable funding of social protection expenditure. The projections of the European Commission from March 2015 show that, without changes in the relevant policies, the impact of ageing on public expenditure would be particularly strong, as the share of age-related expenditure would increase most with regard to GDP among all EU Member States in the 2013–2060 period. Compared to other EU Member States, the increase in expenditure on pensions in Slovenia is significantly higher, but Slovenia also exceeds the EU average in the growth of expenditure on healthcare, long-term care and education. This is the result of Slovenia's demographic situation, as approximately by 2050, more numerous generations will be retiring, and they will be living longer in retirement due to higher life expectancy (under the current retirement conditions). At the same time, the labour market will be entered by less numerous generations which will worsen the ratio between the number of pensioners to the number of insured persons. Demographic projections show further rise in the old-age-dependency coefficient, which has been rapidly rising since 2012 (see Indicator 3.3.).

Following the pension reform of 2013, in particular intervention measures have had a great effect on

Figure 20: **Projections of public expenditure on pensions, healthcare and long-term care, Slovenia**



Source: The 2015 Ageing Report, 2015.
Note: The figure shows the AWG baseline scenario, which is taken into account in assessing fiscal sustainability in the context of monitoring the fiscal policies of EU Members States.

the slow increase in pension expenditure in the last three years; however, the short-term and long-term sustainability of the pension system remain insufficient. After several years of freeze on indexation, the pensions were brought into line twice in 2016, which, given the unchanged number of retired persons, was the main reason for the continued growth of pension expenditure. The new pension law (ZPIZ-2), which entered into force in 2013, temporarily slowed down the rise in the number of old-age retired persons[89]; the number of other types of retired persons is falling.[90] The budget transfer to the pension fund still remains high (see Indicator 3.12), indicating short-term problems of financing pensions. The projections of pension expenditures show that pension expenditure in relation to GDP will start to increase in a few years' time, as the number of people aged over 65 is increasing (see Indicator 3.3.); meanwhile the ratio between the number of employed and retired persons is worsening. This is why a new reform that will address, to a greater extent, the long-term sustainability of the pension system will have to be prepared as soon as possible. In addition, it would be necessary to provide information to the Slovenian population about the consequences of the ageing populating and the rights arising from compulsory insurance and to encourage private saving for old age. From this point of view and in

[89] We estimate that the rise in the number of retired persons, which increased considerably before the adoption of the ZPIZ-2 and in the year following, slowed down due to the effects of the adoption of the reform. However, in the following years, this effect is expected to decrease gradually, as people who had to postpone their retirement due to stricter retirement conditions after the adoption of the new act will begin to retire. This is why the retirement age of new pensioners is expected to gradually increase.

[90] The number of beneficiaries of survivors', disability, military and farmers' pensions is decreasing.

the light of providing decent pensions, the challenge that remains is the development of measures to encourage people to take greater personal responsibility for their own social status. In maintaining the public financial sustainability of pension systems, there is a problem of providing a decent level of pensions, as evidenced by the relatively high risk-of-poverty rate among people aged over 65, particularly among women.

In healthcare, greater difficulties in respect of access to the system have been encountered, while the health insurance fund budget has been additionally burdened by an increase in sick leave. In recent years, patient waiting times have considerably increased (see Chapter 3.3.2). In order to facilitate access to certain programmes, the Government earmarked additional funds in 2016; in 2017 and 2018, a special government project to reduce waiting times and to increase the quality of healthcare treatment will be underway. Positive effects on access are also expected due to the introduction of e-referrals and amendments to the Patients' Rights Act. Over the last two years, absenteeism has been increasing rapidly in Slovenia and the level of absenteeism is much higher than the average of OECD countries.[91] In 2015, already 11% more lost work days were paid by the Health Insurance Institute of Slovenia compared to 2008, while the number of cases rose by approximately one-third. The negative trend continued in 2016, when expenditure on sick pay increased by 15%. The analysis of the Health Insurance Institute of Slovenia[92] showed that the highest increase was recorded among insured persons above the age of 50 and, with regard to activity, in the public sector (particularly in education, health and social work). Among the main reasons in the last year were in particular employment growth, and in general, ageing of the active population, changes in the pension system, restrictions on employment during the crisis, increase in the nursery school enrolment rate and lengthening of waiting times. The measures should be focused on greater responsibility of employers, regulations regarding sick pay and assessment of incapacity for work, reduction in waiting times, the preferential treatment of long-term absence, health promotion, prevention in the working environment and investments in motivation and satisfaction of employees.

A several-year delay in the reforms of healthcare and long-term care brought to the fore the challenge of designing long-term systemic changes. In recent years, the main objectives of economic policies in the EU resulting from the pressures related to the consolidation of public finances were to ensure the long-term sustainability of public finances. The reforms of healthcare and long-term care will have to provide both more efficient systems and long-term stable and sustainable financing. Long-term projections also point out that quality services cannot to the present extent be provided by public funding alone; therefore in the future, the maintenance and improvement of access to healthcare services and long-term care services is only possible with appropriate combinations of public and private sources in both systems. In order to ensure the long-term sustainability of public finances, it is therefore necessary to seek solutions in a combination of three dimensions: (1) improving efficiency, (ii) increasing and differentiating public sources and (iii) re-establishing boundaries between public and private financing of healthcare and long-term care (i.e. a redefinition of the set of rights in both systems).[93] Changes in healthcare legislation that are in preparation will have to provide solutions to these challenges.

The reforms of financing healthcare and long-term care are directly related; therefore, it is essential to implement solutions for stable and sustainable financing of both systems simultaneously. From the perspective of individuals (i.e. insured persons), in addition to the set of rights in healthcare, the set of rights in long-term care is also important; the two aspects are closely related in terms of content and financing. In Slovenia, as much as 48% of total public expenditure on long-term care is financed from compulsory health insurance, so the issue of scope and funding the set of rights in long-term care should be solved concurrently with the issue of the scope and funding the set of rights in healthcare. In terms of overlap between services and cash benefits/receipts, the lack of transparency of the system, administrative costs and organisation of the implementation of long-term care, it would be rational to merge the existing public resources for long-term care into a single source for a new social insurance for long-term care. This could help achieve a more efficient management of resources for long-term care, easier coordination between healthcare and social services and thus a higher quality of treatment in long-term care[94], better access and lower cost.

3.3 Quality of life and social inclusion

3.3.1 Material living conditions

Material living conditions have been improving owing to a growth in household disposable income since 2014. With employment growth and the rise in wages, the wage bill (compensation of employees)

[91] In 2014, employed people in Slovenia were on sick leave for an average of 11.3 working days, while the average for OECD countries was approximately 9 working days.For more, see Assessing the Effects of Some Structural Measures in Slovenia (IMAD), 2016.

[92] Incapacity for Work – Data, Estimates and Activities of the Health Insurance Institute of Slovenia (materials for members of the Board of Directors of the Health Insurance Institute of Slovenia), 2016.

[93] Fiscal Sustainability of Health Systems: Bringing Health and Finance Perspectives (OECD), 2015.

[94] Adequate social protection for long-term care needs in an ageing society (EC), 2014.

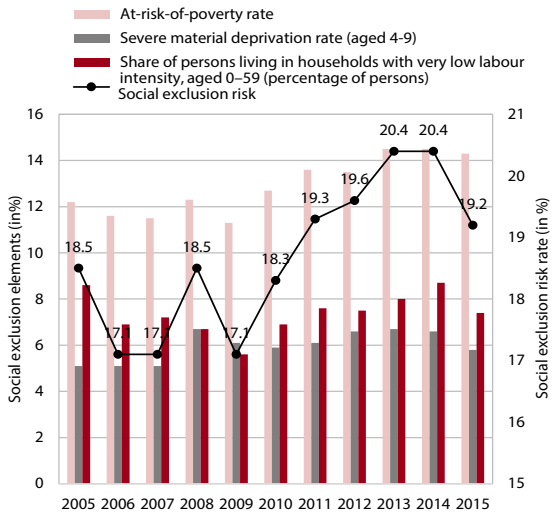
Table 2: **Components of the population's disposable income in Slovenia, real growth rates in %**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Compensation of employees	5.7	3.9	−1.3	−0.3	−1.8	−4.0	−3.8	1.7	3.6	4.2
Social transfers other than social transfers in kind	1.8	4.5	5.3	2.3	4.7	−2.5	−3.5	−1.2	1.8	1.5
Gross operating surplus and mixed income	6.0	0.7	−3.1	−6.2	−0.6	−7.0	−2.4	4.5	3.2	1.8
Property income and other current transfers	−1.3	−0.9	−10.6	6.5	6.2	−6.1	2.6	10.6	−21.4	−31.3
Social security contributions	4.6	3.8	1.0	0.2	−1.0	−2.6	−4.2	2.0	4.5	3.9
Current taxes on income, property, etc.	3.6	10.1	−5.4	−3.2	0.3	−1.3	−8.7	2.7	4.4	4.6
Gross disposable income	5.0	2.5	−0.5	−0.8	0.0	−5.0	−2.7	1.5	2.0	2.1

Source: SURS and Eurostat, National Accounts, calculations by IMAD.

has increased in the last three years after a period of decline (2008–2013); its share in the structure of income was higher in 2005 than in the pre-crisis period. The significant increase in social transfers at the beginning of the crisis was followed by a decrease in social benefits[95] in mid-2012 due to the fiscal consolidation measures and the adoption of new social legislation. The share of social transfers in the total income remains higher than before the crisis, mainly as a result of the higher pension bill due to the increase in the number of retired persons and the reduced average pensions. The average pension, which had been decreasing until 2016, was mainly influenced by a restrictive pension indexation policy in the period 2010–2015 and probably partly also by early retirements (and therewith lower pensions) prior to the entry into force of the new pension legislation in 2013. After 2013, gross adjusted disposal income per capita began to rise[96] (see Indicator 3.13); however, according to this indicator, Slovenia's gap to the EU average was even wider in 2015 than before the crisis. Similar applies to the gap in individual consumption per capita (see Indicator 3.14).

Figure 21: **Social exclusion risk rate and its components, Slovenia**



Source: SURS.

In the circumstances of a considerable decline in income in the lower income deciles, the relatively low level of income inequality increased during the crisis, while income differences by education decreased. During 2008–2015[97], net disposable income in the first and second deciles declined in real terms by more than 16%, while in the tenth decile it declined by 6.3%. The share of the population classified as middle class decreased (by 1.3 percentage points).[98] As a result of the relatively progressive fiscal consolidation measures relating to salaries in the public sector, in 2008-2015, the median income of people having tertiary education decreased while the median income with low levels of education remained at the similar level. Consequently, income differences by education have been decreasing; however, Slovenia lags the most behind the EU in terms of income for those with tertiary education.[99] Income differences by age groups show that in comparison with the EU average, the population aged between 55 and 64 has the worst income position which is attributable to a large share of long-term unemployed elderly people and early retirement.

In 2015, the level of social exclusion[100] fell, following an increase during the crisis (it remained below the

[95] Social benefits as a share of disposable income include unemployment benefits, family benefits, social assistance benefits in cash, pensions, sickness benefits, disability benefits and benefit in respect of death of main provider. Pensions account for the largest share.

[96] Gross adjusted disposable income includes in addition to all disposable income of households and NPISHs, social transfers in kind, e.g. education, health, housing, cultural and recreation services.

[97] This refers to income from the period 2007–2014.

[98] The estimates were based on the Eurostat definition of the share of population at risk of poverty or social exclusion (low income bracket) and the share of the population with more than 160% of the median income (high income bracket). In 2015, 19.2% of the Slovenian population was in the low-income bracket, 69.3% in the middle-income bracket and 11.5% in the high-income bracket (in the EU as a whole, relations due to greater inequalities are expectedly different: 23.7%, 59.0%, 17.3% of the population).

[99] In Slovenia, employees with primary education reach 76.1% of the EU average, those with secondary education 75.2% and those with higher education only 69.2%.

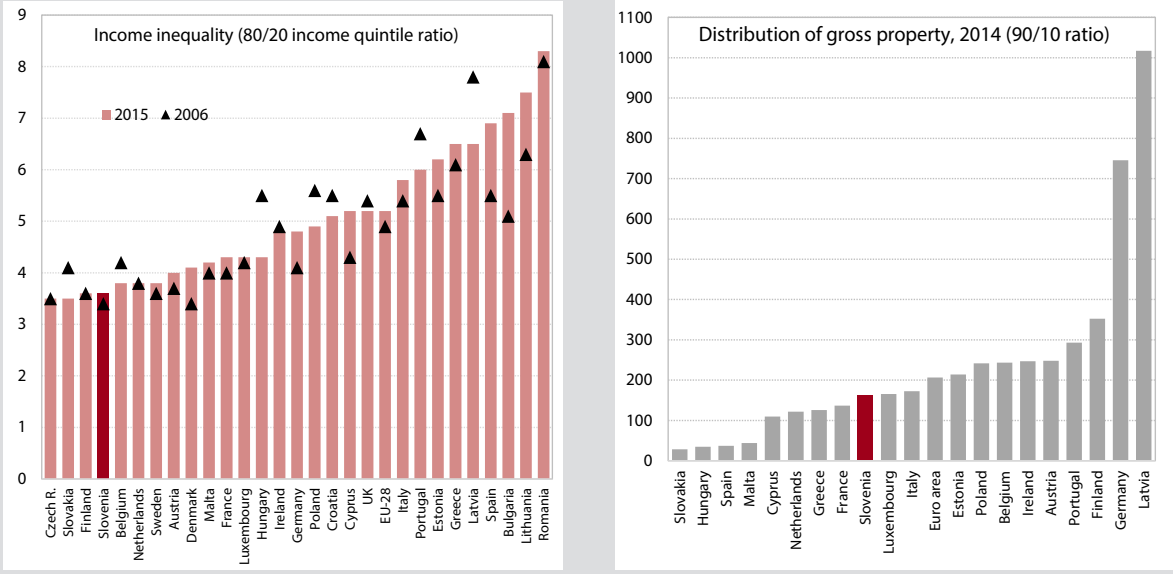
[100] The level of social exclusion is a composite indicator which includes three components: risk-of-poverty rate, severe-material-deprivation rate and share of persons living in households with very low labour intensity.

Box 4: **Inequalities in income and property**

In Slovenia, as in most EU countries, income inequality increased during the economic crisis, but it is still low. In the period 2005–2015, inequality in the distribution of net disposable income per equivalent adult household member was relatively low and stable; after 2012, it slightly increased with the change in the structure of disposable income of households and income distribution. The crisis affected much more the first income quintile than the fifth income quintile. In the period 2008–2015, in the first income quintile, the shares of income derived from employment (as a result of bankruptcies and layoffs, particularly in labour-intensive activities) declined considerably, while the shares of income derived from self-employed activity (employment out of necessity) and family and social benefits increased. In the fifth income quintile, the concentration of income from employment, pensions with supplements and other income from capital increased. In 2015, Slovenia was among the countries with the lowest income inequalities in terms of net income. The income inequalities in Slovenia are significantly reduced through labour taxes.

The distribution of gross and net assets among households shows, according to estimates, that property inequality in Slovenia is slightly below the average level in the rest of the euro area countries. (This refers to survey data which are available only for 2014 for Slovenia.) The bulk of assets of households represents real property (93.5%), of which more than a half are owner-occupied dwellings as permanent residence; on average, Slovenian households own more dwellings than is the case in the rest of the euro area, but their value is lower. The distribution of gross assets places Slovenia almost in the middle among the analysed countries and slightly below the euro area average. A similar picture shows the proportion of gross household assets of the richest 10% of households, which in Slovenia (47.3%) is only slightly lower than the euro area average (48.1%). The property inequalities are greater in terms of net than gross household assets[2], since liabilities of low-income households exceed their gross assets. Slovenia, with its 3.6% share of households with negative net household assets, is ranked in the middle among the analysed countries, but its share is considerably lower than the euro area average (5.2%).

Figure: **Income inequality (left) and distribution of gross property (right)**



Source: Eurostat; calculations by IMAD (left); ECB Household Finance and Consumption Survey, 2016 (right
Note: The distribution of gross property shows the point-by-point comparison between the 90th percentile and 10th percentile.

[1] The data on the distribution of are much more unreliable than on the distribution of income, since many countries, including Slovenia, in the context of national accounts, do not yet have a complete balance sheet. Additionally, there is a short tradition of surveying to collect data on assets and distribution thereof. For the euro area, including Slovenia, these data are collected by the ECB under the Household Finance and Consumption Survey (HFCS) according to the model used in the US statistics (Survey of Consumer Finances – SCF) prepared by the Federal Reserve (FED). The HFCS data were first collected for 2009 (published in 2013), and secondly for 2014 (published in 2016). For Slovenia, only the data for 2014 can be used (in 2009, not enough households were surveyed).
[2] In the net property value, liabilities (debts) of households reduce the value of gross household asets.

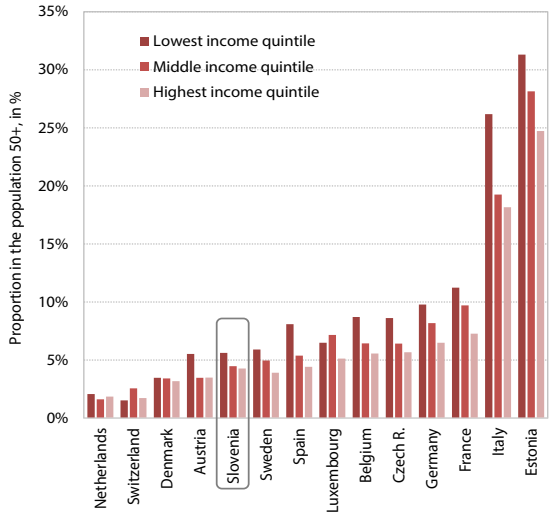
EU average throughout). The decline in net disposable income and an increase in income inequality during the crisis resulted in an increase in the risk of poverty and social exclusion (which peaked in 2014). In 2015, these both decreased for the first time since the crisis due to the improved situation on the labour market (to 19.2% and 14.3%). Due to negative developments during the crisis, Slovenia deviated from the objective of the Europe 2020 strategy to reduce the number of people who are exposed to the risk of social exclusion to 320,000 by 2020 (in 2015, 385,000). The risk-of-poverty and social-exclusion rates are above the EU average among people older than 65 years.

3.3.2 Factors of the quality of life

Due to the diversification of public institutions and mainly public funding, the access of the population to education is mostly good. Kindergarten attendance, which has an important effect on the development of children and facilitates the reconciliation of work and family life, is high. The shares of young people (20–24 years) and adults (25–64) with at least upper secondary education are high; this results from the high participation rate of young people in upper secondary and tertiary education,[101] which has been much higher than the EU average for many years. The developments in youth literacy are also favourable , reducing, among other things, the differences in students' achievements in relation to their socio-economic status in recent years. The participation of adults in formal education is falling and in 2014, it was equal to the EU average (2.8%) which is too modest in a context of population ageing requiring longer work activity.

The financial access to healthcare services remains relatively good, but patient waiting times have lengthened. Direct out-of-pocket expenditure remained relatively low during the crisis, which is linked to the high level of participation of the population in complementary health insurance schemes. In the household consumption structure, the share of expenditure on health is only 1.9%, which is less than in the EU average (2.3%). The households in the lowest income bracket spend money particularly on medicines and medical technical aids, while the share in expenditure on out-patient clinic services in the households in the highest income bracket has risen considerably in the last years[102] which resulted in particular from the lengthening of patient waiting times in the public healthcare network.[103]

Figure 22: **Unmet needs for health care services in the population of 50 years and older for financial reasons and/or waiting periods, by income quintiles, 2015**



Source: SHARE survey, 5th wave, Institute for Economic Research.
ONotes: Visits to dentists were not considered. The two questions in the SHARE survey read as follows: 1) Has there been a need to see your doctor in the past 12 months, but you could not afford it? Answer: Yes; No. 2) Has there been a need to see your doctor in the past 12 months, but you could not see him because you had to wait too long? Answer: Yes; No.

Basic health indicators have improved in recent years, but the situation in Slovenia is still much worse than in other countries as regards lifestyle indicators. Slovenia maintains the lowest infant mortality rate among all the EU countries and the gap in the number of healthy life years has been reduced. Self-perceived health and disability status has also improved[104] though remaining worse than the EU average. The gap with the EU average is particularly great in the population with the lowest income and the low level of education. With regard to lifestyle indicators, Slovenia is mostly below the EU average (smoking, alcohol, obesity). This is the main reason for the high premature mortality[105] and cancer and suicide mortality rates, which remain among the highest in the EU Member States. With regard to amenable

[101] The high participation rate of young people (20–24 years) in tertiary education is connected with free tuition for first-cycle and second-cycle studies and a favourable ratio between the number of enrolment places and the number of applications for these enrolment places.

[102] From 40% in 2012 to 52% in 2015.

[103] In the period from 1 January 2015 to 1 January 2016, the number of all patients waiting for healthcare services increased by 26% (from 182,498 to 208,428), while the number of patients waiting longer than the maximum waiting times rose from 24,805 to 40,648 (according to the National Institute of Public Health). According to the European Health Interview Survey (EHIS), due to waiting periods in 2014, there were 13.4% of unmet needs for medical treatment in the total population which approximately corresponds to the available data on the number of all patients waiting for health care services.

[104] The share of the population assessing its health as good or very good remained at the level of 2013 in 2014 and amounted to 64.8% (2009: 60%), somewhat below the EU average (67.4%). Slovenia is lagging behind in terms of self-perceived disability; in 2014, 30% of the adult population assessed themselves as being very or moderately limited in performing daily activities due to health problems (EU: 28%).

[105] The premature mortality rate is an indicator of mortality before the age of 65, which is often related to unhealthy and risky lifestyle – death from accidents, especially traffic accidents, for example, or because of tobacco and alcohol use. Sometimes it could be prevented with health protection measures (early detection of risk factors, screening for cancer).

mortality[106] (the indicator of system efficiency), Slovenia achieves the EU average. The improvement of lifestyle could, among other things, reduce the pressure on the growth in healthcare expenditure.

The quality of life of older people is influenced by access to long-term care services, which should be improved. Due to the ageing of the population, the need for long-term care is increasing which is reflected in the growing number of long-term care recipients.[107] The proportion of the population in long-term care in Slovenia is approximately equal to the OECD average,[108] but the proportion of people aged 65 and over in long-term care is slightly lower (SI: 11.3%; OECD 21: 12.9%). Long-term care at home is least developed, and Slovenia is lagging significantly behind in terms of the proportion of people in long-term care at home by international comparison.[109] Inappropriately regulated long-term care increases the burden on families and the pressure on healthcare services, pointing to the need for immediate systemic regulation of long-term care. A comprehensive system of long-term care will have to be established, which will ensure that high-quality services are available to the ageing population.

The quality of life is influenced by the number of visits to cultural institutions and events, which is relatively high in Slovenia. The data available show that in 2013, only the share of people who attended a ballet, dance or opera performance was lower than the EU average. In comparison with the EU, there is a great difference in attendance at cultural events between the persons in the lowest and those in the highest income brackets, which indicates that persons in the lowest income bracket have limited access to cultural events.

Certain social climate indicators were better in 2016 than in 2008[110] ***and the perceived threat of people in their living environment still remains at a low level***. The improved social climate reflects the increase in trust among people, trust that people try to be fair and the increased share of those believing that people mostly try to be helpful, which is also indicated by the greater volume of voluntary work performed. Due to the improvement of the social climate, overall satisfaction with the present state of the economy, the government, education and the health system has increased, but it remains lower than in 2008. The satisfaction with democracy and trust in key state institutions has slightly increased, but it remains low. The share of people feeling threatened in their living environment remains low in Slovenia and people feel safe when walking alone in their local area after dark. In 2016, slightly fewer people had a personal experience with burglary or physical assault than in 2008. Compared to other EU Member States, Slovenia is a fairly safe country.[111] In 2015, 96% of respondents believed that their immediate neighbourhood was a secure place to live and 93% that Slovenia was a secure place to live.

According to the last evaluation[112]*, general life satisfaction is at a similar level as before the crisis.* At a personal level, satisfaction with personal financial and employment situation has improved; however, respondents most frequently point out pensions and cost of living as two key problems. At the same time, the level of satisfaction with the economy and employment situation in the country remains quite low, the key problem at the national level being the issue of unemployment. In general life satisfaction, there are growing differences between eastern and western Slovenia which are not only based on income aspects (e.g. a risk-of-poverty-rate indicator).

[106] The amenable mortality rate indicates how many deaths due to a specific cause (or all causes, e.g. the consequences of smoking) could have been avoided with appropriate prevention and public health measures.

[107] The number of long-term care recipients is approaching 61,000 persons, where a little over one-third of that number are long-term care recipients in institutions and the rest are long-term care recipients at home.

[108] In Slovenia it amounted to 2.9% in 2014 (OECD: 2.3% in 2013) (see Nagode *et al.*, 2014).

[109] The share of long-term care recipients at home in Slovenia amounted to 6.5% in 2014 (OECD 21: 8.9% in 2013).

[110] The source for the comparison with 2008 is the European Social Survey 2016 (SJM 2016) – preliminary data.

[111] There has been no deterioration in personal safety indicators. In 2015, mortality due to transport accidents increased slightly on the previous year. The death rate was 6.9 persons (2014: 6.3 persons) per 100,000 population, which is still less than in the period 1996–2013. In 2015, the standardised death rate due to assault decreased in comparison to previous years and stood at the 2008 level (0.6 per 100,000 inhabitants).

[112] Standard Eurobarometer, Slovenian Public Opinion in autumn 2016 and Eurostat EU-SILC for 2015.

4 Environmental, regional and spatial development

Economic performance and the quality of life have become increasingly linked with efforts to ensure a healthy natural environment, balanced regional development and optimal land use. During the economic crisis, trends in these three areas were considerably influenced by the use of less resources; however, with the revival of economic activity, the goals set will be more difficult to achieve and will require additional and systematic action. In order to make a transition to a low-carbon, green and circular economy, Slovenia will have to improve natural resource management, change the production models and consumption patterns into more sustainable forms, and develop and endorse economic incentives and innovations that also benefit the environment. In this regard, Slovenia has undertaken several international commitments, and the achievement of the desired development will largely depend on cooperation and coordination between all stakeholders. This is also important in terms of achieving a balanced regional and sustainable spatial development.

4.1 Environmental development

4.4.1 Natural resources and natural resource management

Slovenia has a rich variety of natural, geographical and environmental features, which can be a vast opportunity for development. It has a favourable position from geographical, transport and climate points of view, good living and production conditions, and relatively good natural capital. It is an area of great landscape diversity and biodiversity, with a large part of it being designated special protection areas.[113] The existing agricultural land and former agricultural land which can potentially be used for production can ensure adequate food security, also with sustainable forms of production. Extensive and high-quality water resources ensure reliable water supply. Slovenia is one of the most forested countries in Europe, with its forests being its best-preserved natural ecosystem, which in turn has a beneficial effect on the environment. In addition to wood, there are many other types of renewable energy sources in all the regions[114].

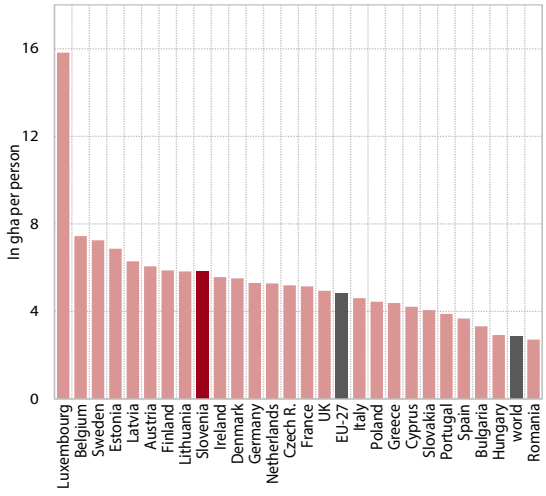
Our current lifestyle and production processes are causing a considerable burden on nature, despite its relatively high biocapacity. After relatively rapidly increasing during the period of economic growth and decreasing to the pre-recession level during the recession, the most recent calculation for 2012 shows that the ecological footprint[115] was 5.6 gha/capita. This is considerably more than nature's biocapacity, which is estimated at 2.4 gha/capita. The main share of Slovenia's biocapacity comes from forests, but the large surface covered by forests is still not enough to absorb CO_2 emissions, which contribute most to the ecological footprint. The estimates show that the demand for food, fuels, wood and fibres was twice and a half the size of the biocapacity to regenerate. The difference between the former and the latter is mainly due to the use of non-renewable energy sources, i.e. fossil fuels. The EU, on average, has better results; with biocapacity being almost the same as in Slovenia, the EU, on average, has

Table 3: **Basic natural resources and their use**

	Slovenia	EU
Share of utilised agricultural area in the total area, 2013, in %	23.6	40.8
Utilised agricultural area, 2013, in ha per capita	0.2	0.3
Share of forest land in the total area, 2015, in %	61.6	40.8
Growing stock, 2015, in m3 per capita	167.7	45.6
Available freshwater resources, multi-annual average, in m3 per capita	15,588	7,963
Exploitation of domestic resources, 2015, in t per capita	13.3	13.2
Share of renewable energy in final energy consumption, 2015, in %	22.0	16.7

Source: Eurostat and SURS.

Figure 23: **Ecological footprint, 2012**



Source: Global Footprint Network, National Footprint Accounts, 2016

[113] In terms of the proportion of territory included in Natura 2000, Slovenia is at the upper end of the scale compared to other EU countries, with more than a third of its territory being included in Natura 2000.

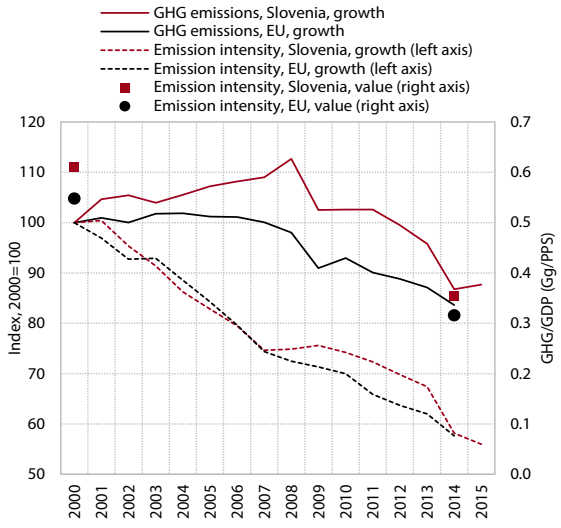
[114] Plut, 2014.

[115] Ecological footprint, which is measured by the Global Footprint Network, is an aggregate indicator of environmental development. It is expressed in a standardised unit of biologically productive area, the global hectare (gha). This is a fertile area needed to meet the needs of human beings for food and to support their lifestyle and to dispose waste generated in this process. The ecological footprint is compared to the biological capacity of nature or biocapacity; this means biologically productive areas which have the capacity to regenerate. See Progress Report 2016, p. 66.

a slightly lower ecological footprint; in 2012 it was 4.8 gha/capita.

Greenhouse gas emissions have decreased after the crisis, while the emission intensity is still below the EU average. *Greenhouse gas emissions*, which is one of the most significant environmental issues, were around a fifth lower in 2015 than in 2008, which was the most polluted year in this respect (see Indicator 4.1). After a decrease in emission levels following the closure of one of the large thermal power plants, the transport sector became the largest contributor in terms of emissions. The interim verification of the implementation of the programme to facilitate a shift to a competitive low-carbon economy[116] showed that obligations were met in the first years of implementation and that the set targets were even exceeded; this, however, does not necessarily mean that emissions are curbed in the long term. Uncertainty is highest with regard to the transport sector, which is characterised by a high annual variability, and where even a short-term rapid rise in the use of fuels may jeopardise the attainment of the target.[117] The reduction in *emission intensity*, i.e. of GHG emissions per unit of GDP, which was faster in the period of economic growth and slowed down during the crisis, again gathered pace in 2014 and 2015. Since this was also due to one-off reasons, such as the closure of the thermal power plant and lower energy consumption for heating in a mild winter, further permanent improvements will be needed to achieve a long-term reduction in emission intensity, given the faster economic growth.

Figure 24: **GHG emissions and emission intensity**



Source: Eurostat Portal Page – Environment and Energy in Economy and Finance, 2017; ARSO preliminary data for 2015; calculations by IMAD.
Note: Emission intensity is calculated as the ratio of GHG emissions to the GDP in purchasing power standards.

The quality of air in Slovenia is closely related to excessive levels of ozone and dust particles, which have not been improving over a longer period. The concentration of solid, dust or PM particles is mostly related to biomass burning in residential combustion sources, road traffic, industry and agriculture. The two factors that would contribute most to improvement in PM concentration levels are an increased use of technologically advanced combustion sources and the raising of the awareness of the population. Although the exposure of the urban population to particles declined, it was still relatively high in the winter period and was above the EU average (see Indicator 4.2). Since the quality of air has a considerable impact on the health of the population, the EU's policy governing this area is being tightened; Member States will have to prepare national monitoring programmes and harmonise measures with plans in all areas with the biggest impact.[118] Another major contributor to air quality issues in Slovenia is ozone and its precursors, which are largely caused by road traffic. The ozone concentration in Slovenia is heavily influenced by transboundary transfer from the lowlands of northern Italy.[119]

Changes in the thermal power plant sector, reduced economic activity, more efficient use of energy and favourable weather conditions have led to a reduction in energy consumption, which will probably be below the target value in 2020. The use of solid fuels declined in 2014 due to the closure of the thermal power plant powered by brown coal and the launch of the modernised part of the power plant powered by lignite. The use of liquid fuels is also decreasing, particularly of fuel oil, which is being in part replaced by less expensive (wood) or cleaner (ambient heat) sources of heating.[120] The total energy consumption for heating is also falling due to more efficient energy consumption, better insulation of buildings, improved combustion installations and other measures for more efficient energy consumption. While motor gasoline consumption is falling, diesel consumption is rising. Total energy consumption is declining at a slower rate due to the high fuel consumption in the transport sector; nevertheless, the target of a 20% reduction with regard

[116] Operational Programme for Reducing GHG Emissions by 2020, 2014 Slovenia's objective is that the emissions will not increase by more than 4% by 2020 compared to 2005. The obligation to reduce GHG emissions refers to emissions in sectors that are not included in the greenhouse gas emission allowance trading scheme.

[117] First annual report on the implementation of the Operational Programme for Reducing GHG Emissions by 2020, 2016.

[118] The National Emission Ceilings Directive, which is the central element of the Clean Air for Europe Programme. It sets stricter ceilings for emissions of the five major pollutants, one of them being PM particles. Compared to 2005, Slovenia is expected to reduce $PM_{2.5}$ emissions by 25% by 2020 and by 70% by 2030 (the EU, on average, by 22% and 51% respectively). This will require new investments; however, slightly higher savings are expected due to reduced costs of healthcare and occupational diseases.

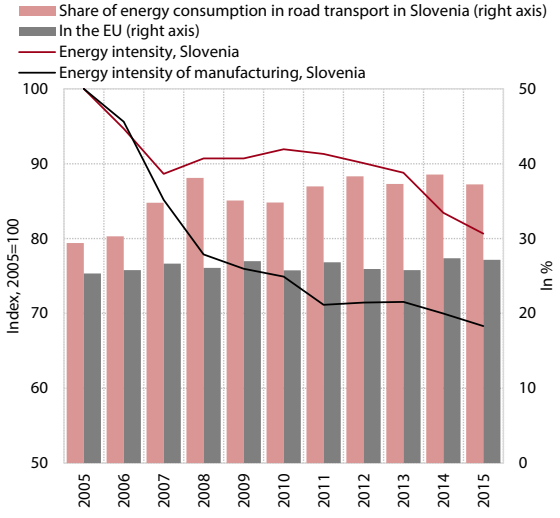
[119] Air quality in Slovenia in 2015 (ARSO), 2016.

[120] Wood and fuel oil accounted for 50% and 26% respectively of energy sources for space heating in 2005 and 57% and 15% respectively in 2015.

to anticipated consumption by 2020 will most likely be achieved (see Indicator 4.3).

In the past decade, the energy intensity*[121] *of Slovenia decreased by a fifth but has remained relatively high due to the large share of energy-intensive industries. It is highest in the transport sector, a few times lower in manufacturing industries (with the paper industry, manufacture of metals and non-metals, and the chemical industry being the most energy-intensive industries; see Indicator 4.4) and considerably lower in the service sector. In Slovenia, the aforementioned energy-intensive industries account for around 40% of total energy consumption, compared with only a third in the EU. In the past decade, in Slovenia energy intensity decreased at a slower pace than in the EU and was 21% higher than in the EU in 2015 (in 2005, 16% higher).[122] The energy intensity of manufacturing industries is also considerably above the EU average (since 2009 the gap has not been closing), despite the fact that it decreased considerably immediately before the crisis due to the modernisation of aluminium production and the closure of the old electrolysis plant.

Figure 25: **Total energy intensity of manufacturing industries and the share of energy consumption of road traffic in final energy consumption**



Source: Eurostat Portal Page – Environment and Energy – Energy and Economy and Finance – National Accounts, 2017; calculations by IMAD.

Transport is a sector that has a significant negative impact on the environment; the volume of freight transport by all modes has increased considerably with the expansion of the EU. The share of road freight transport increased significantly in the middle of the previous decade due to the expansion of road transport activity; in recent years, it has accounted for a little over 80% of total freight transport (see Indicator 4.5). In the period 2005–2015, the volume of road freight transport performed by Slovenian road hauliers increased by 62%. This was mainly due to the increase in transport operations abroad, while in Slovenia, an increase was seen in transport operations by foreign hauliers. In this period, the increase in the volume of rail transport was about half the increase in the volume of road freight transport. Total freight transport per capita in Slovenia is considerably higher than the EU average. The increased foreign trade flows through Slovenia have a significant impact in this regard. In terms of the density of the motorway network per capita, Slovenia ranks at the top of the EU Member States; on the other hand, some parts of its otherwise also very extensive railway infrastructure do not allow for faster increase in rail freight transport, which is environmentally more acceptable.

The share of renewable energy sources (RES) is higher than the EU average as a result of favourable natural conditions, but it is rising at a slower pace. RES consumption, which depends very much on natural conditions (e.g. forests, rivers and solar radiation), is becoming increasingly contingent on the intensive support of the use of such energy. Until 2009[123], the growth in the use of RES in Slovenia was mostly contributed to by the increased use of wood or solid biomass and later by the use of solar and geothermal energy; however, the use of traditional RES (such as wood and hydropower) still accounts for the largest share of RES consumption (see Indicator 4.6). Only three other Member States have a lower share of other RES than Slovenia. The difference is largest in the use of wind energy. The share of RES in heating is almost twice higher in Slovenia than in the EU as a whole; the share of RES in electricity production is also higher, whereas the share of RES in transport is distinctly lower.[124] While the total share of RES in Slovenia is higher, at 22% exceeding the EU average by several percentage points, Slovenia has seen a slower increase in RES consumption.

The resource productivity of the Slovenian economy has improved since the beginning of the crisis, mainly due to a downturn in construction. In the period 2007–2012, GDP per unit of material consumption increased faster in Slovenia than in the EU, and then more slowly. The improvement in the first period was related to the reduced consumption of non-metallic minerals due to a downturn in construction activity, which again slightly increased in 2014. Resource productivity decreased to 82% of the EU average by 2015, which means that GDP generated per unit of material consumption in Slovenia was lower by 18% compared to the EU average. There

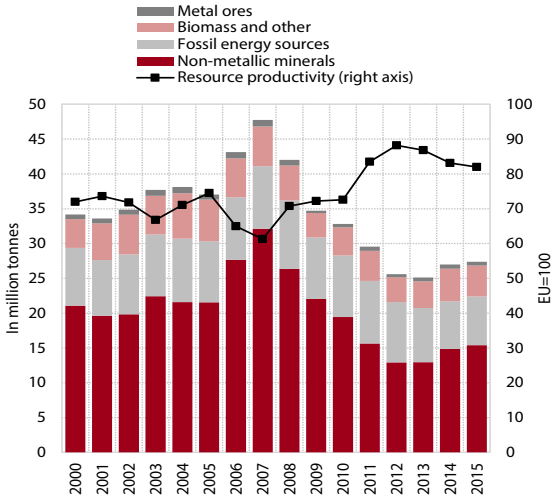
[121] Energy intensity is total energy consumption per unit of GDP.

[122] In the temporal comparison, the indicator of the comparison of primary energy per unit of GDP in fixed prices is used; however, in the comparison between the countries in individual years, purchasing power standards (PPS) are used for higher methodological relevance.

[123] This year, Slovenia has seen the largest increase in the share of RES due to the crisis, the decrease in energy consumption and the increase in RES consumption (also because of the improved statistical coverage).

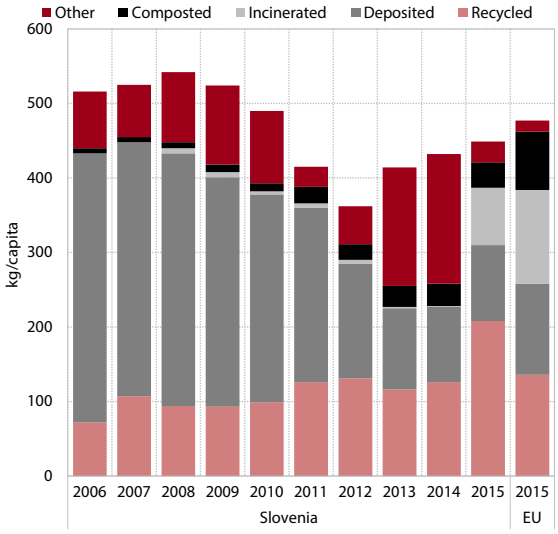
[124] In 2015, the share of biofuels was only 2.2%, the target for 2020 at the EU level being 10%.

Figure 26: **Domestic material consumption and relative resource productivity[1], Slovenia**



Source: SI–STAT Data Portal – Environment, 2016; Eurostat Portal Page – Environment, 2016; Eurostat Portal Page – Economy and Finance; calculations by IMAD.
Note: [1]Resource productivity is measured as GDP over domestic material consumption (in PPS/kg), shown in the chart relative to the EU. Domestic material consumption is defined as the domestic extraction plus net imports of materials.

Figure 27: **Municipal waste management**



Source: Eurostat Portal Page – Environment, 2017; calculations by IMAD.
Note: Waste export but not also import is included. The category "other" covers the preliminary preparation of waste and its temporary storage, i.e. the recovery that could not be completed in the current year.

are, however, no major differences in the structure of material consumption (see Indicator 4.7).

After decreasing during the crisis, waste generation has recently slightly increased, but waste management has improved considerably. In manufacturing and service industries, where the majority of waste is generated, waste generation, after remaining almost unchanged for three years, increased by 14% in 2015 (see Indicator 4.8). To achieve further reduction in waste generation, it will be crucial for the manufacturing industry to commit, to a greater extent, to the "closed-loop system", i.e. greater use of recyclable materials, with special attention to hazardous waste. The generation of municipal waste increased for a second year in a row but is still lower in Slovenia than the EU average. *Waste management*, however, has improved considerably in recent years.[125] Waste recovery is increasing and share of landfilled waste, which is least desirable from the environmental point of view, is declining. In efforts towards more sustainable waste management, this share must be further reduced. The disposal of waste that could be prepared for reuse means lost opportunities for more efficient use of resources, less dependence on imported raw materials and lower greenhouse gas emissions and also for creating new jobs.

According to most indicators, environmental pollution from agriculture, which is not intensive by international comparison[126], is on a long-term decrease. The area of organically farmed land is increasing, representing around 9% of total farmed area in 2015 (see Indicator 4.9). This is above the EU average, but we are still only halfway to the set goal.[127] The market of organic products and organic food is a rapidly growing segment of the food market, but the growth in the supply of domestic organic products is too slow, representing only a fifth of total sales.[128] Organic production is present mainly in animal husbandry, while there is a growing demand for organic fruit, vegetables and non-meat processed foods. To protect the quality of drinking water, which is good in Slovenia in general and is still improving, special attention was devoted to farming in water protection areas. However, greater efficiency of farming overall is desirable. This is measured by the average yield per hectare and, for most crops, is below the EU average, indicating less burden on the environment, as desired, but also a poor exploitation of natural resources. More attention will have to be devoted to improvement in ensuring food production.[129]

Felling and wood assortment production increased considerably due to extensive glaze ice damage in 2014; however, a relatively high amount of high-quality raw materials was exported. Despite the increase, felling in relation to the growth of wood has been relatively low in the last few decades,[130] though it

[125] Several regional waste management centres were built or upgraded as part of the most important cohesion projects in the field of the environment in the 2007–2013 programming period.

[126] According to selected indicators of Agriculture, Fishery and Forestry Statistics, Eurostat, 2015.

[127] The target for 2015 was 20% of utilised agricultural area (the Action Plan for the Development of Organic Agriculture by 2015, 2005).

[128] Final report of the working group on the monitoring of the Action Plan for the Development of Organic Agriculture by 2015, 2012.

[129] Lampič *et al.*, 2016.

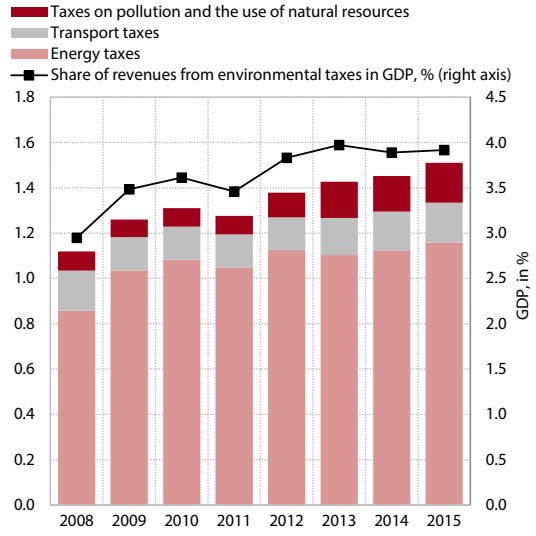
[130] In state-owned forests, trees were felled approximately in

increased significantly after 2014, when half of Slovenian forests were affected by seriously damaging glaze ice (see Indicator 4.10). An increase in felling also resulted in an increase in the production of unprocessed wood, mainly wood for cellulose and panels. However, after the glaze ice damage, foreign trade in unprocessed wood increased considerably more than the production of unprocessed wood; with imports declining by around a fifth, exports increased by around three quarters. The exports of saw logs and veneer logs, which are the highest quality timber and are most appropriate for achieving added value, more than doubled. The extensive and rapidly increasing export of such timber represents an unexploited potential to achieve higher employment and higher added value in further stages of the forest–wood chain.

4.1.2 Selected environmental measures

The share of environmental taxes in GDP in Slovenia is above the EU average, their growth after 2008 being stimulated mainly with a view to reducing the public deficit. Total revenues from environmental taxes increased; in 2015 they were a third higher than in 2008. The major part of the increase in this period is attributable to increases in rates of excise duties on energy products, particularly in the years 2009 and 2012, and the introduction of the CO_2 tax on liquid fuels in 2012. Two-thirds of environmental taxes were borne by households.[131] Measured by the share of paid environmental taxes in value added, the most burdened sector was (i) electricity, gas, steam and air conditioning supply, followed by (ii) transportation and storage activities[132] and (iii) water supply, sewerage, waste management and remediation activities. After 2008, the burden increased in all activities. The share of environmental taxes in GDP, which remained at approximately the same level of around 4% in the three years to 2015, was significantly above the EU average in Slovenia (in 2015 by 1.5 percentage points). This is mainly attributable to the extensive use of motor fuels in road traffic resulting from the dispersed population settlement, the large volume of transit traffic, and poorly developed rail transport and other public passenger transport.[133]

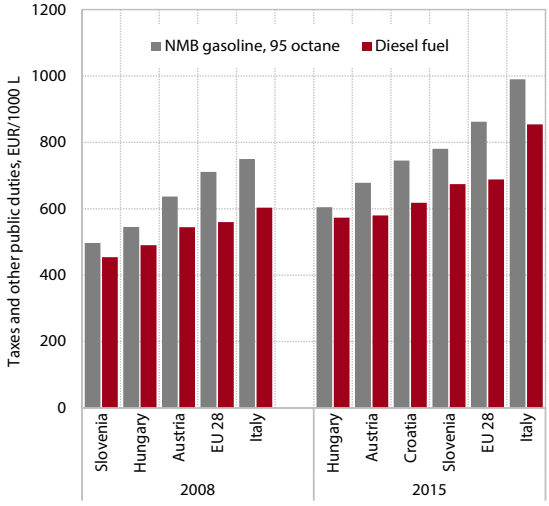
Figure 28: **Revenues from environmental taxes, Slovenia**



Source: SI-STAT – The Environment and Natural Resources – Environmental Taxes, 2017

The excise duty rates on individual energy products, as in the EU as a whole, do not reflect their energy content and CO_2 emissions. The increase in the implicit tax rate (ITR)[134] on energy consumption, which was 42% higher in 2015 than in the pre-crisis year 2008, was driven by the need to achieve fiscal balance. The increase results from a relatively high taxation on liquid fuels after 2008. In 2015, public levies (environmental taxes, VAT and other public levies) per litre of 95-octane gasoline and diesel fuel were higher than in most neighbouring countries. In Slovenia and in almost all other EU Member States, the excise duty rates on gasoline were higher than

Figure 29: **Taxes and other public duties levied on gasoline and diesel fuel**



Source: Weekly Oil Bulletin (EC), 2017.
Notes: NMB – unleaded gasoline. The values are as of the end of the year.

the volumes of the planned or permitted felling, whereas tree felling in privately-owned forests, which constitute the majority, lagged considerably behind.

