

ANALYSIS OF THE  
HEALTH SYSTEM IN SLOVENIA

# Health System Expenditure Review

Final Report



# Health system expenditure review

Final report  
7 October 2015

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# Health system expenditure review

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## List of abbreviations

AWG	Ageing Working Group
CHI	Complementary health insurance
DRG	Diagnosis-related group
EU	European Union
GDP	Gross domestic product
HIIS	Health Insurance Institute of Slovenia
IMAD	Institute of Economic Research
NHA	National Health Accounts
OECD	Organisation for Economic Co-operation and Development
OOP	Out-of-pocket (expenditure)
PPP	Purchasing power parity
SHI	Social health insurance
SURS	Statistical Office of the Republic of Slovenia (Statistični urad Republike Slovenije)
VAT	Value added tax

## Key findings

The key finding of the Expenditure Review is that health sector revenues are very susceptible to labour market fluctuations. With nearly three-quarters of Health Insurance Institute of Slovenia (HIIS) revenues coming from employee contributions, it comes as no surprise that as employment levels and gross wages decreased during the economic crisis, so too did resources for health. Macroeconomic forecasts indicate that the labour market will not return to pre-crisis levels in the near term, which implies that the health sector will continue to face financial pressures going forward. The ageing population exacerbates the problem, since pensioner contributions to the HIIS are significantly lower than average contributions from the employed.

Therefore, it is recommended that diversification of HIIS revenues be made a priority and that counter-cyclical financing mechanisms be put in place so that there is some regularity to health system resources. Without steady, reliable revenue streams, it is difficult for both the HIIS and providers to plan budgets beyond six months to one year and ensure access to quality health care. Nearly all other health systems in Europe, including those traditionally thought of as social health insurance systems (e.g. France, Lithuania, Czech Republic, etc.) receive significant funding from general tax revenues. Given that the HIIS is unable to engage in deficit spending, it is repeatedly put in a position whereby it must either alter prices so they are in line with the available funding and pre-contracted volumes, or delay payments to providers until funds are available. While price reductions could be appropriate (see report: Purchasing and Payment Review) delaying payments until funds are available is not.

A second key finding is to do with the complementary health insurance (CHI) sector (see also separate report: Making sense of complementary health insurance). While there are a number of unappealing characteristics of CHI (e.g. high administrative costs compared to the HIIS, private profits), it has also served an important function during the economic crisis. Without CHI, costs would likely have been shifted onto households in the form of out-of-pocket payments, which would have led to deterioration in access to health services and lack of financial protection. Efforts to replace CHI should only be made once the Ministry of Health can successfully generate the ~€400 million needed to offset the loss of CHI. The Ministry of Health may consider focusing the majority of its attention on better revenue generation; if these efforts are successful, it would be feasible to slowly reduce co-insurance rates to the point that CHI is no longer required. This approach would be less disruptive than replacing CHI all at once.

Finally, the review finds that the HIIS pays for a number of budget items that are unfunded, including specialization training. This represents a significant cost, comparable to the total operating costs and profits of CHI, and could be shifted back to central government budgets.

# 1 Introduction

Since the onset of the financial crisis, Slovenia has taken strides to improve the sustainability of its health system by implementing measures to generate additional revenues and reduce expenditures. Efforts over the last five years have included increasing contributions for the self-employed, requiring contributions from students in vocational training, restricting entitlement to free services, increasing co-insurance rates, and reducing prices of medicines and health services.

Following an in-depth review of macroeconomic conditions in Slovenia in 2014, the Council of the European Union issued a Country-Specific Recommendation (CSR) urging the government to take steps to address its excessive public deficit. To this end, the Council called for a comprehensive review of health expenditures to support fiscal consolidation. This recommendation comes despite the fact that the Health Insurance Institute of Slovenia (HIIS) – the primary financier of health care in Slovenia – cannot itself contribute to public debt. Since 2004, when the public treasury bailed out the health insurance fund, the HIIS has been funded almost exclusively through the yearly contributions of its members and, unlike other areas of the public sector, is prohibited from recording annual losses. Nevertheless, given the financial pressures associated with the rising costs of health care and an ageing population, a review of revenues and expenditures in the Slovenian health sector is an important and timely exercise.

The following health expenditure review provides actionable evidence on how resources for health are generated and spent to assist the Slovenian government in identifying and implementing reforms so that the health system achieves better value for money and can secure long-term sustainability. The review provides a detailed assessment of current funding levels, resource allocations, trends and projections to support an overarching evaluation of the performance of health system resources.

Overall, the review finds that the recent economic crisis led to significant reductions in contributions to the HIIS due to rising unemployment and slower wage growth. Despite fewer resources for health, the volume of goods and services paid for by the HIIS did not commensurately decrease; rather, reductions in HIIS revenues were dealt with by reducing the prices paid for care, shifting costs onto complementary health insurers and delaying reimbursement to providers. As a result, reductions to HIIS revenues have arguably most adversely affected providers, leading some public providers to incur financial losses and a small number of public hospitals to require financial assistance from the Ministry of Finance. Complementary health insurance (CHI) has served an important role throughout the crisis, both by protecting households from incurring high co-insurance payments,

as well as – to a limited extent – by partially subsidizing the provision of services, as private insurers pay providers for the co-insurance portion of services rendered even after HIIS contracted volumes have been met for the year. Going forward, the health system will face increasing pressure to meet the needs of an ageing population with fewer active contributors to the HIIS; alternative revenue sources are needed that ensure the stability of health care funding so that quality health care services continue to be delivered.