[131] This is partly due methodological simplification, whereby the majority of fuel consumption is attributable to households.

[132] The transport and storage burden was otherwise moderate. With a rapid increase in rates of excise duties in 2009, there was the possibility of a partial refund of duties paid on diesel fuel for motor vehicles for the purpose of commercial use (up to the minimum level set out in the EU Energy Directive).

[133] In terms of the quality of railway infrastructure, Slovenia ranked 21st among EU Member States; it ranked 16th on the quality of roads (WEF, Index of Global Competitiveness, 2015–2016).

[134] ITR on energy consumption measures the effective average tax burden of 1 tonne of oil equivalent.

those on diesel fuel despite their lower CO_2 emissions. In recent years, the effectiveness of environmental taxes in environmental protection has also been reduced by (i) the ineffectiveness of the EU Emissions Trading System since the permissions for CO_2 emissions in many companies exceeded their needs; (ii) environmentally harmful subsidies; and (iii) the plummeting oil prices, which reduced the impact of higher taxes on oil consumption and the use of cleaner energy sources[135].

Other measures with larger environmental impacts, such as incentives within the European cohesion policy, state aid for the protection of the environment and budget appropriations for environmental and energy research and development (R&D), have increased. In the financial period 2007–2013, EUR 1.6 billion was paid to beneficiaries by the end of 2015 from the state budget[136] within the Operational Programme for Environmental and Transport Infrastructure Development (OP ETID); the majority of these funds have been reimbursed by the EU.[137] The majority of payments were allocated to environmental protection projects and railway infrastructure. Under the new financial perspective, such projects will be allocated only EUR 1 billion. In the area of environmental protection, state aid is becoming increasingly important; in 2015, it amounted to EUR 190 million and was largely allocated to renewable energy sources (see Indicator 1.11). Government budget appropriations on R&D for environmental and energy purposes and the number of green patents[138] are also increasing, but they remain relatively low. The majority of first patent applications by Slovenian applicants with the EPO were filed in the area of energy-related climate change mitigation technologies. The Composite Eco-Innovation Index for 2015[139] shows that Slovenia performed below the EU average, mainly due to the low level of investments in green industries. The modest exploitation of the potential of the dynamic global market in environmental technologies[140] remains a considerable challenge for Slovenian R&D activity and sustainable economic growth.

Table 4: **Government budget appropriations for environment and energy as a percentage* of total government budget appropriations for R&D**

	2008	2009	2010	2011	2012	2013	2014	2015
Slovenia								
Environment	3.51	2.27	3.27	3.36	2.98	3.10	3.30	6.21
Energy	1.11	1.58	1.99	3.59	2.79	2.90	3.08	2.63
EU								
Environment	2.87	2.80	2.69	2.62	2.62	2.54	2.48	2.68
Energy	3.75	3.64	3.88	3.88	3.84	4.27	4.07	4.11

Source: Eurostat Portal Page – Science and Technology – Research and Development, 2017; SURS, 2016.
Note: *In accordance with the methodology of the Frascati Manual, this involves funds earmarked by the state for the implementation of R&D within the state and abroad, regardless of the implementing sector (OECD Frascati Manual, 2002).

4.2 Regional development

According to the basic indicators of economic development, such as GDP per capita and the unemployment rate, regional differences in Slovenia are relatively small. Although this is expected considering the size of the country, it is also the result of (i) the long-term policy of balanced regional development, (ii) the system of polycentric settlement development and (iii) a relatively high level of daily commuting, which enables income generation in more developed regions and spending in poorer regions. The increase in regional differences before the crisis was mainly due to the concentration of economic activity in the Osrednjeslovenska region, which generated more than a third of total GDP; during the crisis, the differences decreased due to the faster reduction in economic activity in more developed regions. Accordingly, in more developed regions, which are mainly in the western cohesion region, the registered unemployment rate increased, while remaining high in the eastern cohesion region (see Indicators 4.12 and 4.13).

The most developmentally disadvantaged regions are the regions of north-eastern Slovenia. According to the development risk index (DRI)[141], the Pomurska region is around four times more disadvantaged than the Osrednjeslovenska region, although the ratio between the regions at the extremes of the scale and the coefficient of variation have decreased in recent years. The development risk decreased most in the Podravska region, due to the lower registered unemployment rate for young people and the lower total registered unemployment rate and to the improvement in the

[135] Fricke, 2016 and the Framework Programme for the Transition to a Green Economy (Ministry of the Environment and Spatial Planning), 2015.

[136] Payments from the state budget for the implementation of the cohesion policy were possible by the end of 2015, with reimbursement in 2016.

[137] In the previous financial period, Slovenia performed very well, mainly due to simplified procedures and the introduction of "substitute projects".

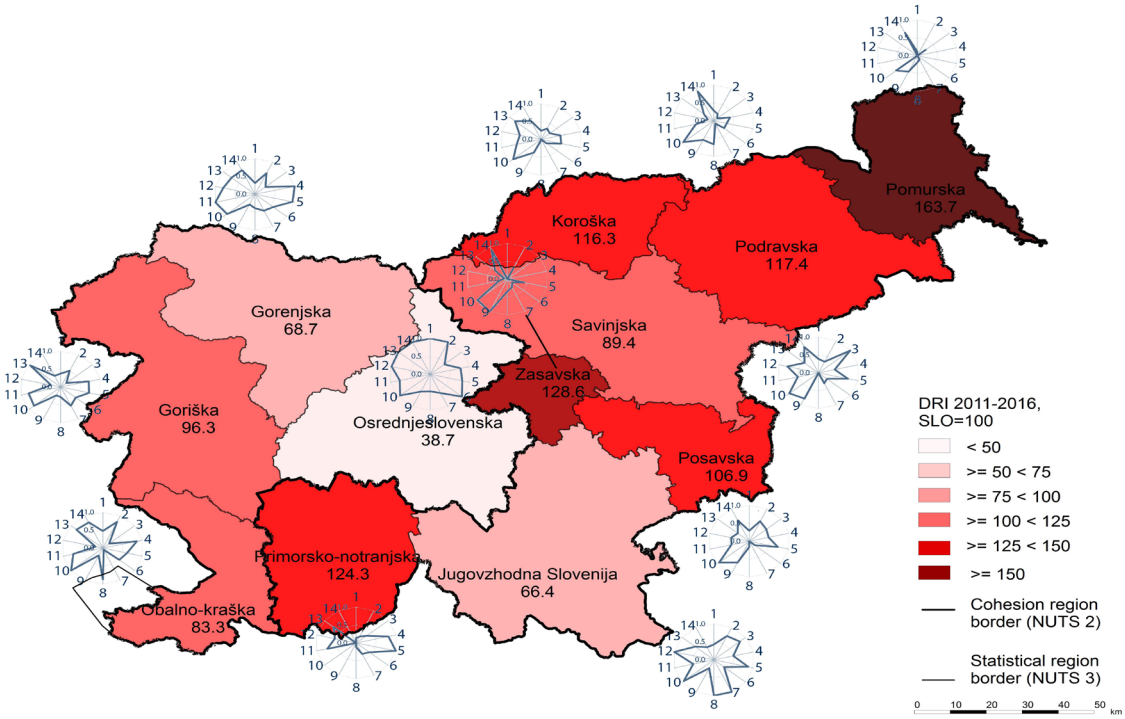
[138] In the period 2005–2013, the number of green patents increased from 4 to 58. Green patents, i.e. environment-related technology patents, include (i) environmental management (the reduction of air and water pollution, waste management, land restoration, and environmental control); (ii) water-related adaptation technologies; (iii) technologies to mitigate the consequences of climate change in the areas of energy, transport and buildings; and (iv) the capture, storage, sequestration or removal of greenhouse gases (Haščič and Migotto, 2015).

[139] Eco-Innovation Scoreboard, 2016.

[140] In the period 1980–2005, green patents based on environmental technologies represented approximately 5% (in 2015 10%) of all the innovations patented in the world (Haščič and Migotto, 2015).

[141] Since regional development depends on a number of factors, the aggregate indicator DRI has been developed for the purpose of monitoring regional development. It consists of 14 sub-indicators, which are specified below in Map 1.

Map 1: **Development risk index, 2012–2016 (DRI 2016)**



1 Gross domestic product per capita	6 % of population with tertiary education (aged 25–64)	11 Registered unemployment rate
2 Gross value added per employee	7 % of gross domestic expenditure on R&D in GDP	12 Ageing Index
3 % of gross fixed capital formation in GDP	8 % of at least secondary wastewater treatment	13 Disposable income per capita
4 Registered unemployment rate (aged 15–29)	9 % of protected area surface	14 Population density - km²/inhabitant
5 Employment rate (aged 20–64)	10 % of estimated damage caused by natural disasters in GDP	

Source: SURS, ARSO, URSZR, MGRT, DRI upravljanje investicij d.o.o.; calculated by IMAD.
Note: Diamond charts show standardised values of individual indicators that make up the DRI and range from 0 (worst value) to 1 (best value). According to the DRI, the Pomurska region is the worst with a number of indicators taking value 0, whereas in the Osrednjeslovenska region, which is the best, the indicators with value 1 prevail.

education structure of the population. In the past few years, this region was also less affected by natural disasters compared to the other regions. On the other hand, in the observed period, the Primorsko-Notranjska region became the most developmentally disadvantaged region, having suffered a deterioration in almost all of the included indicators.

In view of the above-average unemployment rate in certain areas, temporary endogenous regional policy measures have been introduced.[142] Due to high unemployment, the development-oriented intervention act for the Pomurje region[143] was adopted, this being followed by the introduction of temporary development support measures for the Pokolpje region, Maribor with its surroundings, and the municipalities of Hrastnik, Radeče and Trbovlje. In all these areas, measures are implemented on the basis of development programmes of limited duration.[144] They are based on the activation of the areas' own development potential and supported by targeted budgetary funds. The two main objectives of all these programmes are to reduce unemployment by maintaining the existing jobs and creating new ones and to increase the value added per employee. After the introduction of such measures, the registered unemployment rate continued to increase in all areas and began to decline after 2014. Since it also declined in other regions, this could be largely due to the general improvement of the economic situation. The measures implemented thus far resulted in around 1,300[145] jobs in the Pomurje region (planned 1,000) and around 250[146] jobs in the Pokolpje region (planned 400).

[142] The Promotion of Balanced Regional Development Act (the ZSRR-2) and the Decree on the implementation of endogenous regional policy measures lay down the conditions for the introduction of temporary measures in disadvantaged areas with a high employment rate (registered unemployment rate over 17%).

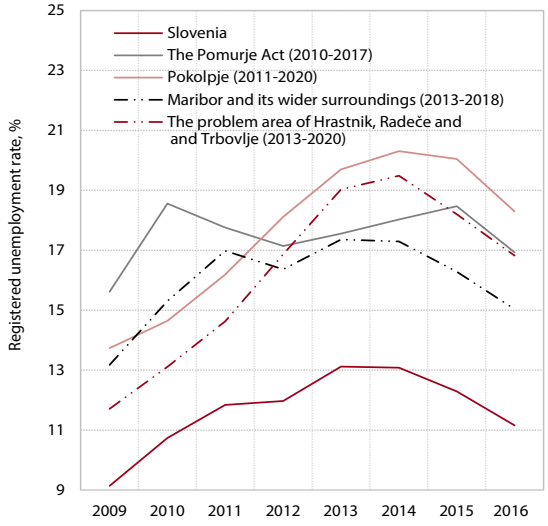
[143] The Development Support for the Pomurje Region 2010–2015 Act; the period has been extended to the end of 2017.

[144] The Pomurje region for the period 2010–2017, the Pokolpje region for the period 2011–2020, Maribor with its surroundings and the municipalities of Hrastnik, Radeče and Trbovlje for the period 2013–2018.

[145] All planned employment on the basis of an employment contract is included. Investors undertook to create new jobs in three to five years after the completion of the investment.

[146] The 5th annual report on the implementation of the Programme for Promoting Competitiveness and Development Support Measures in Pokolpje in the Period 2011–2016.

Figure 30: **Registered unemployment rate in areas in which development support measures were implemented, 2009–2016 (in %)**



Source: SURS; calculations by IMAD.

In areas in which temporary measures were implemented, the value added per employee increased, although the increase was also due to the general recovery of the economy. Both companies and sole traders recorded growth that was mostly above the Slovenian average, which was also due to the above-average reduction in the number of employees and the winding-down of failed companies in these areas. Better results were also attributed to European cohesion funds[147], which will also represent important development funds in the current programming period.[148] A more realistic assessment of the long-term effects of the measures of all development support programmes will be possible after their implementation is completed.

4.3 Sustainable spatial development

Spatial development is characterised by the concentration of the population in suburban areas, near major centres and along the motorway network. Slovenia has a relatively low level of urbanisation and is characterised by an irregular and dispersed settlement pattern[149], this due to (i) natural conditions, (ii) historical development, (iii) the planned promotion of the polycentric urban system, and (iv) the fact that living in the natural environment is highly valued. In recent years, suburban areas near major centres with good transport connections with regional and national centres have been strengthening demographically. There is an increasing spatial mismatch between housing and employment, however, and the construction of residential buildings along the motorway network enables swift access to job locations, educational centres and care. In municipalities along the motorway network, the size of the population is increasing due to both the natural increase and net migration of the population. The number of daily commuters is also increasing and an increasing number of people are subjected to environmental pollution and excessive noise due to an increased volume of personal passenger transport.

Spatial trends do not correspond with the Spatial Development Strategy of Slovenia's (SSDS)[150] objective of urban concentration. Suburbanisation has an impact on the demographic stagnation of urban centres, where the population is ageing at an increasing pace. Areas which do not have good transport connections, which are less successful in economic terms and in which there are not enough jobs for the younger and, as a rule, more educated population are characterised by the ageing of the population and a decrease in population density. Such areas have a larger share of deserted buildings and unoccupied apartments and the land is overgrown due to the abandonment of farming. The supply of services of general and general economic interest, such as healthcare, social security and public passenger transport services, is problematic. The expected demographic changes will further strengthen the current spatial trends; in areas where the number of inhabitants is declining, pressures might further increase as a result of the reduction of activities of general and general economic interest.

The residential real estate market, which is an important segment of spatial development, is reviving, while the outlook for the rental housing market remains modest. The present and expected revival of the real estate market, the still low level of construction of new residential properties[151] and demographic changes could lead to a shortage of appropriate dwellings in the coming years. The inappropriate structure of residential property stock could be partly improved by the activation of unoccupied dwellings, the energy and functional renovation of older housing, and the construction of public and private rental apartments, which are the main objectives of the adopted resolution.[152] The first activities

[147] By the end of 2015, EUR 4.3 billion was paid to beneficiaries from the state budget, with the majority of the funds being paid to the Pomurje region (around EUR 4,000 per inhabitant).

[148] According to the European Commission, in the largest recipients, cohesion funds contribute between four and six percentage points to GDP growth. 1 euro of Cohesion Policy investment in the period 2007–2013 will generate EUR 2.7 of additional GDP by 2023 (Ex-Post Evaluation of the ERDF and Cohesion Fund 2007–2013 (EC), 2016).

[149] In Slovenia, only around half of the population lives in urban areas, compared to the EU average of around three quarters.

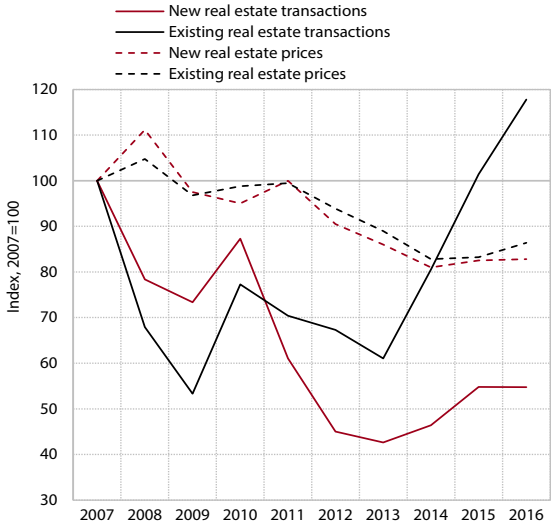
[150] The currently applicable SSDS of 2004.

[151] The number of dwelling constructions begun in 2014 was the lowest since Slovenia's independence and was 75% lower than in 2007. In 2015, it slightly increased due to construction by individuals; building permits issued indicate further increase in 2016.

[152] Resolution on the National Housing Programme 2015–2025, 2015. The Resolution also provides for further use of the financial

relating to its implementation began in 2016 in the form of a project that will define the method and criteria for recognising areas that have potential for settlement[153] and in which the construction of public rental housing would be financed.

Figure 31: **Transactions and prices of new and existing residential real estate properties, Slovenia**



Source: SURS, 2017; calculated by IMAD.

Lengthy procedures for obtaining building permits and documentation required for the commencement of construction activities remain an important obstacle to the ease of doing business in Slovenia despite certain improvements in this area. In recent years, several measures have been taken with regard to registering real estate and obtaining building permits which have had a favourable impact on the ease of doing business..[154] However, due to the lengthy coordination with other stakeholders, procedures for obtaining building permits are still relatively long, a quarter longer than on average in the EU.[155] There are difficulties in ensuring compliance with spatial planning documents, the drafting of which is the responsibility of local communities, and in obtaining consent, which is a prerequisite for the issue of building permits. Lengthy coordination with the stakeholders is also the reason for the relatively long registering of real estate by companies, as these procedures take half more time than on average in the EU.[156]

The unsuccessful mutual coordination of sectoral policies calls for changes in the legislative and strategical area of spatial planning. In addressing the conflicts of interests of various planning authorities, which are always present when it comes to land development, particular sectors often predominate. This in turn leads to harmful and economically unjustified developments without proper regard to long-term development goals. The proposed new laws[157] envisage, among other things, the reintegration of regional development and spatial planning. The activities to date relating to the revision of the new Spatial Development Strategy of Slovenia, which is coming to an end, have been based on four key themes: (i) functional urban areas, (ii) spatial possibilities for a low-carbon economy, (iii) rural areas and green infrastructure, and (iv) mountain and border areas. Their spatial orientations and possible measures have been defined as part of this process. In 2016, municipalities adopted sustainable urban strategies that will provide the basis for urban development funded by the European Regional Development Fund. Projects such as eProstor (eSpace), eGraditev (eBuilding) and ePlan have led to a gradual improvement in the computerisation of spatial data and the development of land policy instruments. This will improve the quality of spatial data, which are crucial to informed decision-making, management and monitoring of the planned spatial development.

instruments of the Eco Fund, in particular favourable loans and subsidies for investment in enhancing the energy efficiency of buildings. The Action Plan for the implementation of the Resolution by 2025 provides for a reduction in the number of unoccupied dwellings equipped with basic infrastructure, from 90 thousand to 40 thousand. The proportion of rental housing is projected to rise from 9% in 2011 to 16% in 2025 (in 2013 the EU average was 30%).

[153] The project "Defining and determining priority areas for housing purposes" – PROSO.

[154] The establishment of a real estate register, the computerisation of the Land Register, and abolition of the requirement for project conditions from water and sewage service providers, etc. The measures have improved Slovenia's ranking in international comparison (World Bank, Doing Business 2017, 2016).

[155] In Slovenia 225 days (the EU average is 168 days). According to the data from administrative statistics, in 2015 the time required to produce a complete application was 21 days, which is within the statutory time limit of up to 60 days (see the Construction Act, 2014, and the General Administrative Procedure Act, 2013).

[156] In Slovenia 49 days (the EU average was 24 days). This also includes the time required for obtaining the necessary certificates from various public records.

[157] New laws – the Spatial Management Act, the Building Act and the Certified Architects and Engineers Act – were drawn up in 2016.

Appendix: Indicators of Slovenia's development

1 Macroeconomic framework

Macroeconomic stability and economic growth

- 1.1 Real GDP growth
- 1.2 Inflation
- 1.3 Current account of the balance of payments
- 1.4 Gross external debt
- 1.5 Net international investment position

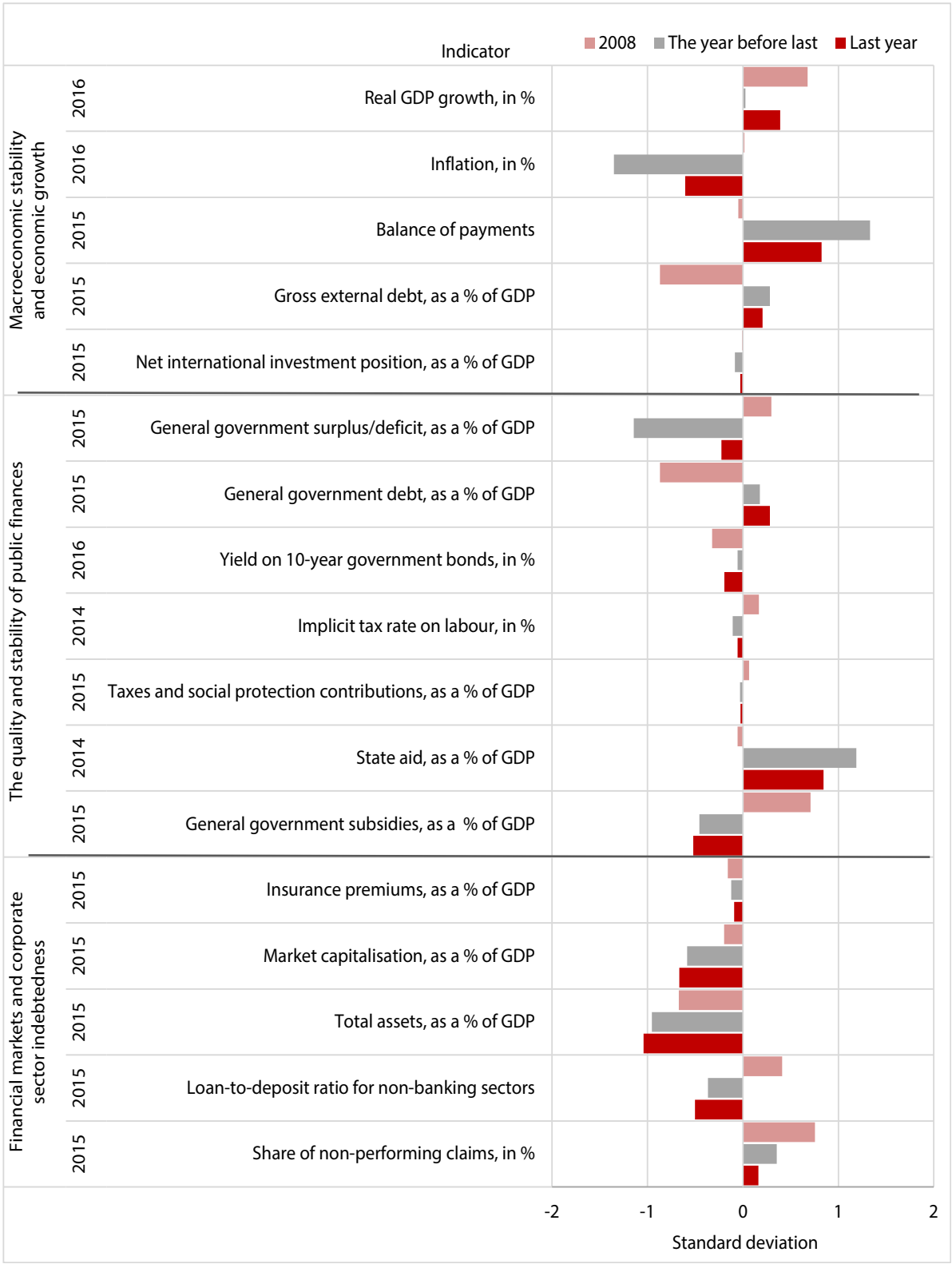
The stability and quality of public finances

- 1.6 General government balance
- 1.7 General government debt
- 1.8 Yield on 10-year government bonds
- 1.9 Taxes and social security contributions
- 1.10 The tax burden by economic function
- 1.11. State aid

Financial markets and corporate sector indebtedness

- 1.12 Financial sector development
- 1.13 Loan-to-deposit ratio
- 1.14 Non-performing claims
- 1.15 Indebtedness of the corporate sector

Overview of indicators – Macroeconomic framework



Source: Calculations by IMAD. Note: The table shows Slovenia's position relative to the unweighted arithmetic average of the EU Member States. It was calculated with regard to the set of countries for which data for individual indicators were available; Cyprus, Malta, Luxembourg and Croatia were excluded from the analysis due to a lack of data. The data in the table are for 2008 and the last year for which data for EU Member States were available (the last year is indicated in the table). A positive indicator value means above-average development relative to the EU, while a negative value indicates that Slovenia lags behind the EU average on that indicator.

1.1 Real GDP growth

GDP has been rising since 2014; besides exports, domestic consumption is becoming a more and more important driver of growth. In 2016 GDP increased by 2.5%. Exports remained the main factor of economic growth. Their growth, boosted by rising foreign demand and the competitiveness gains from previous years, increased slightly further. Domestic consumption also continued to rise, its growth being to a much greater extent than in previous years underpinned by private consumption. Stronger growth in employment and earnings and very favourable consumer confidence indicators were reflected in increased purchases of durable goods, which had decreased the most during the crisis; moreover, purchases of other goods and services, the main component of private consumption, also rose more visibly for the first time in several years. With the relaxation of certain austerity measures, government consumption was also up again. Domestic consumption also continued to expand, its growth being even more than in previous years due to private investment in machinery and equipment, which has otherwise been rising since 2014. Its growth has been mainly related to high capacity utilisation, good business performance and lower corporate indebtedness. Only public investment, which had been significantly higher in 2014 and 2015, thus deviated from the favourable movements in 2016, its contraction being attributable to the very modest absorption of EU funds upon the transition to the new financial perspective.

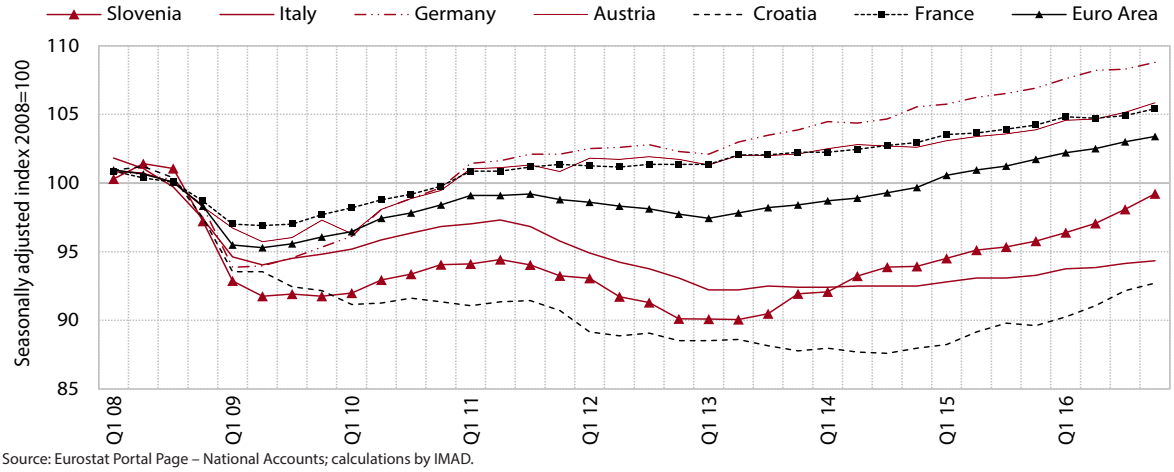
In 2016 economic growth continued across the entire EU (1.9%). It was again mainly due to the strengthening of private consumption. Government and investment consumption also picked up. Although its GDP growth exceeded the EU average in the three years to 2016, Slovenia has remained in the smaller group of EU Member States where GDP is still lower than before the crisis.

Table: **Contribution of expenditure components to GDP change, Slovenia**

	2005	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Real GDP growth, in %	4.0	6.9	3.3	-7.8	1.2	0.6	-2.7	-1.1	3.1	2.3	2.5
Contribution to GDP growth, in pps											
External trade balance (exports–imports of goods and services)	2.1	-2.0	0.2	1.9	2.0	1.3	3.0	0.8	1.4	1.1	0.3
- Exports of goods and services	6.2	8.8	2.8	-11.0	5.8	4.4	0.4	2.2	4.3	4.2	4.6
- Imports of goods and services	4.1	10.9	2.7	-12.8	3.8	3.1	-2.5	1.4	2.9	3.2	4.3
Total domestic consumption	1.9	9.0	3.1	-9.7	-0.8	-0.6	-5.6	-1.9	1.7	1.3	2.2
- Private consumption	1.2	3.3	1.2	0.5	0.7	0.0	-1.4	-2.3	1.1	0.2	1.5
- Government consumption	0.5	0.4	0.9	0.4	-0.1	-0.1	-0.5	-0.4	-0.2	0.5	0.5
- Gross fixed capital formation	0.9	3.3	2.0	-6.5	-3.2	-1.1	-1.8	0.6	0.3	0.2	-0.6
- Changes in inventories	-0.7	2.0	-1.0	-4.0	1.9	0.6	-2.0	0.2	0.6	0.4	0.8

Source: SURS.

Figure: **GDP in Slovenia and its main trading partners**



Source: Eurostat Portal Page – National Accounts; calculations by IMAD.

1.2 Inflation

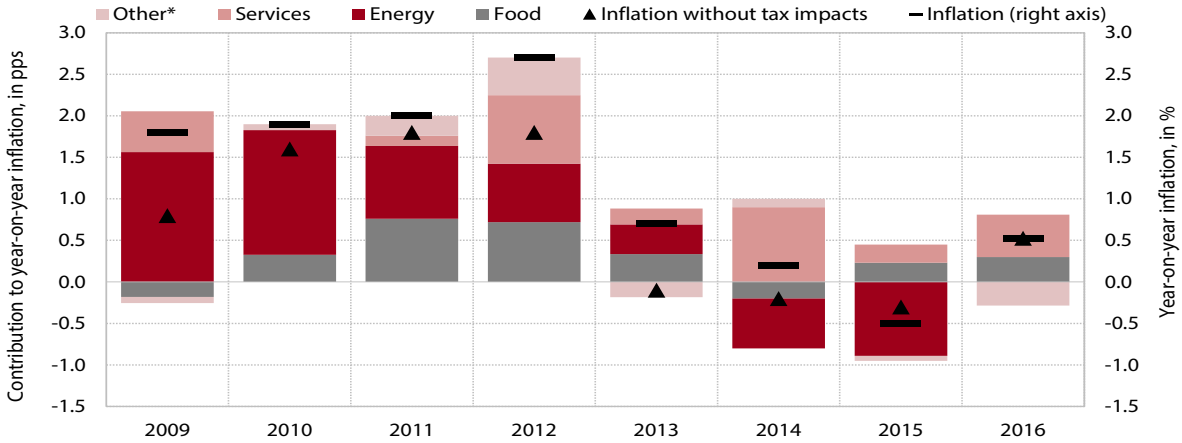
After declining for several years, consumer prices rose at end of 2016, mainly owing to supply-side factors but partly also to a further rise in demand. Among the supply-side factors, the growth of oil and commodity prices on global markets caused energy prices to decline for the first time in two years and thus contributed to further rises in the prices of unprocessed food. The strengthening of demand is estimated to have mainly influenced the rise in service prices, which, one-off factors excluded,[1] strengthened further in 2016. This indicates that increased demand makes it possible for some segments of the non-tradable sector to raise prices. Price rises were mainly recorded for leisure-related services, but also for services related to housing maintenance, utility services, financial services and postal services. Increased domestic demand is not yet reflected, on the other hand, in the prices of durable and semi-durable goods. The prices of durables fell again, while the prices of semi-durables were also lower in 2016 after two years of modest growth. Price developments in this segment are mainly related to companies in the tradable sector trying to maintain competitiveness, which continues to hold back a more visible price growth.

Table: **Annual price growth in Slovenia (year end, in %)**

	Growth, in %											
	2000	**2005**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Food	5.9	0.6	14	3.9	-1.2	1.9	4.9	4.8	2.3	-1.1	1.6	1.6
Processed food	8.8	-1.4	16.0	7.2	-0.4	-0.1	7.8	1.2	2.3	-0.7	0.8	0.4
Unprocessed food	3.6	3.3	11.3	0.0	-2.0	4.8	1.4	9.2	2.1	-1.4	2.4	3.1
Energy	24.9	10.1	9.8	-7.2	14.6	12.3	6.9	5.3	2.7	-4.1	-6.7	-0.2
Services	9.24	3.0	4.9	3.8	1.6	0.0	0.4	2.6	0.6	2.9	0.7	1.7
Other*	5.8	0.0	1.7	3.0	-0.2	0.2	0.5	1.2	-0.5	0.3	-0.3	-0.5
Tax impact (contribution in pps)**	0.6	-0.3	-0.2	0.2	1.0	0.3	0.2	0.9	0.8	0.4	-0.2	0.0
Administered prices	16.0	7.7	7.2	-7.8	12.6	11.5	7.1	4.6	-0.1	-2.6	-9.8	0.6
Inflation*** excluding energy and unprocessed food	7.2	1.0	4.5	3.7	0.5	0.1	1.3	1.7	0.2	1.0	0.3	0.4
Inflation* **	**8.9**	**2.3**	**5.6**	**2.1**	**1.8**	**1.9**	**2.0**	**2.7**	**0.7**	**0.2**	**-0.5**	**0.5**
Average inflation**	**8.9**	**2.5**	**3.7**	**5.6**	**0.8**	**1.8**	**1.8**	**2.6**	**1.8**	**0.2**	**-0.5**	**-0.1**
EU – HICP	**2.2**	**2.1**	**3.2**	**2.2**	**1.5**	**2.7**	**3.0**	**2.3**	**1.0**	**-0.1**	**0.2**	**1.1**

Sources: SURS, Ministry of Economic Development and Technology, Eurostat; calculations by IMAD.
Notes: * Clothing, footwear, furniture, passenger cars, alcoholic beverages, tobacco, etc.; ** The tax impact is calculated as the difference between the rates of inflation under the impact of tax changes and inflation if the tax rates had been kept constant; *** Measured by the CPI.

Figure: **Contributions to year-on-year growth in consumer prices in Slovenia**



Source: SURS; calculations by IMAD. Note: * Clothing, footwear, furniture, passenger cars, alcoholic beverages, tobacco, etc. ** The tax impact is calculated as the difference between the rates of inflation under the impact of tax changes and inflation if the tax rates had been kept constant.

[1] Fiscal consolidation measures, which had the greatest effect on inflation in 2012–2014.

1.3 Current account of the balance of payments

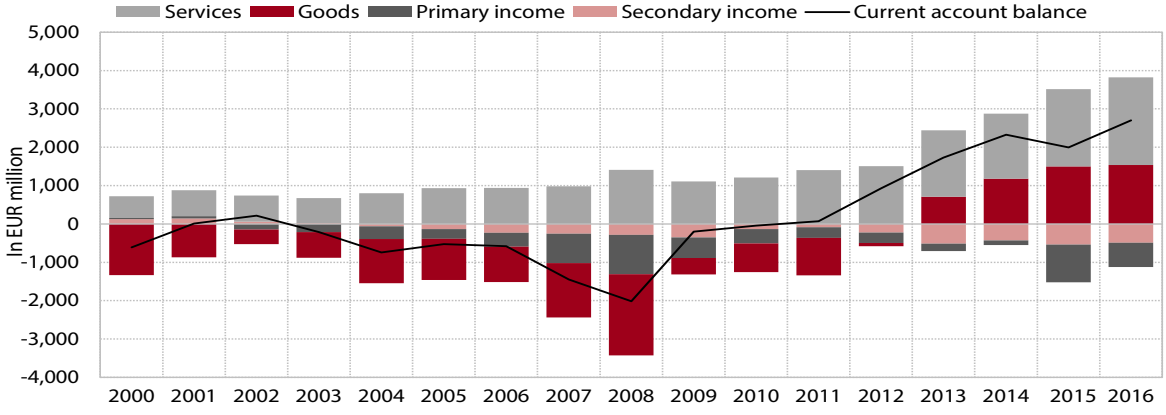
The surplus on the current account of the balance of payments in 2016 was the highest thus far. It totalled EUR 2,698 million (6.8% of GDP).[1] The current account balance has been positive since 2011. This mainly reflects the deleveraging and net saving of the private sector and the still relatively low level of corporate investment amid favourable export trends and the strengthening of tradable-sector competitiveness. The faster growth of exports of goods and services contributed 8.7 pps to the total surplus growth in the period since 2011 (EUR 2.6 billion). Particularly in 2013–2016, the surplus in trade in goods also rose sharply as a result of the positive terms of trade, which – owing to the fall in energy and other commodity prices – contributed a total of EUR 0.8 billion (around 55%) to the change in this period. The *deficit in primary income* has been gradually narrowing since 2009, with the exception of 2015,[2] the main reason being higher net income from labour (larger inflows of revenue from abroad and smaller outflows abroad). On the other hand, net payments of interest on external debt have exceeded the pre-crisis level since 2014, particularly on account of government borrowing. Specifically, the private sector has recorded net interest receipts from the rest of the world since 2015, owing to the deleveraging of commercial banks and higher domestic investment in foreign securities. The *deficit in the balance of secondary income* has remained roughly unchanged since 2013.

Table: **Current account of the balance of payments and terms of trade, Slovenia**

	2000	2005	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Current account, as % of GDP	-2.8	-1.8	-4.1	-5.3	-0.6	-0.1	0.2	2.6	4.8	6.2	5.2	6.8
Goods	-6.0	-3.7	-4.0	-5.6	-1.2	-2.1	-2.6	-0.2	2.0	3.2	3.9	3.9
Services	2.6	3.2	2.8	3.7	3.1	3.3	3.8	4.2	4.8	4.5	5.2	5.7
Primary income	0.1	-0.9	-2.2	-2.7	-1.5	-1.0	-0.8	-0.8	-0.5	-0.3	-2.5	-1.6
Secondary income	0.6	-0.5	-0.7	-0.8	-1.0	-0.4	-0.2	-0.6	-1.4	-1.1	-1.4	-1.2
Terms of trade, chain index												
Total	96.9	97.9	100.9	98.7	103.5	96.0	98.6	98.9	100.8	101.0	101.3	100.8
Goods	96.2	97.5	100.6	98.2	104.1	95.2	98.4	98.7	100.8	101.1	101.3	100.8
Services	101.9	99.7	102.6	100.5	99.1	100.3	100.3	100.0	100.3	99.9	100.5	99.9

Sources: SI-STAT Data Portal – National Accounts, 2016; Bulletin of the Bank of Slovenia, 2016; calculations by IMAD.

Figure: **Components of the current account of the balance of payments**



Source: BoS; calculations by IMAD.

[1] In 2016 the current account surplus was at the indicative threshold of the EU indicator of external imbalance (the current account balance expressed as a % of GDP – a three-year average +6%/-4%).
[2] In 2015 reinvested earnings of foreign investors rose significantly. After recording negative reinvested earnings for six years, firms with FDI saw record profits in 2015, which on the current account shows as an increase in expenditure from primary income.

1.4 Gross external debt

Slovenia's gross external debt increased by EUR 2.9 billion to EUR 43.3 billion from the onset of the crisis to the end of 2016; in the debt structure, the share of government debt rose strongly. From 2008 to the end of 2016, the gross external debt of the *government sector* rose by EUR 17.8 billion to EUR 21.6 billion. This was a consequence of the increase in long-term government debt (particularly in 2014), mainly in order to finance fiscal deficits and measures to bail out domestic banks.[1] In 2015 and 2016 total gross external debt contracted as a consequence of more moderate growth in government debt amid further commercial bank deleveraging abroad. In 2008–2016 the banks' gross external debt declined by EUR 13.8 billion to EUR 4.1 billion, mostly owing to loan repayments, coupled with the withdrawal of non-resident deposits from Slovenian banks. Debt dynamics were also influenced by the Bank of Slovenia, which in 2012 provided additional liquidity for domestic commercial banks through longer-term refinancing operations and thus increased its liabilities within the Eurosystem significantly before reducing them in the following years. The gross external debt of *other sectors* (mainly non-financial corporations – enterprises) declined after 2008, with enterprises mainly repaying long-term loans abroad. *Intercompany financing* of affiliated enterprises has strengthened. Most of this relates to debt of Slovenian affiliates to their parent companies abroad.[2]

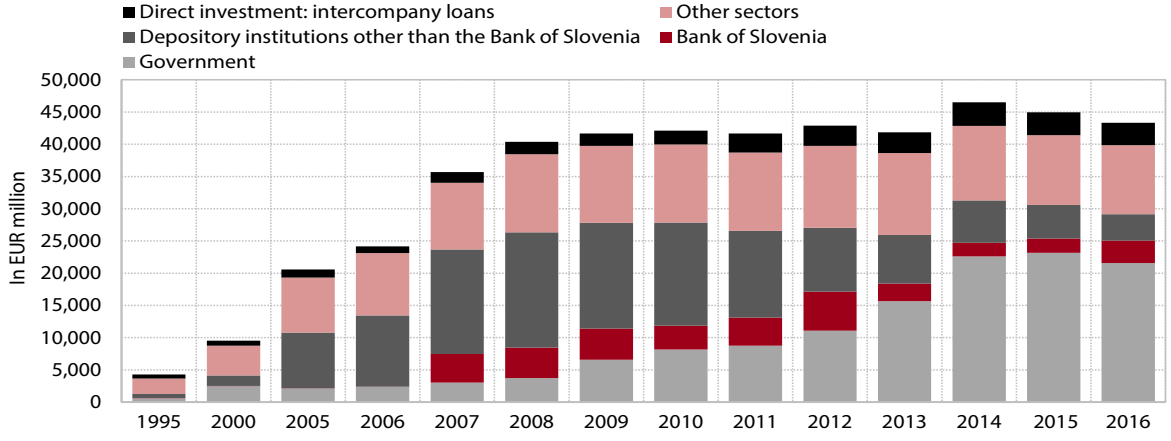
In the structure of debt with regard to guarantees, public debt rose by EUR 17.8 billion to EUR 21.6 billion from the beginning of the crisis to the end of 2016. *Private non-guaranteed debt* more than halved during this period, while *publicly guaranteed debt* rose slightly.[3] At the end of 2016 public debt accounted for almost half of total gross external debt (49.8%, an increase of 40.6 pps over 2008).

Table: **Slovenia's gross external debt position, end year, in EUR million**

	2000	2005	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Total gross external debt	9,526	20,579	35,678	40,388	41,667	42,123	41,669	42,872	41,866	46,514	44,954	43,334
Short-term debt	1,881	3,625	9,973	10,900	10,683	9,592	9,591	11,752	7,506	7,183	8,125	9,489
Public and publicly guaranteed debt	0	194	4,397	4,685	4,625	3,454	4,185	6,011	2,573	2,488	3,450	4,531
Non-guaranteed private debt	1,881	3,431	5,576	6,215	6,058	6,138	5,406	5,741	4,933	4,695	4,675	4,958
Long-term debt	6,892	15,693	24,051	27,560	29,083	30,380	29,123	27,999	31,121	35,679	33,294	30,372
Public and publicly guaranteed debt	2,919	12,970	4,535	5,533	10,672	14,465	14,352	15,881	20,679	27,034	26,376	24,493
Non-guaranteed private debt	3,973	2,723	19,516	22,027	18,411	15,915	14,771	12,118	10,442	8,645	6,918	5,879
Liabilities to affiliates	752	1,261	1,652	1,929	1,901	2,152	2,955	3,120	3,240	3,651	3,536	3,473
Public and publicly guaranteed debt	0	0	0	0	0	0	0	0	0	0	0	0
Non-guaranteed private debt	752	1,261	1,652	1,929	1,901	2,152	2,955	3,120	3,240	3,651	3,536	3,473

Source: Bulletin of the Bank of Slovenia, 2016.

Figure: **Structure of Slovenia's gross external debt by sector**



Source: Bulletin of the Bank of Slovenia, 2017; calculations by IMAD.

[1] To a lesser extent also as a hedge against the foreign exchange risk of issued bonds (EUR 0.8 billion).
[2] According to the new methodology (BPM6), debt instruments are classified according to the type of capital affiliation: i) liabilities of a Slovenian enterprise to a foreign direct investor; ii) liabilities of a Slovenian investor to foreign direct investment enterprises; and iii) liabilities of resident fellow enterprises to fellow enterprises abroad.
[3] Publicly guaranteed debt is a liability of a private legal entity, the repayment of which is guaranteed by the state. Publicly guaranteed debt also includes Bank of Slovenia liabilities to the Eurosystem incurred by the transfer of monetary policy from the Bank of Slovenia to the ECB.

1.5 Net international investment position

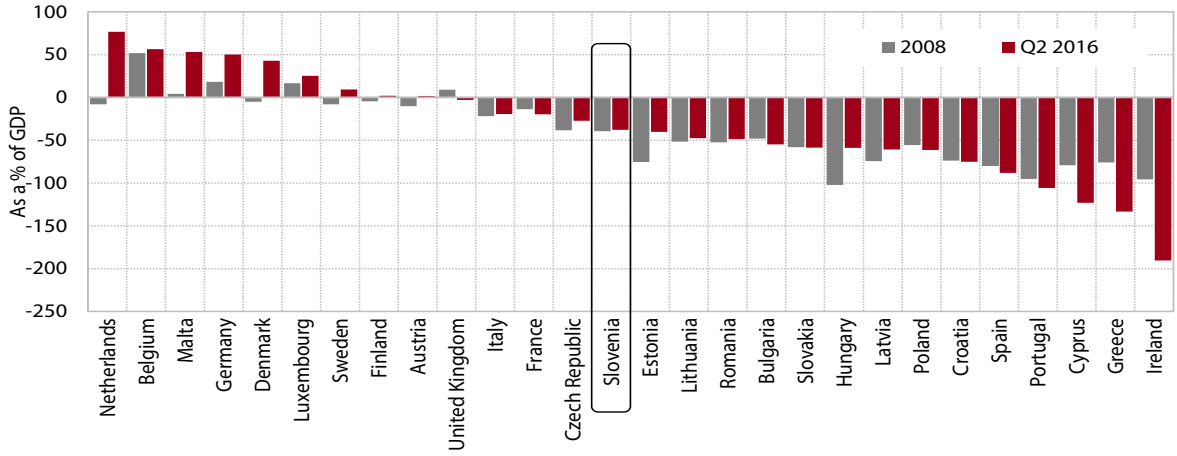
After deteriorating strongly following the crisis, Slovenia's net financial position vis-à-vis the rest of the world has been improving steadily since 2013 and is approaching 35% of GDP. At the end of 2016 Slovenia's net international position was negative, at minus 13.7 billion or 34.5% of GDP (in 2008: 39.4% of GDP). The improvement relative to the pre-crisis year reflected an increase in financial assets held abroad (by EUR 7.5 billion) amid an otherwise smaller rise in external liabilities (by EUR 6.3 billion). The debt-to-GDP ratio was also favourably affected by the higher nominal GDP. The increase in *total claims* was largely due to investment in securities. The largest increases in the stock of assets from securities were recorded in other financial corporations, insurance companies and pension funds, which was related to the higher yields on foreign financial markets. The expansion of total assets was also due to the actions of Bank of Slovenia, which was buying foreign debt securities in the euro area in accordance with the public sector purchase programme (PSPP). The volume of other investment also rose, mostly under the impact of a significant increase in assets from currency and deposits in 2015. Up to 2016 the Government had been transferring its assets to bank accounts abroad and receiving positive returns on term deposits of over six months, while in 2016 it started to withdraw deposits from foreign accounts and deposit them with the BoS. The stock of Slovenian outward FDI and financial derivatives remained approximately the same. The increase in *total external liabilities* relative to the pre-crisis year was mainly due to growth in liabilities from foreign investment in securities and foreign direct investment in Slovenia. This rose owing to the inflow of equity capital and liabilities of Slovenian affiliates to parent companies abroad. Liabilities to foreign portfolio investors increased significantly with the issue of long-term government bonds. At the end of 2016, liabilities from other investment, on the other hand, were significantly below the level from 2008, primarily owing to further commercial bank deleveraging, the outflow of non-resident deposits from Slovenian banks and a decline in liabilities within the Eurosystem. Slovenia is significantly below the level of the most indebted countries in the euro area. In 2016 it was slightly below the indicative threshold of the EU indicator of international investment position (35% of GDP).[1]

Table: **Slovenia's international investment position, as a % of GDP**

	2000	2005	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
1 Debt claims	39.4	67.3	77.3	71.9	74.5	72.3	72.0	73.1	73.0	85.1	85.4	83.6
2 Equity claims	2.4	12.5	22.1	17.3	20.2	20.6	19.1	20.1	20.0	20.6	21.0	20.4
3 Total claims (1+2)	**41.8**	**79.8**	**99.4**	**89.2**	**94.8**	**92.9**	**91.0**	**93.2**	**93.0**	**105.6**	**106.4**	**104.0**
4 Gross external debt	43.1	70.4	101.5	106.4	115.2	116.2	112.9	119.1	116.6	124.6	116.6	109.0
5 Equity liabilities	10.4	20.2	23.4	22.1	23.2	23.8	23.3	24.0	23.0	25.2	28.5	29.6
6 Total liabilities (4+5)	**53.5**	**90.6**	**124.9**	**128.5**	**138.4**	**140.0**	**136.2**	**143.1**	**139.6**	**149.8**	**145.1**	**138.6**
7 Net external debt/claims (1–4)	-3.7	-3.1	-24.2	-34.5	-40.7	-43.9	-41.0	-46.0	-43.6	-39.5	-31.2	-25.4
8 Net equity debt/claims (2–5)	-8.0	-7.7	-1.3	-4.8	-2.9	-3.2	-4.2	-3.9	-3.1	-4.7	-7.5	-9.2
9 Net financial position (7+8)*	**-11.7**	**-10.8**	**-25.5**	**-39.4**	**-43.6**	**-47.2**	**-45.2**	**-49.9**	**-46.6**	**-44.2**	**-38.7**	**-34.5**

Sources: BoS; own calculations. Note: * A negative (positive) sign in the balance concerned indicates a net debt (credit) external financial position.