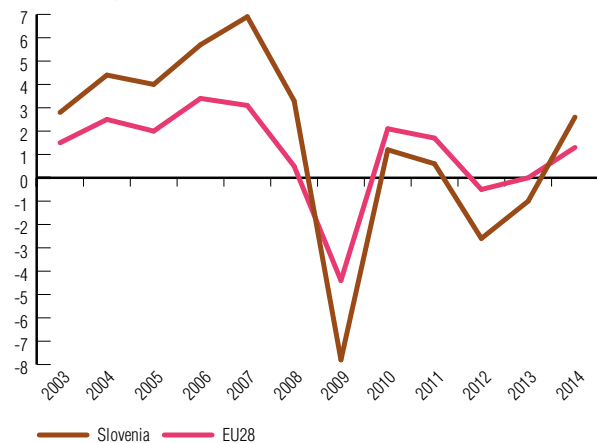
The review begins by describing the macroeconomic context in Slovenia. Next, the review discusses trends in revenue generation and expenditures. This is followed by a review of some of the key approaches that have been taken in recent years to reduce expenditures. The next sections discuss how changes in spending have affected particular areas of the health sector, including hospitals, pharmaceuticals and long-term care; labour and capital expenditures are also covered in depth. Lastly, expectations of future revenues and expenditures in the context of an ageing population are discussed. The report concludes with overall findings.

## 2 Background: macroeconomic context

### Slovenia was severely affected by an extended economic crisis

In the early 2000s, Slovenia experienced robust economic growth fuelled by accession to the European Union (EU) in 2004 and easy access to credit. Between 2000 and 2008, real gross domestic product (GDP) increased at an average annual rate of 4.2%, which was well above the average across the EU (Fig. 1). In 2008, GDP per capita was €18 769 at current prices.

**Fig. 1**  
Real GDP growth, Slovenia and EU28



Source: Eurostat, 2015b.

However, this growth was in part driven by unsustainable debt accumulation by banks and the corporate sector. Along with most other countries in the EU, in 2009, Slovenia suffered a severe economic decline; real GDP shrank by 7.8%, one of the largest declines in all of Europe in 2009 and sharper than the average contraction across the EU28 of 4.4%. Among EU countries, only Estonia, Finland, Latvia and Lithuania suffered larger declines in GDP in that year.

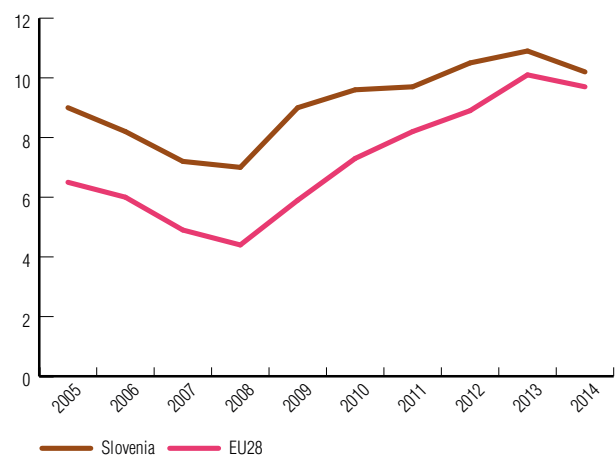
Slovenia experienced positive real GDP growth in 2010 (1.2%), though this rebound was modest and still below the EU average of 2.1%. However, from the last quarter of 2011 and through 2013, the economy again contracted; real GDP contracted by 2.6% and 1.0% in 2012 and 2013, respectively. The collapse in economic activity was so severe that GDP per capita in purchasing power standard declined from 89% of the EU average in 2008 to 82% of the EU average in 2013, on a par with the level of development in Slovenia in 2002, prior to EU accession. Although this second economic contraction also occurred in many other EU countries as well, it was particularly strong in Slovenia. In 2012, for example, real GDP contracted more only in Greece, Italy and Portugal. By 2014 Slovenia

had returned to relatively strong positive export-driven economic growth, above the EU average, though still slower than the pre-crisis average.

### Unemployment has risen while wage growth has stagnated

The economic crisis has had serious implications for the labour market, which is of particular importance because the health system is largely funded by payroll contributions. Based on Eurostat data, the unemployment rate has steadily increased since a low of 4.4% in 2008, reaching 10.1% in 2013 (Fig. 2). This is well below the EU28 average in all years, though since the beginning of the crisis, Slovenia's official unemployment rate has been converging with that of the EU average. Notwithstanding the lack of international comparability, national data on the registered unemployed indicates an even higher unemployment rate, peaking at 13.1% in 2013 and holding steady in 2014. This corresponds with over 120 000 unemployed people, compared to just around half that number in 2008 (63 200). Many of the unemployed have been out of work for 12 months or more; as of 2014 Q4, 55.6% of the working-age (15–74 years old) unemployed were considered as long-term unemployed – above the EU average of 49.8% (Eurostat, 2015a).

**Fig. 2**  
Unemployment rate, Slovenia and EU28 (%)

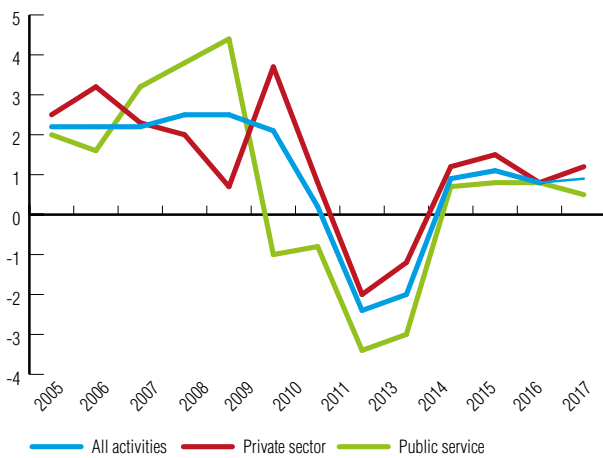


Source: Eurostat, 2015a.

Those who have remained employed have faced significantly lower wages since the crisis unfolded. Real growth in wages remained constant at the beginning of the crisis at over 2% annually, however gross wage growth per employee slowed considerably in 2011 and declined in 2012 and 2013 by 2.4% and 2.0%, respectively (Fig. 3). Though wages stagnated in both the public and private sector, the effects were more substantial in the public sector, where wages increased substantially prior to the crisis.



**Fig. 3**  
Real growth in gross wages per employee (%), Slovenia, 2005–2017



Source: SURS data.

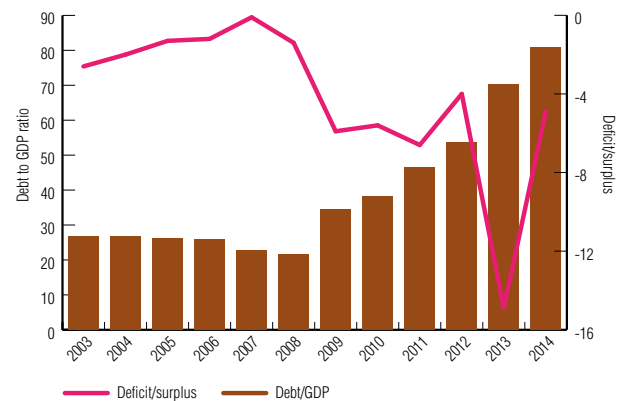
Note: Data for 2016 and 2017 are forecasts.

Other data from the Statistical Office of the Republic of Slovenia monthly survey provide confirmatory evidence that average monthly earnings have been growing more slowly in recent years, particularly in the later years of the crisis. While between 2005 and 2010 average annual growth in average monthly gross salaries was 5.3%, it was registered as 2.0% and 0.1% in 2011 and 2012, respectively.

### The economic crisis has had a detrimental effect on public finances

Poor economic conditions, increased unemployment and reduced wages, together with banking sector recapitalization costs, have had important implications for government finances. As a result of very strong economic growth, Slovenia was running a small annual public deficit leading up to the financial crisis; however, its robust GDP growth enabled it to maintain its debt relative to GDP at consistent and relatively low levels; prior to the crisis and since joining the EU, Slovenia's public debt to GDP was consistently below 30% (Fig. 4). However, as the crisis took hold, the deficit increased from 1.4% of GDP (2008) to 5.9% of GDP (2009). This higher deficit level remained fairly constant over the next few years but, due to lacklustre GDP growth, pushed debt up to around double pre-crisis levels. In 2013 the deficit increased substantially to 14.9% following a more than €3 billion recapitalization of the banks.

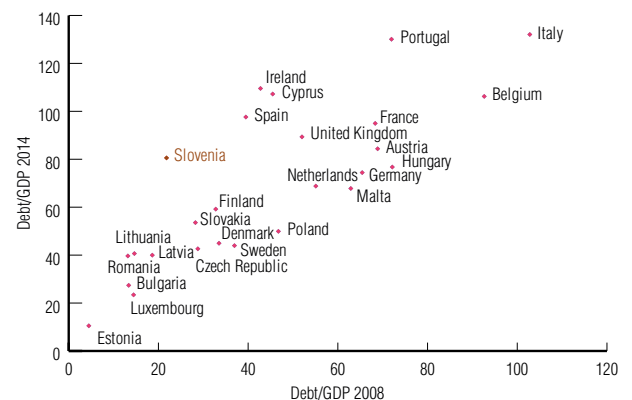
**Fig. 4**  
Debt to GDP ratio and deficit/surplus, Slovenia, 2003–2014



Source: Eurostat, 2015b.

As a result of the crisis, and particularly due to the bank bailout of 2013, Slovenia had the third largest increase in debt to GDP among countries in the EU between 2008 and 2014; debt to GDP increased by nearly 60 percentage points over that period (Fig. 5).

**Fig. 5**  
Comparison of debt to GDP ratios in the EU, 2008 and 2014



Source: Eurostat, 2015b.

Note: Countries further to the left of the line have experienced larger increases in public debt to GDP between 2008 and 2014.