Figure: **Net financial position in EU Member States, as a % of GDP**



Source: Eurostat.

[1] At the end of 2016 Greece recorded a negative net international investment position of 133.3% of GDP, Ireland 190.0%, Portugal 105.6%, Spain 88.1% and Cyprus 123.0%.

1.6 General government balance

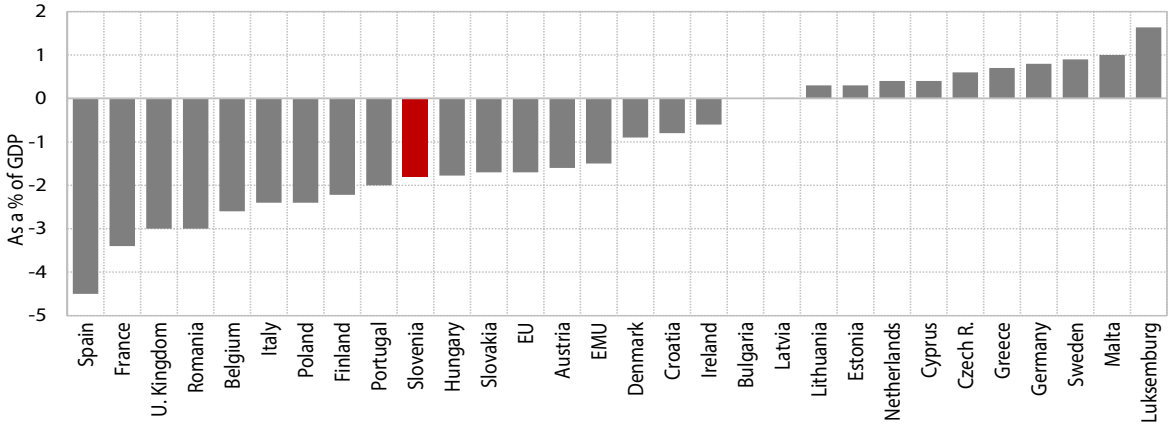
The general government deficit has been declining in the last few years; in 2016 it amounted to 1.8% of GDP. The decline has been taking place under the impact of the improvement in macroeconomic conditions, which since 2014 has been reflected in the strengthening of tax revenues and revenues from social contributions; the growth of these revenues was also influenced by the adopted permanent measures. In 2016 the Government stepped up activities for more efficient tax collection (tax registers). The main measures that contributed to the increase in tax revenues in 2015 were increases in the rates of the tax on financial and insurance services and the CO_2 tax. VAT rates, which had been raised in 2013, and the fourth income bracket remained in place in 2015; the Government also broadened the base for social contributions (student work). In 2014 and 2015 fiscal consolidation on the expenditure side was mainly supported by temporary measures, which affected wage policy, employment of public servants, social benefits and transfers, but with the relaxation of these measures in 2016,[1] the deficit decline was to a larger extent than in previous years achieved by the reduction of flexible categories of expenditure. Particularly investment (i.e. its co-financing with EU funds) dropped as a result of the lower receipts from the EU funds upon the transition to the 2014–2020 financial perspective. The growth of intermediate consumption was also slower, stemming mainly from higher expenditure in public institutes in the health sector. Capital transfers related to the BAMC were also significantly lower in 2016. A comparison of expenditure levels in 2016 relative to 2008 shows the largest increases for expenditure on social benefits (pensions), interest payments and compensation of employees and the largest declines for investment and general government subsidies. The impact of one-off factors, similarly to 2015, was negligible in 2016.

Table: **General government revenue, expenditure and balance (ESA 2010), Slovenia, as a % of GDP**

	2008	2009	2010	2011	2012	2013	2014	2015	2016
Revenue	**42.5**	**42.3**	**43.6**	**43.3**	**44.5**	**45.2**	**44.7**	**45.2**	**43.6**
Expenditure	43.9	48.2	49.3	50.0	48.6	60.3	50.1	48.1	45.5
General government deficit	-1.4	-5.9	-5.6	-6.7	-4.1	-15.1	-5.4	-2.9	-1.8
Primary balance	-0.3	-4.6	-4.0	-4.8	-2.1	-12.5	-2.1	0.4	1.4

Source: SI-STAT Data Portal – National Accounts – General Government Accounts – Main Aggregates of the General Government, April 2017.

Figure: **General government balance in EU Member States, 2016**



Source: Eurostat Portal Page – Economy and Finance – Government Statistics, April 2016.

[1] A partial removal of austerity measures that had contained expenditure since 2012: in 2016 child benefits in the 5th and 6th income brackets, social assistance in cash, the eligibility criteria for state scholarships, care supplements to pensions, and subsidies for school meals were all raised. Two extraordinary adjustments of pensions were carried out. Some restrictions on hiring in the public sector were abolished (e.g. the requirement to reduce the number of employees by 1% and the need to seek permission for hiring) and the pay scale was restored.

1.7 General government debt

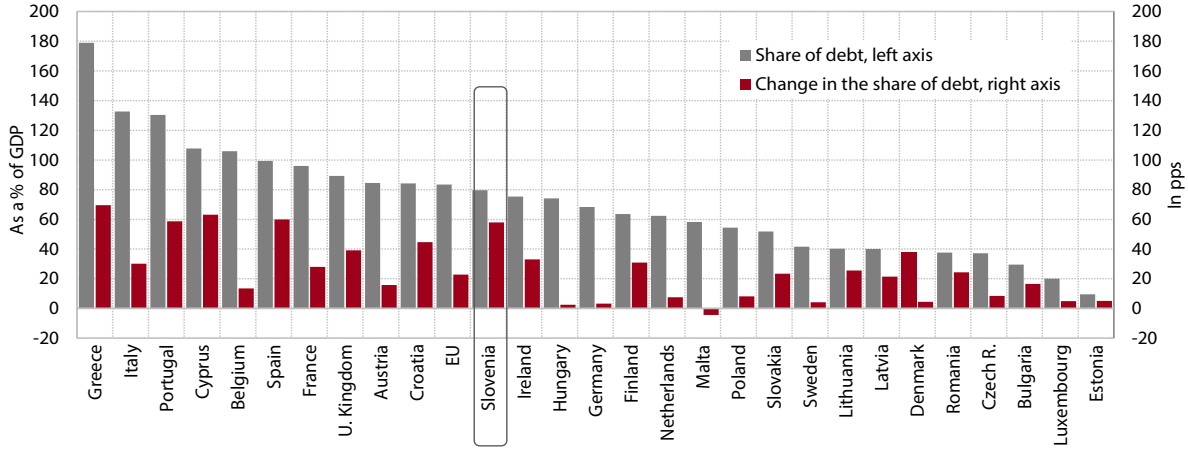
In 2016 general government debt (as a % of GDP) declined significantly; with the active debt-management policy, its maturity continues to lengthen and the implicit interest rate to decline. The reduction of debt stopped the upward trend seen since mid-2008. In 2016 the debt-to-GDP ratio decreased by 3.4 percentage points (to 79.7% of GDP at the end of 2016), which is also a consequence of a nominal debt decline. According to the level of debt, Slovenia ranks in the middle of EU Member States, but it is still among those in which debt has increased the most in comparison with the pre-crisis figures. In 2016 the Government increased the existing debt issues and issued new long-term bonds in the total amount of just below EUR 4.8 billion. The bulk of the new debt issued in 2016 was allocated for repayments of the matured principal (around EUR 3.6 billion) and – in the favourable borrowing conditions on international financial markets – the swapping of the bonds issued in 2012–2014 with the required yield of over 5% for long-term bonds with better conditions (including the two bonds maturing in 2035 and 2040, respectively, in the total amount of EUR 2.0 billion with the average interest rate of only just above 1.5%). The high liquidity of the money market was also reflected in the extremely low required yield on short-term debt instruments, which has been at less than 0% since February 2016.[1] The implicit interest rate of the total debt thus declined by 0.1 of a percentage point in 2016 (to 3.7%). The predominant portion of debt remains at the central government level (98% of total debt).

Table: **Consolidated general government debt by sub-sector, Slovenia**

	2008	2009	2010	2011	2012	2013	2014	2015	2016
In EUR bn									
General government, total	**8.3**	**12.5**	**13.9**	**17.2**	**19.4**	**25.5**	**30.2**	**32.1**	**31.7**
Central government	8.2	12.2	13.4	16.6	18.8	25.0	29.6	31.5	31.1
Local government	0.4	0.5	0.6	0.7	0.7	0.7	0.8	0.8	0.8
Social security funds	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0
Consolidated debt between sub-sectors	-0.3	-0.2	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2
As a % of GDP									
General government, total	**21.8**	**34.6**	**38.4**	**46.6**	**53.9**	**71.0**	**80.9**	**83.1**	**79.7**
Central government	21.6	33.7	36.9	45.0	52.3	69.5	79.3	81.6	78.3
Local government	0.9	1.4	1.7	1.9	2.0	2.0	2.1	2.0	1.9
Social security funds	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0
Consolidated debt between sub-sectors	-0.7	-0.5	-0.4	-0.4	-0.5	-0.5	-0.5	-0.5	-0.5

Source: SI-STAT Data Portal – National Accounts – General Government Accounts – General Government Debt, March 2017.
Note: Some calculations and sums do not match due to rounding.

Figure: **Consolidated general government debt in EU Member States in 2016 and the change of debt relative to 2008**



Source: Eurostat Portal Page - Economy and Finance – Government Statistics, April 2016.

[1] The short-term debt in the form of securities totals around 1% (including short-term loans at around 3.5%) of the total general government debt. The share of the short-term debt in the total debt has been constantly declining and reflects the Government's efforts towards greater debt-maturity dispersion. The largest share of the total short-term debt amounted to around 10% of the total debt at the beginning of 2009.

1.8 Yield on 10-year government bonds

The required yields on Slovenian 10-year government bonds continued to fall in 2016. Such a decline was characteristic of most EU Member States, this mainly related to the further improvement in economic and financial market conditions and the implementation of the ECB's measures (a further lowering of interest rates and an increase in security purchases).[1] The required yields of Slovenian government bonds, like those of a number of other euro area countries, thus dropped to very low levels in 2016 (in Slovenia, the lowest level thus far, 0.6%, was reached in March 2016). In 2016 Slovenia again took advantage of the environment of low interest rates on government securities of various maturities for pre-financing the liabilities of the state budget in the years to come.

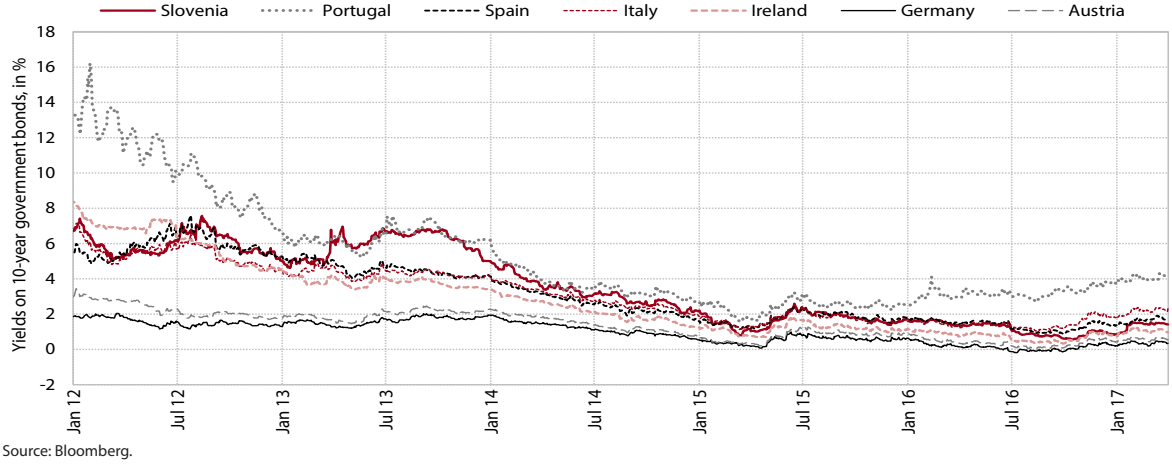
In 2016 Fitch and S&P raised their credit ratings for Slovenia; Moody's left its rating unchanged but improved the outlook to positive from stable. The main reasons for the improved ratings arise from favourable developments in the economy, the expected continuation of economic growth in the next few years, and improvements in the area of public finances and the banking system. Despite the upward revisions in recent years, however, the ratings remain lower than before the crisis.

Table: **Credit ratings for Slovenia and their revisions**

Agency	Rating in March 2017	Change March 2017/Dec. 2008	Change March 2017/Dec. 2015
Fitch	A–	↓4	↑1
Moody's	Baa3	↓7	No change
S&P	A	↓4	↑1

Sources: Standard&Poors, Moody's, Fitch, 2017.

Figure: **Yields on 10-year government bonds denominated in euros**



Source: Bloomberg.

[1] In March 2016 the ECB cut its interest rate on the main refinancing operations and the interest rates on the marginal deposit facility and the marginal lending facility and increased its monthly purchases under the asset purchase programme from EUR 60 billion to EUR 80 billion. It expanded the list of eligible assets for purchases to include not only government bonds but also bonds issued by the corporate sector. These purchases started in June 2016, when the ECB additionally adjusted its policy by the implementation of a new series of targeted longer-term refinancing operations (TLTRO II). At the end of 2016, it extended the implementation of the asset purchase programme until the end of 2017 and announced that from the end of March 2017 (when the previous programme was set to come to an end) the monthly purchases would again amount to EUR 60 billion.

1.9 Taxes and social security contributions

In 2015, taxes and social contributions exceeded the pre-crisis level in nominal terms for the first time; their increase was the largest since the beginning of the crisis. Revenues related to the recovery of the labour market (social contributions and personal income tax) and private consumption (VAT)[1] increased the most amid the recovery in economic activity since 2014. The improvement in business performance was also reflected in higher revenue from corporate income tax; this revenue nevertheless lags the most behind that before the crisis, not only as a result of the deterioration in corporate business results in the early years thereof, but also due tax rate reductions.[2] Revenue from taxes and social contributions as a share of GDP (37.1%), which indicates the burden of taxation, was slightly higher in 2015 than that in 2008 (+0.3 pps) but smaller than the peak in 2005 (-1.2 pps).

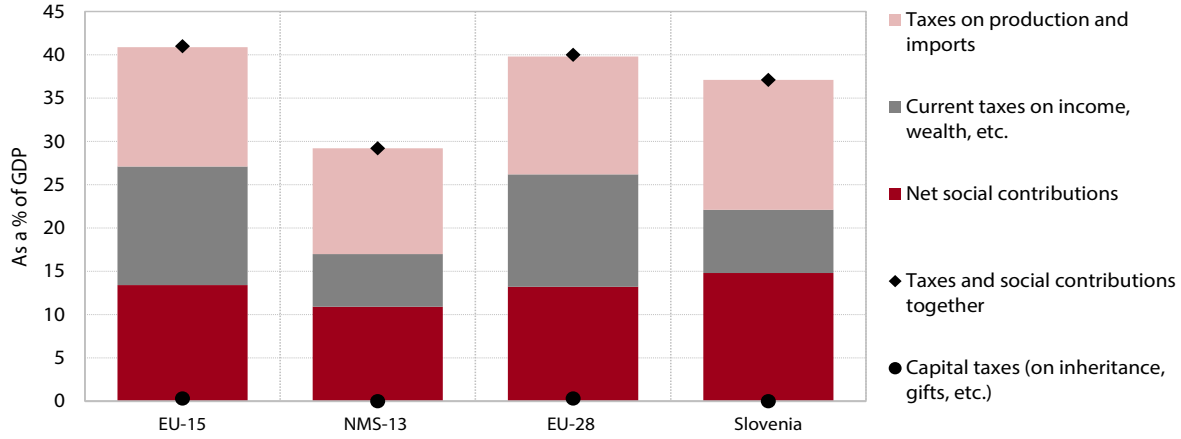
In 2015 the share of taxes and contributions as a share of GDP in Slovenia was lower than the EU average.[3] The burden of taxes and contributions was 3.8 pps lower than the average for the old EU Member States, which was mainly due to the relatively lower tax burden on personal income. On the other hand, it was 4.4 pps higher than the average for those countries that joined the EU in 2004 or thereafter, the main reason being the relatively higher burden of social contributions. Slovenia stands out from both averages with its higher shares of excise duties and social contributions as a % of GDP and its smaller share of the tax burden on corporate income.

Table: **The burden of taxes and social contributions, Slovenia, as a % GDP (according to ESA 2010)**

	2000	2005	2008	2009	2010	2011	2012	2013	2014	2015
TAXES AND SOCIAL CONTRIBUTIONS	**36.9**	**38.3**	**36.9**	**36.8**	**37.5**	**37.0**	**37.5**	**37.3**	**37.0**	**37.1**
Taxes, of which	**22.7**	**24.1**	**22.9**	**21.9**	**22.3**	**22.0**	**22.2**	**22.3**	**22.3**	**22.3**
Value added tax (VAT)	8.5	8.5	8.3	7.9	8.1	8.1	8.0	8.5	8.5	8.3
Excise duties*	3.0	3.3	3.3	4.0	4.2	4.1	4.5	4.3	4.2	4.1
Personal income tax	5.5	5.4	5.7	5.7	5.6	5.6	5.7	5.1	5.1	5.1
Corporate income tax	1.1	2.7	2.5	1.8	1.8	1.7	1.2	1.2	1.4	1.5
Net social contributions	**14.2**	**14.2**	**14.0**	**14.9**	**15.2**	**15.0**	**15.3**	**15.0**	**14.7**	**14.8**

Source: SI–STAT Data Portal – National Accounts – General Government Accounts – Fiscal Burden of Taxable Persons by Taxes and Social Contributions, September 2016.
Note: * Both excise duties on imports and all other excise duties.

Figure: **The burden of taxes and social contributions as a share of GDP, 2015**



Source: Eurostat Portal Page – Economy and Finance – Government Statistics – Main National Accounts Tax Aggregates (according to ESA 2010), December 2016.
Note: The figures for the EU-28, EU-15 (old EU Member States) and NMS-13 (EU Member States since 2004 or thereafter) are unweighted averages.

[1] The growth of these revenues was also affected by the increase in tax rates (in the first half of 2014 the effect of the increase in VAT rates in 2013; in 2015 social contributions started also to be paid from student work).
[2] The reduction in the rate of corporate income tax was implemented gradually, from 25% in 2006 to 17% in 2013; at the same time, tax reliefs were raised.
[3] The figure for the EU-28 is the unweighted average (40.0%), which was also calculated for narrower groups of countries.

1.10 The tax burden by economic function

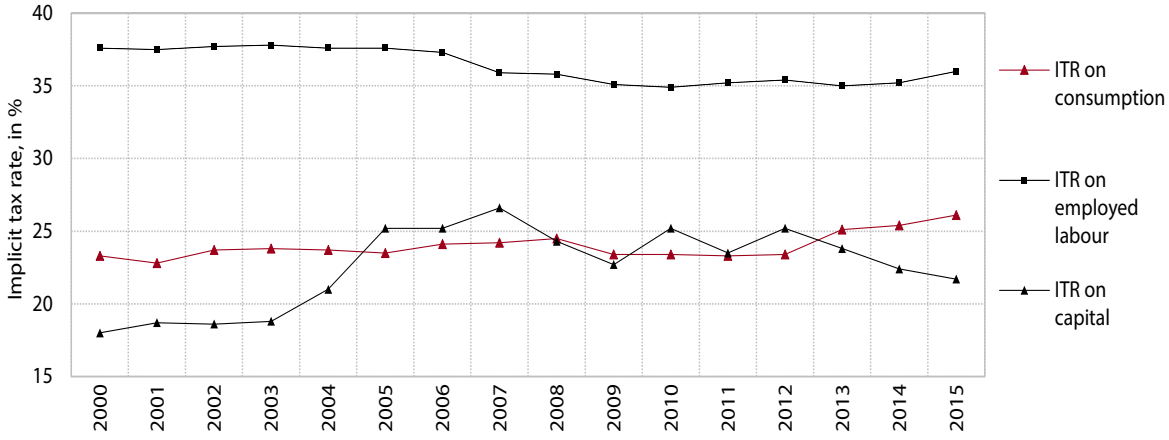
In the period since the crisis, the tax burden has been shifted from capital to consumption, while the effective taxation of labour has remained more-or-less the same. The effective taxation of consumption, measured by the *implicit tax rate on consumption,* has risen significantly relative to the pre-crisis period as a result of the increased rates of excise duties, VAT (as of mid-2013) and certain environmental taxes. It reached the highest level in 2015 (26.1%). Owing to the gradual reduction in the corporate income tax rate and the increase in tax reliefs, the *implicit tax rate on capital* in 2015 (21.7%) was much lower than when it peaked in 2007.[1] The *implicit tax rate on labour* was relatively stable after a period of decline (2006–2010), but rose to the level of 2008 again with an increase in 2015 (to 36.0%) when the payments of social contributions from student work were introduced. In comparison with the EU average, Slovenia had a significantly higher effective tax rate on consumption according to the latest internationally comparable data available, while the gap in the effective taxation of labour was small.[2] The shares of revenues from taxes according to their economic function as a share of GDP show similar trends and similar international relationships since 2008 to those of the implicit tax rate. The changes to tax legislation adopted in 2016[3] represent a shift towards increasing the taxation of capital and reducing the taxation of labour.

Table: **Taxes and contributions by economic function – Shares of collected taxes as a % of GDP (according to ESA 2010)**

		2002	2005	2008	2009	2010	2011	2012	2013	2014
Taxes on consumption	Slovenia	13.4	13.1	13.1	13.3	13.7	13.7	14.0	14.7	14.6
	EU	10.8	10.8	10.5	10.3	10.7	10.9	10.9	10.9	11.0
Taxes on labour	Slovenia	20.2	20.0	18.7	19.0	19.2	19.0	19.2	18.6	18.2
	EU	19.1	18.7	18.9	19.4	19.1	19.2	19.4	19.6	19.6
Taxes on capital	Slovenia	3.6	4.8	4.8	4.1	4.2	4.0	3.9	3.7	3.9
	EU	7.7	8.3	8.6	7.6	7.5	7.7	8.0	8.1	8.2

Source: Taxation trends in the European Union (EC), 2016.
Note: Taxes are classified according to the ESA-2010 classification by economic function of the base on which they are levied.

Figure: **Implicit tax rates (ITR) on consumption, labour and capital (as a % of the base)**



Source: SI-STAT Data Portal – National Accounts – General government accounts – Implicit tax rates, September 2016.

[1] In 2007 the corporate income tax rate totalled 23%, in the 2013–2015 period 17%; tax reliefs for R&D investment etc. were also raised in this period.
[2] The higher effective tax rate on consumption in Slovenia is indicated by a comparison with the unweighted and weighted EU averages. The implicit tax rate on labour in Slovenia is slightly lower than the weighted EU average and slightly higher than the unweighted average (Taxation trends in the European Union, 2016 Edition). The data on the weighted EU average for the implicit rate on capital is not available; the unweighted average for the EU cannot be calculated owing to the shortage of data for a number of EU Member States (after the transition from reporting according to the ESA-95 to the ESA-2010 methodology). On the basis of a comparison of the shares of taxes on capital as a share of GDP, we estimate that the effective taxation of labour in Slovenia has remained lower than in the EU.
[3] The personal income tax brackets were changed, as a new bracket (with a 34% tax rate) between the 2nd and the 3rd bracket was introduced; at the same time, the tax rate of personal income in the 4th bracket was reduced from 41% to 39%; the threshold for entitlement to the highest general tax allowance was increased by EUR 300 and part of performance-related pay, such as 13th wage, Christmas bonuses, was disburdened (in the amount of up to 70% of the average wage in Slovenia). In the area of corporate income taxation, the rate of corporate income tax was raised from 17% to 19%.

1.11 State aid

State aid[1] (excluding crisis aid[2]) stabilised at 1.5% of GDP in 2013–2015; it is among the highest in the EU. Having hovered around the EU average for several years, state aid surged after 2008. The increases in 2009 and 2010 were a consequence of the special crisis measures, which were later replaced by an even greater volume of new measures focused on environmental protection, efficient energy use and employment of disabled persons. State aid for the restructuring of firms also rose significantly in 2015, after being relatively low in previous years. The level of state aid aimed at enhancing the competitiveness of the economy and business investment[3] (for R&D and innovation, aid for small and medium-sized enterprises, training, and regional development) continues to shrink and is becoming increasingly dependent on receipts from European structural funds. In 2015, at the transition to the absorption of funds from the new 2014–2020 financial perspective, the amount of state aid for these purposes more than halved (to EUR 49 million or to less than one-tenth of total aid). Such uneven absorption of funds brings volatility to the financing for these purposes, making it increasingly difficult for Slovenia to implement its industrial policy.

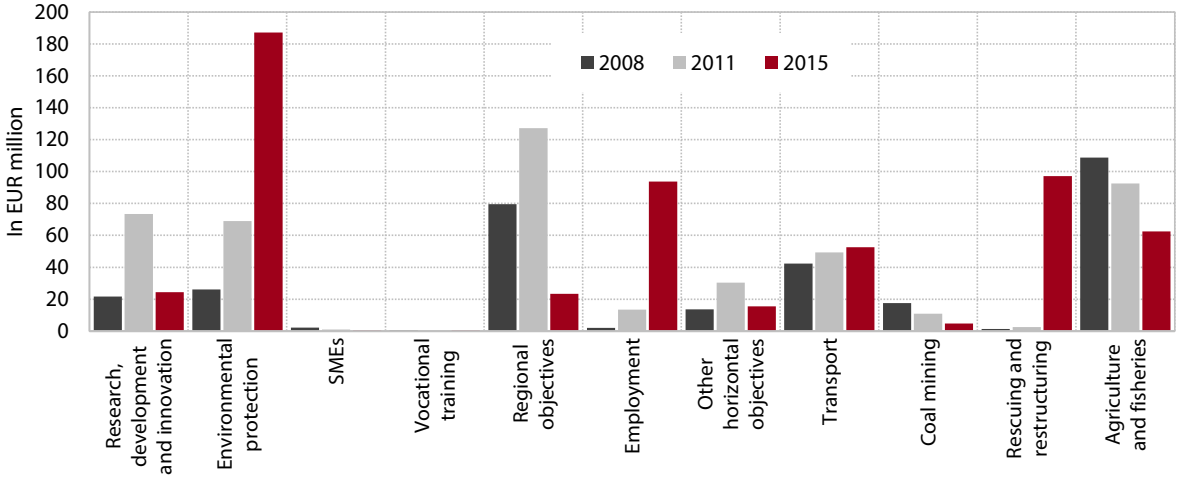
State aid is increasingly being provided through tax instruments, which is a non-transparent and less desirable way of state aid provision. In 2015 tax instruments already accounted for as much as 23.5% of total state aid, compared with less than 5% before 2011. The reduction of social security contributions, a very rapidly rising form of state aid (2015: EUR 76.9 million), is meant to promote employment of disabled persons.[4] The instrument of exemption from environmental taxes (CO_2 emissions), which had been used significantly less in previous years, also rose significantly in 2015 (to EUR 51.6 million). State aid being increasingly provided through tax instruments (and high general tax allowances, which are otherwise not considered state aid), government intervention in the economy has been rising in recent years, but its effectiveness is questionable. The difference between the relatively very high level of state aid in Slovenia and the EU average narrowed slightly only in 2014, and this as a result of higher state aid in the EU. Specifically, in 2014 state aid for environmental protection (renewable sources and efficient energy use) in the EU tripled relative to 2013 and accounted for as much as 42% of total state aid in the EU.

Table: **State aids (excluding crisis aid and aid for rail transport)**

As a % of GDP	2000	2005	2007	2008	2009	2010	2011	2012	2013	2014
Slovenia	0.8	0.4	0.3	0.5	0.8	0.8	1.0	1.0	1.1	1.1
EU	0.5	0.5	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.7

Source: State Aid Scoreboard 2015, 2016, European Commission.

Figure: **State aid by category (excluding crisis aid), in EUR million**



Source: Thirteenth (2008), Fifteenth (2011) and Annual (2013–2015) Surveys of State Aid, Ministry of Finance.

[1] State aid represents the measures of a country that intervene in its current and investment expenditures (subsidies and capital transfers), revenues (reduced payments of taxes and contributions), financing (favourable loans) and debt (guarantees) and have an impact on the single market of the EU. The impact on the single market is defined arbitrarily by rules adopted by the European Commission, the European Council and the European Court of Justice, whereby a significant part of state aid to agriculture, i.e. measures under the Common Agricultural Policy (CAP), is no longer recorded as state aid.

[2] In 2009–2014 crisis aid amounted to as much as 12.2% of GDP from 2015, while in 2015 state aid for this purpose was no longer allocated.

[3] With changes in the legislation regulating the taxes on corporate income and personal income of natural persons engaged in registered activities, general tax allowances for investment in research and development, employment, recruitment of disabled persons, and in-company placement in vocational education rose notably after 2009 (and especially after 2012). General tax allowances are not taken into account in state aid, as they can be claimed by all beneficiaries and do not distort the single market.

[4] The recruitment of disabled persons mainly pursues social objectives from the perspective of social cohesion; these could be more effectively achieved by other instruments that do not cause tax distortions.

1.12 Financial system development

Slovenia has a wide gap with the EU in financial system development and this widened further in 2016; particularly the gap in capital-market and banking-sector development has increased since the onset of the crisis. In 2015 the banks' total assets were already 12.7% lower than in 2008, recording what was one of the largest declines in the EU (larger declines were reported only in Austria, Belgium, Cyprus, Greece, Luxembourg and Spain).[1] In 2016 the decline continued. Throughout this period, this was mainly due to the falling volume of loans to non-banking and banking sectors as a result of deleveraging of non-banking sectors (enterprises and NFIs in particular) and modest interbank lending, as banking system liquidity has been high in the last few years. As regards sources of finance, the banks continued to reduce their liabilities to domestic and, in particular, foreign monetary sectors (including the ECB). The share of liabilities to foreign banks totalled 7% of total liabilities at the end of 2016; their value had declined by around EUR 15 billion since the onset of the international financial crisis and totalled EUR 2.7 billion at the end of 2016. The capital market, which is shallow and illiquid in Slovenia, has shrunk noticeably since the beginning of the international financial crisis. The relatively strong market capitalisation growth during the period of economic boom was followed by a pronounced decline in the prices of shares during the crisis. These have been recovering more visibly only in the last two years. In 2016 the market capitalisation of shares (EUR 5 billion) reached only around 25% of its 2007 peak, lagging more than 55 percentage points behind the EU average as a % of GDP.

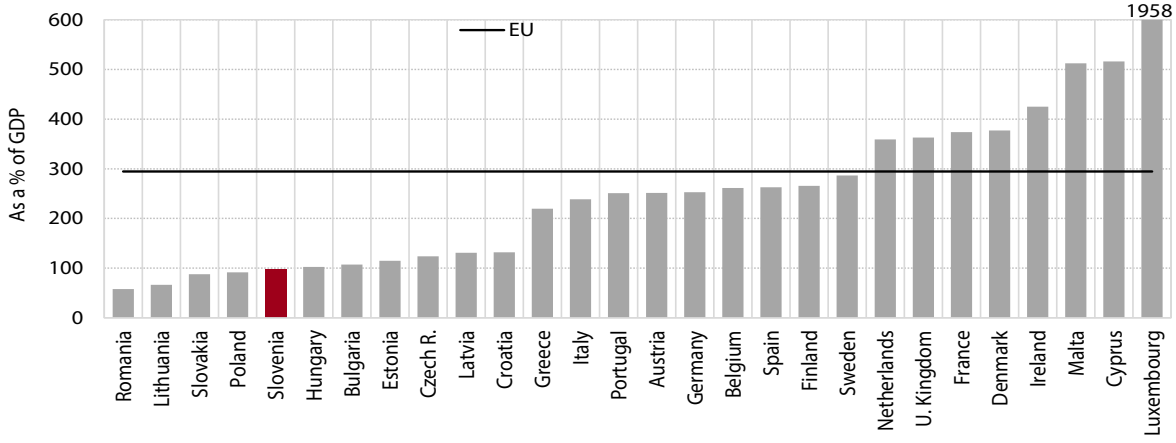
The development gap is smallest in the insurance sector, where the indicator value declined the least during the crisis. However, Slovenia still lags significantly behind the EU in terms of its share of life-insurance premiums, which, at 1.5% of GDP, amounts to less than one-third of the EU average. The low value in this insurance category is also a consequence of the relatively insignificant level of this type of saving for old age, which additionally impedes capital market development.

Table: **Indicators of financial system development in Slovenia and the EU**

	2000	2005	2008	2009	2010	2011	2012	2013	2014	2015	2016
Banks' total assets, as a % of GDP											
Slovenia	68.9	100.2	125.5	142.7	138.8	132.1	128.1	112.3	103.7	97.0	93.2
EU	234.1	294.0	332.6	349.4	346.9	351.5	338.3	313.2	309.9	269.4	
Insurance premiums, as a % of GDP											
Slovenia	5.0	5.3	5.3	5.7	5.8	5.6	5.6	5.5	5.2	5.1	
EU-25		8.4	7.9	8.7	8.6	7.9	7.7	7.8	7.9	7.7	
Market capitalisation of shares, as a % of GDP											
Slovenia	17.6	22.9	22.3	23.4	19.4	13.2	13.6	14.4	16.6	14.3	12.6
EU**	95.7	90.3	42.4	56.9	64.9	56.9	60.9	68.5	68.6	70.1	69.8

Sources: Financial Stability Review (various volumes), Annual Statistical Report (Ljubljana Stock Exchange – various volumes). Statistical Insurance Bulletin (Slovenian Insurance Association – various volumes), Insurance Data at http://www.insuranceeurope.eu/insurancedata, European Banking Sector Facts and Figures 2015 (EBF), Company files (London Stock Exchange – various volumes), European Securities Exchange Statistics (Federation of European Securities Exchanges), National Accounts (EUROSTAT), National Accounts (SURS), 2016. Notes: * The indicator of insurance premiums as a % of GDP does not include data for the Baltic States. ** Including Iceland.

Figure: **Banks' total assets as a % of GDP in EU Member States, 2015**



Sources: BoS, European Banking Federation, SURS, Eurostat.

[1] The comparison refers to the period until 2015.

1.13 Loan-to-deposit ratio

The loan-to-deposit ratio has declined since 2009, but in 2016 the pace of decline slowed considerably. The indicator value has almost halved compared to the highest level (in 2008). This significant decline was due to the strong contraction of loans and fairly high growth in deposits. In 2008–2016 the volume of loans to the non-banking sector declined by over one-third, owing to accelerated corporate sector deleveraging and the transfer of claims to the BAMC. On the other hand, bank deposits rose by almost 30%. Owing to the low deposit interest rates, only overnight deposits have been on the rise. These have recorded 80% growth in the last five years alone and already accounted for around 40% of the banking system's total assets in 2016. Among deposits, the deposits of domestic non-financial corporations have increased significantly, in the last five years almost by half, to EUR 5.8 billion.

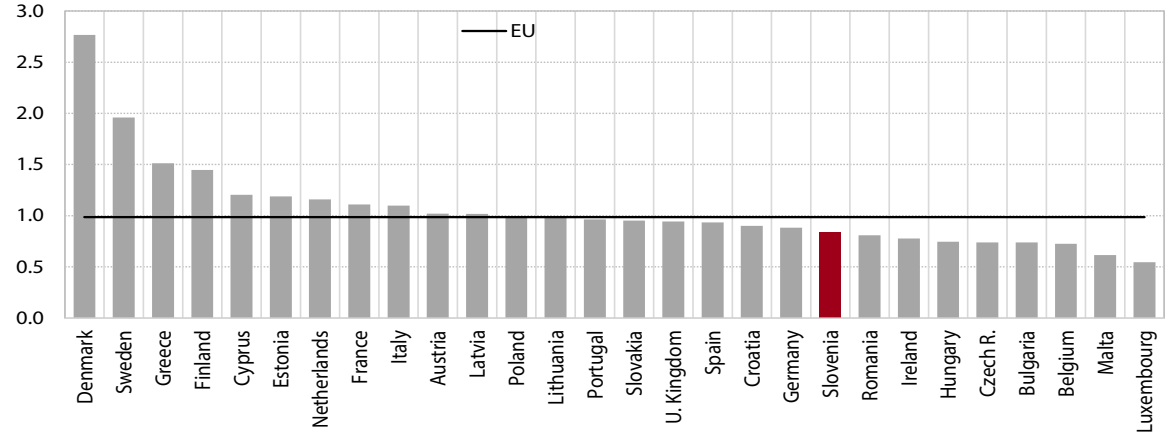
In the EU the value of this indicator has also declined since the beginning of the crisis, but from a lower pre-crisis level and to a much lesser extent than in Slovenia; in 2016 the decline even accelerated slightly. This was a consequence of a smaller volume of loans to non-banking sectors, which fell again in 2016 following an increase in 2015. Only in Ireland has the loan-to-deposit ratio fallen more than in Slovenia since the beginning of the crisis.

Table: **Loan-to-deposit ratios of non-banking sectors in Slovenia and the EU**

	2005	2010	2011	2012	2013	2014	2015	2016
Slovenia	1.03	1.48	1.40	1.38	1.22	0.98	0.89	0.83
EU*	1.26	1.16	1.15	1.13	1.08	1.06	1.04	0.99

Sources: EBF, ECB, BoS; calculations by IMAD.
Note: *Data for Lithuania, Latvia and Croatia have been available only since 2010. Data for Denmark for 2016 refers to October and not to the end of the year.

Figure: **Loan-to-deposit ratio in EU Member States, 2015**



Sources: BoS, ECB; calculations by IMAD. Note: the data for Denmark for 2016 refers to October 2016 and not the end of the year.

1.14 Non-performing claims

With the process of the banks' balance sheets repair, the volume and share of non-performing claims declined, most notably in 2016, but they remain relatively significant. This means that they still pose a risk to the stability of the banking system. Before the beginning of the banking system restructuring in December 2013, the volume of non-performing claims[1] totalled EUR 7.8 billion. By the end of 2014, it had dropped to EUR 4.4 billion, mainly owing to the transfers of claims to the BAMC. Later the decline was also due to the restructuring of enterprises within the master restructuring agreements (MRA), increased write-offs and, to some extent, the sales of a portion of non-performing claims. At the end of 2016 the volume of non-performing claims thus totalled EUR 2.0 billion. Most of this amount was accounted for by claims against enterprises from construction, manufacturing, the distributive trades, professional and scientific, technical, and administrative and support service activities, and real estate. The dynamics of the decline in the share of non-performing claims in the total exposure[2] was also significantly affected by the fall in the total lending activity of banks: had loan volume remained at the level seen after the beginning of restructuring in 2013, the share of non-performing claims would have been another 1 pp lower in 2016.

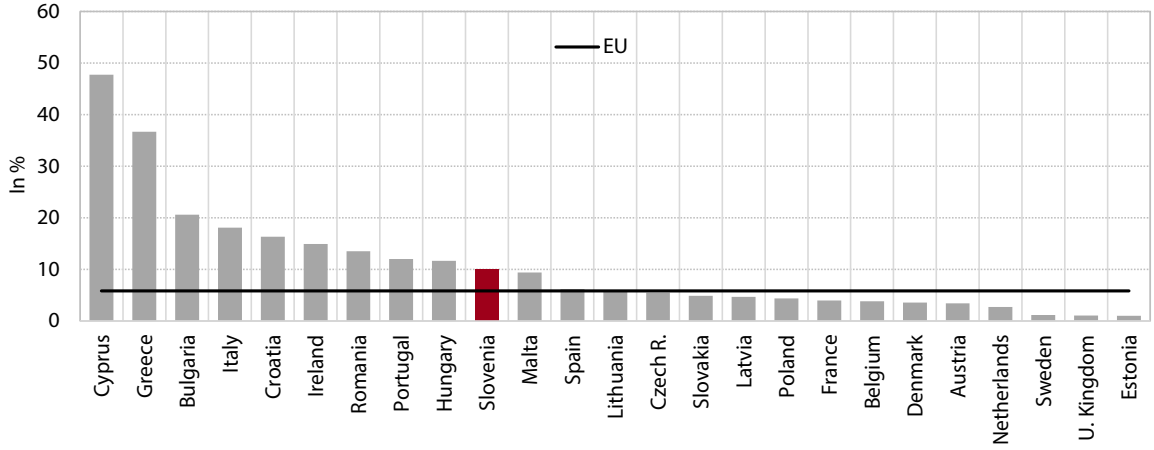
The share of non-performing claims is still above the EU average. While it rose much more than in the EU as a whole in the early years of the crisis, it has also been falling faster after the banks' balance sheet repair, but nevertheless remains higher than the average. Compared with EU Member States that requested financial assistance, Slovenia has reduced the share of non-performing claims the most since the beginning of banking system restructuring.[3]

Table: **Share of non-performing claims in the total exposure in Slovenia and the EU, in %**

	2008	2009	2010	2011	2012	2013	2014	2015	2016
Slovenia	3.8	5.4	7.4	11.2	14.4	13.4	11.9	9.9	5.8
EU*	2.6	4.3	4.5	5.1	5.7	6.2	5.8	5.8	

Sources: IMF, World Bank, BoS; calculations by IMAD.
Note: * The data for the EU are the averages of EU Member States weighted by the total assets of their banking systems. For 2013 the data for Finland, for 2014 the data for Finland and Luxembourg, and for 2015 the data for Finland, Luxembourg and Germany are not available.

Figure: **Comparison of the shares of non-performing claims in EU Member States, 2015**



Sources: IMF, BoS; calculations by IMAD.
Note: * The data for the EU is the average of EU Member States weighted by the total assets of their banking systems. For 2015 the data for Germany, Finland and Luxembourg are not available.

[1] To ensure a longer time series, we have considered as non-performing only those claims that are more than 90 days past due, rather than all those according to the EBA definition, which is broader as it includes not only arrears of more than 90 days but also exposures that meet the »unlikely to pay« criterion. For claims according to this definition, sufficient data to enable comparisons over a longer time period are not available.
[2] Total classified claims.
[3] Data for other EU countries pertain to Q2 or Q3 of 2016. In 2015 and 2016 the share of non-performing claims otherwise dropped more in Ireland, but in Ireland this share had still been rising for more than two years after the beginning of the banking system restructuring (at the end of 2011).

1.15 Indebtedness of the corporate sector

Corporate indebtedness has been declining since 2009, more notably since 2013. In the pre-crisis period the growth of financial debt[1] (particularly bank debt) resulted in a significant deterioration in the indicators of indebtedness, which reached their peaks in 2008 and 2009. In the following years these indicators improved gradually, particularly during the period from 2012 to 2015. The decline in total debt in this period, especially in 2014 and 2015, was primarily due to the reduction of bank debt (by 47% relative to 2008, of which 32% in 2014 and 2015). This debt had at first been shrinking primarily as a result of the winding-down of companies,[2] whereas its decline since 2012 has been to a greater extent due to the intensive deleveraging of surviving companies and the transfers of claims to the BAMC. The movement of some indicators was also influenced by companies' EBITDA,[3] which has on average been rising ever since 2010, more noticeably in 2014 and 2015. In 2015 most indicators of indebtedness thus reached the most favourable values in the entire period analysed (since 2006).

The debt overhang[4] of Slovenian companies declined the most in 2014 and 2015. In 2009, when it peaked, it was almost twice as high as in 2006, while in 2015 it again came close to the levels of 2006. In 2015, 44% of the debt overhang was debt with an interest coverage ratio[5] below 1, meaning that companies were not able to finance debt with their current operations. As most of these companies also have negative EBITDA, even their survival is questionable in the long term. Among over-indebted companies, those focused on the domestic market and micro, small and medium-sized enterprises (SMEs) have predominated since 2011. Policy measures for these companies have mostly been created only in the last two years. In 2015 their share in the total debt overhang stood at 59%.[6] Debt overhang was highest in holding and leasing companies; broken down by sector, it was highest in the distributive trades, real estate, transportation and storage, manufacturing, and professional and technical activities.

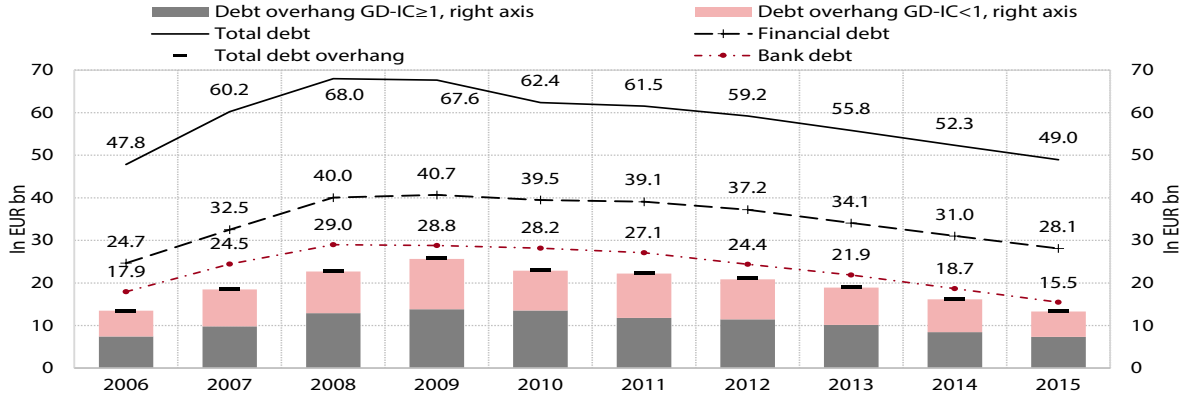
The concentration of the financial debt of over-indebted companies is relatively high. In 2015 the 10 most indebted companies accounted for around 30% of the financial debt of all over-indebted companies (and 28% of value added). The 50 most indebted companies accounted for as much as half of the financial debt of all over-indebted companies (and 42% of value added). Of these, 34 companies had already been over-indebted before the crisis.

Table: **Concentration of the financial debt of over-indebted companies in the entire corporate sector, 2015**

	First 10	First 30	First 50	First 100	First 500	All companies
Financial debt, in EUR bn	**5.8**	**8.7**	**10.0**	**11.6**	**15.2**	**19.8**
Share in financial debt of all companies	21 %	31 %	36 %	41 %	54 %	71 %
Share in total debt of all companies	12 %	18 %	21 %	24 %	31 %	41 %
Share in financial debt of all over-indebted companies	29 %	44 %	51 %	58 %	77 %	100 %
Share in total debt of all over-indebted companies	22 %	34 %	39 %	45 %	59 %	77 %

Source: AJPES; calculations by IMAD.

Figure: **Corporate sector indebtedness and debt overhang**



Source: AJPES; calculations by IMAD. Notes: IC<1: interest coverage ratio below 1; IC≥1: interest coverage ratio above or equal to 1; GD – company.

[1] Financial debt is the largest part of total debt, which also comprises operational liabilities and other liabilities of companies.
[2] In this analysis, the term »winding-down« is used for failure to submit annual financial statements.
[3] EBITDA (Earnings Before Interest, Taxes, Depreciation and Amortisation) is free cash flow from business operations.
[4] The debt overhang is financial debt that exceeds five times EBITDA (in companies where FV≥5) or total financial debt (in companies where EBITDA<0).
[5] I.e. IC (the EBITDA/interest payments ratio).
[6] The total debt overhang totalled EUR 13.4 bn.

2 Factors of competitiveness

- 2.1 GDP per capita in purchasing power standards

Competitiveness of the corporate sector

- 2.2 Market share
- 2.3 Unit labour costs
- 2.4 Labour productivity
- 2.5 Structure of merchandise exports by factor intensity
- 2.6 Knowledge-intensive market services
- 2.7 Network industries
- 2.8 Foreign direct investment
- 2.9 Entrepreneurial activity

Human capital

- 2.10 Share of the population with tertiary education
- 2.11 Education expenditure
- 2.12 Participation of adults in lifelong learning

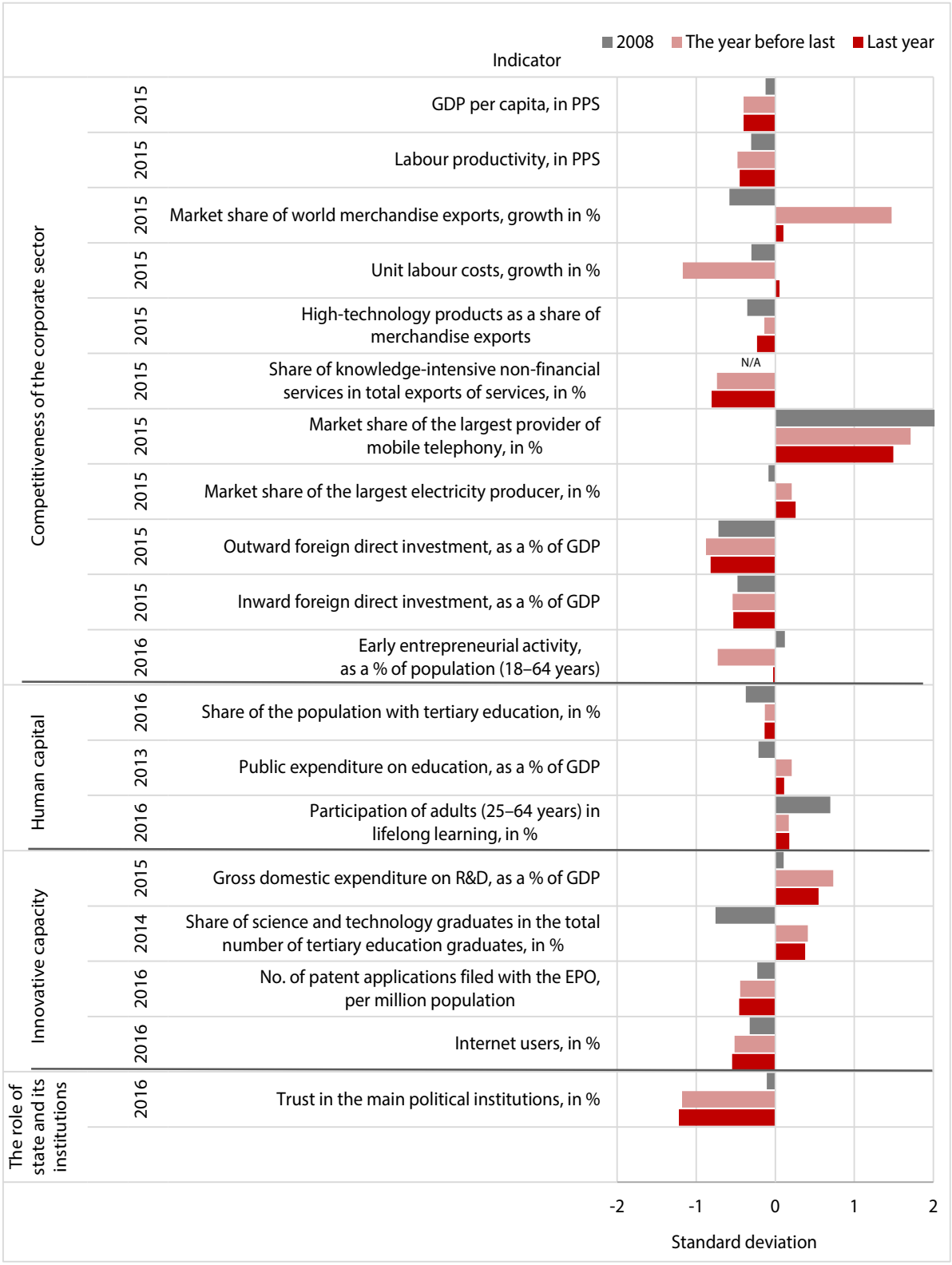
Innovative capacity

- 2.13 R&D expenditure
- 2.14 Graduates and doctors of science and technology
- 2.15 Innovation activity of enterprises
- 2.16 Intellectual property
- 2.17 Use of the internet and e-services

The role of the state and its institutions

- 2.18 Trust in institutions

Overview of indicators – Factors of competitiveness



Source: Calculations by IMAD.
Note: The table shows Slovenia's position relative to the unweighted arithmetic average of the EU Member States. It was calculated with regard to the set of countries for which data for individual indicators were available; Cyprus, Malta, Luxembourg and Croatia were excluded from the analysis due to a lack of data. The data in the table are for 2008 and the last year for which data for EU Member States were available (the last year is indicated in the table). A positive indicator value means above-average development relative to the EU, while a negative value indicates that Slovenia lags behind the EU average on that indicator.

2.1 Gross domestic product per capita in purchasing power standards

Slovenia's gap with the EU average in terms of economic development remained wide in 2015, at 17 pps. In 2014 Slovenia had converged slightly with the EU average in terms of GDP per capita in purchasing power standards (PPS)[1] for the first time since the onset of the crisis, while in 2015 GDP per capita in PPS remained the same as in 2014 (25,500 PPS), according to the most recent Eurostat data. Before the crisis, Slovenia had been catching up with the EU on this indicator and reached 90% of the EU average in 2008. However, owing to a steeper decline in economic activity,[2] it lost nine percentage points compared with the EU as a whole over the next five years until faster economic growth in 2014 and 2015 (Slovenia 3.1% and 2.3% respectively; EU 1.6% and 2.2% respectively) reduced the gap by two percentage points. Current data on economic activity suggest that Slovenia continued to converge with more developed countries in 2016 (see Indicator 1.1). The breakdown of per capita GDP into productivity and employment rate shows that the renewed narrowing of Slovenia's development gap recorded since 2013 has arisen from the increase in productivity, which nevertheless remains significantly lower than in the EU as a whole (see Indicator 2.4). The decline in the employment rate, which was significantly higher than the EU average at the beginning of the crisis, stabilised in 2014 and 2015 at a rate just above the average rate in the EU.

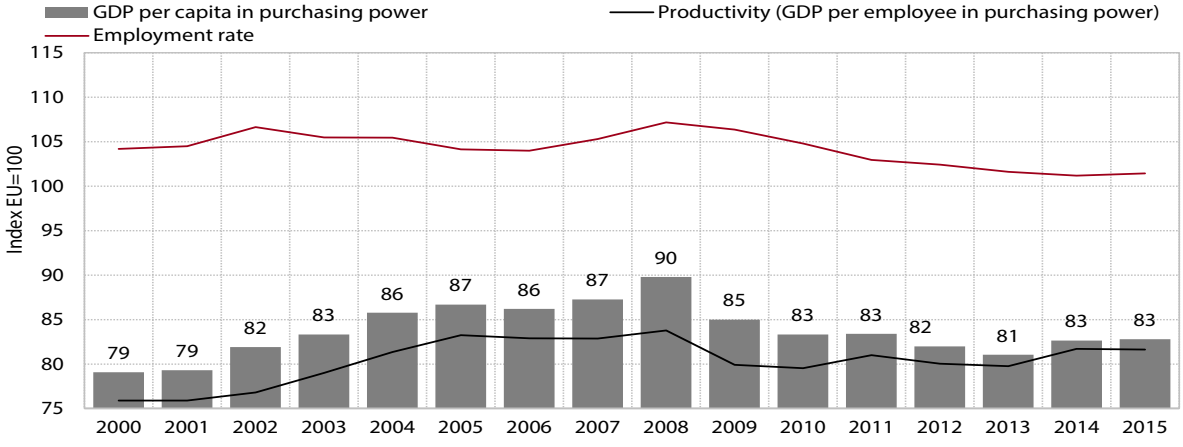
Slovenia remains one of the countries whose relative positions in economic development in the EU have deteriorated the most since the beginning of the crisis. The countries that have diverged more from the EU average than Slovenia since 2008 are Greece (25 pps), Cyprus (24 pps), Finland (12 pps), the Netherlands, and Spain and Italy (11 pps each). Sixteen counties have improved their positions in this period, ten of them being new Member States. In terms of GDP per capita in PPS, Greece (93%) and the Czech Republic (84%) were closest to Slovenia in 2008; the countries closest to Slovenia in 2015 were Cyprus (82%) and the Czech Republic (87%). Two of the new Member States, Malta and the Czech Republic, outpaced Slovenia in this period. The overall gap in GDP per capita in PPS among the EU Member States has been narrowing over the years, from 1:9.5 (Romania to Luxembourg) at the beginning of the previous decade to 1:5.6 (Bulgaria to Luxembourg) in 2015.

Table: **GDP per capita in purchasing power standards for selected countries (EU-28=100)**

	2000	2005	2008	2009	2010	2011	2012	2013	2014	2015
EU-15	116	113	111	110	110	110	109	109	109	108
Nordic countries	129	125	128	126	126	126	126	125	123	122
Vulnerable EU Member States*	104	106	103	102	99	96	94	94	94	102
Slovenia	**80**	**87**	**90**	**85**	**83**	**83**	**82**	**81**	**83**	**83**
New Member States excluding Slovenia	51	60	67	66	67	68	69	70	70	71

Source: Eurostat Portal Page – Purchasing Power Parities, 2016; calculations by IMAD.
Note: * The vulnerable EU Member States here are Greece, Ireland, Italy, Portugal, Slovenia and Spain.

Figure: **GDP per capita and its components**



Source: SI-STAT Data Portal – The Economy – National Accounts, 2016; calculations by IMAD.

[1] GDP per capita in purchasing power standards enables a comparison between countries by eliminating the effect of price level disparities. The purchasing power standard (PPS) is the name given by Eurostat to the artificial currency used to express certain economic results. In Eurostat's comparisons, results are thus presented in a fictitious »currency« (PPS) that, at the EU level, equals one euro. The PPS, or the »EU-28 euro«, is thus a currency that reflects the average price level across the EU-28.
[2] See also Indicator 1.1.

2.2 Market share

Slovenia's market share in merchandise trade increased significantly in 2013–2016. In 2008–2012 Slovenia was one of the EU countries that experienced the largest losses in market shares in global merchandise trade (–22%), which was partly a consequence of the regional and product structures of the country's exports.[1] The decline on the markets of the main trading partners (12) was more than half smaller; on the EU market some two-thirds smaller. In 2013–2015 Slovenia was among the EU countries with the highest growth in world market share.[2] Its fall relative to 2007 decreased by around a third. Slovenia achieved pre-crisis levels on the markets of its main trading partners; in the EU, it exceeded them. In the first nine months of 2016 the positive trends continued. Slovenia remained among the EU Member States with the highest growth in world market share.

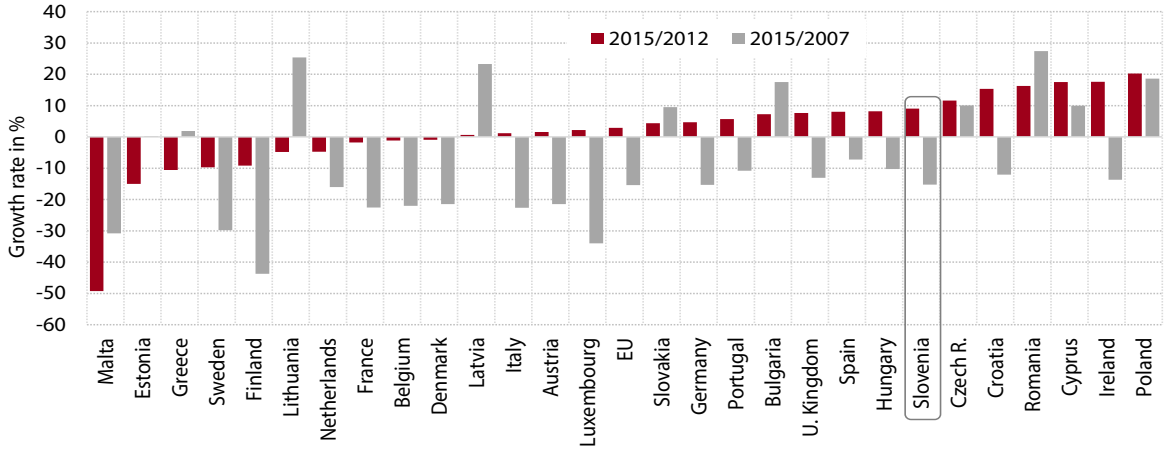
The growth of Slovenia's world market share in 2013–2015 was a consequence of increases in the shares on most of its regional and product markets, which were, at the same time, some of the most dynamic. Significant market share growth was recorded not only in Germany, Italy, Austria, Croatia and Russia, but also on the relatively less important EU markets; these market shares were also significantly higher than before the crisis. In terms of factor intensity, the market shares of resource-intensive products and of low-technology- and medium-technology-intensive products grew in this period. The market share of high-technology-intensive products declined,[3] but remained at the pre-crisis level in 2015. Despite the increase, the shares of low- and medium-technology-intensive products were around one-fifth lower, while the share of labour-intensive products was two-fifths lower than before the crisis.[4]

Table: **Slovenia's market share of world merchandise exports and in main trading partners, in %**

	2000	2007	2010	2011	2012	2013	2014	2015
World market share [1]								
Slovenia	0.137	0.196	0.165	0.164	0.152	0.158	0.166	0.166
EU	37.742	38.890	34.252	33.504	31.969	33.012	32.810	32.894
Slovenia's market share in its main trading partners[2]								
Germany	0.474	0.472	0.450	0.485	0.493	0.491	0.503	0.519
Italy	0.498	0.687	0.608	0.617	0.626	0.690	0.764	0.727
Austria	0.959	1.328	1.311	1.231	1.312	1.431	1.574	1.490
Croatia	8.724	8.267	8.176	8.613	8.368	8.994	10.292	10.032
France	0.204	0.287	0.328	0.274	0.224	0.225	0.235	0.233
Poland	0.470	0.515	0.480	0.432	0.421	0.416	0.456	0.477
Russian Federation	0.564	0.473	0.342	0.339	0.383	0.430	0.466	0.483
Serbia	N/A	5.447	5.381	4.932	5.047	4.820	4.817	5.067

Source: United Nations Commodity Trade Statistics Database, 2016; calculations by IMAD.
Notes: [1] The export market share, calculated as the share of the merchandise exports of Slovenia/the EU (intra and extra) in world merchandise exports. [2] Slovenia's market share in its main trading partners, calculated as the share of Slovenia's merchandise exports in the merchandise imports of a given trading partner.

Figure: **World merchandise market shares of EU Member States, growth rates in %**



Source: United Nations Commodity Trade Statistics Database, 2016; calculations by IMAD.

[1] Slovenia's merchandise exports are more oriented towards markets that were recovering relatively slowly during the crisis, particularly the EU and the former Yugoslavia. Slovenia also has a relatively large share of manufactured goods and, within these, of medium-technology products and less-technologically-intensive and labour-intensive products, the demand for which shrank more than for other products during the crisis (see Development Report 2013, 2014.
[2] In 7th place (9% cumulative growth; EU: 3%).
[3] Largely as a result of the lower shares of medicinal and pharmaceutical products and of certain other chemical products (pigments, paints and varnishes; perfumery, cosmetic and toiletry preparations; and plastics and plastic products).
[4] Only the market share of natural-resource-intensive products increased relative to 2007, this mainly as a result of the higher volume of trade in energy products. Among the main SITC sections, road vehicles, machinery specialised for particular industries, iron and steel, non-ferrous metals and metal products, miscellaneous manufactured articles, and petroleum and petroleum products increased their market shares in 2013–2015.

2.3 Unit labour costs

In 2016 unit labour costs increased following several years of decline. At the beginning of the crisis real unit labour costs rose significantly under the impact of strong wage growth (2008 and 2010[1]) and a decline in labour productivity (2009). Their decline in 2011 arose from the slowing growth of wages. Owing to renewed growth in labour productivity, it also continued in 2013–2015. The renewed growth of unit labour costs in 2016 was a consequence of slower growth in labour productivity amid stronger growth in compensation per employee. It stemmed primarily from the non-tradable sector.[2]

In manufacturing, unit labour costs continued to decline in 2016. Owing to a strong contraction in foreign demand, 2008 and 2009 recorded a larger decline in value added (and hence in labour productivity) in manufacturing than in the economy as a whole. Real unit labour costs therefore also increased more, despite the more modest growth of wages. Real unit labour costs in manufacturing had already started to decline in 2010. In 2016 they were at the same level as before the crisis, while real unit labour costs in the economy were still higher. More specifically, with a rebound in foreign demand, labour productivity in manufacturing was higher than in the economy as a whole due to a larger increase in value added and a steeper decline in employment. Growth in compensation of employees was otherwise also higher, but not as much as labour productivity growth.

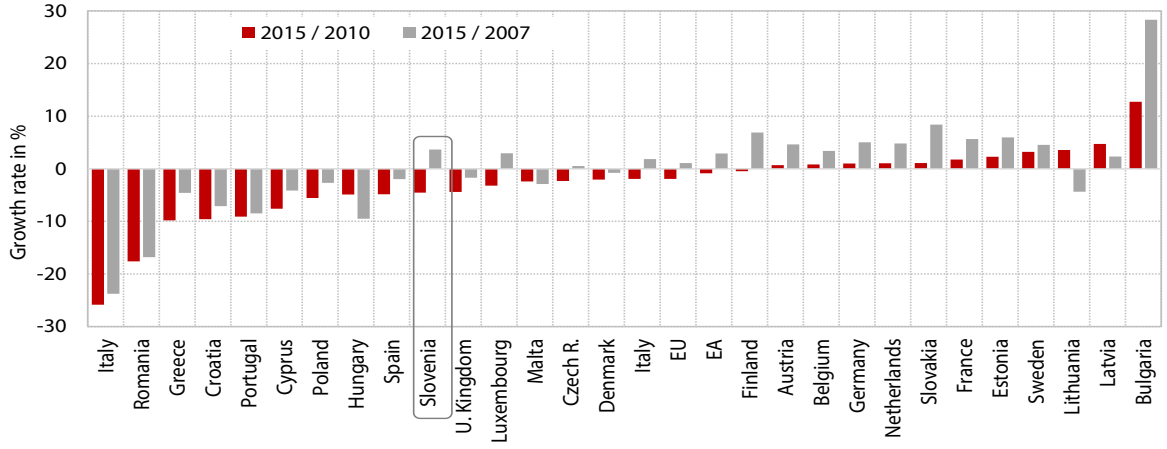
In 2016 the manufacturing sector's position relative to the EU was similar to that before the crisis, while the relative position of the economy as a whole was still worse than in the pre-crisis period. Up to 2010 Slovenia had been among the EU Member States with above-average growth in real unit labour costs in manufacturing; since 2010, on the other hand, the country has been experiencing an above-average decline. In 2016 real unit labour costs in manufacturing were at the same level as in 2007 (in the EU 0.3% lower and in the euro area 1.9% higher[3]). Real unit labour costs in the economy as a whole were 4.8% higher in this period (in the EU and in the euro area 1% and 2.8% higher respectively).

Table: **Unit labour costs in Slovenia and the EU**

Real annual growth rates, in %	2001–2007	2008–2010	2011	2012	2013	2014	2015	2016[3]
Unti labour costs[1]								
Slovenia	-0.7	2.8	-1.9	0.5	-0.4	-2.1	-0.7	1.1
EU	-0.6	1.0	-0.9	0.5	-0.3	-0.5	-0.8	-0.1
EMU	-0.6	1.2	-0.5	0.7	-0.1	-0.1	-0.9	-0.1
Unit labour costs – Slovenia								
Total	-0.7	3.0	-1.8	0.9	0.2	-2.3	-0.7	1.1
Manufacturing	-0.9	3.1	-3.3	0.4	-2.3	-2.8	-0.6	-0.6

Sources: SI-STAT Data Portal – Economy, 2016; Eurostat Portal Page – Economy and Finance, 2016.
Notes: [1] Compensation of employees per employee in current prices divided by the gross domestic product per employed person according to the national accounts methodology in current prices; [2] compensation of employees per employee in current prices divided by the value added per employed person in current prices; [3] SURS and Eurostat estimates based on quarterly data for 2016.

Figure: **Real unit labour costs in Slovenia and EU Member States, in %**



Source: Eurostat Portal Page – Economy and Finance, 2016.

[1] In 2008 wage growth was a consequence of the adjustment of wages to past high inflation and productivity and the elimination of wage disparities in the public sector; in 2010 it was boosted by the increase in the minimum wage.
[2] Among individual sectors, construction and financial and insurance activities stood out in terms of the growth of real unit labour costs (13.3% and 5.1% respectively), construction largely owing to a decline in labour productivity and financial and insurance activities also as a result of higher compensation per employee. In terms of the growth of nominal unit labour costs, the public sector also stood out, alongside construction, as a result of the stronger nominal growth of earnings.
[3] The average of the EU or the euro area excluding Ireland, where there was a break in the data series owing to a large GDP revision.

2.4 Labour productivity

Slovenia's productivity gap with the EU average remains wider than before the crisis. In 2000–2008 the average annual rate of productivity growth[1] in Slovenia (3%) was significantly higher than the average rate in the EU (1.2%) The lag behind the EU then widened during the crisis and has been declining only slowly since 2014. The relative productivity level in comparison with the EU (where GDP in purchasing power standards per person employed is usually compared) in 2015 was thus, at 82%, 2 pps below its 2008 peak. The breakdown of trend productivity growth into the contributions of capital and total factor productivity indicates a greater impact of these two components on the slowdown of productivity growth after 2008 than in the EU. The sharp decline in the contribution of capital not only reflects the cyclical fall in investment, but is also attributable to structural factors, particularly the less than optimal allocation of capital before the crisis. Total factor productivity indicates mainly the impact of long-term structural factors, which affect the innovation activity of enterprises and the development of high-growth enterprises.

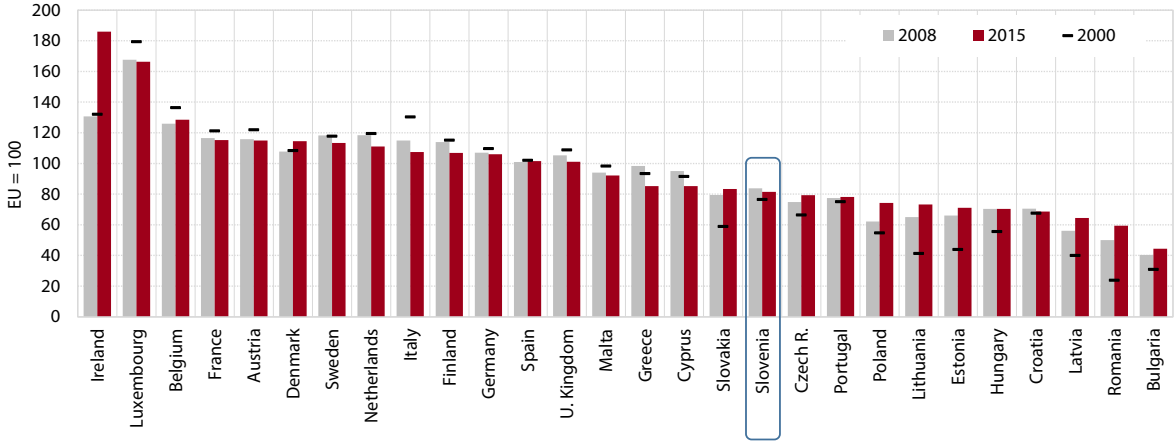
At the sectoral level, only the manufacturing sector exceeded slightly the ratio in relation to the EU that was recorded before the crisis; in market services and construction, it is still significantly lower. In 2008–2015 manufacturing reduced its productivity gap by approximately two percentage points. Productivity growth was mainly driven by medium- and high-technology industries, while the contribution of the technologically least intensive industries was negative. In comparison with the pre-crisis period, productivity growth was particularly favourably affected by the restructuring of manufacturing, especially in the early years of the crisis.[2] Among market services, traditional services (trade, transport, and hotels and restaurants) were closest to their pre-crisis levels in relation to the EU in 2015. Significant lags behind the EU are recorded for financial services and construction, sectors that were severely affected by the crisis, and, owing to the decline in domestic demand, for professional and technical services. Information and communication activities also have significantly wider gaps in relation to the EU than before the crisis, not only computer and information services, where small businesses predominate, but also telecommunications, a sector characterised by one of the largest investment declines in the EU[3] during the crisis and the retention of state ownership in the largest provider of these services.

Table: **Labour productivity, Slovenia**

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Real productivity growth, in %	4.5	4.0	3.4	0.7	-6.1	3.4	2.4	-1.8	0.0	2.6	1.2	0.5
Labour productivity in PPS, EU=100	83	83	83	84	80	80	81	80	80	82	82	N/A

Sources: SI-STAT – National Accounts, 2017; Eurostat Portal Page – Economy and Finance, 2017; calculations by IMAD.

Figure: **Productivity in purchasing power standards**



Source: Eurostat Portal Page – Economy and Finance, 2017.

[1] Measured as the ratio between GDP (or value added at the sectoral level) and the number of persons employed.
[2] An increase in the share of technologically more intensive and a decline in the share of low-technology industries (with lower productivity).
[3] Investment for the Digital Economy (European Commission), 2016.

2.5 Structure of merchandise exports by factor intensity

The structure of merchandise exports has improved since the beginning of the crisis. The share of high-technology products expanded particularly in the first years of the crisis (2008 and 2009), when the shares of other, less competitive, industries started to contract more strongly. The increase was mainly attributable to the growth of pharmaceutical exports, but this came to a halt in 2014 and 2015, owing mainly to the fall in exchange rates and in prices on some of the key export markets. The share of high-technology products has thus remained much lower than the EU average, though slightly higher than the average for new Member States. The share of medium-technology products is significantly higher than in the EU as a whole; it rose further in 2014 and 2015, largely owing to the renewed growth (after a fall during the crisis) in the share of passenger car exports and exports of automotive-related products. Despite this increase in the last period, however, it is still significantly lower than in the years before the crisis

The share of products with low value added[1] in merchandise exports has stopped falling in recent years. Owing to competition from countries with lower labour costs, the significance of these products in total merchandise exports has been declining, primarily reflecting the falling share of labour-intensive products (e.g. furniture, textile products, and paper and paperboard), though the share of low-technology products has also decreased significantly since the start of the economic crisis. This has accelerated the transformation of these sectors. Companies have thus managed to preserve their – mostly healthy – cores, as the share of products with low value added has been relatively stable in the last four years. Despite the decline since the onset of the crisis, the relative volume of these products remains above the EU average.

The share of exports of resource-intensive products,[2] which had risen markedly in the early years of the crisis owing to the increased trade in primary products, has been declining of late. The shares of electricity and petroleum product exports have increased since 2009, mainly on account of higher volumes of trade in these two product groups (re-exports). Following a significant decline in energy prices at the end of 2014, the value of international trade in these product groups declined noticeably;[3] electricity exports also fell following several years of growth.

Table: **Structure of merchandise exports by factor intensity[1], Slovenia and the EU**

		2000	2005	2007	2008	2009	2010	2011	2012	2013	2014	2015
Resource-intensive	**Slovenia**	**15.0**	**10.8**	**12.3**	**12.9**	**13.0**	**15.0**	**16.5**	**17.0**	**17.3**	**16.8**	**16.3**
	EU	20.6	17.5	18.4	20.2	19.6	20.6	21.9	22.5	22.3	21.4	19.3
	EU-15	20.7	17.5	18.6	20.4	19.8	20.7	22.1	22.7	22.5	21.7	19.4
	EU-13	19.3	17.8	17.1	18.2	18.2	19.3	20.5	21.5	21.0	19.7	18.4
Labour-intensive	**Slovenia**	**13.5**	**19.8**	**15.8**	**14.6**	**14.4**	**13.5**	**13.3**	**12.6**	**12.2**	**12.3**	**12.1**
	EU	10.4	11.7	11.1	10.6	11.1	10.4	10.2	9.9	10.0	10.3	10.2
	EU-15	10.2	11.2	10.7	10.3	10.8	10.2	9.9	9.6	9.6	9.9	9.8
	EU-13	12.5	16.9	14.1	12.8	13.3	12.5	12.1	12.0	12.4	12.8	12.8
Low-technology	**Slovenia**	**10.2**	**11.1**	**12.3**	**12.9**	**9.8**	**10.2**	**10.8**	**10.6**	**10.2**	**10.5**	**10.6**
	EU	8.0	8.3	9.2	9.4	8.0	8.0	8.1	7.7	7.3	7.4	7.3
	EU-15	7.8	7.9	8.9	9.0	7.7	7.8	7.8	7.4	7.0	7.2	7.1
	EU-13	9.6	11.7	11.8	11.9	9.6	9.6	10.0	9.6	9.4	9.2	9.1
Medium-technology	**Slovenia**	**39.4**	**40.6**	**41.1**	**39.4**	**40.0**	**39.4**	**38.0**	**36.9**	**36.6**	**37.2**	**38.1**
	EU	29.7	31.2	32.0	31.2	29.8	29.7	30.3	30.0	29.9	30.7	31.1
	EU-15	29.2	30.9	31.5	30.7	29.2	29.2	29.7	29.4	29.0	29.8	30.1
	EU-13	33.8	33.5	35.8	34.7	34.2	33.8	34.1	34.4	35.3	36.6	38.0
High-technology	**Slovenia**	**20.6**	**16.4**	**17.4**	**18.9**	**21.4**	**20.6**	**20.2**	**21.6**	**22.4**	**22.0**	**21.6**
	EU	28.5	28.8	27.0	26.5	28.9	28.5	26.9	27.0	26.6	27.1	28.4
	EU-15	29.2	29.8	27.9	27.2	29.7	29.2	27.6	27.8	27.5	28.1	29.6
	EU-13	23.4	18.9	19.9	21.0	23.2	23.4	21.8	20.9	20.4	20.3	20.0

Source: United Nations Commodity Trade Statistics Database, 2017; calculations by IMAD.
Note: [1] The classification of products into individual groups is based on the UN methodology (Trade and Development Report, 2002), which does not include all products. Consequently, the sum of the five product groups does not necessarily equal 100.

[1] The low-technology and labour-intensive product groups include products with the lowest value added per employee, such as clothing, textile products, footwear, furniture, glass and glass products, flat-rolled products of iron or steel, and base-metal manufactures.
[2] The main groups of exported resource-intensive products in Slovenia's merchandise exports are as follows: aluminium, mineral manufactures, electric current, rough wood, veneer and other wood manufactures, and non-alcoholic and alcoholic beverages.
[3] According to the ComExt database (European Commission), the value of Slovenia's petroleum and petroleum product exports in EUR (SITC 33) fell by 19.0% in 2015 while their volume rose by 11.0%. The average price of Brent Crude expressed in EUR fell by 35.2% in 2015.

2.6 Knowledge-intensive market services

Since 2013 the growth in knowledge-intensive market services[1] has mainly resulted from the strengthening of revenues on foreign markets. Following a fall during the crisis, these services started to recover later than in the EU, but their value added has exceeded the pre-crisis level since 2014 (in the EU since 2011). Specifically, several years of weak domestic demand had a negative impact on activity in service sectors that are focused predominantly on the domestic market[2] and have only in recent years started to offset the decline in domestic sales by sales on foreign markets. In 2015 their value added was thus still 10.6% below the pre-crisis level, whereas in the EU this figure had already exceeded it in 2012. In contrast, the share of value added of some knowledge-intensive services[3] that started to rapidly increase revenues particularly on foreign markets[4] after 2009, has been gradually rising. In 2015 their value added exceeded the pre-crisis level by 37.4% (in the EU: in 2014 by 12.8%).

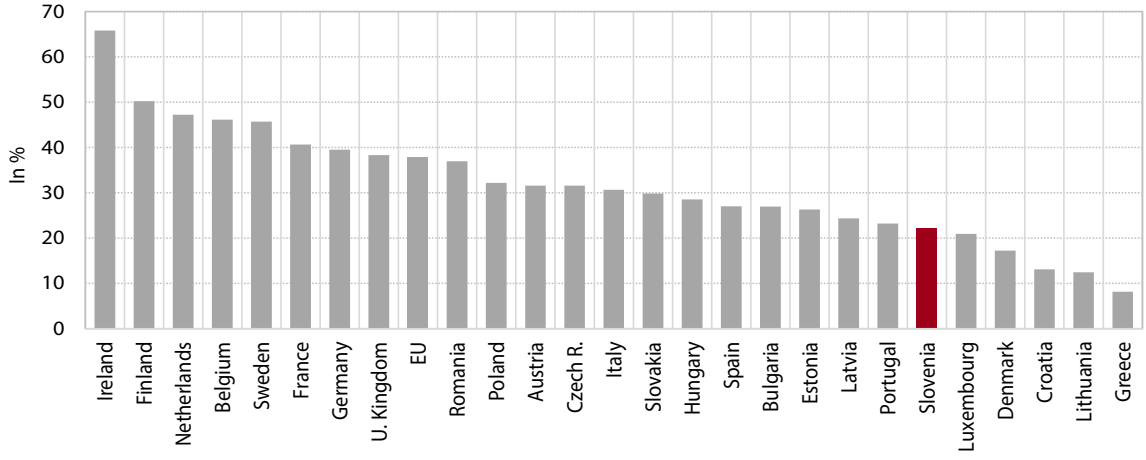
Despite stronger export orientation, the competitiveness of knowledge-intensive market services on foreign markets remains weak. Slovenia continues to lag significantly behind the EU average with regard to the share of knowledge-intensive market services in total services exports. In the three years to 2015 this share practically stagnated; in 2015 it totalled 22.3% and lagged more than 10 pps behind the average in the EU (2015: 37.9%), where exports of computer services are rising at the fastest pace. In 2015 lower shares in services exports with regard to the EU average were found particularly in computer services (by 7.6 pps), technical, trade-related, and other administrative and support service activities (by 5.9 pps); a higher (and rising) share was recorded particularly for telecommunications services (by 3.4 pps). That export competitiveness of knowledge-intensive services is weak is also evident from their market share in the EU, which is not rising. Indicators of cost-competitiveness also reveal relatively high unit labour costs of these services, which is a consequence of low productivity in comparison with the EU.

Table: **Value added in knowledge-intensive non-financial market services, Slovenia, index 2008=100**

	2000	2005	2008	2009	2010	2011	2012	2013	2014	2015	EU 2014
Knowledge-intensive non-financial market services	62.3	77.8	100.0	95.1	99.1	99.6	98.7	99.9	104.3	107.8	108.3
Information and communication activities (J)	53.3	75.1	100.0	95.6	98.8	98.9	98.6	99.3	102.7	110.7	114.1
Professional, scientific and technical activities (M)	67.7	79.5	100.0	94.8	99.3	100.1	98.7	100.2	105.3	106.1	103.9

Sources: SI-STAT Data Portal – Economy - National Accounts, 2016; Eurostat Portal Page – Economy and Finance, 2017; calculations by IMAD.

Figure: **Share of knowledge-intensive non-financial market services in total exports of services, 2015**



Source: Eurostat Portal Page – Economy and Finance, 2017; calculations by IMAD.
Note: Exports of knowledge-intensive non-financial market services are calculated as the sum of the exports of telecommunications, computer and information services (SI), and other business services (SJ).

[1] These include information and communication activities (J) and professional, scientific and technical activities (M).
[2] Publishing activities; motion picture, video and television programme production and sound recording and music publishing activities; programming and broadcasting activities; telecommunications; architectural and engineering activities; technical testing and analysis; advertising and market research; and other professional, scientific and technical activities.
[3] Computer programming, consultancy and related activities; legal and accounting activities; and business and other management consultancy activities.
[4] The net sales revenues on foreign markets in 2015 were 144.2% higher than in 2008 (AJPES data).

2.7 Network industries

In electronic communications, competition is fairly strong in terms of broadband internet access, but competition in mobile telephony still lags significantly behind the EU as a whole. *Fixed telephony* (with the exception of internet – VoIP – telephony) has been losing market share in recent years and is increasingly being replaced by *mobile telephony*. In both segments market concentration is relatively high and approaching the EU average only slowly. If Slovenia is at the tail end on this competitiveness indicator in mobile telephony, it is already in the upper quarter of EU Member States in *broadband internet access,* given the (low) market share of the leading provider. According to the most recent data available, in 2010[1] the prices of telephony services were for the most part lower than the EU average, but on the basis of the dynamics of the prices of telephone services (from the HICP), it can be concluded that by 2016 the gap had narrowed (or even reversed) due to a further 10% price reduction in the EU. In autumn 2015, the costs of internet use were mostly slightly higher than the EU average.[2]

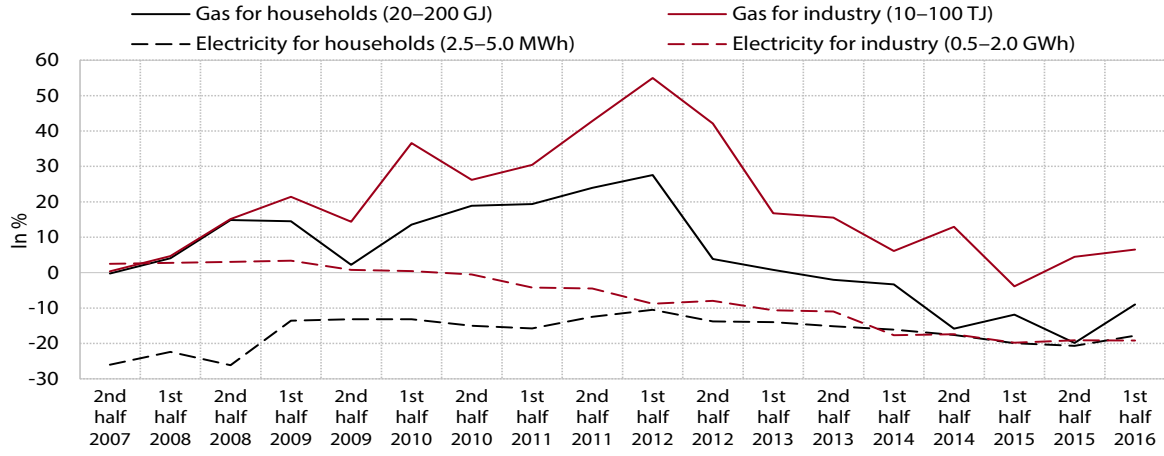
In electricity and gas supply, the competitive behaviour of providers is spurred by numerous customer switches between them. According to the Energy Agency, after the deregulation of the market in 2007, the number of consumers switching *electricity providers* increased markedly only in this decade, first peaking in 2012 (over 55,000 or 5.9% of consumers) and then in 2015 (over 66,000 consumers).[3] The rate of competition on the electricity generation market is low, but comparable with that in the EU as a whole;[4] competition on the retail market is stronger. In the period from the deregulation of the market up to 2015, the Herfindahl-Hirschman Index (HHI) for electricity supply to final consumers dropped from 1,766 to 1,369 (medium market concentration); the structure of the providers changed even more. In the first half of 2016, the retail price of electricity for households and industry, excluding taxes, was almost 20% lower than on average in the EU. On the *natural gas* market, the arrival of a new provider led to sharp price falls in 2012, and in the first half of last year only the gas price (excluding taxes) for industrial consumers remained slightly higher than the EU average. After almost no instances recorded of providers being switched in previous years, more than 11,000 consumers (8.6%) switched providers in 2012 and more than 8,000 in 2015.

Table: **Market shares[1] of the largest electronic communications providers, in %**

		2009	2010	2011	2012	2013	2014	2015	EU-3[2]
Fixed telephony	Slovenia	78	73	67	65	62	60	np	
	EU	59	56	54	53	52	51	np	40
Mobile telephony	Slovenia	56	55	53	50	49	48	47	
	EU	38	38	37	36	35	34	34	31
Broadband internet	Slovenia	46	43	42	39	36	35	34	
	EU	45	44	43	42	42	41	40	26

Sources: Digital Agenda Scoreboard, Key Indicators (European Commission), 2016; Eurostat Portal Page – Digital Economy And Society, 2016.
Notes: [1] Traffic in minutes (in December) for fixed telephony, number of active SIM cards (in October) in mobile telephony and number of connections in broadband internet (end of year). [2] The average of the three EU Member States with the smallest shares in the last year.

Figure: **Discrepancies in energy prices between Slovenia and the EU average**



Source: Eurostat; calculations by IMAD.

[1] Report on Telecoms Price Developments 1998–2010 (EC), 2010. Packages (baskets) of fixed and mobile telephony services are compared.
[2] Broadband Internet Access Cost (BIAC) Autumn 2015 (EC), 2015. Internet of various speeds was compared (also in a bundle with telephony and TV).
[3] A further significant factor in the renewed increase in the number of supplier switches was the campaign of the Slovenian Consumer Association.
[4] According to Eurostat, it was 51.3% in Slovenia in 2015, while the arithmetical mean of the shares of EU countries (excluding Austria, Bulgaria, the Netherlands and the UK) was 51.8%.

2.8 Foreign direct investment

Inward FDI flows indicate a significant improvement after 2013, while outward FDI remains modest. The increase in inward FDI in recent years is mainly a consequence of higher equity capital inflows due to the acceleration of privatisation and the generally higher sales of equity stakes in Slovenian companies. There have also been more expansions of existing foreign-owned companies in Slovenia. The SPIRIT survey indicates a continuation of favourable trends in 2017. As many as 37.5% of companies with foreign capital in Slovenia that disclosed their plans for investment are planning to expand in Slovenia in 2017, which is 6.4 pps more than in 2016. On the other hand, outward FDI has been rising only modestly since 2014, following a decline in 2010–2013, and in 2015 its stock was still 11.1% lower than its 2009 peak. The flows in 2016 do not indicate any improvement in this area.

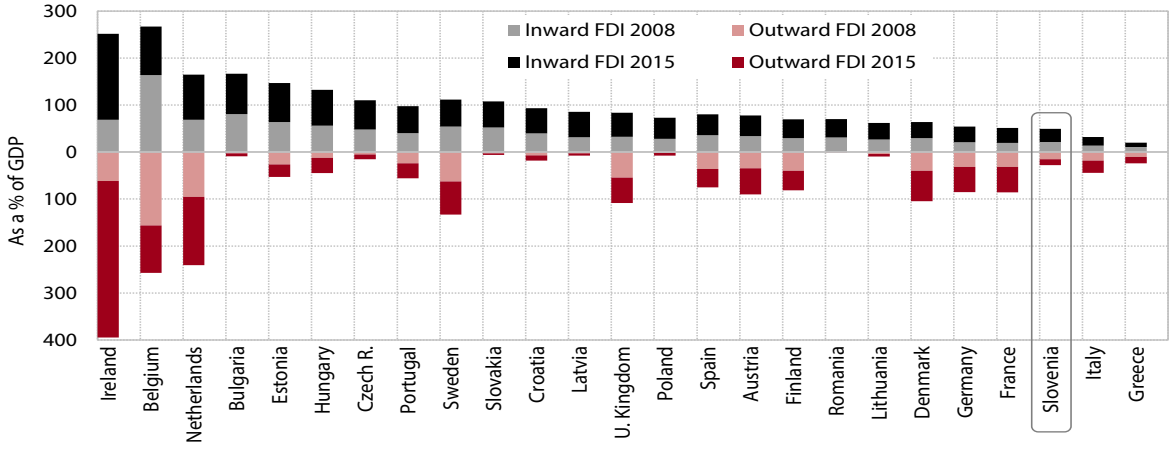
Slovenia remains among the EU countries with the lowest inward FDI stock as a share of GDP. Although the stock of inward FDI as a percentage of GDP had increased to 30% by 2015 (an increase of around 8 pps compared to the beginning of the crisis), Slovenia remains among the EU countries with both the smallest stock and the smallest increase in inward FDI as a share of GDP. A smaller share than in Slovenia is recorded only by Greece and Italy. In terms of outward FDI relative to GDP among the new Central European EU Member States, Slovenia lags only behind Hungary and Estonia, but both of them have significantly larger shares.

Table: **Flows and stocks[1] of inward and outward FDI[2] in Slovenia**

In EUR million	2000	2005	2008	2009	2010	2011	2012	2013	2014	2015	2016
Inward FDI											
Year-end stock	2,567	5,981	8,598	7,828	7,983	8,880	9,249	8,897	10,202	11,564	12,261 (end Q3)
Inflow of equity capital[3]	96.3	270.7	380.3	127.1	449.9	63.2	334.1	441.7	1,436.1	1,353.6	896.0
Stock as a % of GDP	11.9	20.5	22.7	21.6	22.0	24.1	25.7	24.8	27.3	30.0	31.3
Outward FDI											
Year-end stock	829	2,777	6,085	6,143	6,097	6,049	5,710	5,179	5,335	5,461	5,421 (end Q3)
Inflow of equity capital[3]	54.7	456.0	720.8	491.4	181.0	240.7	383.9	427.4	133.8	229.1	199
Stock as a % of GDP	3.8	9.5	16.0	17.0	16.8	16.4	15.9	14.4	14.3	14.2	14.1

Source: BoS. Notes: [1] The stocks are calculated by the new BPM6 methodology according to the directional principle used by the Bank of Slovenia since 2014. The stocks calculated according to the new methodology changed significantly owing to changes in the categories taken into account in the calculation. In the case of Slovenia, this holds true particularly for inward FDI: at the end of 2013, the stock of inward FDI amounted to EUR 10,729 million according to the previous and only EUR 8,926.0 million according to the new methodology, the stock of outward FDI EUR 5,121 million and EUR 5,172 million according to the previous and the new methodology respectively (Direct Investment 2013, 2014). [2] Companies in which a foreign investor holds a 10% or higher stake. [3] Equity capital without reinvested earnings.

Figure: **Stocks of inward and outward FDI, as a % of GDP**



Source: UNCTAD, FDI/MNE database (www.unctad.org/fdistatistics). Note: For better illustration, the figure shows EU countries excluding Cyprus, Malta and Luxembourg, which stand out in comparison with other countries in terms of their very large FDI stocks.

2.9 Entrepreneurial activity

With increased business opportunities, in 2016 early-stage entrepreneurial activity for the first time more distinctively exceeded the level seen before the crisis. Since the beginning of the crisis, it first increased more noticeably in 2012 and 2013, when the share of necessity-driven early-stage entrepreneurs strengthened due to increased self-employment. On the other hand, the improvement in 2016[1] mainly reflected a significant increase in the share of opportunity-driven enterprises, which is favourable from the aspect of the potential for fostering innovation activity, value added growth and job creation. The share of established entrepreneurs (those who have been in business for more than 42 months) also increased more visibly last year after having declined for several years, which is another favourable shift, also from the perspective of the next stage of the business process, when enterprises are transitioning from the early into the next phases of development. The share of established enterprises is very important for these enterprises, given that established enterprises represent a significant source of growth and support for new micro and small enterprises.[2] The share of necessity-driven entrepreneurs also increased further in 2016, thus exceeding for the first time the average for the EU Member States that were included in the GEM survey.[3] The rates of early-stage and total entrepreneurial activity also surpassed the EU average in 2016.

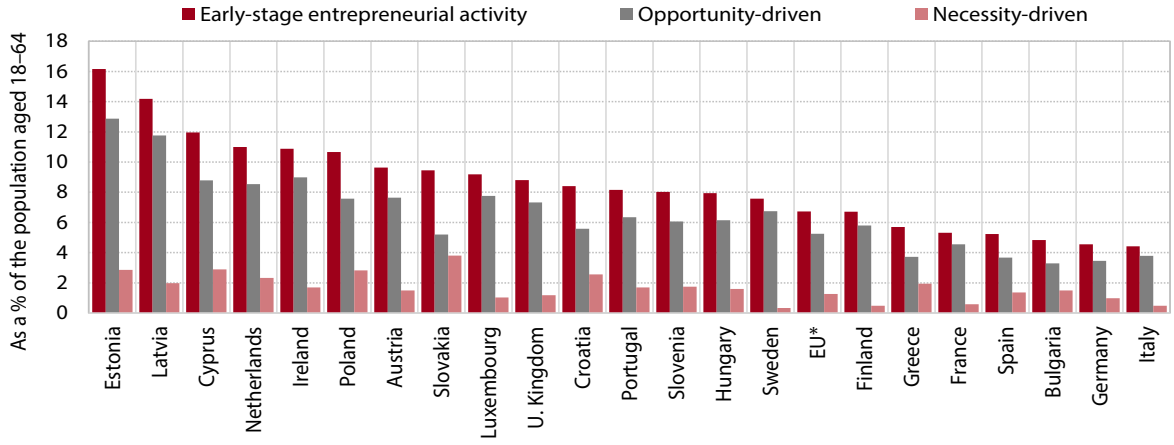
The share of enterprise births exceeds the share of enterprise deaths; new enterprises are mostly micro enterprises; the number of high-growth enterprises remains low. The share of enterprise deaths, which had persisted at a high level until 2013, was large (2013: 9.0%) but the share of newly established enterprises was even higher throughout the 2009–2014 period (11.0%).[4] However, the majority of newly established enterprises were micro enterprises with only one to four employees (which created around 96,000 jobs in total in the six-year period); moreover, most of these enterprises have not attained high growth rates in the years following start-up, as the number of high-growth enterprises[5] has stagnated at an exceptionally low level since 2012 and their share in total enterprises is among the smallest in the EU. The innovation activity of small enterprises, one of the key possibilities for increasing value added and number of employees, is also low (see Indicator 2.15).