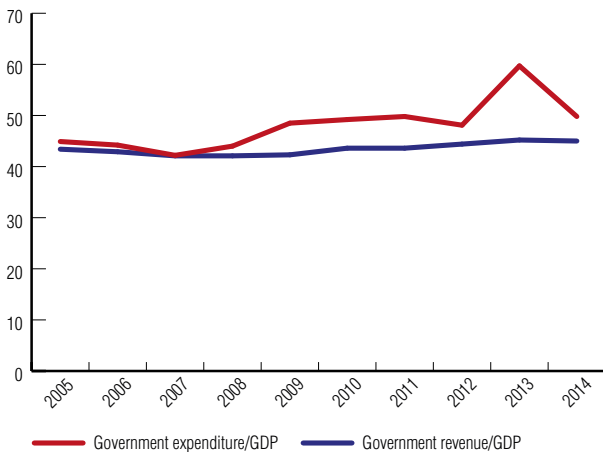
### Understanding the public finance situation requires a close look at both public revenues and expenditures

The poor public finance situation of the last few years is a direct result of the pro-cyclical fiscal policy and significant decline in economic activity, which culminated in the 2013 bank bailout. Total government revenue as a share of GDP has increased since the beginning of the crisis from 42.1% in 2008 to 45.0% in 2014 (Fig. 6). This is slightly below the government revenue share of GDP of the entire euro area (16 countries), 46.6% in 2014; however, at first glance the increasing trend suggests that government revenue generation has not been adversely affected during the crisis. At the same time, the lower revenue share compared to the euro area could also indicate that there is some room for additional revenue generation in Slovenia, though less so than in other countries such as Ireland,

Lithuania and Romania, whose revenues as a share of GDP are all below 35%. Total government expenditures as a share of GDP, which had been in line with revenues prior to the crisis, increased notably in 2009. While government expenditure as a share of GDP was 44.0% in 2008, this increased to 48.5% in 2009 and remained greater than revenues through 2014.

**Fig. 6**

Comparison of government revenue and expenditure as a share of GDP, Slovenia, 2005–2014

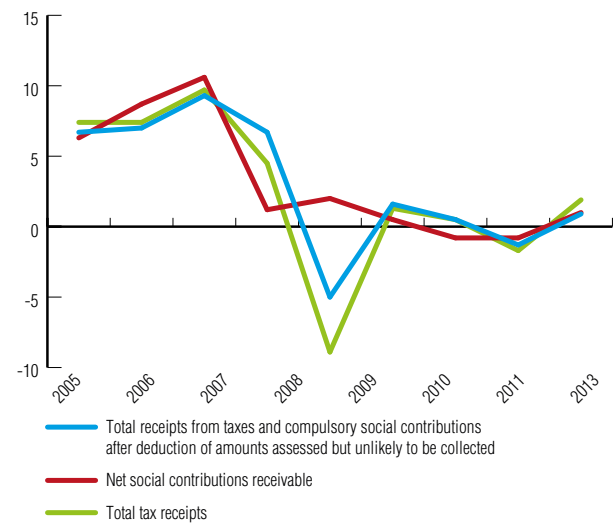


Source: Eurostat, 2015b.

Looking at shares of GDP masks variation in both the levels and types of revenues and expenditures. First looking at revenues, if we focus on the differences between tax revenues (e.g. VAT) and social contributions, we see a slightly more complex story (Fig. 7). Although tax receipt growth declined substantially in 2009 coinciding with the large decline in GDP, it rebounded to some extent in 2010. On the other hand, growth in social contributions declined more slowly but steadily, as they closely followed trends in unemployment. This illustrates the importance of relying on multiple revenue streams so that the public sector is not susceptible to fluctuations that occur in one particular area.

**Fig. 7**

Growth in the level of revenues from taxes and social contributions in Slovenia, 2005–2013

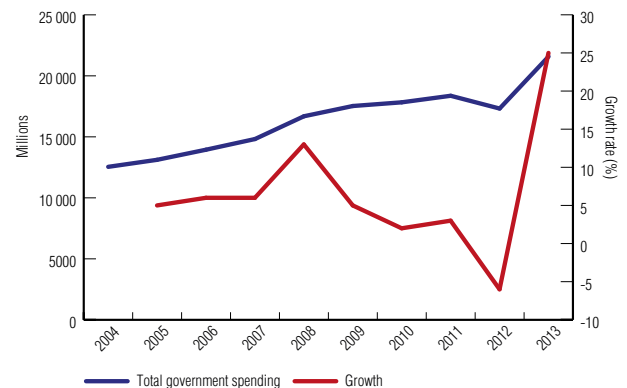


Source: Eurostat, 2015b.

Likewise, looking more closely at government expenditure, it becomes clearer that the divergence between revenues and expenditures in Fig. 6 is largely due to the one-time spike in expenditure growth in 2008 (Fig. 8). This acceleration in government expenditure growth in 2008 was driven largely by the public sector salary reform that took hold in the second half of 2008. Aside from this one-time increase, expenditure growth was near 1.7% in 2010, 3.0% in 2011 and negative in 2012, before increasing drastically in 2013 as a result of the banking bailout.