Table: **Selected GEM indicators of entrepreneurial activity, Slovenia, as a % of the population (aged 18–64)**

	2002	2005	2008	2009	2010	2011	2012	2013	2014	2015	2016	EU 2016
Early-stage entrepreneurial activity*	4.6	4.4	6.4	5.4	4.7	3.7	5.4	6.5	6.3	5.9	8.0	6.7
Established businesses**	-	6.3	5.6	5.7	4.9	4.8	5.8	5.7	4.8	4.2	6.8	6.4
Total entrepreneurial activity***	-	10.1	11.8	10.8	9.5	8.4	11.2	11.9	11.0	10.1	14.5	12.8

Sources: Rebernik et al., 2003; Rebernik et al., 2006; Rebernik et al., 2009; Rebernik et al., 2010; Rebernik et al., 2011, Rebernik et al., 2012; Rebernik et al., 2013, Rebernik et al., 2014, Rebernik et al., 2015, Rebernik et al., 2016, GERA, 2017. Notes: * The rate of early-stage entrepreneurial activity measures the share of the population engaging in entrepreneurship. It includes individuals who have started setting up a new business or are engaging in new business activities, including self-employment. It also includes individuals who are owners/managers of a business that is less than 42 months old. ** The share of the population who own or manage a business that has been operating for more than 42 months. *** Total entrepreneurial activity includes the rate of early-stage entrepreneurial activity and the share of established businesses.

Figure: **Early-stage entrepreneurial activity in Slovenia and 22 EU Member States included in the GEM survey, 2016**



Source: GERA, 2017; calculations by IMAD. Note: * Weighted average of the EU Member States included in the 2016 GEM survey.

[1] The data are from the Global Entrepreneurship Monitor (GEM), which is carried out in the first half of the year.
[2] Rebernik et al., 2016.
[3] 22 Member States participated in the survey (19 of which were the same as in 2015).
[4] Final data on enterprises' deaths and births are available until 2013 and 2014 respectively.
[5] A high-growth enterprise is an enterprise with average annualised growth in number of employees greater than 10% per year over a three-year period and at least 10 employees in the first year of this three-year period.

2.10 Share of the population with tertiary education

The share of adults with tertiary education has exceeded the EU average since 2014. Given the long-term trend of high participation of young people in tertiary education, the share of tertiary graduates has been rising for a number of years, albeit at a slower pace of late, this attributable to a decline in the number of graduates for demographic reasons (a decline in student enrolment due to the smaller generations of young people). The share of women with tertiary education is higher than that of men, the gap between the two groups being wider than for the EU as a whole. The growth of the share of tertiary-educated persons increases a country's human capital as a factor of the competitiveness of the economy and is favourable given the anticipated increase in the business sector's needs for this kind of workforce.[1] However, the level of education attained does not necessarily ensure appropriate skills and competencies for work. In the areas for which data are available, particularly literacy and digital skills[2] are seen as problematic with tertiary graduates in Slovenia. There is also room for improvement in numeracy skills.

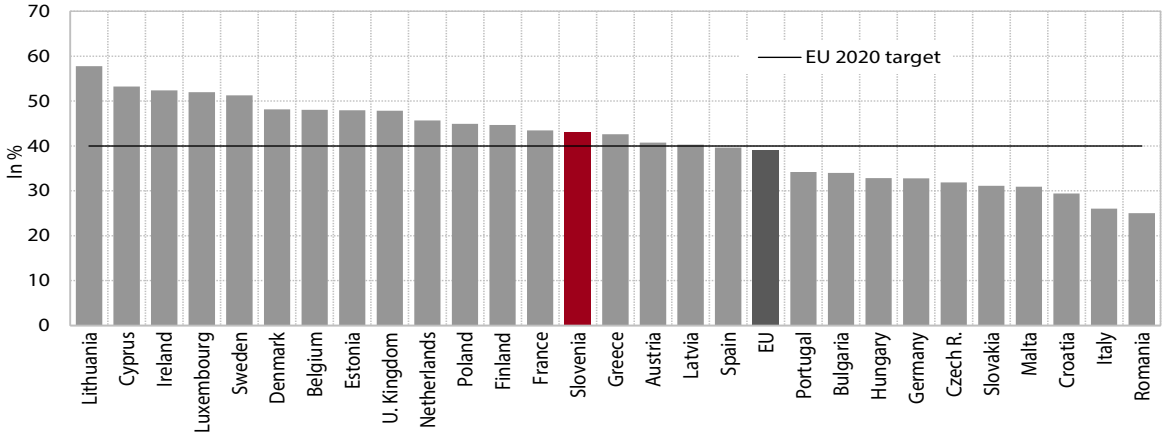
The share of tertiary-educated young people is higher than the EU average. In the 30–34 age group, however, it is no longer rising. In 2016 it stood at 43.1%, which is higher than the long-term average, the average of the EU (39.0%) and the Europe 2020 Strategy target of 40%. Despite the currently favourable situation, demographic change (i.e. smaller generations of young people entering the labour market) could lead to a shortage of appropriately educated people in certain occupations. A favourable shift in this direction, on the other hand, is the significant increase in the share of tertiary-educated people in the 25–29 age group in 2016. This surpassed the EU average for the first time, which is partly attributable to the deadline for completing studies under the pre-Bologna study programmes.[3] The share of tertiary graduates in the 20–24 age group is, however, still low by international standards, which suggests low efficiency of the tertiary education system. Slovenia also lags behind the EU average regarding the share of tertiary graduates in the middle and higher age groups (45–54 and 55–64).

Table: **Share of the population aged 25–64 with tertiary education, 2nd quarter, in %**

	2002	2005	2008	2009	2010	2011	2012	2013	2014	2015	2016
Slovenia	14.8	20.0	21.9	22.5	23.7	25.5	26.1	27.8	29.2	30.2	30.7
EU	19.9	22.3	24.1	25.0	25.8	26.6	27.5	28.5	29.1	30.0	30.5

Source: Eurostat Portal Page – Population and Social Conditions – Education and training, 2017.

Figure: **Share of the population aged 30–34 with tertiary education, 2nd quarter of 2016**



Source: Eurostat Portal Page - Population and Social Conditions, 2017.

[1] According to Cedefop projections (Slovenia: Skills forecasts up to 2025, 2015).
[2] According to the Programme for the International Assessment of Adult Competencies (PIAAC), tertiary educated people (25–65 years) in Slovenia scored 285.7 in literacy skills (OECD: 292.1) and 291.4 in mathematical literacy (OECD: 292.0). The share of the tertiary-educated with the lowest level of skills for a successful functioning in digital society is 47.0% (the OECD average being 41.3%).
[3] This share will increase further when data for the whole year become available, as the deadline for their completion expired on 30 September 2016.

2.11 Education expenditure

Public expenditure on education (as a % of GDP) is lower than the EU average, while private expenditure is comparable.[1] Public expenditure has been declining since 2012. In 2015 it accounted for 4.65%[2] of GDP and was significantly lower than Slovenia's long-term average at all levels except pre-primary education. The several-year downward trend has been primarily a consequence of the Government's fiscal consolidation measures, but also of certain other measures to rationalise the use of public expenditure on education.[3] In 2013 (the latest international data) education expenditure was lower than the EU average for the first time. This holds true for the upper secondary and tertiary levels of education, while expenditure on pre-primary, primary and secondary education was higher than the EU average. Private expenditure on education stood at 0.64% of GDP in 2015, which is lower than the long-term average and, according to data for 2013, comparable with the average for those EU Member States that are also OECD members (i.e. the EU-22).[4]

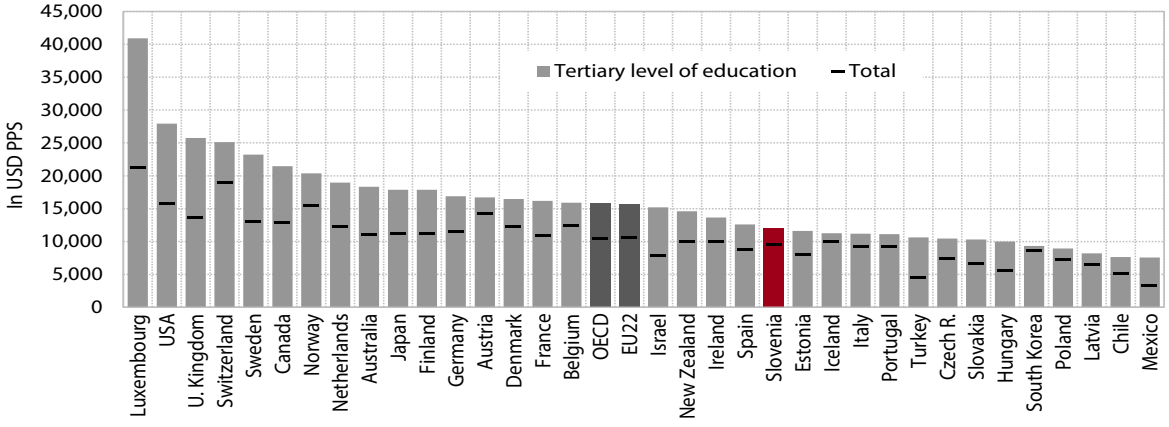
Expenditure (both public[5] and private) per participant in education is low, although it is rising. Despite the decline in the number of students enrolled in tertiary education, expenditure per participant has increased for all educational institutions in the last few years and exceeds the long-term average. However, it remains lower than the EU-22 average[6] except for expenditure on pre-primary and primary education, which is higher than in the EU as a whole. Expenditure on upper secondary and tertiary levels is significantly lower compared with the EU as a whole, owing to the higher participation of the population in education, which makes it difficult for Slovenia to improve the quality of education.

Table: **Total public expenditure on education as a share of GDP, in %**

	2000	2005	2008	2009	2010	2011	2012	2013	2014	2015
All levels of education										
Slovenia	5.65	5.63	5.11	5.57	5.56	5.57	5.34	5.13	4.99	4.65
EU	N/A	4.92	5.04	5.38	5.41	5.25	5.18	5.34	N/A	N/A
Tertiary education										
Slovenia	1.24	1.23	1.19	1.35	1.34	1.42	1.20	1.13	1.05	0.98
EU	N/A	1.12	1.14	1.21	1.25	1.27	1.28	1.29	N/A	N/A

Sources: Eurostat, SURS; calculations by IMAD. Note: N/A = not available.

Figure: **Expenditure on educational institutions per participant, in PPS USD, 2013**



Source: Education at a Glance 2016, 2016. Note: »Total« includes primary, secondary, upper secondary and tertiary levels of education.

[1] Data for public expenditure on education are available for the EU average, while data for private expenditure are available only for those Member States that are also members of the OECD.
[2] Excluding the first age group of the pre-primary level of education. According to the International Standard Classification of Education (ISCED) 2011, which also includes this group, public expenditure on education totalled 4.95 % of GDP in 2015.
[3] For example removing anomalies such as fictitious enrolment in tertiary education, introducing per capita funding in upper secondary education, changing the legal status of upper secondary schools, using internal personnel reserves in elementary schools, and improving the organisation of work in kindergartens according to the new Rules on norms for the performance of pre-school education activity of 2014.
[4] Private expenditure on the pre-primary, primary and lower secondary levels of education is higher than the EU-22 average, on the upper secondary level it is equal, and on the tertiary level it is lower.
[5] Public expenditure does not include transfers for students/households.
[6] In 2013 (the latest international data available), it totalled PPS USD 9,597 in Slovenia (EU-22: PPS USD 10,548).

2.12 Participation of adults in lifelong learning

The participation rate for adults (aged 25 to 64) in lifelong learning[1] is somewhat higher than the EU average, although it has declined noticeably since 2010. Since 2013 it has stagnated, despite the improvement in the economic situation and labour market conditions, which has made it easier for companies and households to finance education. It is lower than both the objective of the strategic framework for European cooperation in education and training (Education and Training 2020/ET 2020), which is 15%, and the objective of the Resolution on the Slovenian Master Plan for Adult Education 2013–2020, which is 19%. The low participation rates of less-educated people and older people are particularly problematic and these have fallen further since the onset of the crisis.

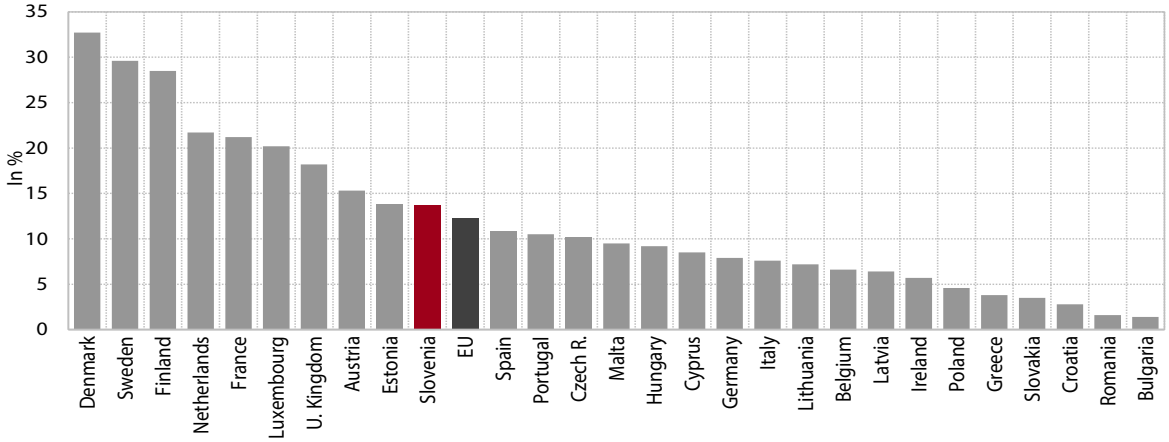
The participation of the working-age population (25–64) in lifelong learning has yet to recover from the decline during the crisis. It stopped falling in 2015 and is still higher than the EU average. The decline of the participation in lifelong learning across all occupational groups and in most sectors during the crisis hinders the adjustment to changes in the workplace and weakens the competitiveness of the business sector. Broken down by sector, in 2015 participation in lifelong learning was highest in education and lowest in construction; it is on average higher in those sectors that have larger shares of people with tertiary education.

Table: **Participation of adults aged 25–64, in lifelong learning, 2nd quarter, in %**

	2003	2005	2008	2009	2010	2011	2012	2013	2014	2015	2016
Slovenia	15.1	17.8	15.9	17.0	18.2	17.2	14.7	13.7	13.5	13.3	13.4
EU	8.4	9.6	10.0	10.0	9.8	9.4	9.8	11.4	11.5	11.4	11.5

Source: Eurostat Portal Page – Population and Social Conditions – Education and Training, 2017.

Figure: **Participation of employed persons aged 25–64 in lifelong learning, 2015, in %**



Source: Eurostat Portal Page – Population and Social Conditions – Education and Training, 2017.

[1] Lifelong learning includes formal and non-formal education.

2.13 R&D expenditure

R&D expenditure (as a percentage of GDP) has been above the EU average since 2010, but declining since 2014 primarily owing to lower public investment. After several years of growth, R&D investment declined by one-tenth in real terms in 2012–2015, mainly on account of lower public expenditure since 2012. The business sector's share in total R&D expenditure has increased further and is significantly higher than in the EU.[1] The share of researchers[2] in the business sector, at 53.1% in 2015, is also considerably above the EU average (2015: 48.7%). In 2009–2015 the business sector increased R&D investment by 42.2% in real terms, partly as a result of funding from the European Commission (where co-funding by enterprises was required) and cohesion fund receipts for financing centres of excellence and competence and development centres in 2010–2013. Throughout the period, R&D financing was also favourably affected by R&D tax relief.[3] In 2009–2015 almost one-third of R&D tax relief was claimed by companies in the pharmaceutical industry, one-tenth each by manufacturers of motor vehicles and manufacturers of electrical equipment, and one-fifth by various service activities, primarily knowledge-intensive services.[4]

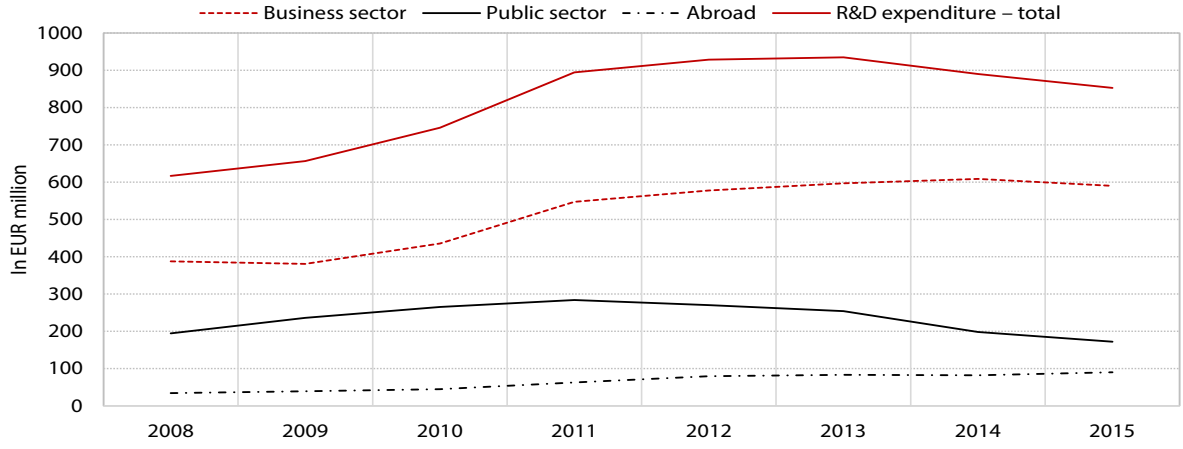
The weak cross-financing of R&D does not foster cooperation and knowledge-transfer between sectors. R&D expenditure of the public sector (the government and the higher education sector) has been shrinking since 2012. In 2015 it was nominally lower than before 2008, which affected particularly public research and higher education institutions, given that each sector is mainly financing its own R&D. The share of the government sector's R&D expenditure allocated for financing research in the business sector has declined significantly in recent years: in 2015, it totalled 16% of its total R&D expenditure. Meanwhile, the business sector allocated less than 4% of its total R&D expenditure for financing research undertaken by the public sector. The small share of R&D cross-financing is reducing cooperation between sectors and the transfer of R&D results, which is vital to reach synergies and increase the efficiency of R&D investment. Funds from abroad represent an increasingly important source of R&D funding in Slovenia. In 2015, these accounted for 10.6% of total funds. The majority of this funding comes from investment by the European Commission and the business sector from abroad.

Table: **R&D expenditure, as a % of GDP**

	2000	2005	2008	2009	2010	2011	2012	2013	2014	2015
Slovenia	1.36	1.41	1.63*	1.82	2.06	2.42*	2.58	2.60	2.38	2.21
EU	1.77	1.74	1.84	1.93	1.93	1.97	2.01	2.03	2.04	2.03

Sources: Eurostat Portal Page – Science and Technology – Research and Development, 2016; SURS, 2016.
Notes: Data for the EU are Eurostat estimates. * The breaks in the time series in 2008 and 2011 were due to the higher number of reporting units in the business sector. In 2011 this change contributed to an increase in R&D expenditure of 0.21% of GDP (see Development Report 2013, p. 132).

Figure: **R&D expenditure by source of funds, Slovenia**



Source: SURS, 2016.

[1] The share of the business sector was significantly higher than the EU average in the entire 2009–2015 period (in the last few years by as much as 10 pps).
[2] Expressed on a full-time equivalent basis.
[3] The tax relief on R&D investment (20%) was introduced in 2006. In 2010 it was raised to 40% and in 2012 to 100%.
[4] Information and communication activities (J); professional, scientific and technical activities (M).

2.14 Graduates and doctors of science and technology

The share of science and technology graduates is high, but their annual number is decreasing. Since 2005 Slovenia has made significant progress in promoting enrolment in science and technology. Although in the last few years the share of science and technology graduates has no longer been rising, it was still higher in 2015 (at 24.9%) than before the crisis and higher than the EU average. As since 2013 the number of science and technology graduates has been declining for demographic reasons, while companies' demand for them, with rising technology intensity and digitalisation of operations, is set to increase according to some estimates,[1] it may soon become difficult for Slovenia to ensure an adequate number of this kind of personnel.[2] This may also a consequence of higher-paying job opportunities abroad and consequent emigration. Low enrolment will be particularly problematic in the areas of computer science, electronics and automation, fields that are already dealing with a shortage of tertiary-educated personnel, and the accelerated digitalisation of the economy will make this problem even more acute.

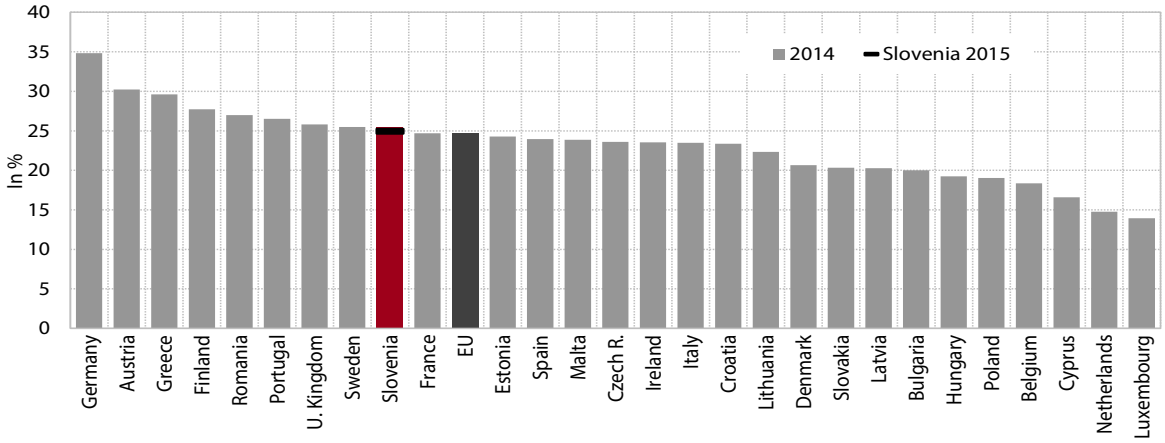
The share of new doctors of science and technology is significant, but the decline in their number is problematic from the point of view of strengthening innovation potential. Their share has mostly been above the EU average for years, which is a consequence of long-term enrolment-promotion planning by the Government (the Government incentives Young Researchers, Young Researchers for the Economy, etc.).[3] Their number is also higher than before the crisis, but in 2014 and 2015 it declined as a result of reduced funding for young researchers. Owing to lower enrolment in doctoral science and technology programmes, similar trends are also expected in the future. Furthermore, the knowledge of this staff is not sufficiently exploited to increase the competitiveness of companies, given that certain support instruments have been abolished (for example funding of the Young Researchers for the Economy programme) or are not longer being financed (for example centres of excellence and competence centres). New instruments (such as strategic development and innovation partnerships) should therefore be launched as soon as possible in order to enhance the involvement of academia in the development of innovative solutions for companies. Strengthening the acquisition of entrepreneurial skills within the framework of doctoral studies and regulating university spin-off creation would make it possible for university researchers to engage in entrepreneurial activity and establish high-technology businesses.

Table: **Share of new doctors of science and technology in the total number of doctors of science, in %**

	2003	2005	2008	2009	2010	2011	2012	2013	2014	2015
Slovenia	47.7	48.5	49.1	48.7	53.3	40.9	44.5	54.2	52.3	45.1
EU	41.7	40.5	41.8	42.0	43.4	43.5	44.4	45.9	45.6	N/A

Sources: Eurostat Portal Page – Population and Social Conditions – Education and Training, 2017; SI-STAT Data Portal – Demography and Social Statistics – Education (SURS); calculations by IMAD.

Figure: **Share of science and technology graduates in the total number of tertiary education graduates, 2014**



Sources: Eurostat Portal Page – Population and Social Conditions; SI-STAT Data Portal – Demography and Social Statistics – Education (SURS), 2017.

[1] According to Cedefop's forecast for skill needs in Slovenia (Slovenia: Skills forecasts up to 2025, 2015), science and technology is one of the areas that will create the most jobs in the future.
[2] Eurostat Portal Page – Digital Economy and Society.
[3] The significant fluctuations in the proportion of doctors of science and technology since 2010 are a consequence of changes in the proportions of new doctors in other fields.

2.15 Innovation activity of enterprises

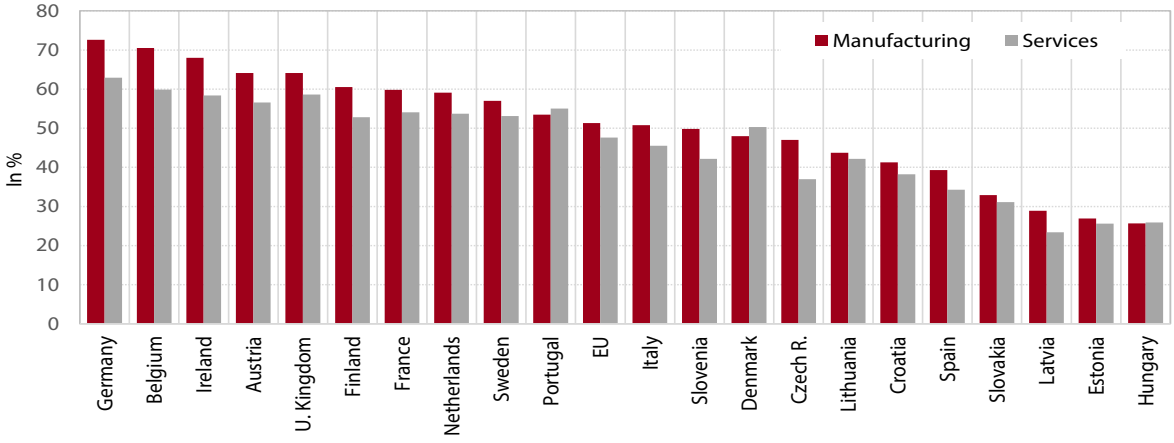
Innovation activity of enterprises is stagnating and lags behind the EU average. In 2012–2014, 45.9% of enterprises were innovation-active in Slovenia, which is slightly less than in the previous three-year period (2010–2012) for which comparable data are available.[1] The share of innovation-active enterprises (IAEs) in the EU rose minimally, but the most innovation-active Member States increased their lead on this indicator. The share of large innovation-active enterprises in Slovenia exceeds the EU average, while the share of small enterprises lags behind, which cannot be simply attributed to the differences in the average number of employees per enterprise between countries.[2] The share of innovation-active enterprises in manufacturing remains traditionally higher than in the service sector, but in both it is 10 pps to 20 pps lower than in the most innovative countries, reducing the competitiveness of Slovenian enterprises. In those EU Member States where the share of IAEs declined in 2012–2014, the gap between the manufacturing and service sectors, similarly to Slovenia, widened further. In the service sector, the most innovation-active enterprises in Slovenia are in computer services (72.5%). This is close to the EU average but significantly lower than in the leading Member States (over 85%). In knowledge-intensive services together[3] the share of IAEs amounts to 55.6%, compared with more than 60% in the best-performing Member States. Knowledge-intensive services (e.g. ICT services and consultancy services) significantly influence the strengthening of innovation activity across all sectors and hence contribute to the improvement of competitiveness in general.

Table: **Innovation-active enterprises by enterprise size, in 2012–2014, as a % of all enterprises**

					MANUFACTURING				SERVICES			
	TOTAL	Small	Medium-sized	Large	TOTAL	Small	Medium-sized	Large	TOTAL	Small	Medium-sized	Large
Slovenia	45.9	39.7	63.1	87.2	49.8	41.1	67.3	92.5	42.2	39.0	57.6	82.9
EU*	49.1	45.0	61.5	78.1	51.3	45.7	66.1	82.2	47.6	44.9	57.2	74.0

Sources: Eurostat Portal Page – Science and Technology – Community Innovation Survey, 2017; First Release, SURS (2016); calculations by IMAD.
Note: * Data for manufacturing for the EU average excluding Malta; calculations by IMAD.

Figure: **Share of innovation-active enterprises in manufacturing* and services in 2012–2014, as a % of all enterprises**



Source: Eurostat Portal Page – Science and Technology – Community Innovation Survey, 2017; calculations by IMAD.
Note: * Data for manufacturing for the EU average excluding Malta; calculations by IMAD.

[1] The statistical survey on innovation activity that includes a larger number of activities was carried out for only the second time, which should be taken into account in comparing and interpreting data for the period before 2010 (for more see Development Report 2015, p. 122).
[2] In Slovenia, the average number of employees in small innovation-active enterprises is equal to the EU average (EU: 21.8; Slovenia: 21.4).
[3] These include information and communication activities (J) and professional, scientific and technical activities (M). Enterprises from M have a significantly lower innovation-activity rate than those from J.

2.16 Intellectual property

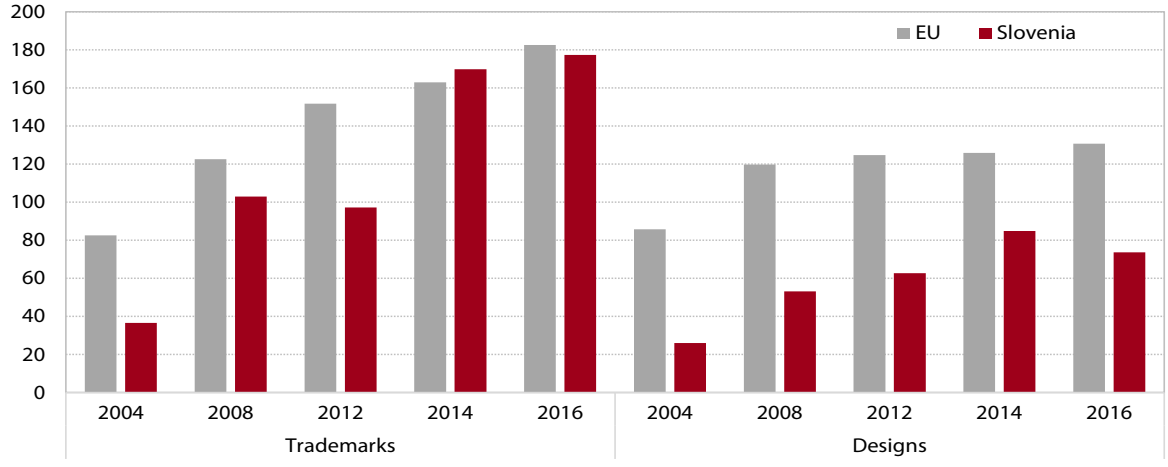
The number of patent applications per million inhabitants filed with the European Patent Office (EPO) is lower than before the crisis, but significant progress has been made in EU trademarks. According to data on the number of first[1] patent applications with the EPO, Slovenia has widened its gap with the EU average since the beginning of the crisis. However, it remains significantly more successful than other countries in Central and Eastern Europe with regard to the degree of patentability, which is measured by the number of patent applications per million inhabitants. Estonia, the country with the second best results in this group, reached only 60% of Slovenia's performance in 2016. The inventive capacity of enterprises, which is also partly reflected in the number of patent applications on the basis of the first application, also depends on the structure of the economy, as some technologies[2] have more patentable products than others. According to the international WIPO methodology, more patentable technological fields are: medical technology, digital communications, computer technology, and technology related to electrical energy, machinery and apparatus.[3] In 2010–2016, half of all patent applications derived from these technological fields, the majority of them having been filed by large enterprises (EPO Annual Report 2016, 2017). In EU trademark[4] applications,[5] Slovenia has already come close to the EU average, although in recent years their number has risen less than on average in the EU. In Community design[6] protection, Slovenia's gap remains wide, which may be due to creative industries being insufficiently used to enhance the competitiveness of products. In both areas of legal protection, the number of applications is increasing more rapidly in Slovenia than in the EU. This indicates that Slovenian applicants are increasingly interested in the legal protection of these rights because of the lower costs and faster implementation of protection than in the case of patents; they are also easier to use in services, a sector populated by many micro and small enterprises.

Table: **Patent applications filed with the EPO by year of first filing*, per million inhabitants**

	2000	2005	2008	2009	2010	2011	2012	2013**	2014**	2015***	2016***
Slovenia	25	54	69	61	52	55	62	62	66	57	55
EU	106	116	114	113	113	114	113	112	112	133****	132****

Source: Eurostat Portal Page – Science and Technology – Patent Statistics, 2017; EPO Annual Report – statistics 2016, 2017.
Notes: * Data for 2015 and 2016 relate to patent applications that are not necessarily the first on a global scale but were filed with the EPO in the current year (EPO Annual Report – statistics 2016, 2017). ** Eurostat estimate. *** Provisional data. **** IMAD estimate based on the recalculation of data for EU Member States.

Figure: **Number of EU trademark applications and registered Community designs with the EUIPO*, per million inhabitants**



Source: EUIPO Web Page, 2017; calculations by IMAD. Note: * EUIPO – European Union Intellectual Property Office.

[1] The data on patent applications for the last two years are taken from the EPO Annual Report, which means that they refer to the current year. These applications are not necessarily the first patent applications on a global scale, which refer to the year closest to the date of invention as released by Eurostat (for more information, see SEM 2/2009).
[2] The legal protection of patents actually involves the exclusive protection of technologies (rather than sectors) and related procedures and processes in which the products are made. The international classification of patents is therefore based on the classification of technologies (Schmoch, 2008).
[3] Among the top ten technological fields, technologies related to pharmaceuticals rank 9th.
[4] A trademark or service mark is any sign (or any combination of signs) protected by law that can be graphically represented and used to distinguish between otherwise identical or similar goods or services. A trademark is valid for ten years from the filing date and may be renewed (SIPO Annual Report 2011, 2013).
[5] With the entry into force of the new trademark regulation in 2016, the Community trademark became the EU trademark and the Office for Harmonization in the Internal Market (OHIM) was renamed. It continues to protect the rights deriving from registered EU trademarks and Community designs in the territory of the entire EU.
[6] A design protects the external appearance of a product, which is new and has an individual character. Design protection lasts for five years and may be renewed (2011 SIPO Annual Report, 2013).

2.17 Use of the internet and e-services

Slovenia continues to lag behind the EU average in terms of internet use and access to the internet, which is one of the signs that it is not sufficiently prepared for digitalisation. The percentage of regular internet users and households with internet access remain below the EU average and lower than in a number of new Member States. This is a consequence of a wider digital divide from the point of view of the age and education structure of the population and in turn greater differences in e-skills; at the same time, lower internet use is also recorded for population groups with lower income. The gap in the use of higher-capacity broadband internet access has also been widening since 2011. The differences from the EU average are particularly significant when it comes to faster access, but there is also a difference in the price of fixed broadband access.[1] The key for digitalisation is the use of modern technologies and appropriate digital skills. This is where Slovenia lags behind the EU average, as it performs worse than the EU as a whole in both basic and advanced skills for the use of digital technologies and has a significantly larger share of inhabitants who do not use the internet or have only low digital skills.[2] The use of more advanced e-services (such as online shopping, online banking and e-administration services) is consequently much lower than in the EU generally. Less than one-fifth of enterprises have a high or very high digital intensity index (this measures the intensity of the use of ICT services). The share of these enterprises is otherwise similar to the EU average, but the gap with leading EU Member States in this area is considerable. The digitalisation of Slovenian enterprises is also impeded by difficulties in recruiting appropriate ICT specialists, a problem that is much more severe than elsewhere in the EU.

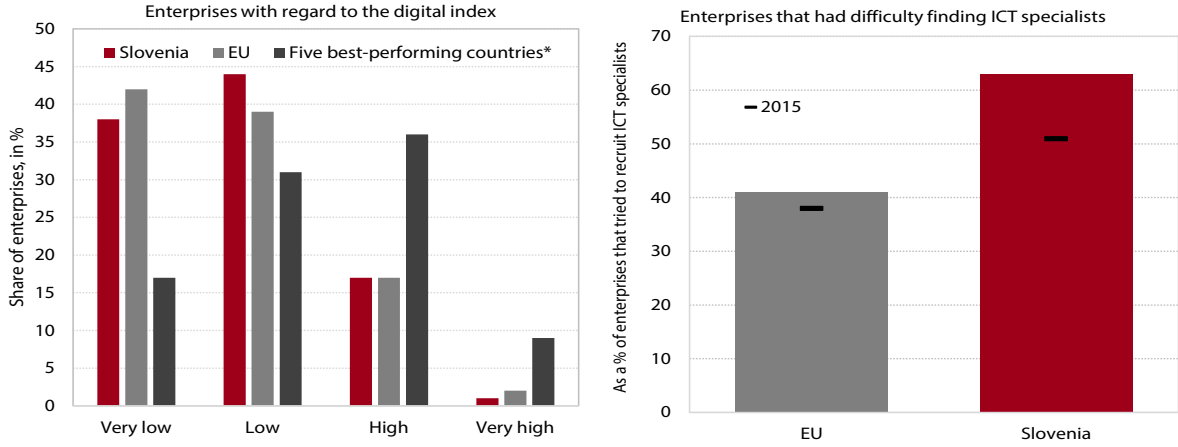
Slovenia also lags behind the EU average in the use and availability of more advanced e-government services. The availability of modern e-services of public institutions can significantly reduce the costs of public administration and increase the savings of enterprises, households and other public institutions. The use of simple e-government services is equal to the EU average, but Slovenia lags significantly behind in more advanced types of online interaction with public authorities. The share of internet users who return completed forms to public authorities electronically is significantly lower than the EU average; Slovenia also lags behind the EU average in the availability of forms pre-completed with data that are already available to the public administration. Regarding open data[3] that enable further connectivity of data and new knowledge-creation, Slovenia even ranks last among all EU Member States.[4]

Table: **Internet usage and access by households and individuals (16–74 years)**

In %		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Internet users in the last three months	Slovenia	47	51	53	56	62	68	67	68	73	72	73	75
	EU	N/A	N/A	57	61	65	68	71	73	75	78	79	82
Households with internet access	Slovenia	48	54	58	59	64	68	73	74	76	77	78	78
	EU	N/A	N/A	55	60	66	70	73	76	79	81	83	85
Households with broadband internet access	Slovenia	19	34	44	50	56	62	67	73	74	75	78	78
	EU	N/A	N/A	42	48	56	61	67	72	76	78	80	83

Source: Eurostat Portal Page – Digital Economy and Society, 2017. Note: Data for individual years refer to the first quarter; N/A = data not available.

Figure: **Digital index[1] for enterprises and their difficulties in recruiting ICT specialists, 2016**



Sources: The digitalisation rate for enterprises with at least 10 employees in 2016 (SURS), 2016; Eurostat Portal Page – Digital Economy and Society, 2016.
Note: [1] The digital index shows the intensity of ICT use in enterprises (SURS, 2016). * In the high and very high digital index, the figure is the unweighted average of the five countries with the highest share of enterprises with such index; in the low and very low index, this is the unweighted average of the five countries with the lowest share.

[1] Digital Scoreboard 2016: Slovenia (Evropska komisija), 2016.
[2] Digital Scoreboard 2016: Slovenia (Evropska komisija), 2016.
[3] Data anyone is free to use, reuse and redistribute without copyright restrictions.
[4] The digital economy and society index 2015 (European Commission), 2016.

2.18 Trust in institutions

Trust in institutions[1] remains low. Having declined significantly since the beginning of the crisis, it is now among the lowest in the EU. According to the latest survey, the proportion of respondents who trust the Parliament and the Government has risen slightly compared with November 2015 and May 2016. However, trust in political parties has remained very low and, similarly to trust in the Parliament and the Government, among the lowest in the EU. Trust in local authorities, on the other hand, has improved noticeably. In November 2016 it was 11 pps higher than one year before, though still below the EU average. Dissatisfaction with the current economic and general situation in Slovenia persists, despite the improvement in macroeconomic indicators. Specifically, the most recent Eurobarometer data show that respondents remain dissatisfied with the employment situation in Slovenia (85%) and the situation of Slovenia's economy (72%), but the proportion of those who perceive the current situation as bad has declined in both areas. The majority also expect the employment situation, economic conditions and their life in general to remain the same over the next year.

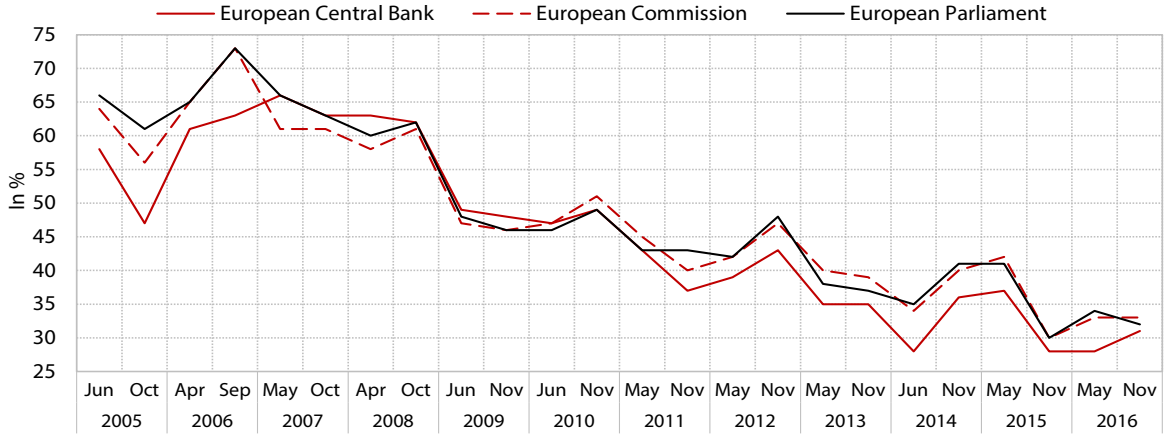
Trust in the EU and its institutions rose. According to the latest survey, trust in the EU and its main institutions is slightly higher than measured one year earlier, though still significantly lower than at the onset of the crisis. In November 2016 the proportion of respondents who trusted the EU was seven percentage points higher than one year before and again above the EU average. In Slovenia around one-third of respondents trust the European Commission, the European Parliament and the European Central Bank, but all these figures remain lower than on average in the EU. Almost half of Slovenians still believe that things in the EU are heading in the wrong direction. This continues to be mainly related to dissatisfaction with how the EU is dealing with the refugee crisis, as respondents in Slovenia see (im) migration (58%) and terrorism (36%) as the two most important issues currently faced by the EU. In contrast to previous years, a smaller proportion of respondents perceive the economic situation to be the EU's main concern (16%).

Table: **Trust in institutions, in %**

		2005	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Parliament	Slovenia	33	31	34	19	23	10	12	6	9	11	14
	EU	35	35	34	30	31	27	28	25	30	28	32
Government	Slovenia	39	32	36	29	27	12	15	10	13	16	17
	EU	31	34	34	29	29	24	27	23	29	27	31
Political parties	Slovenia	14	13	17	9	11	7	9	6	6	6	6
	EU	17	18	20	16	18	14	15	14	14	15	16
Local authorities	Slovenia	np	np	39	40	39	36	34	29	31	27	38
	EU	np	np	50	50	47	45	43	44	43	42	47
EU	Slovenia	55	65	60	50	47	38	39	37	40	30	37
	EU	45	48	47	48	42	34	33	31	37	32	36

Source: Eurobarometer. Note: The figures for individual years are the latest available data for that year (autumn measurements). For the EU, the figures for 2005 are for the EU-25; the figures from 2007 to 2012 for the EU-27, and the figures for 2013 to 2016 for the EU-28; N/A – data not available.

Figure: **Trust in EU institutions, Slovenia**



Source: Eurobarometer.

[1] The source of the data is Eurobarometer, which is based on public opinion polls on the level of trust in selected institutions, the possible answers being "tend to trust", "tend not to trust" and "don't know".

3 Demographic changes and the welfare state

Demographic changes

- 3.1 Fertility rate and life expectancy
- 3.2 Net migration
- 3.3 Age-dependency ratio

Labour market

- 3.4 Employment rate
- 3.5 Unemployment rate and long-term unemployment rate
- 3.6 Temporary and part-time employment
- 3.7 Minimum wage
- 3.8 Young people neither in employment nor in education or training

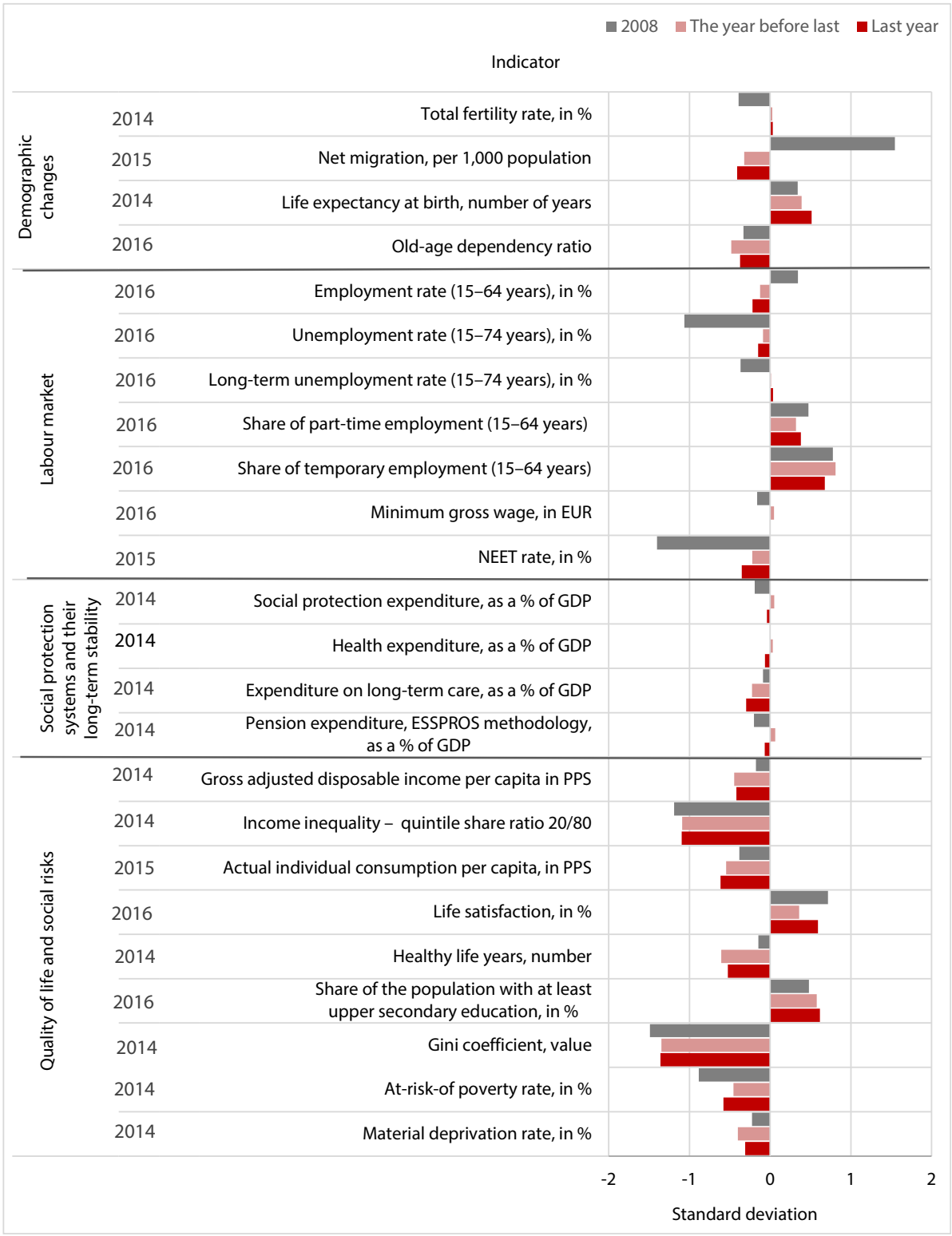
Social security systems and their long-term sustainability

- 3.9 Social protection expenditure
- 3.10 Health expenditure
- 3.11 Expenditure on long-term care
- 3.12 Pension expenditure

Quality of life and social risks

- 3.13 Gross adjusted disposable income per capita
- 3.14 Actual individual consumption per capita
- 3.15 Life satisfaction
- 3.16 Healthy life years
- 3.17 Share of population with at least upper secondary education
- 3.18 At-risk-of-poverty rate

Overview of indicators – Demographic changes and the welfare state



Source: calculations by IMAD.
Note: The table shows Slovenia's position relative to the unweighted arithmetic average of the EU Member States. It was calculated with regard to the set of countries for which data for individual indicators were available; Cyprus, Malta, Luxembourg and Croatia were excluded from the analysis due to a lack of data. The data in the table are for 2008 and the last year for which data for EU Member States were available (the last year is indicated in the table). A positive indicator value means above-average development relative to the EU, while a negative value indicates that Slovenia lags behind the EU average on that indicator.

3.1 Fertility rate and life expectancy

The fertility rate,[1] at around 1.57 children per woman of childbearing age since 2010, was at the EU average in the three years to 2014. Following a short period of growth, the number of births started to fall again in 2011, not only because women are having children later, but also due to a faster decline in the number of women of childbearing age. This has been declining continuously ever since 1997 and in the three years to 2014 fell by an average of 6,400 annually. The mean age of mothers at childbirth[2] continues to increase by around one month per year: in 1980, 70.3% of all children were born to mothers in the age group of 20–29 and 15.5% to mothers in the age group of 30–39, compared with 43.8% and as much as 52.1% respectively in 2015. Judging by the size of generations and assuming there is no change in fertility rates or family policy (this is otherwise favourable by international comparison), it can be inferred that the number of births will also decline in the years to come. The fertility rate that ensures the natural replacement of the population (2.1) was last reached in Slovenia in 1980.