**Fig. 8**

Total government spending, level and growth rate, Slovenia, 2004–2013

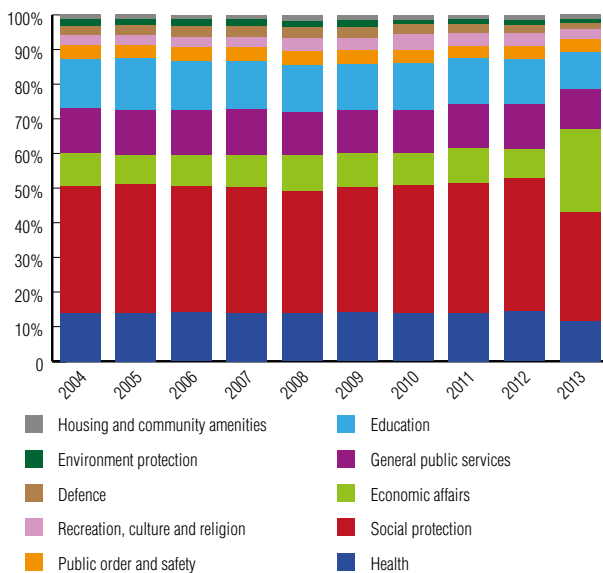


Source: Eurostat, 2015b.

To try to better understand the drivers of changes in public expenditure, we look next at the distribution of government spending over time (Fig. 9). From 2008 to 2009, social protection experienced the largest increase in its share of total government expenditure (0.7 percentage points), followed by health (0.3 percentage points); however, these changes were still fairly small, at less than a percentage point each, emphasizing that the spike in

expenditure growth in 2009 occurred similarly across multiple sectors of government, as the public sector salary reform occurred. From 2004 through 2012, the health share of total government spending remained virtually unchanged at between 13.8% and 14.4%. The most notable change in the health share of government spending was in 2013, when health fell to 11.6%; this was due to the capitalization of banks, which increased economic affairs to 24.2% of general government expenditure. At this time, between 2012 and 2013, the share of the government budget spent on social protection also declined by 7 percentage points for the same reason.

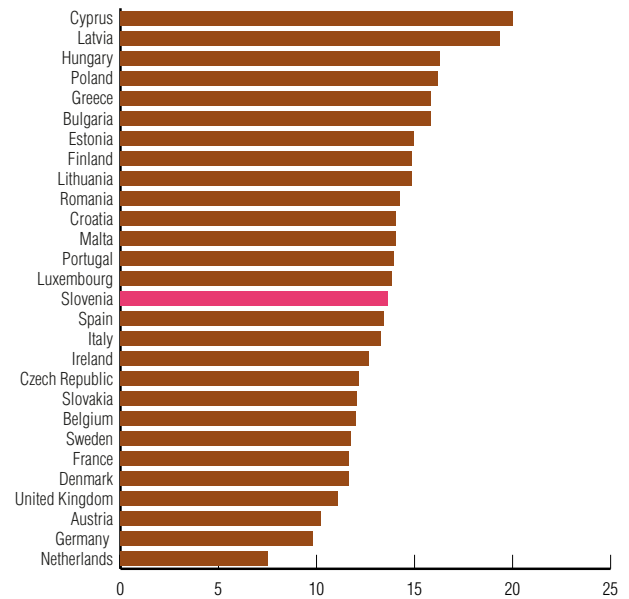
**Fig. 9**  
Distribution of government expenditure, Slovenia, 2004–2013



Source: SURS, 2015 (COFOG methodology).

Since at least 2006, the health portion of total government expenditure in Slovenia has been near the EU28 average in all years; in 2012, Slovenia was the median country of the EU in terms of its health spending as a share of government spending (Fig. 10). The health share of total government expenditure decreased to 11.6% in 2013 due to increased public expenditure to bail out the banks, placing Slovenia well below the EU28 average of 14.8%.

**Fig. 10**  
Health as a share of total government expenditure, 2012 (%)



Source: WHO, 2015a.

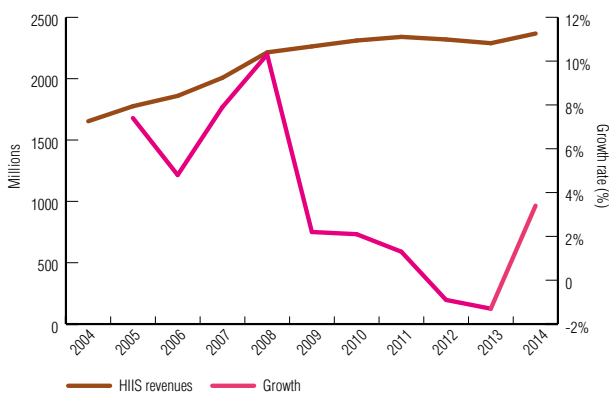
### 3 Revenues in the health sector

Total government revenue growth has been affected by declines in economic activity; however, government revenues as a share of GDP have continued to increase through the crisis. As shown in Fig. 7, total government revenues have been somewhat resilient to the crisis because they come from a mix of different types of taxes and social contributions. Revenue generation in the Slovene health sector may be less reliable in times of crisis, however, because the health sector depends primarily on social insurance contributions. In this section, we will explore recent trends in revenue generation for both the HIIS and CHI sectors.

#### HIIS revenue growth has slowed dramatically since 2008 because of lower social security contributions

Although all Slovenians are covered for CHI through the HIIS, there has been a marked slowdown in HIIS revenues since the crisis began (Fig. 11). While between 2007 and 2008 HIIS revenues increased by 10.3% as a result of public sector wage reform and high levels of employment, revenue growth in 2009 slowed to 2.2%. Revenues declined in 2012 and 2013 by 0.9% and 1.3%, respectively, before returning to positive growth (3.4%) by 2014 that remained below pre-crisis annual rates of increase.