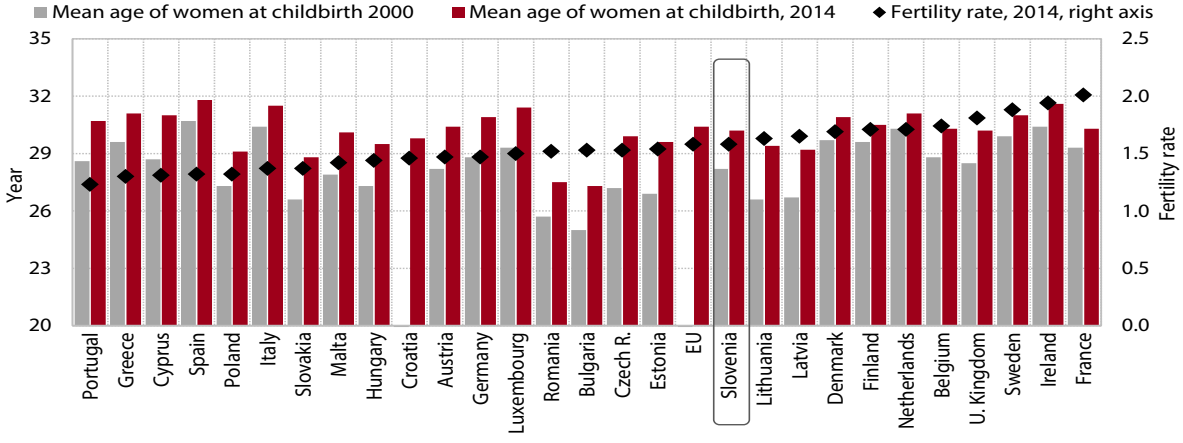
Life expectancy[3] in Slovenia has been increasing in the last few years and surpassed the EU average[4] in 2014. The main factor in the increase has been higher life expectancy for men, which reached the EU average, while life expectancy for women has already been higher than the EU average since 2008. Life expectancy in Slovenia increased by almost five months per year, on average, in the ten years to 2014, compared with three months per year in the EU as a whole. This improvement in longevity is attributable to various factors, such as higher education, better socio-economic conditions, healthier lifestyles and advances in medicine.[5] Life expectancy for people aged 65[6] remains just below the EU average, on the other hand, which indicates there is still some room for improvement in improving the lifestyles of older people.

Table: **Total fertility rate and life expectancy at birth**

	2000	2005	2008	2009	2010	2011	2012	2013	2014
Slovenia, by gender, together	76.2	77.5	79.1	79.4	79.8	80.1	80.3	80.5	81.2
Men	72.2	73.9	75.5	75.9	76.4	76.8	77.1	77.2	78.2
Women	79.9	80.9	82.6	82.7	83.1	83.3	83.3	83.6	84.1
EU, by gender, together	N/A	78.5	79.4	79.6	79.9	80.2	80.3	80.5	80.9
Men	N/A	75.4	76.3	76.6	76.9	77.3	77.4	77.7	78.1
Women	N/A	81.5	82.3	82.6	82.8	83.1	83.0	83.3	83.6
Slovenia - fertility rate	1.26	1.26	1.53	1.53	1.57	1.56	1.58	1.55	1.58
EU – fertility rate	N/A	1.51	1.61	1.61	1.62	1.59	1.59	1.55	1.58

Source: Eurostat Portal Page – Population and Social Conditions – Population – Demography – Mortality, 2016. Note: N/A – not available.

Figure: **Mean age of women at childbirth and fertility rate in EU countries**



Source: Eurostat Portal Page – Population and Social Conditions – Population – Demography – Fertility, 2016.

[1] The total fertility rate is the sum of age-specific birth rates in a calendar year. It indicates the number of live births per woman if, during her entire childbearing age, the age-specific fertility rates were to remain unchanged from those in the given calendar year.
[2] In 2015 the mean age of mothers at first childbirth was 29.3, which is 2.8 years more than in 2000.
[3] Life expectancy is the average number of years that a person aged x years can expect to live, assuming that age-specific mortality rates remain unchanged during their lifetime.
[4] SURS does not publish data on total life expectancy, and its data on life expectancy by gender differ slightly from those published by Eurostat due to the different methodologies used.
[5] OECD (2016). Health at a glance: Europe 2016. State of health in the EU cycle.
[6] Women at age 65 can be expected to live another 21.6 years and men another 17.7 years.

3.2 Net migration

In the last few years total net migration has been low in Slovenia, primarily owing to the large number of Slovenian citizens emigrating from the country, as the positive net migration of foreigners has remained roughly the same. Since 2010 positive net migration has totalled less than 500 people per year; in the first two years, this was a consequence of lower immigration of foreigners, since 2012 of increased emigration of Slovenian citizens. In 2012–2015 more than 8,000 Slovenian citizens per year moved abroad and around 2,500 came back. The negative net migration of citizens – a constant feature since 2000 – thus increased significantly in 2012–2015 owing to higher emigration. Almost half of the emigrated citizens moved to Austria and Germany, with around a tenth going outside Europe. Among the foreign nationals moving to Slovenia, the majority (approx. 70%) still come from other former Yugoslav republics. In 2015, 43.8% of foreigners moved to Slovenia to find work, but family reunification had become a slightly more important reason for immigration than employment, reflecting a trend since 2011 and attributable to fewer opportunities for new employment due to the crisis (while many of the foreigners who stay are later joined by their families).

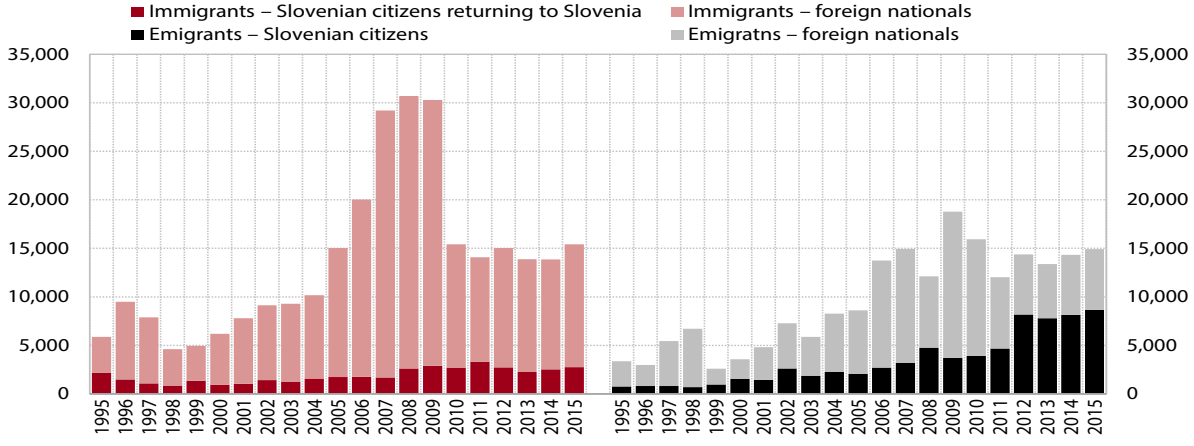
People emigrating from Slovenia are slightly older and better educated than those who immigrate. A total of 30.8% of emigrated citizens over the age of 15 had completed at least higher education, which is the largest share in the last five years for which data are available; most settled in Germany and Austria (together 37.3%). Among the immigrated foreigners older than 15 years, only 13.0% had tertiary education (though this is in fact the highest percentage so far) and just over half had completed upper secondary education. Slightly less than 5% of all immigrated foreign nationals came to Slovenia to study. In 2015 the average age of all immigrants was around 32.3 (of foreign nationals: 31.1), while the average age of emigrants was 35.1 (of citizens: 33.3).

Table: **Net migration per 1,000 population, 2000–2015**

	2000	2005	2008	2009	2010	2011	2012	2013	2014	2015
Slovenia	1.4	3.2	9.2	5.6	-0.3	1.0	0.3	0.2	-0.2	0.2
EU	2.1	3.1	2.4	1.4	1.5	1.4	1.8	3.4	2.1	3.7

Source: Eurostat Portal Page – Population and Social Conditions – Demography, 2016.

Figure: **Emigration from and immigration to Slovenia, 1995–2015**



Source: SURS.

3.3 Age-dependency ratio

The age-dependency ratio has been rising rapidly in recent years owing to the declining number of working-age people[1] and a rising number of older people. This situation emerged in 2012,[2] not only because a large post-war generation exited from the labour force and joined the ranks of the older population, but, indeed mainly, as at the same time smaller cohorts of people born in the early 1990s started to enter the group of the working-age population. While in 2011 the number of 20-year-olds (who joined the working-age population that year according to the definition) was still 7,000 higher than the number of 65-year olds (who joined the ranks of the older population), the opposite was the case in 2016: the number of 65-year-old people was 7,000 higher than the number of 20-year-olds. The number of older people is also rising on account of higher life expectancy. In 2016 there were 23.9 young[3] and 29.6 older people[4] (together 53.5) per 100 working-age people in Slovenia. Projections show that the number of older people will continue to increase for three decades, when the generations born up to the beginning of the 1980s (when around 30,000 children were born per year, after which almost 10,000 fewer) will be transitioning into old age. The decline in the working-age population[5] means a decline in potential labour force and, hence, the need to adjust the systems for funding social protection and the demand on the labour market accordingly. With the current organisation of social protection systems, the decline in the working-age population and the increase in the age-dependency ratio represent a growing problem in terms of financing.

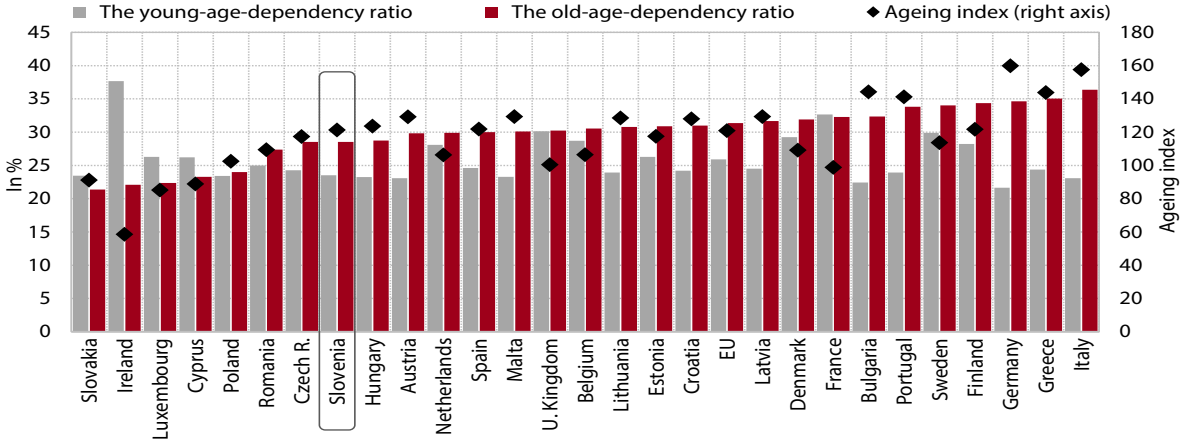
In 2016 there were already almost a quarter more older people than children in Slovenia. The number of older people (over 65 years) exceeded the number of children for the first time in 2004, and it is rising much faster than the number of children (by 2.5% per year in the last four years, the number of children by 1%). Among older people, the number of those over 80 is rising particularly strongly, and the over-80s already account for 5.0% of the total population (in 2004: 2.9%). The increase in the share of older people indicates the urgent need to adjust society, the environment and social systems to the changes in the age structure of the population.

Table: **Age-dependency ratio**

	2000	2005	2008	2009	2010	2011	2012	2013	2014	2015	2016
Slovenia	47.6	46.4	47.1	47.4	47.5	47.8	48.6	49.6	50.7	52.1	53.5
EU	N/A	53.8	53.8	54.0	54.3	54.5	55.1	55.8	56.5	57.3	57.9

Source: Eurostat Portal Page – Population and Social Conditions – Population, 2017.
Note: N/A – not available.

Figure: **The young-age-dependency ratio, the old-age-dependency ratio and the ageing index,[6] 2016**



Source: Eurostat Portal Page – Population and Social Conditions – Population 2017; calculations by IMAD.
Note: Ranked by old-age-dependency ratio.

[1] Population aged 20–64.
[2] As at 1 January (throughout text).
[3] The young-age-dependency ratio: (0–14 years)/(20–64 years).
[4] The old-age-dependency ratio: (65+years)/(20–64 years).
[5] In 2016 it was almost 35,000 less than in 2011 (–2.6%).
[6] The ageing index is the ratio of the number of older people to the number of children: (65+ years)/(0–14 years)*100.

3.4 Employment rate

Against a background of economic recovery, the employment rate has risen for the third consecutive year. Having exceeded the EU average before the crisis, it fell during it and remained below the EU average until 2013. Following the rebound in economic activity, however, the rate has been rising. Owing to an above-average fall in activity in construction and low-technology manufacturing industries, which are dominated by male employees, the employment rate for men declined more during the crisis (though it remained higher than the rate for women). Young people (15–20 years) were particularly affected by the crisis, especially owing to their high exposure to fixed-term contracts, which were not being extended during the crisis, and a decline in student work. The employment rate for this demographic therefore fell more than for other age groups in 2008–2013. Since then it has been rising due to increased hiring, a larger volume of student work, demographic trends and active employment policy programmes targeted at young people. The employment rate for older people (aged 55–64) in 2016 was higher than before the crisis, mainly as a result of the pension reform and the demographic effect of employed persons from younger cohorts entering the group of older workers, thereby increasing the employment rate for this group. Nevertheless, the employment rate for older people is still one of the lowest in the EU.

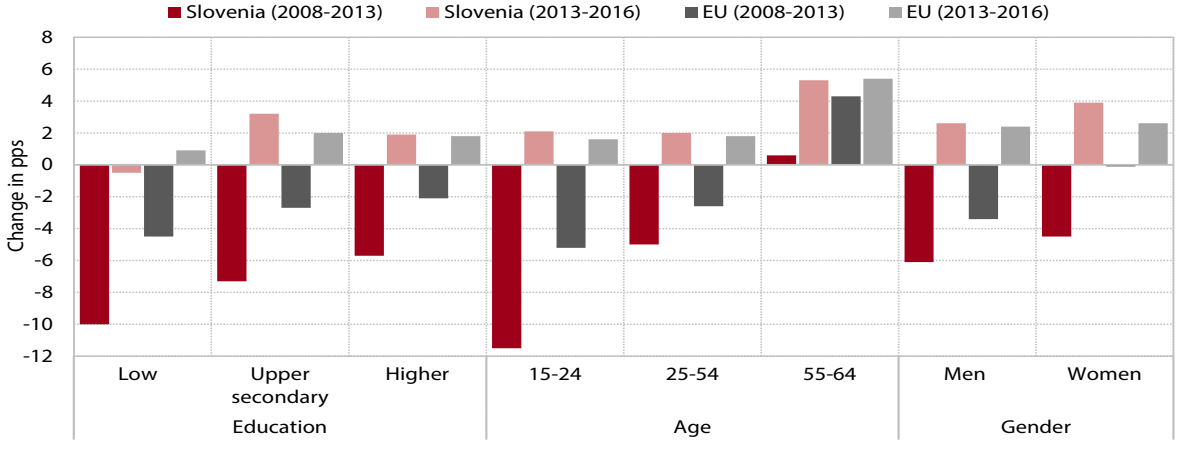
The employment rate for low-skilled workers dropped notably in 2016 following two years of growth. It fell the most in 2008–2013, owing to a significant decline in activity in construction and manufacturing, i.e. sectors that mainly employ a low-skilled workforce. By 2015 it had risen strongly owing to the structure of economic recovery.[1] Last year it declined, which we estimate could be due to a further significant fall in the number of unpaid family workers, who mainly have a low level of education.[2] Similar to other countries in the EU, the employment rate for those with higher education declined the least during the crisis, mainly as a result of hiring in public service activities and a smaller fall in activity in sectors that have a better-educated workforce. Last year, the rate rose slightly again. In 2016 particularly the employment rate for people with upper secondary education was up relative to 2013, this owing to a broad-based recovery of the labour market especially in the last two years.

Table: **Employment rate (15–64 age group) according to the Labour Force Survey. in %**

	2000	2005	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Slovenia	62.7	66.0	68.3	68.3	67.6	66.5	64.4	63.8	63.0	64.5	65.5	66.2
EU	N/A	63.4	65.3	65.8	64.6	64.1	64.3	64.2	64.1	64.8	65.5	66.6

Source: Eurostat Portal Page – Population and Social Conditions – Labour market, 2016.
Note: N/A – data not available; data for individual years refer to the second quarter.

Figure: **Change in the employment rate by population group, between 2008 Q2 and 2013 Q2 and 2013 Q2 and 2016 Q2**



Source: Eurostat Portal Page – Population and Social Conditions – Labour Market, 2016.
Note: Data for this period refer to the second quarter of the given year.

[1] Owing – particularly in the first year of the recovery – to a notable increase in hiring through employment agencies, which most frequently provide labour to manufacturing, a sector in which most of the labour force has low, secondary or upper secondary education, and, in 2015, to a visible recovery in direct hiring in the manufacturing sector.

[2] The number of unpaid family workers, most of whom are low-skilled and older people, remained relatively high during the crisis. Since 2013 it has been declining, particularly in 2016. In our estimation this is a consequence of the recovery in economic activity and better employment prospects for other household members. The number of unpaid family workers with low levels of education was 11,000 less year on year in the second quarter of 2016. The number of unpaid family workers older than 50 declined to a similar extent.

3.5 Unemployment rate and long-term unemployment rate

With the economic recovery, the unemployment rate has been declining since 2013 but remains almost twice as high as before the crisis. After bottoming out in mid-2008, the unemployment rate according to the labour force survey definition rose sharply during the crisis. With the recovery of economic activity, it started to fall in 2013. By the second quarter of 2016 it had dropped to 7.8% and was lower than the EU average, to which it had otherwise come fairly close even during the crisis. At the onset of the crisis, the adverse effects on manufacturing and construction, sectors where a male labour force predominates, caused the unemployment rate for men to rise more than the unemployment rate for women. In 2012 the unemployment rate for women nevertheless again exceeded the rate for men, and by 2016 the gap between the two had widened somewhat further. In the last few years the unemployment rate for people with upper secondary, secondary and low education has declined the most, in line with the structure of the recovery of employment, at first mainly owing to hiring through employment agencies, which provide labour to the manufacturing sector, and, in the last two years, to increased hiring in most other sectors. Young people[1] (aged 15–24) were hit hardest by the crisis, their unemployment rate having risen to 24.1% in 2008–2013 before dropping to 13.7% by 2016.[2]

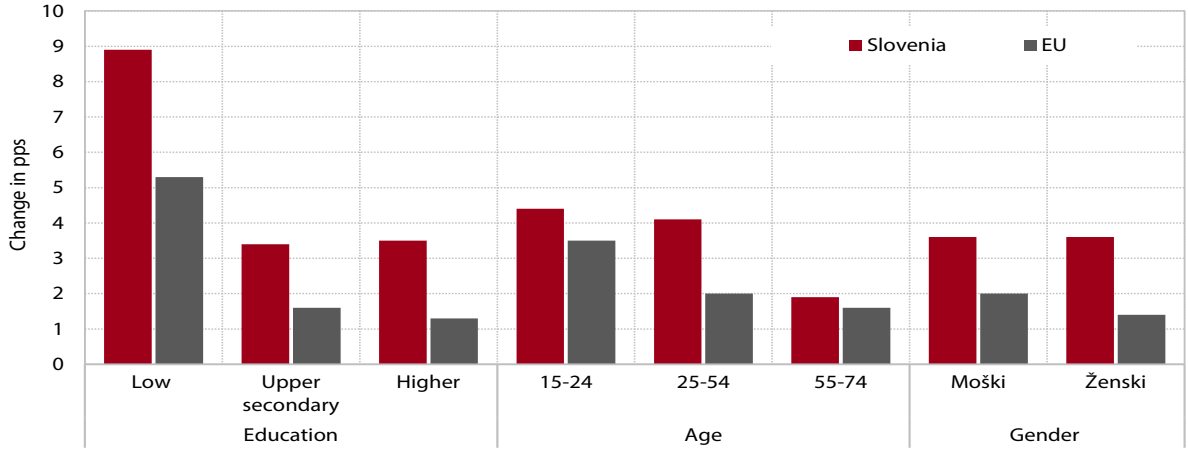
The long-term unemployment rate[3] fell slightly for the second consecutive year, but every second unemployed person still remains unemployed for more than one year. As a result of weak demand for labour, the long-term unemployment rate rose sharply in 2009–2014; by 2016 it had dropped slightly owing to more favourable employment prospects and active employment policy measures, but the share of long-term unemployment in total unemployment remained high. It was the long-term unemployment rate for young people that rose the most during the crisis and it was also that rate that dropped the most in 2015 and 2016. The increases in the rates for men and women were similar in the 2009–2014 period.

Table: **Unemployment rate and long-term unemployment rate (15–74 age group), in %**

	2000	2005	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Unemployment rate												
Slovenia	6.9	5.8	4.6	4.1	5.6	7.1	7.7	8.2	10.4	9.3	9.2	7.8
EU	N/A	8.9	7.0	6.8	8.7	9.5	9.3	10.3	10.8	10.1	9.5	8.6
Long-term unemployment rate												
Slovenia	4.3	2.9	2.2	1.9	1.7	3.2	3.5	3.9	5.1	5.3	4.7	4.3
EU	N/A	4.1	3.1	2.6	2.8	3.8	4.0	4.5	5.1	5.0	4.6	4.0

Source: Eurostat Portal Page – Population and Social Conditions – Labour Market, 2016.
Note: N/A – data not available; data for individual years refer to the second quarter.

Figure: **Change in the unemployment rate by population group, between Q2 2008 and Q2 2016**



Source: Eurostat Portal Page – Population and Social Conditions – Labour Market, 2016; Note: Data for this period refer to the second quarter of the given year.

[1] This was a result of the high prevalence of temporary forms of employment in this group, as during the crisis enterprises were not renewing fixed-term employment contracts and also reduced the extent of student work.
[2] We estimate that this may be mainly the result of the increased volume of student work and active employment policy programmes targeted at young people (for example the Youth Guarantee Scheme). The decline is also due to demographic factors, however, as the number of young people has already been falling for a long time.
[3] Unemployment extending for a year or longer.

3.6 Temporary and part-time employment

After increasing for two years, the prevalence of temporary employment*[1] *declined slightly in 2016. In 2008–2013 the share of temporary employment in total employment dropped, mainly as result of companies' unwillingness to extend fixed-term contracts and the reduction of student work. In 2013 the share also declined as a result of legislative amendments adopted to reduce the segmentation on the labour market and increase its flexibility. In the next two years the share expanded again, most likely due to employers' caution in hiring for an indefinite period of time amid the uncertain recovery and due to an increase in student work. The decline in the share of temporary employment in 2016 could be related to higher confidence in the economic recovery or the more favourable business climate. The share of temporary employment, which continues to exceed the EU average, is still the highest among the young (the 15–24 age group). Similarly to other countries, it is higher for women than for men.

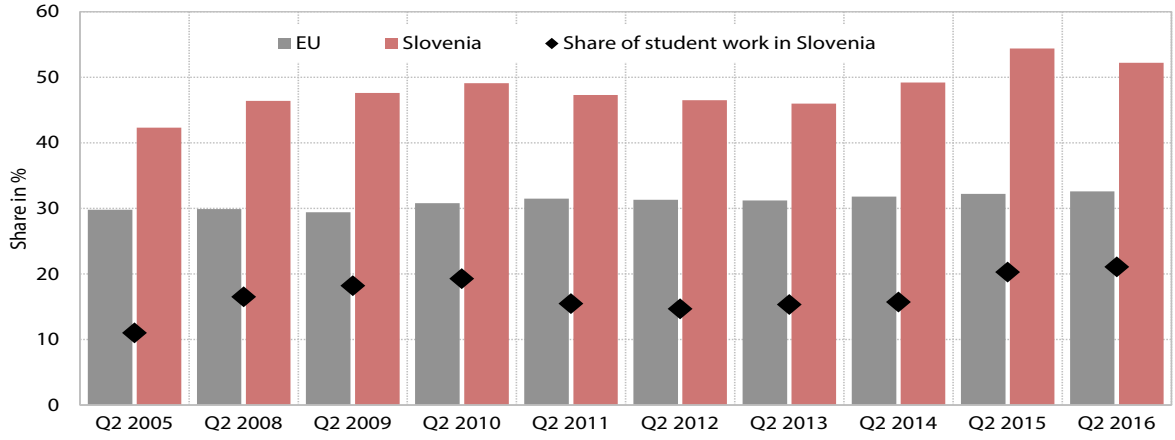
In 2016 the share of part-time employment in total employment declined for the second year in a row, but it remains higher than before the crisis. In the second quarter of 2016 it totalled 9.3%, 1.4 pps less than in the second quarter of 2015. The change is estimated to be due to greater confidence in the economic recovery and, in turn, to an increase in full-time employment.[2] In 2008–2014 the share rose slightly more than in the EU as a whole, which, in our view, was primarily a result of the greater significance of student work for total youth employment. Precisely owing to the prevalence of student work among young people (aged 15–24), the share of part-time employment is largest in this age group, where it is also significantly above the EU average.

Table: **Shares of temporary and part-time employment in total employment, in %**

	2000	2005	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Temporary employment												
Slovenia	12.8	16.8	18.5	16.9	16.4	17.7	17.5	16.7	15.4	16.5	17.8	17.2
EU	N/A	13.9	14.6	14.2	13.5	14.0	14.1	13.8	13.6	14.0	14.2	14.3
Part-time employment												
Slovenia	5.3	7.8	8.8	8.1	9.7	10.5	9.1	8.5	9.3	10.9	10.7	9.3
EU	N/A	17.3	17.6	17.6	18.1	18.7	18.8	19.3	19.7	19.7	19.7	19.6

Source: Eurostat Portal Page – Population and Social Conditions – Labour Market, 2016.
Note: N/A – data not available; data for individual years refer to the second quarter.

Figure: **Shares of temporary employment in total employment among youth aged of 15–29 in Slovenia and the EU and the share of student work in total youth employment**



Sources: Eurostat Portal Page – Population and Social Conditions – Labour Market, 2016; SURS; calculations by IMAD.

[1] The term »temporary employment« refers to fixed-term employment and other forms of employment that are considered to be temporary work in Slovenia.
[2] The share of part-time jobs declined in 2015 and 2016 despite the increase in student work, which is often in the form of shorter working hours.

3.7 Minimum wage

Despite the stagnation of the minimum wage in the last two years, the ratio of the minimum to the average wage remains high. As a result of the crisis and changes to legislation,[1] it is significantly higher than before the crisis and the highest (49.9% in 2016) in the EU.[2] The ratio is also influenced by the relatively low average wage, which reflects the structure and the low value added of the economy. With the amendment to the Minimum Wage Act, three allowances[3] have been excluded from the calculation of the minimum wage as of 2016. The allowances for unfavourable working time are also exempted from the minimum wage in most of the other EU Member States in which the minimum wage is enforced by law. Throughout the crisis, the growth of the minimum wage exceeded the growth of productivity in private-sector activities, but in the last three years, it has been lagging behind. While during the crisis Slovenia recorded one of the largest declines in economic activity in the EU, it was also the country with the largest real increase in the minimum wage; in some countries, the minimum wage remained almost unchanged for several years and even declined in others in certain years. In 2017 the amendment to the minimum wage legislation was also followed by a change in the tax treatment, which made it possible for minimum wage earners, who often work unfavourable hours, to remain eligible for the higher general allowance as they were before the exemption of these three allowances from the minimum wage.

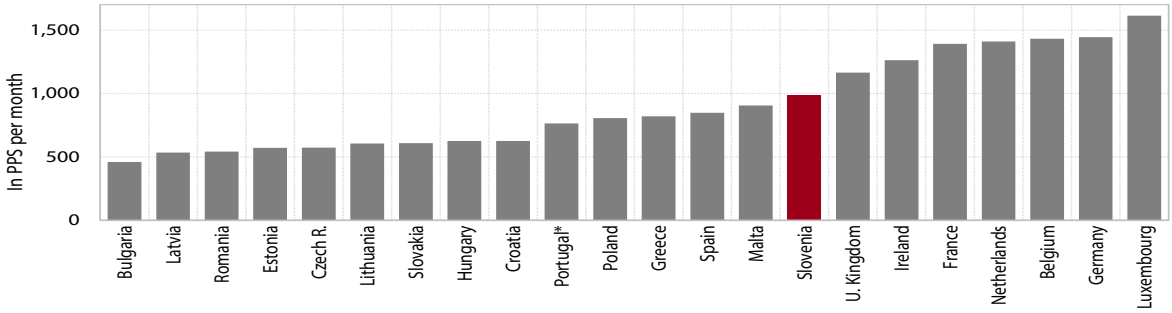
In the last two years the number of minimum wage earners has declined significantly[4] but is nevertheless still 1.8 times as high as before the adoption of the new Minimum Wage Act. In addition to the recovery of economic activity, this decline was probably also due to the increase in the lowest base for calculating pension and disability insurance contributions paid by employers[5] and the exemption of allowances for unfavourable work time. As a result of higher employment and wages, the proportion of minimum wage earners in total employment has also dropped notably in the last two years, but it is still much larger than in 2009 (5.4%; 2009: 3.0%). Despite an almost 40% decline in the last two years, the majority of workers receiving the minimum wage remain in private-sector activities.[6] Meanwhile, the increase in the (though still small) number and proportion of minimum wage earners in public service activities in 2009–2016 was much greater (from 451 to 8,881 and from 0.3% to 5.4% respectively), which was mainly a consequence of the significant increase in the minimum wage and austerity measures of the public sector wage policy in 2010–2013.

Table: **Average gross minimum wage, average gross wage and ratio between the two, Slovenia**

	Minimum gross wage	Nominal growth in minimum wage	Real growth in minimum wage	Average gross wage	Nominal growth in gross wage	Real growth in gross wage	Ratio of minimum wage to average wage
2000	322	10.3	1.3	800	10.6	1.6	40.3
2005	499	4.9	2.4	1.157	4.8	2.2	43.1
2008	571	8.0	2.2	1.391	8.3	2.5	41.1
2010	679	14.6	12.6	1.495	3.9	2.1	45.4
2011	718	5.7	3.8	1.525	2.0	0.2	47.1
2012	763	6.3	3.5	1.525	0.1	-2.4	50.0
2013	784	2.7	0.9	1.523	-0.2	-2.0	51.4
2014	789	0.7	0.5	1.540	1.1	0.9	51.2
2015	791	0.2	0.7	1.556	0.7	1.2	50.8
2016	791	0.0	0.1	1.585	1.8	1.9	49.9

Sources: SURS, SKD 2002 until 2008, SKD 2008 from 2009 onwards; Ministry of Labour, Family and Social Affairs; AJPES.

Figure: **Minimum gross wage, July 2016, in PPS**



Source: Eurostat Portal Page, 2016. Note: Data for the 22 EU Member States where the minimum wage is enforced by law.

[1] In 2010 a new Minimum Wage Act was adopted; this determined a new, significantly higher minimum wage, the method of transition to the higher level of the minimum wage, and the mechanism for its adjustment.
[2] Closest to Slovenia is France, with a ratio of 47.6%, while the lowest ratios are in Spain and the Czech R. (34.1% and 34.6% respectively).
[3] Allowances for night work, work on Sundays and on public holidays; these are paid separately from the minimum wage.
[4] In 2015 and 2016 the number of minimum wage earners declined by 29% in total; in 2016 it amounted to 33,811.
[5] In 2015 the minimum base for calculating pension and disability insurance contributions paid by employers was raised from the minimum wage to 52% of the average wage, which could have influenced the payment of wages that are just slightly above the minimum wage.
[6] 24,930 workers received the minimum wage in 2016, which is approximately one-third more than in 2009. The share of minimum wage earners in the private sector rose from 3.8% to 5.5% of all workers in 2009–2016.

3.8 Young people neither in employment nor in education or training

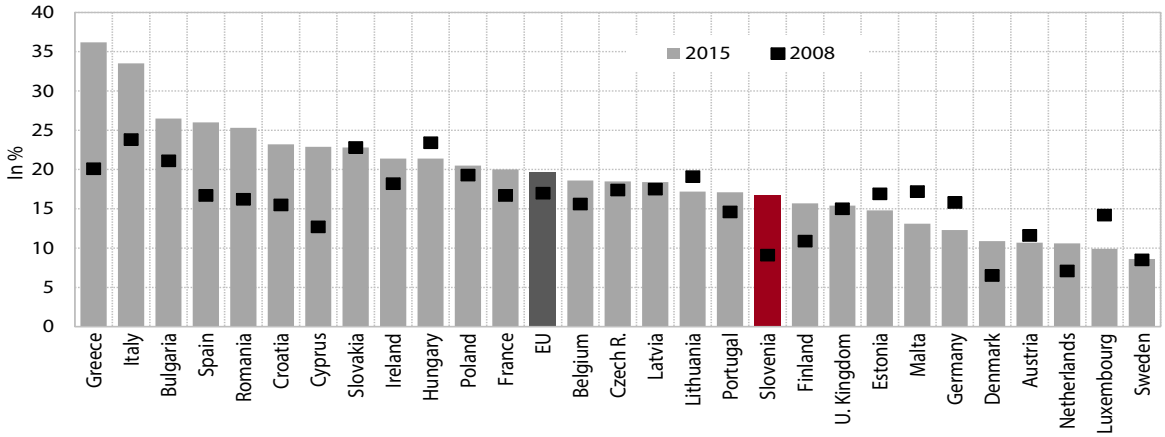
Last year the share of young people neither in employment nor in education or training (the NEET rate) declined, but it was still higher than at the beginning of the crisis. Owing to the high participation of young people in education, it was below the EU average despite the increase during the crisis. It was lowest for the 15–19 age group,[1] the main reason being the high participation of young people in upper secondary education. In 2008–2013 the NEET rate rose significantly for young people at ages when they complete upper secondary or tertiary education and enter the labour market. In 2015 it was highest for those aged 25–29 (Slovenia: 16.7%; EU: 19.7%), which is when many enrolled students complete their studies. Specifically, young people are facing difficulties when transitioning from education to employment, which is linked to the insufficient response of upper secondary and tertiary education programmes to labour market needs and the lack of jobs. The 2015 decline in the NEET rate is attributable to the recovery of the labour market and better employment prospects, measures to promote the employment of young people, and demographic reasons (smaller generations of young people on the labour market). The NEET rate dropped significantly for young people aged 25–29, which is the age group targeted by many measures of the Youth Guarantee scheme implemented since 2014.

Table: **Share of young people (20–34) neither in employment nor in education or training, in %**

	2002	2005	2008	2009	2010	2011	2012	2013	2014	2015
Slovenia	10.9	10.4	8.4	10.5	11.1	11.1	13.5	15.4	15.9	14.4
EU	19.6	18.7	16.5	18.5	19.1	19.3	19.9	20.1	19.4	18.9

Source: Eurostat Portal page — Population and Social Conditions – Education and Training, 2017.

Figure: **Share of young people (25–29) neither in employment nor education or training, 2008 and 2015, in %**



Source: Eurostat Portal Page – Population and Social Conditions – Education and Training, 2017.

[1] In 2015 it was 4.3% in Slovenia (EU: 6.3%).

3.9 Social protection expenditure

After two years of decline owing to changes to social legislation and austerity measures, in 2014 social protection expenditure*[1] *remained similar to that in 2013 but higher than before the crisis. In 2014 (the most recent data available),[2] it was 3.2% higher in real terms than in 2008; as a share of GDP, it was up 3.1 pps. The growth of social protection expenditure in this period stemmed primarily from higher expenditure on old age as a consequence of the higher number of pensioners. Expenditure on unemployment[3] also rose markedly, given the increase in the number of the unemployed during the crisis. Expenditure on social exclusion not elsewhere classified was also higher; this had started to rise rapidly with the onset of the crisis following a period of decline.

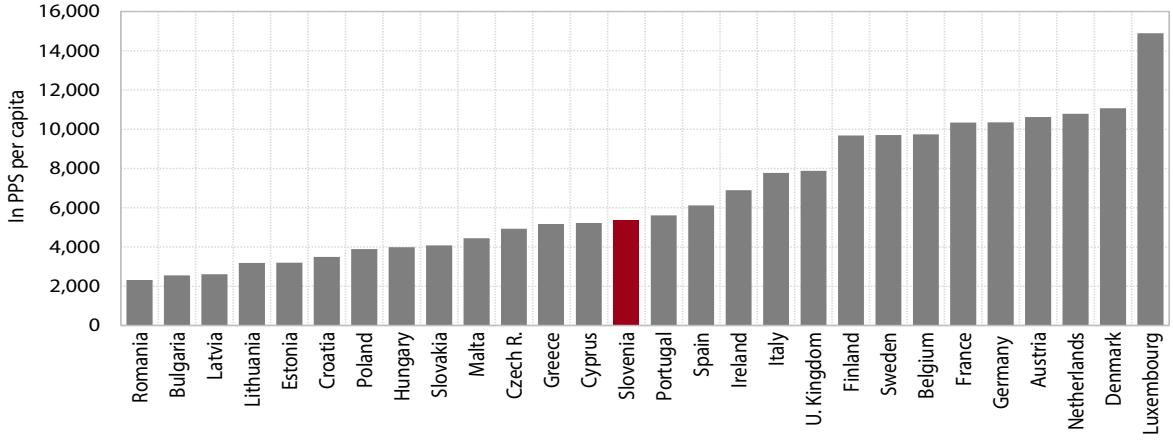
Slovenia lags behind the EU average in terms of social protection as a share of GDP, most notably in expenditure on unemployment benefits. The system nevertheless provides relatively good access to health services and reduces the poverty risk. Unemployment expenditure increased the most during the crisis, but Slovenia nevertheless has the widest gap with the EU average in this expenditure category. The duration of benefits being similar to the EU average, this gap is primarily a consequence of the small share of unemployment benefit beneficiaries among the unemployed compared with other Member States. Slovenia also has a relatively high replacement rate[4] at the early stage of unemployment, one of the highest in the EU. The reform of the system of social transfers from 2012 has significantly altered and, in some cases, tightened the eligibility criteria for social transfers. According to the estimate of the Ministry of Labour, Family and Social Affairs, in 2012–2015 the number of persons claiming financial social assistance and income support also declined as a consequence of the provision stipulating that the state could encumber or prohibit the alienation of real estate to the benefit of the Republic of Slovenia for those beneficiaries who had received financial social assistance several times[5]. The changes in social legislation which were adopted at the end of 2016 and entered into force as of 2017 abolished encumbrances on real estate[6] for most categories of financial social assistance and income-support beneficiaries.

Table: **Social protection expenditure in Slovenia and in the EU, as a % of GDP**

	2000	2005	2007	2008	2009	2010	2011	2012	2013	2014
Slovenia	27,5	22,6	20,9	21,0	23,7	24,4	24,5	24,9	24,9	24,1
EU	np	np	np	27,0	29,9	29,7	29,4	29,8	28,9	28,7

Source: Eurostat Portal Page – Social Protection, 2016. Note: N/A – not available.

Figure: **Social protection expenditure in PPS per capita, EU, 2014**



Source: Eurostat Portal Page – Social protection, 2016.

[1] Social protection expenditure according to the ESSPROSS methodology.
[2] Data for 2015 for Slovenia are expected to be released in autumn 2017.
[3] The number of unemployment benefit beneficiaries in 2014 was 88% higher than in 2008.
[4] The replacement rate is defined as the ratio of the amount of benefits received to the amount of an individual's gross earnings before becoming unemployed.
[5] If they were receiving assistance for more than 12 months.
[6] The amendment abolishes annotations on real estate titles and the need to reimburse the financial social assistance and income supplement received for those beneficiaries who own a flat/house worth less than EUR 120,000.

3.10 Health expenditure

Following a significant decline during the crisis, health expenditure rose in real terms in 2014–2016. Current expenditure (excluding capital formation) amounted to 8.3% of GDP in 2016 and 8.4% of GDP in 2015, according to the first estimate.[1] Health expenditure is closely linked to HIIS revenue, as the HIIS is required to have a balanced budget.[2] The higher revenue from contributions for compulsory health insurance in 2016 (by 3.5% in real terms) was mainly underpinned by growth in employment and earnings. Furthermore, most of the measures for balancing the HIIS budget that had been adopted during the crisis remained in force. In 2016 the additional funds were allocated for the expansion and improved evaluation of certain priority programmes (such as model practices, oncology, nursing homes and biological medicines) and the reduction of waiting times and for higher expenditure on sickness benefits. According to the first estimate, current public expenditure totalled 6.0% of GDP in 2016 and 6.1% of GDP in 2015; the share of public expenditure in total expenditure rose to 72.3% in 2016.

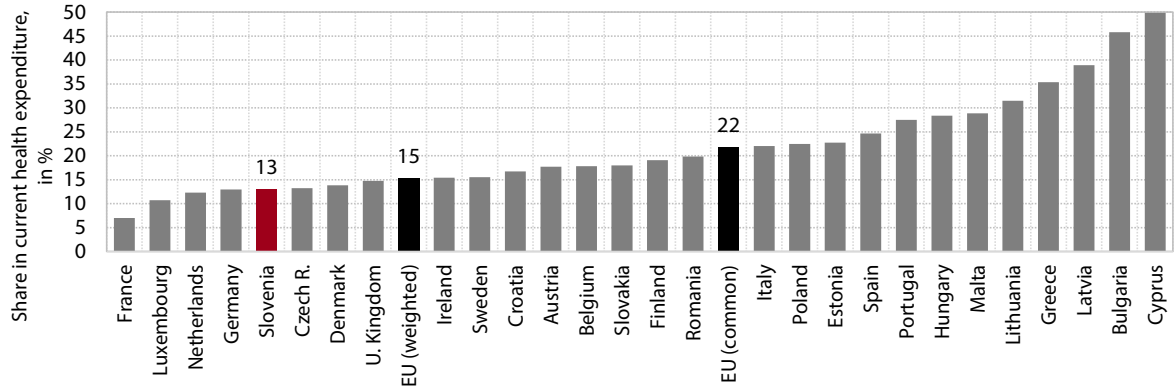
Slovenia lags behind the EU average in terms of health expenditure both as a share of GDP and per capita. Compared with the common (unweighted) average of the EU, which reflects data for all Member States, the share of current health expenditure in GDP in Slovenia was approximately at the EU average in 2015 and the level of total (public and private) health expenditure per capita had reached 80% of the EU average. A comparison with the weighted EU averages, where large countries have greater weight, on the other hand, shows greater lags. A significant difference between the arithmetic and weighted averages is seen in out-of-pocket expenditure, which is one of the key indicators of financial access to health services[3] and whose share in total expenditure is highly dependent on the way a health system is being financed**.** In the weighted EU average, the share of out-of-pocket expenses is low (15.3%), given the large weights of Germany, France and the United Kingdom, three large countries with very low out-of-pocket expenditure**.** The unweighted EU average for out-of-pocket expenditure, which is more relevant for comparisons of health policies within the EU, is significantly higher (21.8%). According to the recommendations of the World Health Organisation, direct out-of-pocket expenditure is acceptable and does not jeopardise financial access to health services as long as it does not exceed 15% of total health expenditure.[4]

Table: **Health expenditure** [5]

	Health expenditure, as a % of GDP				Public health expenditure, as % of GDP				Private expenditure as a share of current expenditure, in %			Out-of-pocket expenditure as a share of current expenditure, in %		
	2005	2014	2015	2016	2005	2014	2015	2016	2005	2014	2016	2005	2014	2016
Slovenia[2]	8.0	8.5	8.4	8.3	5.9	6.2	6.1	6.0	26.5	29.0	27.7	13.0	13.0	12.3
EU (weighted average)[1]	8.7	10.0	9.9	N/A	7.5	7.8	7.8	N/A	23.2	20.2	N/A	14.0	15.3	N/A
EU (common average)	7.7	8.5	8.5	N/A	6.0	6.2	6.3	N/A	25.0	26.7	N/A	21.5	21.8	N/A

Sources: OECD Stat; Eurostat; WHO HFA-DB; SURS: Health expenditure and sources of funding, June 2016.
Notes: [1] The weighted EU average (total health spending divided by total GDP of all EU Member States or, for the indicator of health expenditure per capita, by the total population of the EU) shows the amount of funds allocated for health in the EU as a whole; source: Health at a glance: Europe 2015. [2] For Slovenia the calculation of the share of GDP takes into the account the revision of GDP in September 2016 (SURS, National Accounts), for 2016, the first release by SURS in February 2017; for 2015 and 2016, health expenditure for Slovenia is the first estimate (HIIS Business Report for 2016); N/A – data not available.

Figure: **Out-of-pocket expenditure in EU Member States, 2014**



Source: OECD Health Statistics 2016.

[1] HIIS Business Report for 2016 (draft, March 2017). Data according to the SHA methodology are estimated in cooperation with SURS.
[2] It may not borrow or raise the contribution rate.
[3] See Development Report 2015, 2015.
[4] Evetovits T. (WHO Barcelona Office for Health Systems Strengthening), 2015.
[5] In 2011, a revised manual of the System of Health Accounts, prepared by the OECD, Eurostat and the WHO (SHA 2011), was adopted. Starting from 2016, EU Member States are required to report to Eurostat according to the SHA 2011 methodology. Most of the Member States have also already revised data from 2005 onwards. An important change was made to the basic indicator of health expenditure, which now shows only current expenditure on health excluding capital formation.

3.11 Expenditure on long-term care

Slovenia's gap with the OECD average in terms of expenditure on long-term care (LTC) is widening. LTC expenditure expressed as a share of GDP totalled 1.31% of GDP in 2013 and 2014 (average of 16 OECD countries:[1] 2.0% of GDP); within that, public expenditure accounted for 0.95% of GDP (OECD: 1.8% of GDP) and private expenditure for 0.35% of GDP (OECD: 0.2% of GDP). Broken down by source of funding, the share of public sources rose slightly in 2014 after eight years of decline (to 73.1%); broken down by function of care, the share of expenditure on the health part of LTC was up (to 67.3%).

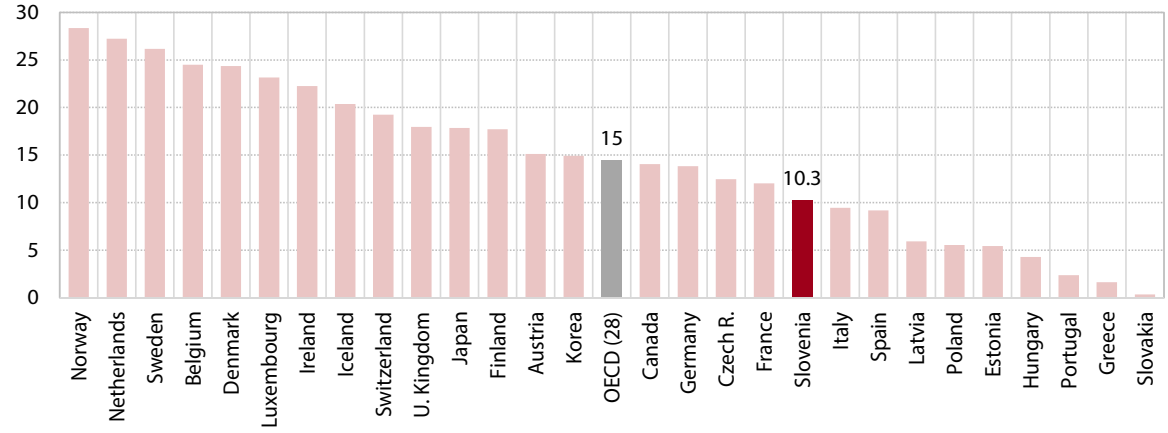
The proportion of long-term care in total expenditure on health in Slovenia is significantly lower than the OECD average. In 2005–2014 public LTC expenditure in Slovenia rose by 2.1% per year in real terms, while the OECD average rose by 3.8%. The majority of public LTC expenditure (as much as 89%) at the same time also belongs to health expenditure, where it represents the fastest growing component. It increased from 9.0% in 2005 to 10.3% in 2014. Despite its relatively rapid growth, this share is still significantly below the OECD average (15%). In some Scandinavian countries, expenditure on LTC (on health-related LTC)[2] already accounts for more than 25% of total health expenditure. While more advanced OECD countries primarily increase public funding for long-term care at home, in Slovenia the ratio of institutional care to care at home had been deteriorating from year to year. In 2014 it improved slightly for the first time (in favour of LTC at home) as a result of increased HIIS funding for community nursing care. In 2014, 75% of total LTC expenditure was allocated for long-term care in institutions (homes for the elderly, special social welfare institutions, hospitals, etc.) and 25% for long-term care at home.

Table: **LTC expenditure by source of funding and by function, Slovenia**

	In EUR m			As % of GDP			Breakdown, in %			Real growth, in %	Average annual real growth, in %
	2005	2013	2014	2005	2013	2014	2005	2013	2014	2014/2013	2005–2014
Long-term care	314	471	487	1.08	1.31	1.31	100.0	100.0	100.0	2.5	2.8
By source of funding											
Public expenditure	245	342	356	0.84	0.95	0.95	77.8	72.5	73.1	3.4	2.1
Private expenditure	70	130	131	0.24	0.35	0.35	22.2	27.5	26.9	0.2	5.0
By function											
Health care	230	314	328	0.79	0.88	0.88	73.3	66.7	67.3	3.4	1.8
Social care	84	157	159	0.29	0.43	0.43	26.7	33.3	32.7	0.7	5.1

Source: SURS – Long-term care (December 2015).
Note: The conversion into constant prices was made using the GDP deflator.

Figure: **Proportion of expenditure on LTC (health component) in total current health expenditure, 2014**



Sources: OECD Stat 2016; SURS – Health expenditure and sources of funding (June 2016)/Long-term care (December 2016).

[1] Data on total LTC expenditure (the health and social components of LTC) are available for only 16 OECD countries, as many countries do not yet report data on the social component of LTC, which is mainly paid from private sources and is difficult to capture statistically. Many more (as many as 29) OECD countries report data on the health component of LTC. In 2014 this expenditure amounted to 1.1% of GDP (in Slovenia 0.9% of GDP) (OECD Stat 2016).

[2] Expenditure on health-related LTC services, which is included in total health expenditure, encompasses not only long-term medical care, but also personal care related to assistance in performing the basic activities of daily living (such as eating, bathing, dressing, getting in and out of bed, using the toilet, and controlling incontinence). It includes benefits in cash and in kind (for example attendance allowance). In Slovenia, 51.3% of expenditure on the health care part of LTC services is financed by the HIIS, the rest being funded by the PDII, the Ministry of Labour, Family and Social Affairs, and local government budgets.

3.12 Pension expenditure

In 2016 pension expenditure increased more than in the previous two years; the budget transfer to the pension fund was lower, but still high. Pension expenditure including the annual pension allowance totalled EUR 4.353 billion in 2016 and was 1.1% up, for the most part owing to two pension indexations. Pensions were adjusted by 0.7% in January (extraordinary indexation for 2014) and by another 0.4% in October (extraordinary indexation for 2015). A further increase in expenditure was mitigated by there being no increase in the total number of pensioners,[1] as the retirement conditions have been tightening from year to year due to the transition periods of the reform (the last one will expire in 2020). The budget transfer totals over one billion euros (2016: EUR 1.311 billion), as much as three-quarters being funds for covering the difference between PDII revenue and expenditure (Article 162 of the ZPIZ-2). This indicates a high degree of the pension fund's dependency on the state budget and thus unsustainability of the pension system.

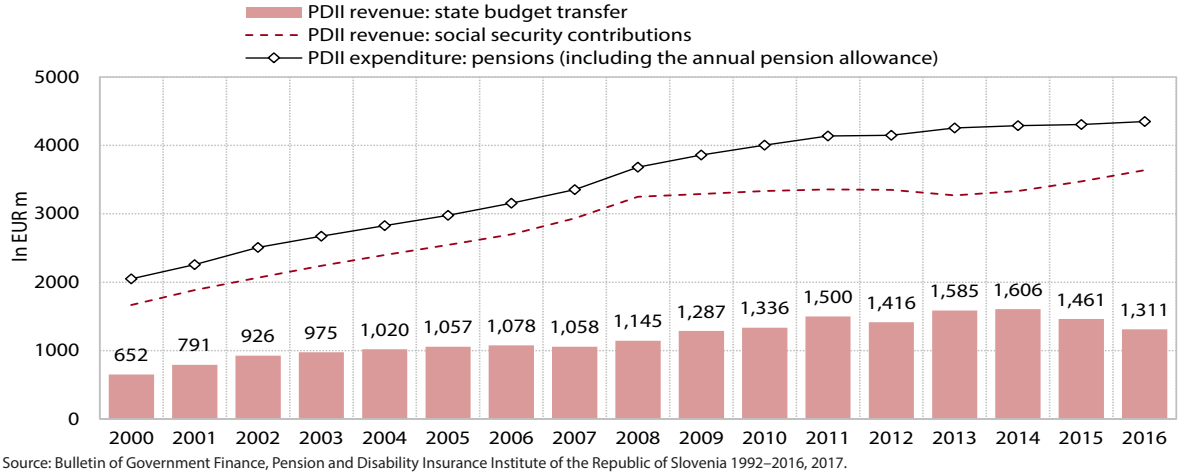
Pension expenditure as a share of GDP in Slovenia is still below the EU average, but it is rising faster due to the rapid ageing of the population. According to the most recent data available, the share of pension expenditure[2] in GDP (12.6%) remained below the EU average in 2014. In 2008–2014 the share of pension expenditure in GDP increased more than on average in the EU, although the share of older people was rising more slowly and has yet to reach the EU average. Pension expenditure is estimated to have stabilised in the medium term in this period due to the effects of the Pension and Disability Insurance Act (the ZPIZ-2) (according to our estimate, it also hovered around 11% of GDP in 2016), but will start rising again in 2023 to gradually exceed 15% of GDP. This means that the new pension system (the ZPIZ-2) does not ensure long-term fiscal sustainability. In contrast, pension expenditure in the EU as a whole is projected to stay at the current level over the long term.

Table: **Proportion of the population aged 65 or more, employment rate of older workers, duration of working life and pension expenditure as a share of GDP**

	Share of the population aged 65+, in %			Employment rate of older workers (55–64 years)			Duration of working life*			Pension expenditure, as a % of GDP**		
	2000	2008	2015	2000	2008	2015	2000	2008	2015	2000	2008	2014
Slovenia	13.9	16.3	17.9	22.7	32.8	36.6	31.8	34.0	34.3	10.8	9.5	11.2
EU	N/A	17.1	18.9	N/A	45.5	53.3	32.9	34.3	35.4	N/A	11.6	12.6

Source: Eurostat, 2016.
Notes: N/A – data not available; [1] The number of years a person aged 15 or more is expected to be active on the labour market; [2] According to ESSPROS methodology.

Figure: **Selected PDII revenues and expenditures, Slovenia**



Source: Bulletin of Government Finance, Pension and Disability Insurance Institute of the Republic of Slovenia 1992–2016, 2017.

[1] The number of old-age pensioners rose by 0.7%, the least in the last 20 years.
[2] According to ESSPROS methodology (the European System of Integrated Social Protection Statistics).

3.13 Gross adjusted disposable income per capita

After a decline in 2012 and 2013, gross adjusted disposable income[1] has been rising in the last few years. In the first years of the crisis its growth slowed mainly as a consequence of a decline in economic activity and employment but was maintained by an increase in social transfers. In 2012 and 2013 gross adjusted disposable income contracted, mainly as a result of legislative changes in the area of social transfers. The recovery of economic activity and, in turn, labour market conditions (growth in employment and earnings) has contributed to renewed growth in disposable income in recent years. In 2015 Slovenia lagged 4.5 pps more behind the EU average in terms of gross adjusted disposable income per capita in PPS than in 2008.

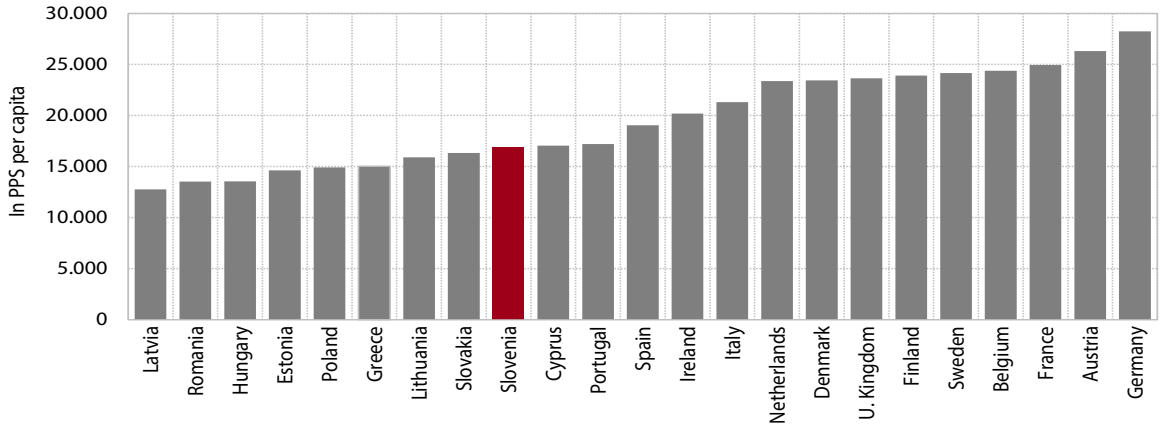
Slovenia has a larger share of income from employment and a significantly smaller share of income from property[2] and other current transfers in the structure of disposable income than the EU average. Owing to the improvement in labour market conditions, in 2014 and 2015 the share of income from employment (compensation of employees) rose in both Slovenia and the EU as a whole. The share of compensation of employees in Slovenia remains higher than the EU average and its increase of 1.3 pps relative to 2014 widened the gap in favour of Slovenia further in 2015. The share of social transfers in the total income structure does not diverge significantly from the EU average. Its increase during the crisis and in 2014 and 2015 was also similar to that in the EU. However, the share of income from property and other current transfers remains significantly smaller.

Table: **Gross adjusted disposable income of households and NPISHs per capita, Slovenia and the EU average, year-on-year growth rates, in %**

	2000	2005	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Slovenia	12.1	6.7	7.7	8.9	0.3	0.5	1.7	-2.8	-1.2	1.2	1.3	2.4
EU	6.7	3.5	4.2	1.1	-1.7	2.3	1.9	1.8	0.2	1.8	4.1	N/A

Sources: Eurostat Portal Page – Annual sector accounts, 2017; SURS – Non-financial sector accounts.
Note: N/A – not available.

Figure: **Gross adjusted disposable income of households and NPISHs in PPS per capita in Slovenia and selected EU countries, in 2015**



Source: Eurostat Portal Page – Annual sector accounts, 2017.

[1] In addition to all households' and NPIHSHs' disposable income, gross adjusted disposable income includes social transfers in kind, such as educational, health, cultural and recreational services.
[2] Property income comprises interest, dividends and rental income.

3.14 Actual individual consumption per capita

Actual individual consumption,[1] which is a measure of the standard of living of the population, has been rising again in recent years following the decline in 2008–2013. The strong growth in actual individual consumption seen in the pre-crisis period first weakened significantly at the beginning of the crisis, and in 2012 and 2013 consumption actually declined owing to the fall in disposable income. Since 2014, however, actual individual consumption has agan been rising, reflecting the recovery of economic activity and an increase in disposable income.

Since 2011 Slovenia's gap with the EU average in terms of individual consumption per capita in PPS has been widening; it is larger than the gap in per capita GDP. The growth of disposable income at the beginning of the crisis played a significant role in retaining individual consumption at the level already achieved. It totalled 79.9% of the EU average in 2011. In 2012 and 2013, however, Slovenia's gap with the EU average widened owing to the prolonged crisis. In 2014 and 2015 it increased further despite economic growth and the growth of actual individual consumption.

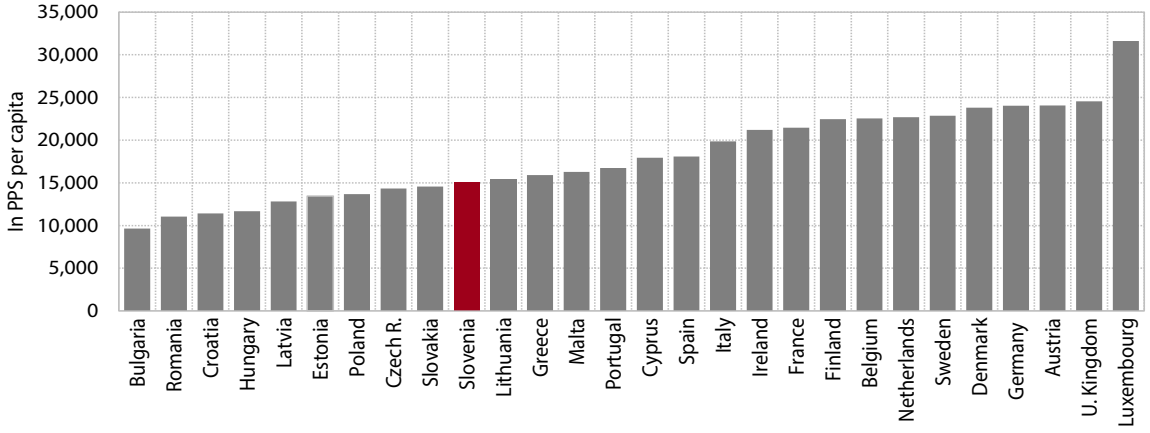
Disparities between EU countries in actual individual consumption are smaller than in GDP per capita, but Slovenia has a wider gap with the EU average on the indicator of consumption than in terms of GDP. The differences between the countries with the highest and the lowest levels of individual consumption per capita decreased slightly in 2008–2015. In 2015 the maximum gap in the indicator of GDP per capita in PPS totalled 1:5.6 (Bulgaria/Luxembourg) and the gap in the indicator of individual consumption per capita 1:3.3 (Bulgaria/Luxembourg).

Table: **Actual individual consumption per capita, year-on-year growth, in %**

	2000	2005	2007	2008	2009	2010	2011	2012	2013	2014	2015
Slovenia	2.0	4.3	9.4	8.7	1.5	2.0	1.6	-1.7	-3.6	1.3	0.4
EU	N/A	4.3	4.4	0.9	-3.6	2.3	2.3	2.2	0.2	2.4	3.9

Source: Eurostat Portal Page – National accounts, 2017.
Note: N/A – not available.

Figure: **Actual individual consumption in PPS per capita, 2015**



Source: Eurostat Portal Page – National accounts, 2017.

[1] According to the national accounts methodology, actual individual consumption includes goods and services that individuals actually consume, regardless of whether they are purchased or paid for by households, the government or non-profits institutions. This is a more appropriate measure of the living standards of households than GDP per capita (Eurostat, Statistics explained).

3.15 Life satisfaction

People in Slovenia are more satisfied with their lives in general than people in the EU as a whole.[1] General life satisfaction is still highest in the northern EU Member States and lowest in new Member States and those coping with significant fiscal problems. In autumn 2016 the proportion of satisfied people in both the EU as a whole and Slovenia was higher than in the previous survey in all four sub-areas measured by the Standard Eurobarometer: household financial situation, personal employment situation, employment situation in the country and economic situation in the country.

According to the Standard Eurobarometer Survey, the proportion of people satisfied with their lives returned to the pre-crisis level in Slovenia in 2016. Slovenian public opinion polls also show that in 2016 Slovenians were satisfied with their lives in general, more so than in the last fourteen years (7.06),[2] while the average scores of satisfaction with the economic situation (4.10) and the Government (3.39) were the highest in the last six years.[3]

When asked to identify two main issues at the personal level, Slovenian respondents, as in all previous years, again referred to pensions and the cost of living. At the country level, unemployment had been stressed as a significant problem in all previous years, but in the second half of 2016, health care provision also became a great concern, overtaking the economic situation of the country, another issue (alongside unemployment) that had been most frequently cited since the beginning of the crisis. In the survey conducted one year earlier, on the other hand, immigration had been emphasised as the greatest concern.

Table: **Life satisfaction, in %**

	2005	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Slovenia	89	89	87	86	85	83	85	82	83	84	89
EU	81	80	77	78	78	77	77	75	80	76	81

Source: Eurobarometer.
Note: In the event of two annual measurements, an annual average is taken.

Figure: **Satisfaction with the personal financial and personal employment situation in Slovenia**

Sourcer: Eurobarometer.

[1] The Eurobarometer measures life satisfaction with the following question: All things considered, how satisfied would you say you are with your life these days? The possible answers are very satisfied, satisfied, dissatisfied and very dissatisfied. In our analysis, the category of satisfied people includes those who are very satisfied or satisfied. The Eurobarometer has been conducted twice a year since October 2004.

[2] On a scale from 0 to 10; this set of questions has been repeated every two years since 2002.

[3] The average scores for the health system (4.72) and education services were also relatively high (and the highest in the last four years).

3.16 Healthy life years

People in Slovenia can expect slightly less than 59 years of healthy life;[1] this is significantly below the EU average, though in recent years the gap has been closing. Despite the crisis, the number of expected healthy life years in Slovenia has risen significantly since 2011, while it has declined slightly for the EU as a whole. In 2014 the average number of healthy life years reached 61.6 in the EU and 58.7 in Slovenia. This is, however, an indicator that is mainly derived from subjective perceptions of limitations in daily living and shows the number of years a person is expected to live without disability or the need of assistance. An extension of healthy life years is expected to significantly contribute to slower growth in health spending in the future and, in turn, sustainable financing of health and long-term care in the long term.

After improving for several years, the ratio of life expectancy to number of healthy life years declined slightly in 2014. People in Slovenia spend only 72.4% of their lives free from any limitation (in the EU: 76.3%), which leads to their early retirement and increases expenditure on health and long-term care. In all EU Member States, this indicator shows a wide gap between men and women, which is largely a consequence of lower life expectancy for men; the gender gap in the number of healthy life years is significantly smaller or even reversed than that in life expectancy (in as many as 17 EU countries the number of healthy life years for men is higher than, or equal to, the number for women). In Slovenia the difference between the life-expectancy-to-number-of-healthy-years ratios for men and women is relatively small, as in Slovenia men not only have lower life expectancy but also a lower average number of healthy life years. The poor health status of Slovenian men, particularly those with a lower level of education, is also indicated by other health-status and health-inequality indicators and is mainly related to factors involving risky behaviour (smoking, alcohol and obesity).

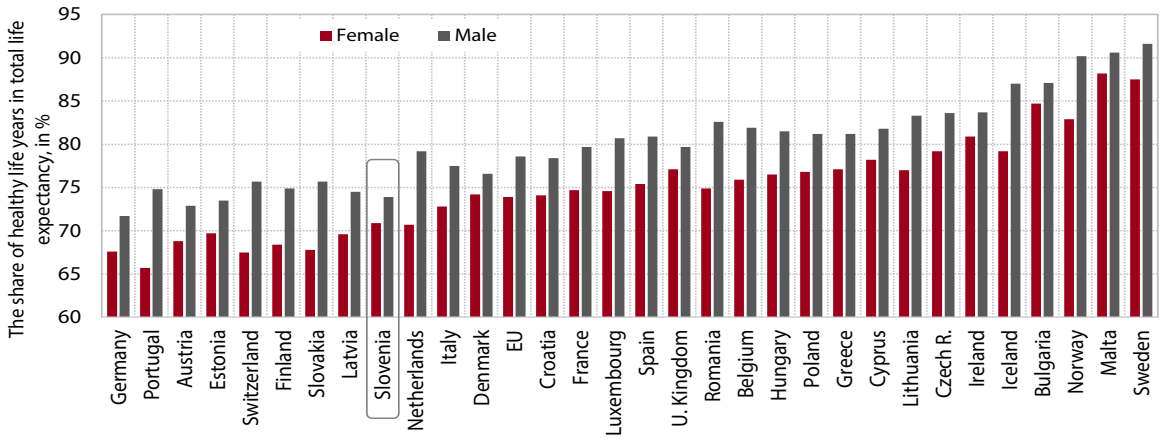
Slovenia is also narrowing its lag behind the EU average as regards expected healthy life years at the age of 65. In the EU a person aged 65 can expect to live another 8.6 years in a healthy state; in Slovenia the indicator improved to as many as 8.2 years in 2014 (2013: 7.4 years). The favourable movement of this indicator in Slovenia is in all likelihood the result of successful preventive health care programmes for elderly people and the relatively high access to health services, which was also preserved during the crisis. However, for further improvement it will be necessary for Slovenia to increase investment in preventive care, in a faster development of long-term care services, and in the prevention and reduction of the burden of chronic diseases.

Table: **Healthy life years at birth and at age 65, 2014**

	Healthy life years at birth								Healthy life years at age 65			
	Women				Men				Women		Men	
	2010	2012	2013	2014	2010	2012	2013	2014	2010	2014	2010	2014
Slovenia	54.6	55.6	59.5	59.6	53.4	56.5	57.6	57.8	7.2	8.6	6.6	7.8
EU	62.6	62.1	61.5	61.8	61.8	61.5	61.4	61.4	8.8	8.6	8.7	8.6

Sources: Eurostat Portal Page, 2017; OECD Health at a glance 2015: Europe.

Figure: **The proportion of years lived in good health, men and women, 2014**



Source: Eurostat Portal Page – Population and Social Conditions – Health – Public Health, 2017.

[1] The indicator of healthy life years measures the number of remaining years that a person of a specific age is expected to live without disability or activity limitations. This is a composite indicator which combines mortality and health status data. The estimate of disability/activity limitations is based on the Global Activity Limitation Indicator (GALI), which, within the EU-SILC survey, measures self-perceived limitations people have experienced – because of health problems – in carrying out their everyday activities for at least six months. In March 2012 Eurostat revised the data and calculated the series from 2004 to 2010 anew. For Slovenia, the translation of the EU-SILC survey question on limitations was corrected in 2010, so only the time series from 2010 onwards are in fact comparable.

3.17 Share of population with at least upper secondary education

Slovenia has a high share of adults aged 25–64 years with at least upper secondary education[1] and this share continues to rise. It has exceeded the EU average for the last ten years. It has risen for all age groups, but remains low for older age groups (45+ years), which is problematic from the points of view of the employability of older people if they become unemployed and the prolongation of working life. As the participation of older people in upper secondary education is low, it would be beneficial to increase its financial accessibility and encourage adults to enrol.

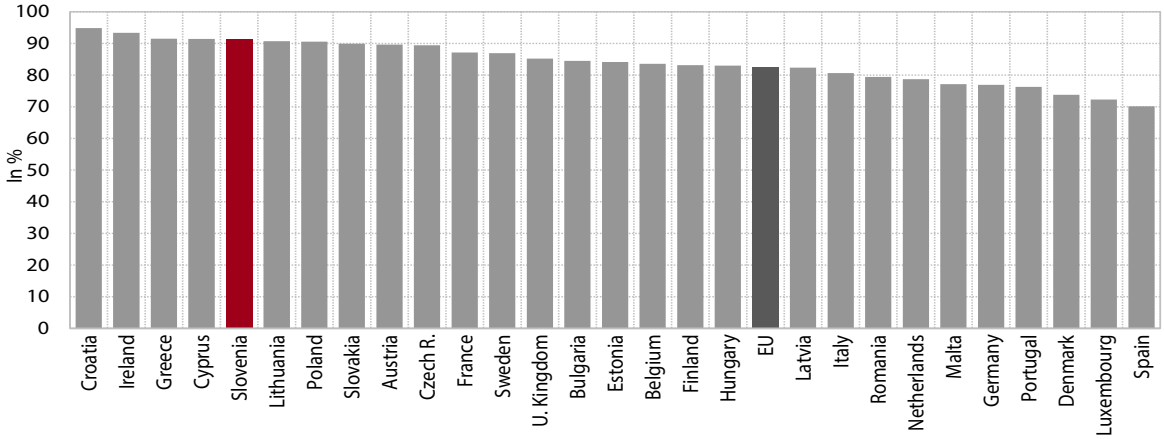
The share of young people (20–24 years) with at least upper secondary education has remained more-or-less unchanged in the last ten years and is among the highest in the EU. In 2016 it totalled 91.4%, compared with 82.6% in the EU as a whole. This large share is a consequence of the high participation of young people (15–19) in upper secondary education, which totalled 78.4% in 2014 and was higher than the EU average (61.9%). It also reflects the high completion rate in upper secondary education and the low share of early school-leavers.[2] While there are no major differences between men and women in the respective shares for adults, in young people the share of men with at least upper secondary education is significantly lower than the corresponding share of women.

Table: **Share of adult population, aged 25–64 years, with at least upper secondary education, 2nd quarter of the year, in %**

	2000	2005	2008	2009	2010	2011	2012	2013	2014	2015	2016
Slovenia	74.8	80.5	81.6	83.1	83.5	84.8	85.1	85.6	85.7	86.5	87.5
EU	N/A	68.8	71.1	71.7	72.4	73.1	74.0	74.9	75.6	76.1	76.7

Source: Eurostat Portal page — Population and Social Conditions – Education and Training, 2017.

Figure: **Share of young people, aged 20–24 years, with at least upper secondary education, 2nd quarter, 2016, in %**



Source: Eurostat Portal page — Population and Social Conditions – Education and Training, 2017.

[1] The phrase »at least upper secondary education« includes upper secondary and tertiary education.
[2] Young people aged 18–24 years with at most lower secondary education and not in further education or training.

3.18 At-risk-of-poverty rate

The at-risk-of-poverty rate in Slovenia has been below the EU average throughout the period analysed, but the gap narrowed strongly during the crisis. The faster increase in the at-risk-of-poverty rate in Slovenia compared with the EU average is estimated to have been due to (i) a larger decline in economic activity and employment in 2009–2013 than in the EU as a whole and (ii) certain austerity measures adopted in 2012 and 2013. Although in Slovenia the at-risk-of-poverty rate declined slightly in 2015[1] with the increase in disposable income, it is still higher than before the crisis. In 2007–2015 it fell for people older than 65 (by 2.2 pps to 17.2) but rose for those younger than 18 (by 2.9 pps to 14.2%) and the age group of 18 to 64 (by 3.8 pps to 13.6%).

In the last ten years, the highest at-risk-of-poverty rate was recorded for the unemployed (44.8% in 2015). The ratios between the at-risk-of-poverty rates for individual groups of the working-age population otherwise remain unchanged, but in data for 2015 some changes have been observed. Relative to the previous year, the at-risk-of-poverty rate for 2015 declined for the groups of unemployed and other inactive people, while it rose for the employed (by 0.6 pps to 4.7%). Within the employed, it dropped for self-employed people and those on fixed-term contracts, while it rose for people in permanent employment (for both full- and part-time employment).

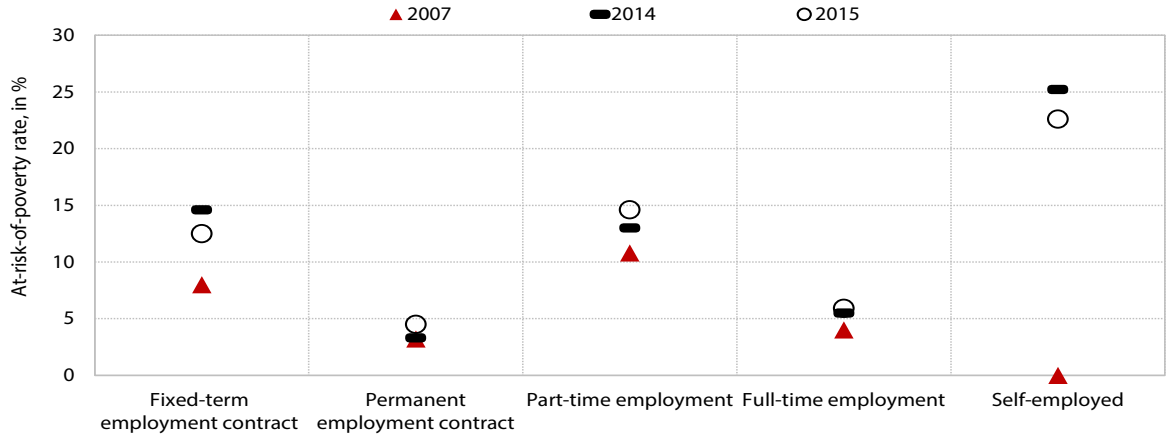
Households with one adult person remain one of the most vulnerable population groups. These households include single women (40.4%), single-person households (35.4%) and single-parent households (32.5%). This can be attributed to housing costs (housing, water, electricity, gas and other fuels) representing a larger burden for single households (20.1% of disposable income in 2015) than for other household types.

Table: **At-risk-of-poverty rate*, in %**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Slovenia	11.6	11.5	12.3	11.3	12.7	13.6	13.5	14.5	14.5	14.3
EU	16.5	16.6	16.6	16.4	16.5	16.8	16.8	16.7	17.2	17.3

Source: Eurostat Portal Page, 2017.
Note: * EU-27 until 2009, since 2010 EU-28.

Figure: **At-risk-of-poverty rate by type of employment, Slovenia**



Source: Eurostat Portal Page, 2017.

[1] Since the average household disposable income increased slightly in 2014 (the reference year for income), the at-risk-of-poverty threshold, which is calculated as 60% of the median equivalised disposable income, rose by EUR 21.08 to EUR 617 per month.

4 Environmental, regional and spatial development

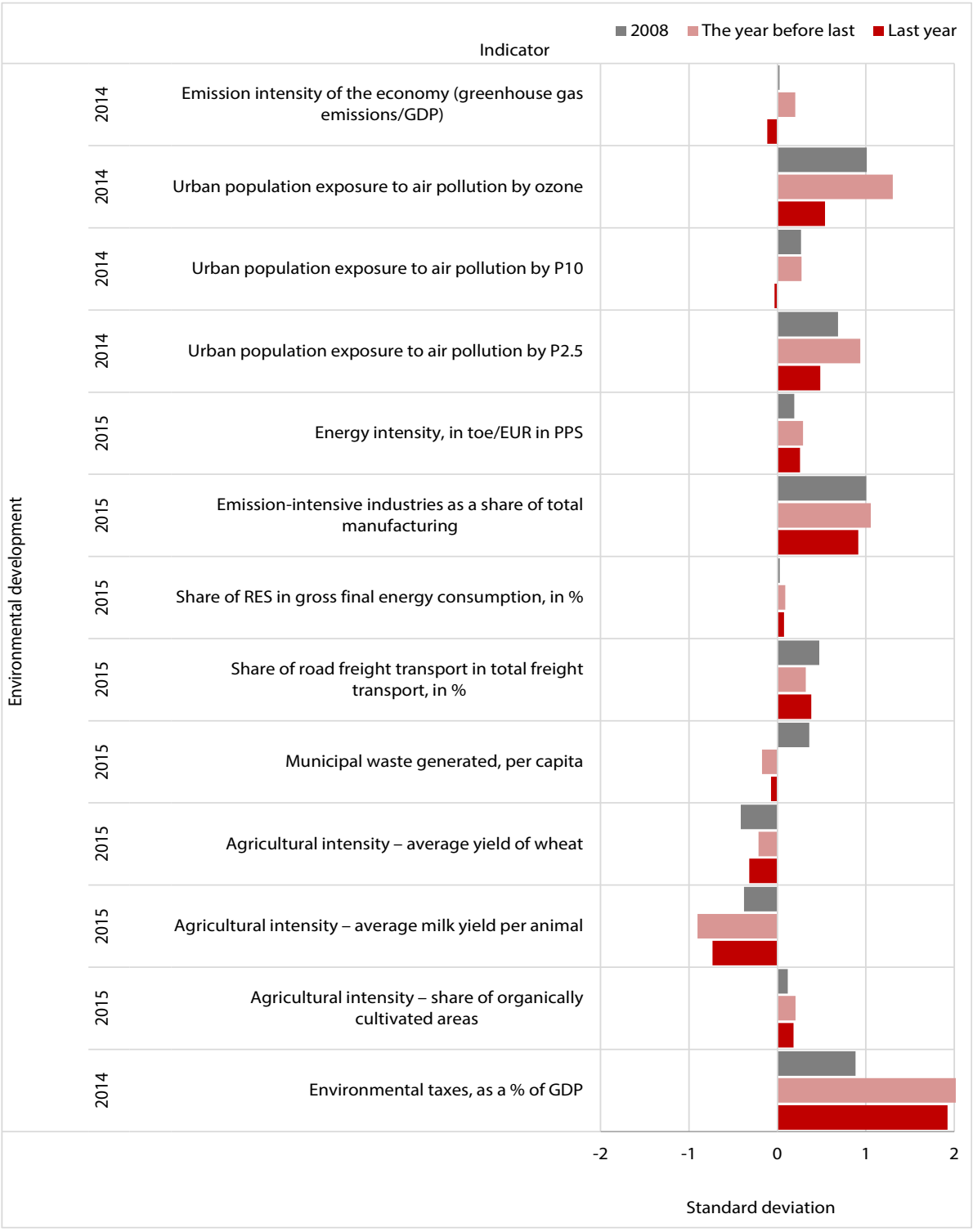
Environmental development

- 4.1 Greenhouse gas emissions
- 4.2 The quality of air
- 4.3 Energy efficiency
- 4.4 Emission-intensive industries
- 4.5 Road freight transport
- 4.6 Renewable energy sources
- 4.7 Domestic material consumption
- 4.8 Waste
- 4.9 Agricultural intensity
- 4.10 Intensity of tree felling
- 4.11 Environmental taxes

Regional development

- 4.12 Regional variation in GDP per capita
- 4.13 Regional variation in the registered unemployment rate

Overview of indicators – Environmental, regional and spatial development



Source: Calculations by IMAD.
Note: The table shows Slovenia's position relative to the unweighted arithmetic average of the EU Member States. It was calculated with regard to the set of countries for which data for individual indicators were available; Cyprus, Malta, Luxembourg and Croatia were excluded from the analysis due to a lack of data. The data in the table are for 2008 and the last year for which data for EU Member States were available (the last year is indicated in the table). A positive indicator value means above-average development relative to the EU, while a negative value indicates that Slovenia lags behind the EU average on that indicator.

4.1 Greenhouse gas emissions

The volume of greenhouse gas (GHG) emissions declined following the crisis. After rising during the times of economic growth, it dropped significantly with the large fall in GDP during the crisis and kept declining until 2014. According to the first preliminary estimate by ARSO (the Slovenian Environment Agency), in 2015 GHG emissions were 1% higher than in 2014 and 22% lower than their peak in 2008. Following the crisis, they declined across all source categories. The total decline was attributable primarily to lower emissions in the energy sector, followed by emissions from transportation and the consumption of fuels in industry and households. The significant decline in the energy sector, where emissions are almost entirely due to electricity generation in thermal power plants, mainly stemmed from the shutdown of one of these plants. The top position in terms of emissions is now occupied by transport. Emissions from this source had also declined slightly following the crisis, but remained approximately unchanged in the next few years. They are still high by international comparison, owing in part to the relatively favourable competitive conditions established through tax policies (the refund of excise duties) and strong international trade flows through Slovenia. The decline in emissions from the consumption of household fuels can be related to the milder weather. Emissions from industrial processes have risen slightly in the last few years, but since their share is modest, they have a relatively minor impact on the quantity of total emissions.[1] The main component of GHG emissions is carbon dioxide, which is generated mostly by combustion of fuels; this is followed by methane and dinitrogen monoxide, which mainly derive from agriculture and landfilled waste.[2]

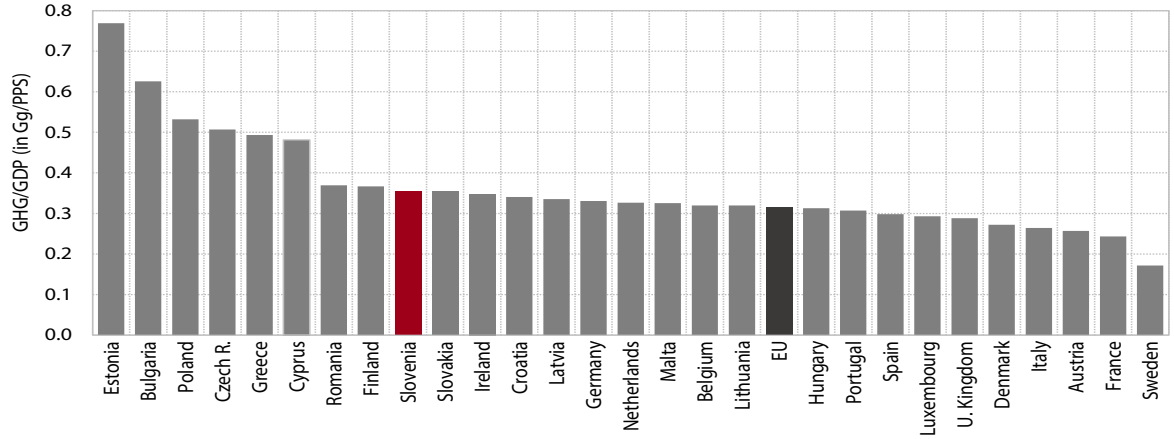
The emission intensity of the economy as measured by the amount of GHG emissions generated per unit of GDP[3] is also falling but remains above the EU average. After declining in times of economic growth owing to faster growth in GDP than emissions, emission intensity remained more or less unchanged in the first years of the crisis. However, with the EU average decreasing further during the crisis, the gap with the EU widened. In 2014 the emission intensity in Slovenia improved and the gap narrowed significantly, but Slovenia nevertheless still produced one-tenth more GHG emissions per unit of GDP than the EU as a whole.

Table: **GHG emissions and emission intensity of the economy (GHG/GDP ratio)**

	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
GHG emissions, index 1990=100												
Slovenia	103	110	111	112	116	105	106	106	102	99	89	90
EU	92	93	93	92	90	84	86	83	82	80	77	N/A
Emission intensity, in Gg/PPS												
Slovenia	0.61	0.51	0.49	0.46	0.46	0.46	0.45	0.44	0.43	0.41	0.35	0.34
EU	0.55	0.46	0.44	0.41	0.40	0.39	0.38	0.36	0.35	0.34	0.32	N/A

Sources: Eurostat Portal Page – Environment and Energy and Economy and Finance, 2017; for 2015, preliminary data by ARSO; calculations by IMAD.

Figure: **Emission intensity, 2014**



Source: Eurostat Portal Page – Environment and Energy and Economy and Finance, 2017; calculations by IMAD.

[1] See also Indicator 4.4: Emission-intensive industries.
[2] GHG emissions records include carbon dioxide (CO_2), methane (CH_4), dinitrogen monoxide (N_2O) and fluorinated gases (F-gases).
[3] In the international comparison, we use data on GDP in purchasing power standards (PPS) for a given year.

4.2 The quality of air

The air quality issue in Slovenia is strongly related to excessive particulate matter (PM) pollution;[1] since 2011 the PM concentration has declined owing to the lower needs for heating. Exceeding the daily limit values for PM is typical for the cold part of the year. During the heating season, PM pollution mainly stems from emissions from residential wood biomass combustion sources, followed by emissions caused by agriculture and by transport, particularly diesel-fuelled vehicles. PM concentrations in Slovenia are highest in poorly aerated basins, where even relatively low emissions can lead to excessive pollution. The exposure of the urban population to particle pollution has declined in general in recent years, partly as a result of milder winters, but is still relatively high; it has reached the EU average for PM_{10} while still exceeding it in $PM_{2.5}$.

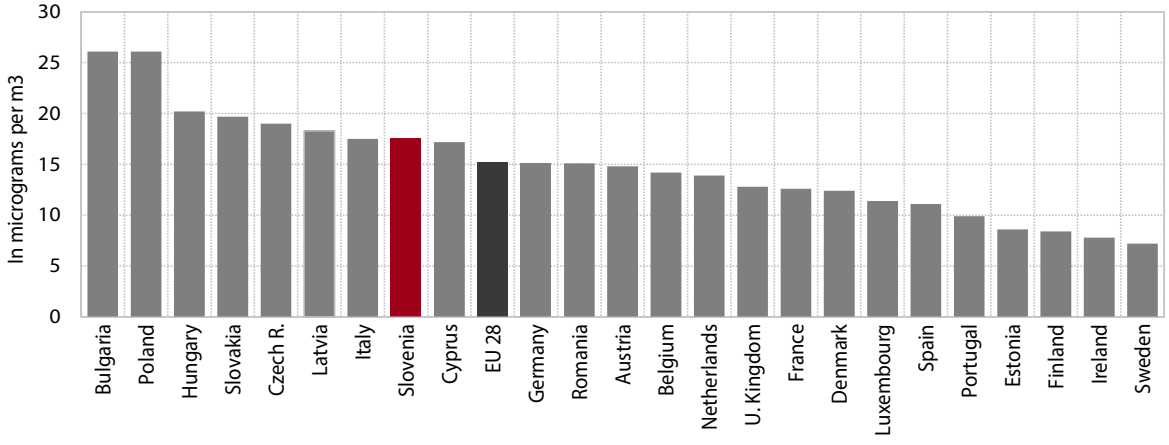
Another problem is the locally high presence of ground-level ozone,[2] but owing to the milder weather in recent years, the situation has also improved in this area. As the formation of ozone requires sufficient sunlight, the excessive concentrations of ozone – in contrast to particulate matter – mainly occur during the summer months. They are mostly the result of road traffic, the main source of ground-level ozone precursors. Being significantly influenced by transboundary air pollution, the ambient concentration of ozone in Slovenia is highly dependent on wind blowing from the west and is the highest in the Primorska region.[3] Owing to the high dependence on weather conditions, the multi-annual series of data does not indicate a clear trend. The urban population's exposure to ozone has decreased in the last few years, but it is still slightly higher than the EU average.

Table: **Urban population exposure to particulate matter and ozone, in micrograms per m³**

	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
PM_{10}											
Slovenia	N/A	36.8	33.3	32.3	29.1	27.5	28.2	31.0	25.4	24.9	22.5
EU	28.7	28.4	30.2	28.5	26.3	26.1	25.8	27.0	24.7	23.8	22.5
$PM_{2.5}$											
Slovenia	N/A	N/A	N/A	N/A	23.9	18.7	21.8	24.1	20.4	20.1	17.5
EU	14.4	15.5	17.7	16.7	17.5	17.4	18.0	18.4	16.8	15.9	15.2
Ozone											
Slovenia	6,806	6,017	6,461	6,514	5,838	4,959	4,497	6,615	6,699	5,528	3,812
EU	3,000	3,669	4,548	3,648	3,609	3,698	3,432	3,749	3,530	3,373	3,243

Source: Eurostat Portal Page – Environment and Energy, 2017.

Figure: **Urban population exposure to $PM_{2.5}$, 2014**



Source: Eurostat Portal Page – Environment and Energy, 2017.

[1] The most frequently measured particles are those sized 10 µm (PM_{10}) and 2.5 µm ($PM_{2.5}$). These are the most health-damaging particles, causing increased morbidity and mortality due to respiratory and cardiovascular diseases. The PM_{10} daily concentration limit is 50 µg/m³, which is not to be exceeded for more than 18 days in a calendar year; the annual limit value for the protection of human health over the long term is 20 µg/m³ (Decree on sulphur dioxide, nitrogen oxides, particulate matter and lead in ambient air, *Uradni list RS*, No. 52/2002/).

[2] Long-term exposure also has a significant harmful effect on human health, as it can lead to diseases of the respiratory tract.

[3] Kakovost zraka v Sloveniji v letu 2015 (Air quality in Slovenia in 2015), ARSO, 2016.

4.3 Energy efficiency

The consumption of primary energy in Slovenia has declined significantly in the last few years and is likely to be lower than the 2020 target.[1] Primary energy consumption declined by more than 10% in the four years to 2015, first primarily as a result of weaker economic activity, then owing to technological advancements in thermal power generation and the higher winter temperatures in some of the years and hence lower demand for heating. A faster decline in energy consumption, on the other hand, is impeded by the high level of energy consumed in transport. The total consumption is also affected by other factors, such as the schedule of regular overhauls in the nuclear power plant[2] and significant annual river-level fluctuations. It was indeed the smaller nuclear and hydro power production that made the greatest contribution to the decline in total primary energy consumption in 2015 (by 0.9%). Energy intensity, i.e. the ratio of energy consumption to GDP,[3] remains relatively high. Until 2007 energy intensity had mostly been rapidly falling, but then its decline slowed and it is still one-fifth above the EU average.

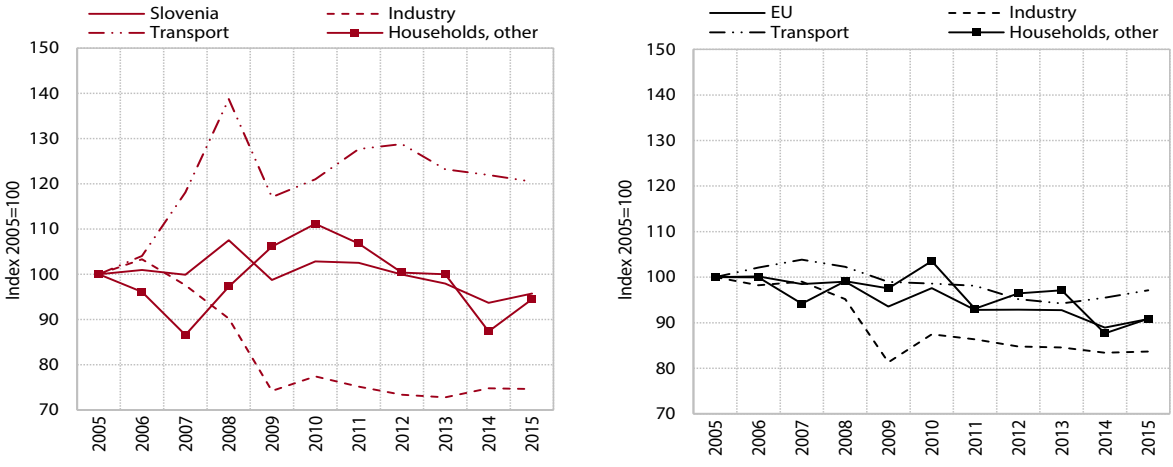
Final energy consumption[4] is significantly influenced by high energy consumption in transport; in recent years, it has also reflected fluctuations in the consumption of energy for heating. In 2005–2015 final energy consumption was falling, but at a slower pace than in the EU as a whole. The volume of energy consumed by industry declined more[5] than it did in the EU, while energy consumption in transport rose significantly, mainly owing to increasing transit through Slovenia.[6] Household consumption of energy for heating declined primarily as a result of the installation of heating cost dividers in multi-dwelling buildings and increasingly efficient heating appliances, while the fall in 2014 was mainly due to the mild winter.[7] In 2015 the consumption of energy for heating increased again because of a colder winter, which was also reflected in higher final energy consumption (by 2.2%).

Table: **Primary energy consumption**

Fixed-base index 2005=100	2000	2005	2008	2009	2010	2011	2012	2013	2014	2015	2020 target
Slovenia	88.6	100.0	106.5	98.7	101.6	102.8	98.7	96.2	92.8	92.0	104.2
EU	94.4	100.0	98.8	93.3	96.7	93.1	92.5	91.6	88.0	89.3	86.6

Sources: Eurostat Portal Page – Europe 2020 Indicators, 2017; EC Energy Efficiency, Reporting targets; calculations by IMAD.

Figure: **Final energy consumption by consumer sector**



Source: Eurostat Portal Page – Environment and Energy, 2017; calculations by IMAD.

[1] One of the three environmental targets of EU Member States for 2020 is energy efficiency, i.e. reaching a 20% reduction in energy consumption with regard to anticipated consumption according to the baseline scenario with no additional measures. Most EU countries thus actually have to reduce their energy consumption by 2020, while some, including Slovenia, are only required to limit its growth. As EU Member States are well on track to meet their 2020 targets, more ambitious goals have already been set for 2030.
[2] Every three years there is a year without an overhaul, which means almost 10% more nuclear power generated.
[3] The calculation takes into account GDP in purchasing power standards (PPS).
[4] Final energy consumption is primary consumption of energy, excluding energy used by the energy sector and in energy transformation processes, and losses.
[5] The reduction in Slovenia was mainly due to the transition to a less energy-intense process of aluminium production.
[6] See also Indicator 4.5: Road freight transport.
[7] According to ARSO (the Slovenian Environment Agency), 2014 was also the warmest year since 1850, which is when continuous meteorological measurements began.

4.4 Emission-intensive industries

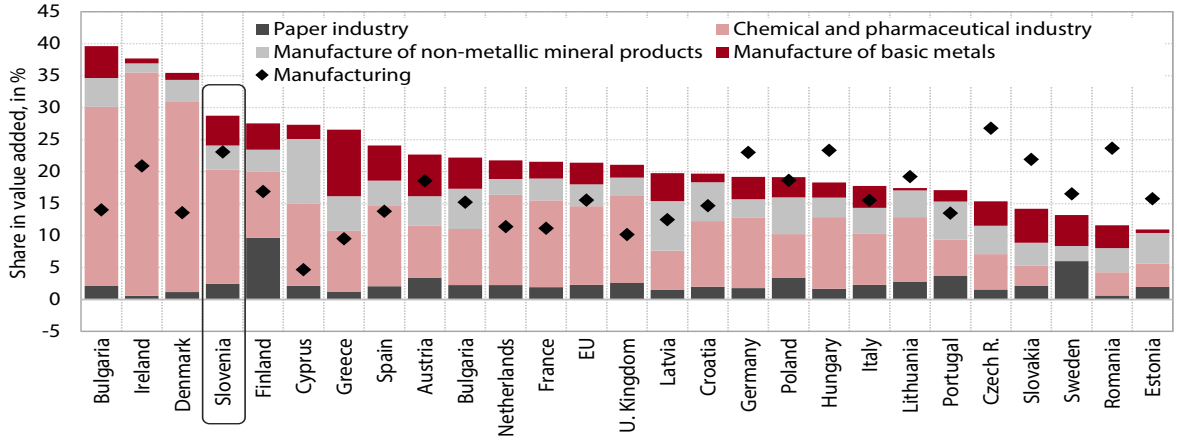
Energy intensity in manufacturing is declining more slowly in Slovenia than in the EU as a whole; the share of emission-intensive industries in value added is larger than on average in the EU. After declining in 2008, the share of emission-intensive industries in the value added of manufacturing rose, particularly owing to growth in the chemical and pharmaceutical industry and in the manufacture of metals. In recent years it has been roughly the same as before the crisis. In the EU as a whole, where the share of emission-intensive industries is smaller particularly due to a smaller share of the chemical and pharmaceutical industry, the significance of these industries in the structure of total manufacturing gradually declines. *Energy intensity*[1] *in manufacturing* is also above the EU average and it is falling more slowly than in the EU. The impact of emissions trading on production costs is therefore also greater than in the EU as a whole, which is harming business results and reducing the competitiveness of production.[2] In order to reduce exposure to higher costs, it is therefore crucial for Slovenia – especially in a period of commodity price growth – to proceed with technological restructuring of enterprises and reduce their energy intensity.