**Fig. 11**  
HIIS revenue levels (in € millions) and growth rates, Slovenia, 2004–2014

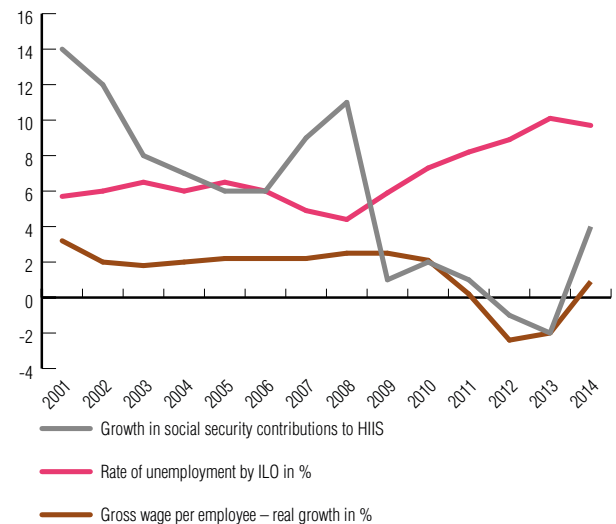


Source: HIIS data 2015.

Social security contributions make up the vast majority of HIIS revenues. Consistent with aggregate trends for total HIIS revenues in Fig. 11, growth in social security contributions to the HIIS slowed dramatically at the beginning of the crisis and then subsequently continued to decline, actually shrinking in 2012 and 2013 before returning to positive growth in 2014 (Fig. 12). Growth in social security contributions closely mirrors trends in unemployment, as shown, and is exacerbated by declines in wages. The correlation between unemployment rates and growth in social security contributions to HIIS is strongly negative, 0.75, confirming that increases in the

unemployment rate are associated with decreases in the rate of growth of HIIS social security contributions; this reflects the low level of budget transfers to HIIS on behalf of the unemployed.

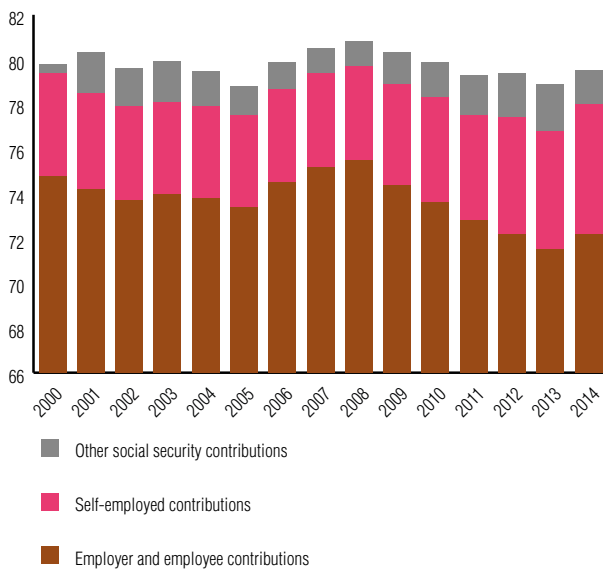
**Fig. 12**  
Growth in HIIS revenues from social insurance contributions compared to unemployment rates and real growth in wages



Source: SURS and HIIS data 2015.

Despite most HIIS revenues coming from social security contributions, there has been a slight decline in the social security contribution share of total revenues since 2008. In 2008, social security contributions comprised 80.9% of total HIIS revenues (Fig. 13); however, this fell to 79.3% in 2011 (the lowest share since at least 2000) and by 2014 remained at 79.5%. The decline in social security contributions is driven in part by a fall in employer and employee contributions, which went from a high of 75.5% (2008) to a low of 71.5% (2013). At the same time, there were small increases in the share of revenues coming from the self-employed and other contributors.

**Fig. 13**  
Percentage of total HIIS revenues from social security contributions, disaggregated by source, 2000–2014



Source: HIIS data 2015.

Note: It is not advisable to further disaggregate the contributions from employers and employees, as there have been data inconsistencies beginning in 2011 when the Financial Administration of Republic of Slovenia (FURS) began using a new system of documenting the source of contributions.

Other HIIS revenues come mostly from other general government institutions, such as state and local budgets, as well as social security funds (e.g. the Pension and Disability Insurance Fund), although a small amount comes from various non-tax sources, such as proceeds from sales of goods and services. There has been a slight increase in revenues transferred to the HIIS from government institutions, which has compensated somewhat for declines in social security contributions. The increase has largely been due to transfers from social security funds and from the state budget. Transfers from the state budget have historically comprised a small share of HIIS revenues; for example, in 2008 the state budget contributed almost 1.0% of HIIS revenue; however, this share was more than doubled between 2010 and 2014. By 2014, the state budget was contributing 2.1% of revenues. This amounts to 0.13% of GDP in 2014 (it was only 0.06% of GDP in each year from 2004 to 2008). Overall, the increase in government transfers to HIIS was mainly due to increases in three types of revenues:

1. revenues from employer health contributions related to unemployment benefits;
2. transfers from the state budget for employer health insurance contributions for prisoners;
3. payments to subsidize medical services for socially disadvantaged persons.

These increases resulted in other government institutions contributing slightly more to the HIIS to protect some vulnerable groups in recent years, though the magnitude of this increase was quite small.

#### Households are contributing less to the HIIS since the crisis

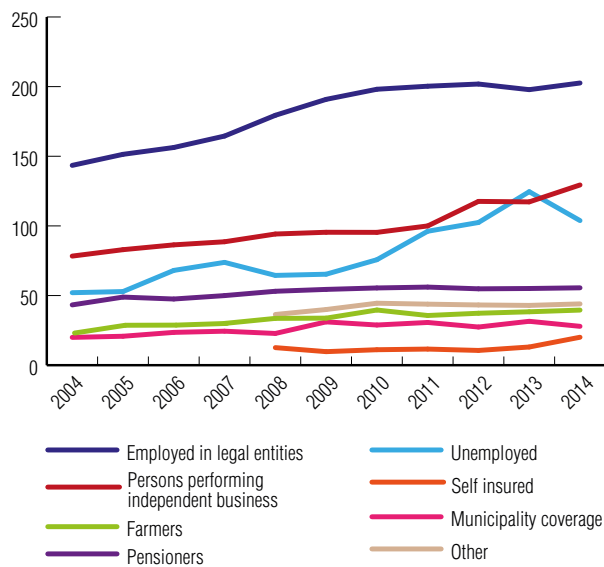
Although all households are covered for the same basket of services, contribution rates differ depending on household characteristics. To better understand the reasons behind the decline in social insurance contributions to the HIIS, we next explore how the mix of contributions has changed as a result of the crisis.

Contribution rates vary, primarily depending on whether an insured person is employed, and the sort of employment that person is in. Legally mandated contribution rates differ substantially across groups and have been largely unchanged since 2004 (Table 1). All contributions are pooled by the HIIS. Although contribution rates differ by category of insured person and are specified according to the rights afforded to each insured person, contributions are not earmarked for particular groups or services which allows for maximizing the benefits of having only one pool for all insured.

Actual average monthly HIIS contributions capture variations in wages, pensions, the number of people not contributing and other characteristics (Fig. 14). Although the actual contribution levels have mostly increased from year to year, this has not always been the case; for example, one explanation for declines in average contributions could be if large numbers of people in a particular category stop paying their contributions.

While from 2004 to 2010, average annual growth in monthly contributions by individuals employed in legal entities (the category with the largest average contributions per person and also with the largest number of enrollees) increased by 5.5%, from 2010 to 2014, average annual growth for this group slowed to 0.6%. Since 2010, average annual growth in contributions by pensioners has been 0.0%, while it had been 4.2% from 2004 to 2010. Although growth in monthly contributions has slowed for the employed, the level of contributions by the employed remains significantly higher than all other groups. As of 2014, an employed person on average contributed €202.59 per month to the HIIS for coverage for themselves and their household; the next highest contributing group was those running independent business (€129.40), followed by the unemployed (€103.81) on whose behalf the unemployment agency makes contributions. In 2014 there was a notable increase in per person contribution levels from the self-employed due to a change in the law, as well as a decrease in per person contribution levels from the unemployed due to reductions in contribution rates and changes to the basis for their contributions.

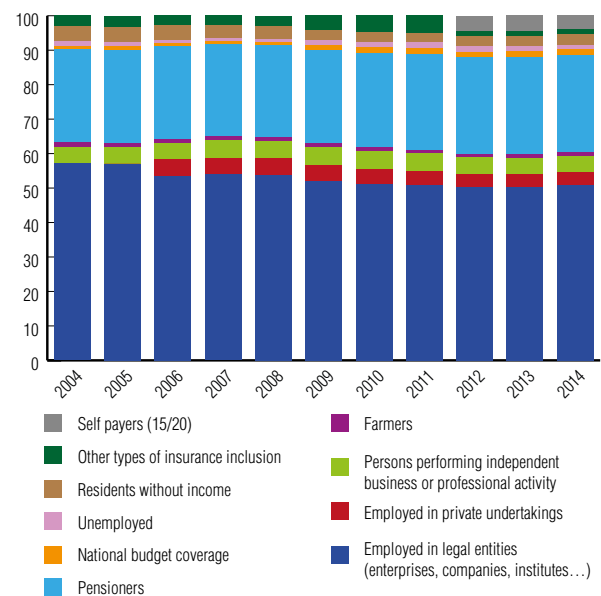
**Fig. 14**  
Average per person monthly contributions to the HIIS (€),  
2004–2014



Source: HIIS data 2015.

There have also been shifts in the mix of HIIS enrollees, which has important implications for revenues due to the variation in the average contribution levels across categories, as shown above. Between 2004 and 2008, the percentage of total HIIS enrollees and their family members who were registered as private non-farm-employed contributors increased every year (Fig. 15). However, the share of people in this category has steadily declined up to at least 2013; this leads to significant losses for HIIS revenues because this group historically has paid the highest contribution levels. At the same time, groups with relatively low contribution levels, such as the self-insured and pensioners have increased.

**Fig. 15**  
Mix of people enrolled in the HIIS, by category of contributor,  
2004–2014



Source: HIIS data 2015.