Table: **Production in emission-intensive industries and energy intensity in manufacturing**

	2008	2009	2010	2011	2012	2013	2014	2015
Production in emission-intensive industries (index 2005=100)	115.4	92.0	104.2	108.4	109.8	113.3	117.7	127.1
Paper industry	94.1	90.2	94.6	92.0	87.9	89.1	94.8	97.6
Chemical and pharmaceutical industry	123.1	108.3	121.3	125.9	131.1	138.5	140.9	140.1
Manufacture of other non-metallic mineral products	124.7	88.3	95.7	93.9	88.6	87.1	88.2	90.1
Manufacture of basic metals	108.2	68.1	85.9	96.7	98.5	99.9	108.8	142.8
Production volume in manufacturing excluding emission-intensive industries (index 2005=100)	115.7	94.1	101.1	103.2	98.7	96.4	101.8	103.0
Energy intensity in manufacturing (index 2005=100)	77.9	76.0	74.9	71.2	71.5	71.5	70.0	68.3
GHG emissions from industry (index 2005=100)	73.7	76.0	75.2	70.5	68.8	70.0	71.2	N/A

Source: SI-STAT Data Portal – National Accounts, Mining and Manufacturing, 2016; calculations by IMAD.

Figure: **Shares of emission-intensive industries in manufacturing and shares of manufacturing in the value added of the economy, 2014**



Source: Eurostat Portal Page – National Accounts, 2016; calculations by IMAD.

[1] Energy intensity is total energy consumption per unit of GDP.
[2] The climate and energy package adopted in 2010 and the emissions trading system have a twofold effect on the costs for businesses: direct costs for the purchase of emissions allowances and indirect costs paid through higher electricity prices.

4.5 Road freight transport

The share of road freight transport, having increased relatively rapidly in the previous decade, has remained above the EU average in the last few years. In 2015 the number of tonne-kilometres performed by Slovenian hauliers again increased more than freight transport by rail (by 8 pps). The share of road transport in total freight transport thus rose slightly, to around 81%. Data for the first three-quarters of 2016 indicate balanced and more modest growth for both freight transport modes. The share of road transport thus remains more or less unchanged, hovering around 5 pps above the EU average, which places Slovenia in the middle third of EU Member States. From the environmental perspective, a faster shift from road to rail transport is desirable; this would be best achieved through modernisation of railway infrastructure.

The volume of freight transport per inhabitant is high owing to Slovenia's transit location and the density of its transport infrastructure. In the period before 2005, the volume of freight transported by domestic hauliers (measured in tonne-kilometres per inhabitant) was comparable with the average volume transported by hauliers in the EU; in 2015 it was already 2.5 times as high. The increase is attributable to Slovenia's position at the crossing of the V and X pan-European transport corridors (where transport also expanded with the enlargement of the EU) and its highly developed motorway network, the largest in the EU in per capita terms. At the same time, Slovenia also has a similarly high level of per capita freight transport by rail because of its extensive railway network and the connection with the port of Koper.

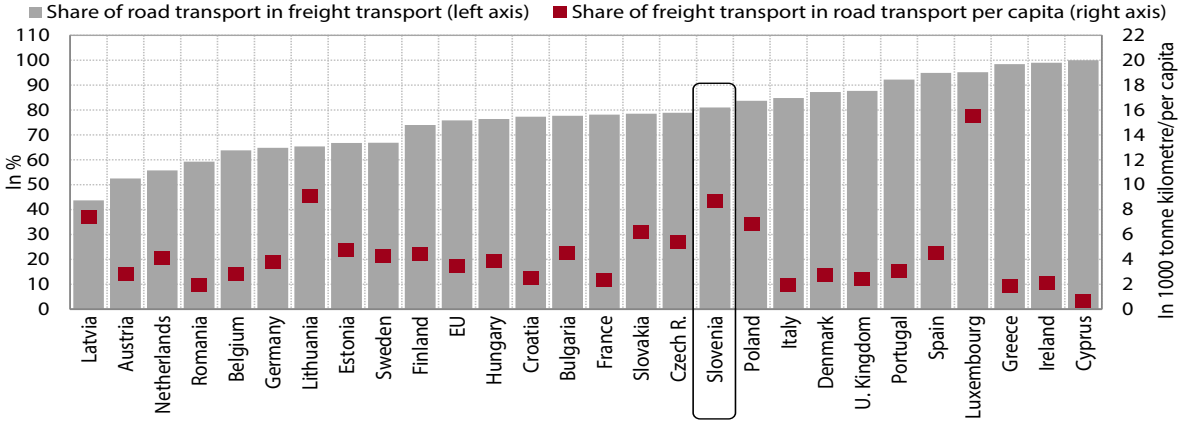
Slovenian hauliers perform more and more of their services abroad; at the same time, more and more foreign hauliers operate on Slovenian roads.[1] This trend has to do with the liberalisation of transport in the EU. In 2015 the distance of journeys performed in the territory of Slovenia by all hauliers (both domestic and foreign) again approached the high level from 2008. The distance of journeys performed by Slovenian hauliers (solely) abroad increased by 39%, while their journeys in their national territory and those that are at least partly connected to the territory of Slovenia (i.e. when goods are loaded or unloaded in Slovenia) declined by 13%. This indicates an increase in transport by foreign hauliers on Slovenian roads, which is also confirmed by data from toll stations.[2] In 2008–2012 the share of foreign freight vehicles on Slovenian motorways rose by 15 pps, to 68%.[3]

Table: **Share of road transport in total freight transport (measured in tkm), in %**

	2000	2005	2008	2009	2010	2011	2012	2013	2014	2015
Slovenia	71.9	77.3	82.2	84.0	82.3	81.4	82.1	80.7	79.8	81.1
EU*	73.7	76.4	76.3	77.5	76.2	75.6	75.3	75.5	75.4	75.9

Source: Eurostat Portal Page – Transport, 2017; for 2007–2015 calculations by IMAD.
Note: * For some countries, data from previous years are taken into account in the calculation.

Figure: **Road freight transport in Slovenia and the EU[1] in 2015**



Source: Eurostat Portal Page – Population and Social Conditions and Transport, 2017; calculations by IMAD.
Note: [1] Data for Malta not available; data for some countries are from previous years.

[1] As there are no official statistical data on tonne-kilometres performed in individual countries, this can be inferred from a comparison of vehicle-kilometres driven by domestic freight vehicles (source: SURS) and by vehicle-kilometres driven by all freight vehicles on Slovenian roads (source: Slovenian Infrastructure Agency (DRSI)).
[2] Freight vehicles counted at toll stations in the entire territory of Slovenia, DARS 2009.
[3] Proposals for the new price list, DARS 2013.

4.6 Renewable energy sources

The share of renewable energy sources (RES) in final energy consumption is higher than the EU average but is increasing at a slower pace. In the last decade it rose more markedly in 2009, when final energy consumption fell by almost 10% because of the crisis while the consumption of RES increased by around one-fifth.[1] After that year its growth slowed significantly, in recent years also as a result of the lower consumption of RES for heating. Slovenia ranks just behind the first third of EU Member States according to this share, but it is in the last third according to its growth. In 2015 the share of RES was only 32% higher than the average for the EU, compared with 91% in 2004. In recent years RES consumption (which is highly dependent on natural endowments in individual Member States) has also been rising as a result of strong financial incentives.

In comparison with the EU as a whole, Slovenia still has a large share of traditional RES and less of other RES. Traditional RES (solid biomass and hydropower) account for more than 85% of total RES consumption in Slovenia, compared with just 60% in the EU overall. Smaller shares of other RES (wind, solar and geothermal energy, biofuels, heat pumps, and biogas) are recorded in only three EU Member States. While wind energy use is already widespread in the EU (13% of RES consumption), Slovenia has only a few wind farms. The use of heat pumps is also much more modest than in the EU as a whole and the shares of biofuel and solar energy consumption are 50% smaller. In 2005–2015 the share of other RES rose by 2.5 pps (in the EU as a whole by 4.8 pps).

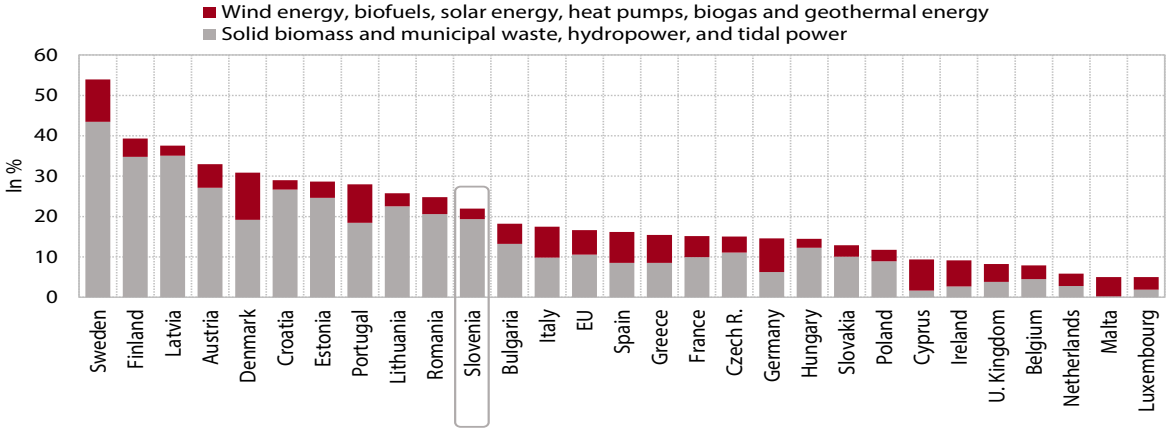
In recent years the amount of RES grants has been rising, particularly in solar energy production. In 2005 EUR 16 million was paid to promote electricity generation from RES, the bulk of which was intended for hydroelectric power plants. Since 2010 the amount of RES grants has been strongly rising. In 2015, when supports for solar power plants prevailed, it exceeded EUR 112 million. With a shift towards more expensive energy sources, the amount of grants per unit of power generated from RES also increased several times over.

Table: **Share of RES in gross final energy consumption, in %**

	2005	2008	2009	2010	2011	2012	2013	2014	2015	2020 target[1]
Total										
Slovenia	16.0	15.0	20.1	20.4	20.3	20.8	22.4	21.5	22.0	25.0
EU	9.0	11.0	12.4	12.9	13.2	14.4	15.2	16.1	16.7	20.0
In electricity										
Slovenia	28.7	30.0	33.8	32.2	31.0	31.6	33.1	33.9	32.7	
EU	14.8	17.0	19.0	19.7	21.7	23.5	25.4	27.5	28.8	
In transport										
Slovenia	0.8	1.8	2.3	3.1	2.5	3.3	3.8	2.9	2.2	10.0
EU	1.8	3.9	4.6	5.2	4.0	5.6	5.9	6.5	6.7	10.0
In heating										
Slovenia	18.9	19.2	27.6	28.1	30.3	31.5	33.4	32.4	34.1	
EU	10.9	13.1	14.7	14.9	15.6	16.4	16.9	18.1	18.6	

Source: Eurostat Portal Page – SHARES (Renewables), 2017.
Note: [1] One of the three 20-20-20 environmental targets of the EU.

Figure: **Share of RES in gross final energy consumption, 2015**



Source. Eurostat Portal Page – SHARES (Renewables), 2017; calculated by IMAD.

[1] Also as more data were statistically captured in this period.

4.7 Domestic material consumption

Material consumption per capita, its structure and self-sufficiency in Slovenia are roughly comparable with the EU average. In terms of material consumption per capita, which is an indicator of sustainable consumption, Slovenia is on a par with the EU average; lower consumption is recorded for nine EU Member States. The breakdown of material consumption[1] is comparable too, except for the slightly smaller proportion of biomass consumption (particularly fodder crops, timber and biomass products) than in the EU as a whole and a larger proportion of non-metallic minerals (sand, gravel and lignite). Like most other EU Member States, Slovenia is a net importer of materials, its net imports totalling around 10% consumption (average net imports in the EU around 4 pps more).

The bulk of material net imports are processed materials, in contrast to raw materials in the EU as a whole. In 2000 raw materials also predominated in the Slovenian breakdown by stage of manufacturing, but since 2007 their share has been rapidly falling. In 2015 it amounted to only 10%, the rest being net imports of processed materials (finished and semi-finished products). In the EU as a whole raw materials accounted for the largest part of material net imports throughout this period, while imports and exports of materials of higher stages of manufacturing were fairly balanced.

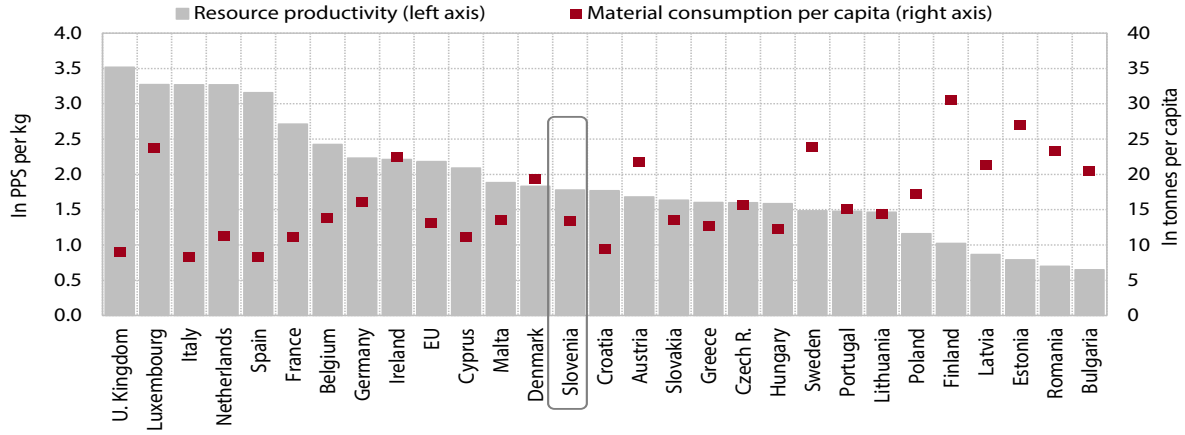
The resource productivity of the economy has improved since the onset of the crisis, but this has mainly been due to the decline in construction activity. In 2007–2012 productivity, expressed as a ratio of GDP to domestic material consumption, was rising faster than in the EU. Its growth then came to a halt, while continuing in the EU as a whole. The improvement in the first period was related to the sharp fall in construction activity and hence lower consumption of non-metallic minerals.[2] Resource productivity came closest to the EU average in 2012, before again diverging to reach 82% in 2015. Higher resource productivity is recorded particularly by the most developed EU Member States.

Table: **Resource productivity, in PPS/kg**

	2000	2005	2008	2009	2010	2011	2012	2013	2014	2015
Slovenia	0.92	1.10	1.13	1.23	1.32	1.51	1.75	1.78	1.74	1.80
EU	1.28	1.48	1.59	1.70	1.83	1.81	1.98	2.05	2.09	2.19
Slovenia /EU, index	72.0	74.5	70.7	72.2	72.6	83.5	88.2	86.8	83.1	82.0

Sources: SI–STAT Data Portal – Environment, 2016; Eurostat Portal Page – Environment and Energy and Economy and Finance, 2016; calculations by IMAD.

Figure: **Resource productivity and material consumption per capita, 2015**



Source: Eurostat Portal Page – Environment and Energy, 2016.

[1] The data are for 2014.

[2] Owing to their specific weight, non-metallic minerals significantly determine the overall material consumption. In 2007 they accounted for two-thirds of total consumption, in 2015 for 56%. These are in particular sand, gravel and limestone. According to data obtained from the Geological Survey of Slovenia, in 2014 three-quarters of non-metallic minerals were used as raw materials in construction, a further 17% as raw materials for building material industry and only 7% in manufacturing.

4.8 Waste

The quantity of total waste generated, which was declining during the crisis, has been rising in the last few years. In 2015 approximately 5.2 million tonnes of various types of waste was generated in Slovenia, around 10% more than one year previously and 16% more than in 2012, a year when the recorded quantity was also relatively low owing to a change in methodology.[1] Waste from *production and service activities*, which accounts for 80% of total waste, had been rising more slowly, except last year when it increased slightly more. The majority of waste, around 90%, is generated in four sectors: (i) manufacturing; (ii) construction; (iii) electricity, gas and steam supply; and (iv) water supply, sewerage, waste management and remediation activities. The largest share is accounted for by construction waste, which has a high specific weight. The remaining fifth is *municipal waste*, i.e. waste from households and other waste of similar origin managed by the providers of mandatory municipal public services for environmental protection. The quantity of this waste increased by around one-quarter in 2012–2015. Particularly problematic is hazardous waste, where chemical compounds and other chemical waste predominate; it accounts for around 3% of total waste generated and is increasing in the long term.

Waste recovery is increasing faster than waste generation and the quantities of landfilled waste are falling. The *total quantity of waste recovered* in 2015 amounted to around 6.9 million tonnes, 13% more than in 2014 and almost twice as much as a decade before. However, as the share of backfilling or pre-treatment, which had been lowest at the beginning of the crisis, increases, the actual amount recovered was more than half lower. Recycling, a very desirable form of recovery from an environmental perspective, rose slightly for the second consecutive year, but it was still significantly lower than during the crisis. In the period after the crisis, its share more than halved, to 42% of total recovery. Landfilling, which is the least favoured option in the waste management hierarchy, continues to be successfully reduced. The quantity of landfilled waste had also been highest at the onset of the crisis, but following a steep decline, this waste accounted for only 4% of the total amount processed in 2015. The share of landfilled *municipal waste* also decreased further, as more than two-thirds of municipal waste is already collected separately and as residual mixed municipal waste must be treated before going to landfill; it totalled 23%, which is slightly better than the EU average.

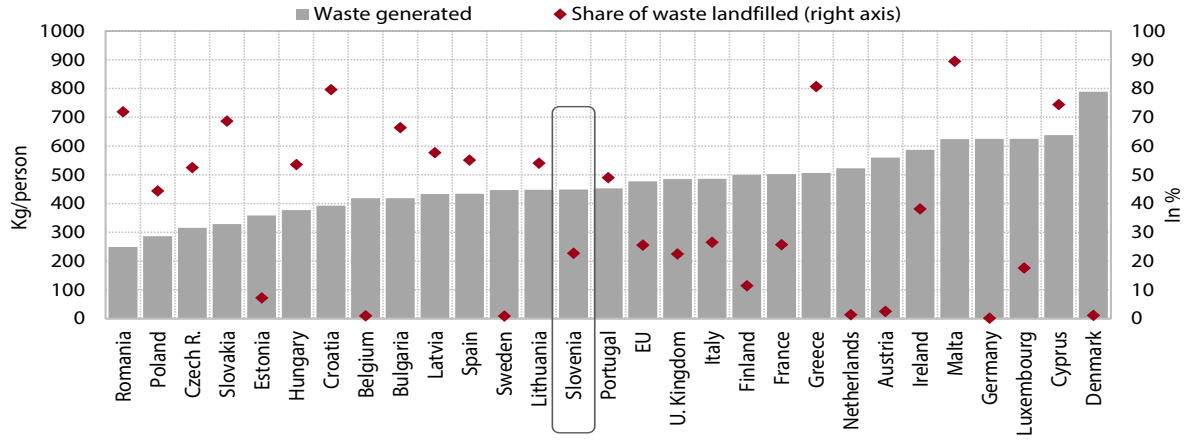
In the area of municipal waste, Slovenia performs better than the EU as a whole. Despite the increase in 2014 and 2015, the quantity of municipal waste generated per person is still lower than the EU average (in 2015 by 28 kg or around 6%). Waste-management structure is also better than in the EU generally, as a larger share of municipal waste is recycled and a smaller share landfilled. Meanwhile, as many as six EU Member States have already reduced their shares of landfilled municipal waste to below 3% of total waste generated.

Table: **Municipal waste generation, year 2000=100**

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Slovenia	96	101	102	106	102	96	81	71	81	84	88
EU	99	100	101	100	98	97	96	93	92	91	92

Source: Eurostat Portal Page – Environment and Energy, 2017; calculations by IMAD.

Figure: **Municipal waste generated and landfilled, 2015**



Source: Eurostat Portal Page – Environment and Energy, 2017.
Note: data for Ireland and Greece are for 2012, data for Portugal and Romania for 2014.

[1] Statistical data indicate a decline of around one-quarter for that year, which was, in addition to methodological changes (some waste categories having been reclassified as by-products), also due to a reduction in construction waste.

4.9 Agricultural intensity

Having declined considerably in the previous decade, the consumption of mineral fertilisers and pesticides has been rising modestly in recent years. Both agricultural inputs observed had recorded similar declines, only that *fertiliser use* ceased to fall a few years earlier. Agricultural producers had been reducing fertiliser use until 2009, when one-third less main macronutrients (NPK fertilisers, i.e. nitrogen, phosphorus and potassium) per unit of agricultural area (UAA) were used than a decade earlier. After that, fertiliser consumption rose slightly. The *total quantity of all active ingredients in pesticides sold* (around two-thirds of which are estimated to be used in agriculture) had been declining more slowly; in 2013 it was around one-third less than ten years before, though it rose slightly in the next two years. The consumption of both inputs is above the EU average, but international comparisons are difficult to make, particularly for pesticides, where the figure on the quantity sold is the sum of active ingredients with different toxicity levels.

Agricultural efficiency, as measured by average yields of the most important crops and milk yield per animal, is rising in the long term but mostly lags behind the EU average. In 2015 the yield per hectare was again up on the ten-year average for both crops (i.e. wheat and maize). An increase in the yield may, as long as it is not too large, also indicate better exploitation of natural resources than in previous years. Compared with the EU average, it was lower for wheat and higher for maize. The gap with the EU is not diminishing, and the significant fluctuations between years mainly reflect differences in weather conditions. The relatively low average milk yield per animal is also rising in the long term, which is favourable from the perspective of the environmental burden per unit of GDP generated in the economy. The total environmental burden of livestock production measured by the number of animals per unit of agricultural area is also relatively high as a result of natural conditions, but is declining (i.e. improving) according to the latest survey results.

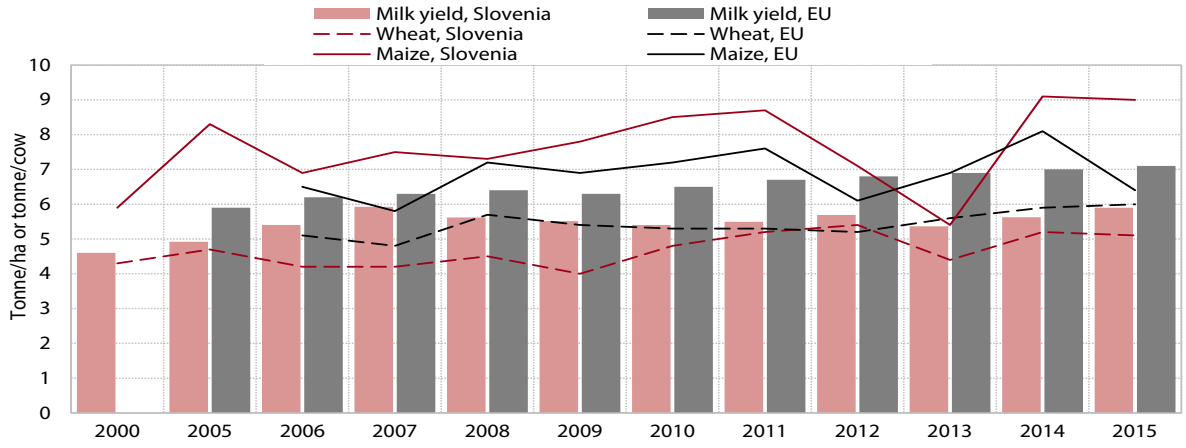
The share of agricultural holdings involved in controlled organic farming is rising and exceeds the EU average. A total of 5% of agricultural holdings with 9% of UAA were involved in controlled organic farming in 2015, which is significantly less than planned (20%) but around 3 pps above the EU average. Organic holdings are on average larger than non-organic farms, and their owners are generally younger and better educated than conventional farmers and tend to register more supplementary activities. The largest share of UAA is accounted for by permanent grassland intended for animal production, but the shares of other types of land are rapidly rising under the impact of increased demand. The area dedicated to the production of organic olives and vegetables has increased the most in recent years. Increases in organically farmed areas are also reflected in higher quantities of organic products and more organically raised animals.

Table: **Consumption of NPK fertilisers and pesticides and the share of organic production area, Slovenia**

	2000	2005	2008	2009	2010	2011	2012	2013	2014	2015
NPK fertiliser use, in kg/ha of UAA*	147	115	105	95	103	104	96	98	100	103
Pesticide sales, in thousand tonnes of active ingredient	1.5	1.4	1.2	1.2	1.1	1.1	1.0	0.9	1.0	1.0
Organic production area as a share of UAA, in %	1.1	4.6	6.1	4.7	6.4	7.0	7.3	8.1	8.6	8.8

Sources: SI-STAT Data Portal – Environment and Natural Resources – Agriculture and Fishing, 2017; Eurostat Portal Page – Agriculture, Forestry and Fisheries, 2017; calculations by IMAD.
Note: * Utilised agricultural area.

Figure: **Average yields of main crops and milk production**



Sources: SI-STAT Data Portal – Environment and Natural Resources – Agriculture and Fishing, 2017; Eurostat Portal Page – Agriculture, Forestry and Fisheries, 2017; calculations by IMAD.

4.10 Intensity of tree felling

Tree felling is increasing over the long term, but in the last few years it has been particularly pronounced as a result of emergency removals in the aftermath of the ice storm and the spread of wood pests. In 2014 and 2015 around half more wood was cut per year than before the glaze ice damage,[1] and twice the amount felled at the beginning of the previous decade. In recent years annual tree felling has come close to the maximum felling level determined in the forestry management plans, after lagging considerably behind in previous years.[2] Tree felling intensity, which is expressed as a ratio of annual felling to the annual wood increment and had been fairly low compared with the EU average, rose significantly in these two years (to more than 70%). This is close to the level envisaged in the Action Plan, according to which tree felling intensity could be increased to 75% and 6.5 million m^3 could be cut without jeopardising sustainable development.[3] However, following the ice storm the structure of cut wood changed significantly: felling for tree-tending purposes, which normally accounts for the largest share, declined, having previously been on the rise, while the scope of sanitary cuts rose notably. In 2015 the severe tree damage caused by the ice glaze was exacerbated by the rapid spread of the spruce bark beetle. As a result, three times more wood had to be cut then ten years before, when the spruce bark beetle had previously caused the greatest tree damage until that time.

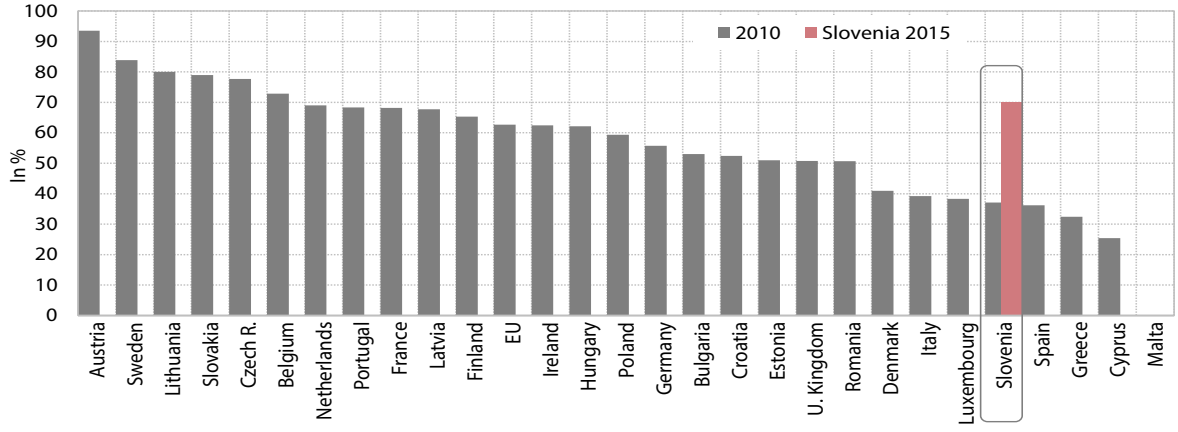
The increased felling is reflected not only in the higher production of raw wood categories, but also in a rapid increase in exports of the highest-quality wood in particular, which is an untapped potential for Slovenia. In the aftermath of the ice storm, the utilisation rate of felled wood declined, so that the growth of *production* fell slightly behind the growth of removal.[4] The volume of pulpwood increased the most, while the volume of sawlogs and veneer logs, the highest quality wood and that which generates the highest value added, also rose. After the glaze ice damage, *external trade* in unprocessed wood increased much more than total production. While imports of unprocessed wood declined by around 20%, exports thereof rose by around three-quarters. Within those, exports of the highest-quality wood more than doubled. The share of total wood exports rose by 8 pps, while the share of exports of the highest-quality wood alone rose by 9 pps more, to 55% of total unprocessed wood exports.

Table: **Forests and their economic yield, Slovenia**

	2000	2005	2008	2010	2011	2012	2013	2014	2015
Forest area (thousand ha)	1,134.2	1,169.2	1,185.1	1,185.2	1,184.4	1,184.5	1,183.4	1,181.9	1,182.0
Growing stock (million m3)	262.8	300.8	322.2	331.0	334.1	337.8	342.4	346.1	348.2
Annual wood increment (million m3)	6.9	7.6	7.9	8.1	8.3	8.4	8.5	8.6	8.6
Removals (million m3)	2.6	3.3	3.4	3.4	3.9	3.9	3.9	6.3	6.0
Tree felling intensity	38.0	43.0	43.6	41.6	47.1	46.4	46.2	74.0	70.1

Source: SI-STAT Data Portal – Environment and Natural Resources – Forestry and Hunting, 2017; calculations by IMAD.

Figure: **Intensity of tree felling, 2010**



Source: Eurostat Portal page – Agriculture, Forestry and Fisheries, 2017.

[1] Glaze ice damaged Slovenia's forests at the beginning of 2014.
[2] The potential (or allowable) felling is determined in the forestry management plans of the Slovenia Forest Service with a view to ensuring sustainable development, i.e. the long-term stability of all forests and their habitats irrespective of ownership. While in the years before the ice damage was sustained around two-thirds of allowable felling was carried out, tree felling reached 103% and 95% of the potential respectively in 2014 and 2015.
[3] Akcijski naèrt za povečanje konkurenčnosti gozdno-lesne verige v Sloveniji do leta 2020 (Action Plan to Increase the Competitiveness of the Forest–Wood Chain in Slovenia by 2020).
[4] The utilisation rate of felled wood depends on the structure of raw wood categories and the types of trees felled.

4.11 Environmental taxes

Environmental tax revenue expressed as a percentage of GDP has stabilised since 2012; owing to the high excise duties on energy, it has remained significantly higher than before the crisis. In the last three-year period the level of environmental taxes paid into the state budget continued to rise in nominal terms, but with GDP expanding at a similar pace, their share in GDP remained approximately the same, at just below 4%. This was around 1.0 pp more than in 2008, primarily as a result of higher excise duty rates[1] and higher, or new, other taxes (the introduction of CO_2 tax on motor fuels, the sale of emissions allowances and the increase in annual road user charges).

More than three-quarters of environmental taxes are accounted for by energy taxes, with taxes on pollution becoming slightly more important in recent years. Revenue from *energy taxes* accounted for around 77% of environmental taxes collected in the last three-year period, the bulk being revenue from excise duties on liquid fuels. The consumption of liquid fuels is relatively high in Slovenia, given the large volume of transit and other road transport, which is also related to the dispersed settlement pattern and poorly developed public transport infrastructure. Around 12% of inflows came from *transport taxes*. The bulk of these taxes arose from annual road user charges, but their total share was lower than in 2008. In contrast, the share of *taxes on pollution* increased to around 10% in the period analysed as a result of the more broadly based tax on CO_2 emissions. The share of *taxes on the use of natural resources*, which is low, was stable. Most of the environmental tax burden, around two-thirds, was borne by households, which can be attributed in part to methodological simplification according to which most motor fuel consumption, and hence energy taxes, is ascribed to households.

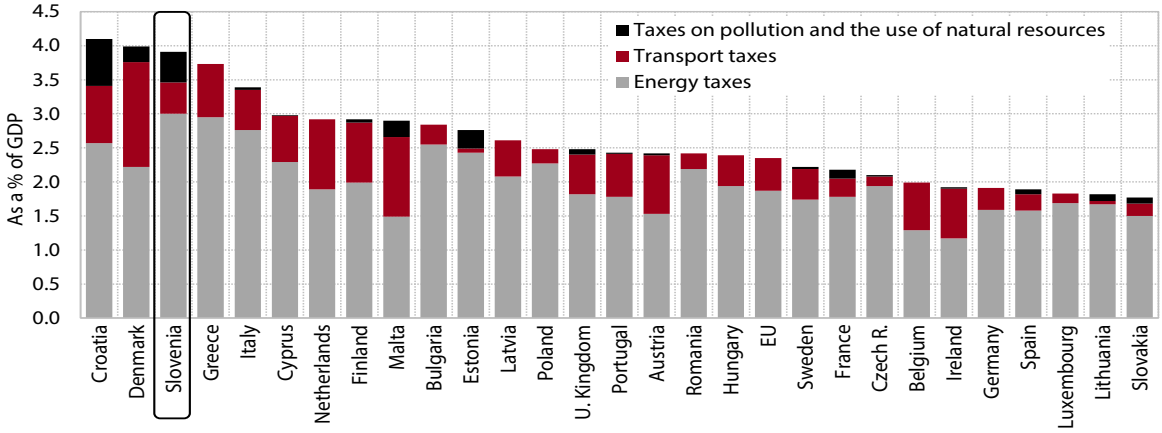
In terms of the environmental tax burden relative to GDP, Slovenia is at the top of the EU. Environmental tax revenue as a percentage of GDP was 1.5 pps higher in Slovenia in 2015 than on average in the EU. The high share is mainly attributable to the extensive use of motor fuels in road transport and the relatively high tax rate on energy. The implicit tax rate on energy totalled EUR 237 per tonne of oil equivalent of final energy consumption in 2015, which was higher than the EU average.

Table: **Environmental tax revenues, as a % of GDP, Slovenia and the EU**

	2000	2005	2008	2009	2010	2011	2012	2013	2014	2015
Slovenia	2.88	3.15	2.95	3.49	3.62	3.46	3.83	3.97	3.89	3.92
EU (weighted average)	N/A	2.51	2.29	2.36	2.37	2.40	2.44	2.45	2.46	2.44

Source: Eurostat Portal Page – Environment and Energy.

Figure: **Revenue from environmental taxes, Slovenia and the EU, 2015**



Source: Eurostat Portal Page – Environment and Energy.

[1] In 2015 the average excise duty rates for petrol and diesel fuel were around 40% higher than in 2008. With the sharp increase in excise duty rates in 2009, the option to obtain a partial refund of excise duties paid on diesel fuel used for commercial purposes was introduced (up to the minimum amount set in the EU energy directive).

4.12 Regional variation in GDP per capita

Economic growth is rising in all regions except Zasavska. Following the decline during the crisis, GDP has risen the most in nominal terms in the Obalno-kraška and the Primorsko-notranjska regions.[1] It has dropped only in the Zasavska region, which has therefore widened its gap with the Slovenian average. This region also has the lowest GDP per capita, at only around 54% of the Slovenian average. The national average is exceeded the most by the Osrednjeslovenska region (by 41%), while Obalno-kraška has reached its level again after two years.

The gap between the regions and the EU average in terms of GDP per capita, which had mostly been widening during the crisis, narrowed in 2014 and 2015. Zahodna Slovenija is at 97% of the EU average, while Vzhodna Slovenija is at 67% and thus ranks among less developed regions in the EU.[2] During the crisis, GDP per capita declined the most in the regions of Zahodna Slovenija, particularly Osrednjeslovenska and Obalno-kraška (in both by 14 pps in 2008–2015). In the regions of Vzhodna Slovenija, per capita GDP fell most notably (by 10 pps) in Zasavska, the region that has the widest gap with the EU average. Osrednjeslovenska was the only region to exceed the EU average throughout the period observed, but its advantage is gradually decreasing. In 2015 it surpassed it only by 15%, compared with 29% in 2008.

Inter-regional disparities, which are not great in Slovenia, decreased further during the crisis as a result of low activity in general. According to our calculations, the relative variance in GDP per capita,[3] which is one of the indicators of regional disparities, has been decreasing since 2010, but not so much as a result of the regional development policy: the decline is attributable instead to a larger fall in economic activity in those regions that generate the largest share of Slovenia's GDP and also have the highest GDP per capita. The relative variance in GDP per capita in Slovenia is one of the lowest in the EU. The ratio between the two regions with the highest and lowest values of per capita GDP is also relatively low compared with other EU Member States, but this is understandable given Slovenia's small size. In the EU the differences may be as much as tenfold (e.g. in the United Kingdom); in Slovenia the ratio is 2.6 (though it is gradually rising).

Table: **Regional GDP, Slovenia**

Cohesion/statistical region	GDP per capita								Nominal GDP growth, in %	GDP structure, in %
	Slovenia = 100							EU = 100		
	2008	2010	2011	2012	2013	2014	2015	2015	2015/2014	2015
Slovenia	***100.0***	***100.0***	***100.0***	***100.0***	***100.0***	***100.0***	***100.0***	***82***	***3.3***	***100.0***
Zahodna Slovenia	***121.2***	***121.2***	***120.2***	***120.1***	***119.6***	***119.2***	***119.3***	***97***	***3.6***	***56.1***
Obalno-kraška	***107.1***	***108.7***	***106.1***	***101.4***	***98.3***	***97.5***	***100.2***	***81***	***6.4***	***5.5***
Goriška	95.4	93.6	92.2	91.1	90.6	90.6	91.7	74	4.3	5.3
Gorenjska	84.5	82.8	82.9	83.2	85.7	87.8	87.9	71	3.4	8.7
Osrednjeslovenska	145.1	145.3	144.2	145.1	143.8	142.1	141.3	115	3.2	36.7
Vzhodna Slovenia	***82.0***	***81.7***	***82.5***	***82.5***	***82.8***	***83.1***	***82.9***	***67***	***2.9***	***43.9***
Primorsko-notranjska	***72.3***	***70.5***	***69.9***	***68.8***	***70.2***	***71.8***	***73.8***	***60***	***6.1***	***1.9***
Jugovzhodna Slovenia	96.6	95.2	94.9	93.9	95.0	95.8	96.0	78	3.5	6.6
Posavska	80.1	81.6	82.9	83.2	84.1	84.1	83.5	68	2.7	3.1
Zasavska	60.6	61.0	60.5	58.7	58.8	56.5	53.8	44	-2.2	1.5
Savinjska	89.5	90.6	91.8	91.9	91.5	91.5	92.1	75	4.0	11.4
Koroška	76.7	74.2	76.6	78.7	79.5	80.2	80.8	66	3.8	2.8
Podravska	83.8	82.5	83.0	82.8	82.6	83.2	82.7	67	2.4	12.9
Pomurska	63.4	64.2	66.0	67.0	68.1	68.1	66.5	54	0.3	3.8
Dispersity of GDP per capita (NUTS 3)	***22.3***	***23.8***	***23.1***	***23.1***	***22.5***	***21.7***	***21.5***			

Sources: SI-STAT Data Portal – Economy – National Accounts – Regional gross domestic product, 2016, Eurostat – General and Regional Statistics, 2016; calculations by IMAD.

[1] Under Regulation (EU) No. 1319/2013, the following amendments to the NUTS classification entered into force: the Notranjsko-kraška region was renamed Primorsko-notranjska and the Spodnjeposavska region was renamed Posavska. The borders of four NUTS 3 regions were also changed: the municipality of Litija was excluded from Osrednjeslovenska and joined with Zasavska, while the municipalities of Radeče and Bistrica ob Sotli passed from Savinjska to Posavska. The borders of NUTS 2 regions were also changed accordingly. The amendment applies from 1 January 2015; data for regional GDP were also adjusted for previous years.

[2] Regions at the NUTS 2 level whose GDP per capita is less than 75% of the EU average are considered less developed.

[3] The dispersion of regional GDP per capita is measured as the sum of the absolute differences between regional and national GDP per capita weighted by the share of population and expressed as a percentage of national GDP per capita.

4.13 Regional variation in the registered unemployment rate

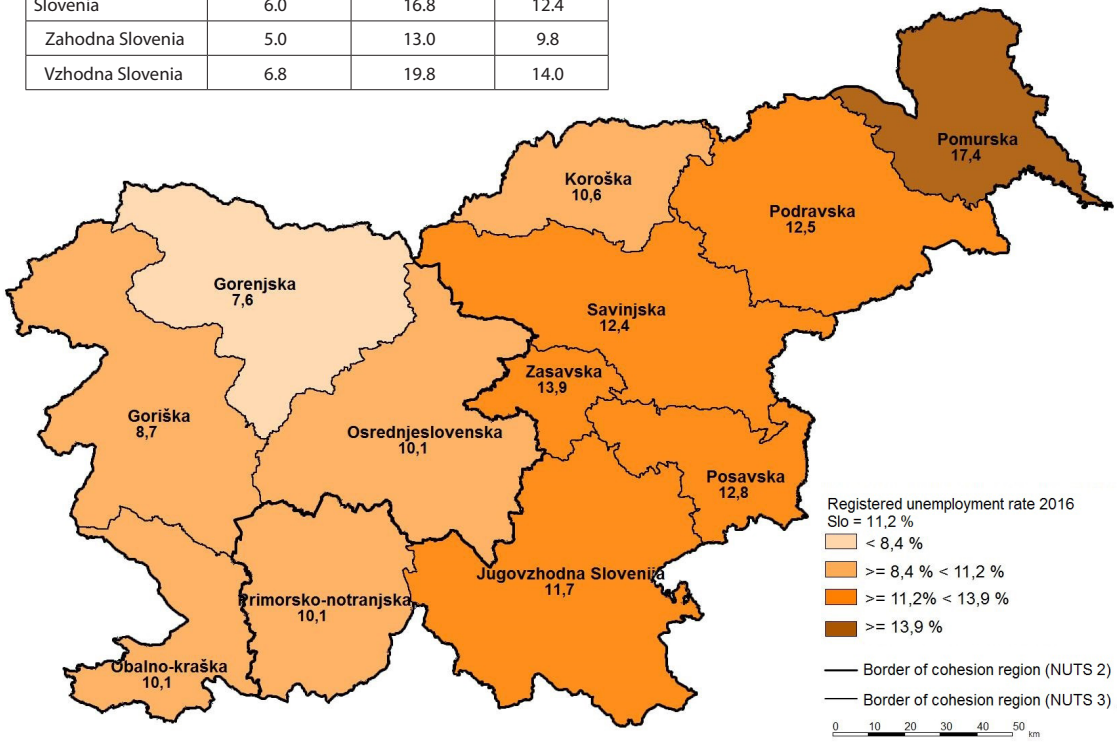
The registered unemployment rate is falling across all regions but is still higher than before the crisis. Since 2011 the lowest rate has been recorded in the Gorenjska region: in 2016 it was a third below the national average and more than two times lower than in Pomurska, the region with the highest rate. Above-average registered unemployment rates are recorded in the regions of Vzhodna Slovenia, besides Primorsko-notranjska and Koroška. Since 2008 the registered unemployment rate has increased overall, the most in Zasavska, the region that has the lowest GDP per capita in Slovenia. In the last two years, however, the situation has been improving across all regions including Pomurska, where unemployment continued to rise even in 2015. This is especially important for this region, as its unemployment rate has been the highest for years, surpassing the national average by more than 50%.

Inter-regional disparities in the registered unemployment rate as measured by absolute dispersion[1] have been stable in recent years. In the early years of the crisis they had been rising, reaching their peak in 2010. In the following two years, on the other hand, they declined, this as a result of a faster increase in unemployment in those regions of Zahodna Slovenija that have below-average rates. Since 2012 inter-regional disparities have remained relatively stable, with small year-on-year fluctuations, and are smaller than in 2008.

Unemployment of young people, the group of unemployed that was disproportionately affected by the labour market contraction during the crisis, has declined in all regions for the second consecutive year. The registered unemployment rate for young people (aged 15–29) shows similar regional variation to that of the total unemployment rate but is, on average, some 50% higher (the national average is 16.8%, with Gorenjska having 10.3% and Pomurska 25.5%). After 2014, it started to fall in all regions, particularly Zasavska, in which it is nevertheless still more than a quarter higher than the national average.

Map: **Registered unemployment rates by region, 2016**

	Long-term	Young people (aged 15–29)	Women
Slovenia	6.0	16.8	12.4
Zahodna Slovenia	5.0	13.0	9.8
Vzhodna Slovenia	6.8	19.8	14.0



Sources: GURS, SURS; cartography by IMAD.

[1] Absolute dispersion: $AD_{Rt} = \sum_r (\frac{A_{rt}}{A_{Rt}}) |SB_{rt} - SB_{Rt}|$, where t = year, A_r = the active population of the region, A_R = the active population of Slovenia, SB_r = the registered unemployment rate of the region, SB_R = the registered unemployment rate of Slovenia.

Bibliography and sources

Drugo letno poročilo o izvajanju ukrepov razvojne podpore v problemskem območju z visoko brezposelnostjo Maribor s širšo okolico in Programa spodbujanja konkurenčnosti Maribora s širšo okolico v obdobju 2013–2018. (Second annual report on the implementation of measures for the development support in the problematic high unemployment rate area of wider Maribor and of the Programme for promoting competitiveness of the wider Maribor area in the period 2013–2018). (2016). Obtained at: Ljubljana: MGRT. http://www.mgrt.gov.si/.

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List of acronyms and abbreviations

ALFS = labour force survey
ARSO = the Slovenian Environment Agency
GDP = gross domestic product
Cedefop = the European Centre for the Development of Vocational Training
CH4 = methane
CO2 = carbon dioxide
CPI = consumer price index
DARS = the Motorway Company of the Republic of Slovenia
VAT = value added tax
DRSI = the Slovenian Infrastructure Agency
BAMC = the Bank Assets Management Company
EBITDA = earnings before interest, tax, depreciation and amortisation
ECB = the European Central Bank
EC = the European Commission
CMMAC = common methodology for measuring administrative costs
EMU = Economic and Monetary Union
EPO = the European Patent Office
ET 2020 = Education and Training 2020
EU = the European Union
EUIPO = the European Union Intellectual Property Office
EUR = euro
EUROAC – the Academic Profession in Europe: Responses to Societal Challenges
EUROSTAT = the Statistical Office of the European Union
FURS = the Financial Administration of the Republic of Slovenia
GEM = the Global Entrepreneurship Monitor
Gg = gigagram (1000 tonnes)
GURS = the Surveying and Mapping Authority of the Republic of Slovenia
ha = hectare
IAEs = innovation-active enterprises
ITR = implicit tax rate (on labour, capital, consumption and energy)
IER = the Institute for Economic Research
ICT = information and communication technology
IMD = the Institute for Management Development
IMF = the International Monetary Fund
ISCO = the International Standard Classification of Occupations
CPC = the Commission for the Prevention of Corruption
UAA = utilised agricultural area
MGRT = the Ministry of Economic Development and Technology
MRA = master restructuring agreement
SMEs = small and medium-sized enterprises
N2O = nitrous oxide
NKBM = Nova kreditna banka Maribor
NLB = Nova ljubljanska banka
NPP fertilisers = mineral fertilisers containing nitrogen, phosphorus and potassium
FDI = foreign direct investment

NUTS classification = the Nomenclature of Territorial Units for Statistics
pp = percentage point
OECD = the Organisation for Economic Cooperation and Development
OHIM = the Office for Harmonization in the Internal Market
OP ETID = the Operational Programme for Environmental and Transport Infrastructure Development
RES = renewable energy sources
PIAAC = the OECD Programme for the International Assessment of Adult Competences
PISA = the Programme for International Student Assessment
PPP = purchasing power parity
PM = particulate matter
PMR = product market regulation
PPS = purchasing power standard
R&D = research and development activity
RS = the Republic of Slovenia
SSH = Slovenian Sovereign Holding
SHARE = the Survey of Health, Ageing and Retirement in Europe
SID = the Slovenian Export Corporation
SKD = standard classification of activities
PPS = purchasing power standard
SPIRIT = the Public Agency for Entrepreneurship, Internationalization, Foreign Investments and Technology
SEF = the Slovene Enterprise Fund
SURS = the Statistical Office of the Republic of Slovenia
TAXUD = the Taxation and Customs Union Directorate
TEA = total early-stage entrepreneurial activity
TEŠ = the Šoštanj thermal power plant
GHG = greenhouse gases
tkm = tonne-kilometre
SIPO = the Slovenian Intellectual Property Office
IMAD = the Institute of Macroeconomic Analysis and Development
USD = US dollar
WEF = the World Economic Forum
WIPO = the World Intellectual Property Organization
ZGD = the Companies Act
ZPIZ = the Pension and Disability Insurance Institute of Slovenia
ZUJF = the Fiscal Balance Act

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