Consolidating these groups further into the active employed population (employed, self-employed and farmers), people covered by public funding (retired, unemployed, etc.) and all respective family members, we can see a clear decline since 2008 in the active population and an increase in those covered by public funding (Fig. 16). There has also been a slight increase in the number of non-contributing family members covered. Clearly, declines in HIIS revenues have occurred in part as a result of households shifting into HIIS categories with lower contribution rates. This has important implications because, even as total revenues decline, the HIIS must still provide coverage for the entire enrolled population.



Contributor	Employer	Employees	Farmers	Pension and Disability Insurance Institute	National employment office	Republic of Slovenia	Insured person	Municipality
<b>Coverage for disease and injury outside work</b>								
For all rights	6.56%	6.36%						
For health services, reimbursement of travel costs		5.21%	18.78%	5.96%	11.92% <sup>a</sup>	5.96%	8.20%	2.00%
Compensation of lost salary during temporary absence from work			1.15%					
Rights (not all)							12.92%	
<b>Coverage for injury at work and occupational disease</b>								
For all rights	0.53%		0.53%			0.18% <sup>b</sup>		
Rights (not all)							0.53%	

Source: HHS data 2015.

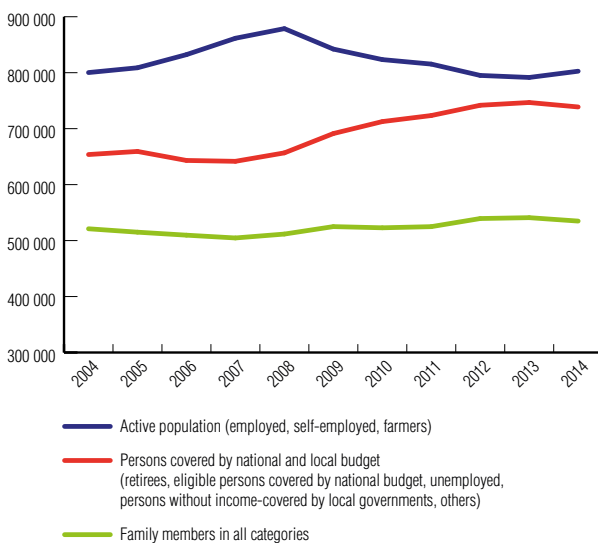
Notes: <sup>a</sup> Until 1 July 2012 the contribution rate was 12.92%.

<sup>b</sup> Only applies to insured persons 19 and 19a (persons in military service who are residents of the Republic of Slovenia) as listed in the first paragraph of Article 15 of the Health Care and Health Insurance Act.



Fig. 16

Active employed population, publicly funded, and non-contributing family members, 2004–2014



Source: HIIS data 2015.

### CHI has remained profitable throughout most of the crisis

CHI is available from three insurance companies, and, although individuals are able to choose between them, each offers essentially the same product. The majority of CHI covers the co-insurance for services that are paid for by the HIIS; more than 95% of the population that is liable for co-payments has this sort of CHI coverage. The largest insurer in terms of market share is Vzajemna, historically followed by Adriatic Slovenica and Triglav. In 2008, Vzajemna covered 60.5% of all CHI enrollees, followed by Adriatic (23.4%) and Triglav (16.1%). By 2014, Vzajemna's market share had fallen to 56.0%, while the other two insurers were nearly equal in size (data from Insurance Supervisory Agency).

Overall levels of enrolment in CHI have not changed dramatically since the crisis. There have been increases in enrolment for Triglav in every year (2008–2014) and corresponding decreases from Vzajemna in all of these years except 2014. Overall, the largest decrease in total enrolment was in 2010, when the number of CHI enrollees fell by around 12 000 people (0.8%); there were smaller decreases in CHI enrollees of around 8200 and 3800 in 2009 and 2011 respectively. These declines may have been due in part to increases in foreign migrants leaving the country during the crisis. Total enrolment in 2014 (1 485 697) was at its highest level since 2008 (1 492 330). Since 2009, the government has started to cover co-payments for economically disadvantaged people who meet predetermined criteria. This population is not recorded as being enrolled in CHI, but their insurance policies remain valid.

Premiums have been community rated since 2006, are similar across the insurers (i.e. premiums currently do not differ across insurers by more than €1 per month) and do not generally increase drastically over time. The large premium increase in 2014 was in response to the 2012 Fiscal Balance Act, which shifted some costs from the HIIS to CHI in an effort to keep public expenditure sustainable (Table 2). As a result, CHI expenditure increased by around €66 million annually, leading all insurance companies to raise premiums by more than 16%. However, the 2014 premium increase was greater than needed to cover expenditures; Vzajemna subsequently returned one month of 2014 premiums to its enrollees and premiums were also reduced in 2015.

To ensure that the insurers are not disproportionately burdened by taking on higher-cost enrollees, an equalization scheme has been in place since 2006. Risk equalization is retrospective, calculated on the basis of expenditures for health care services and for health care providers. This has always led to resources being transferred to Vzajemna from Adriatic Slovenica and Triglav, because Vzajemna covers more than 90% of pensioners; however, the amount transferred is typically no more than €3 million total per quarter.

Table 2

CHI premium levels<sup>a</sup> (Vzajemna) and % increase/decrease

Date	€	% increase/decrease
1 March 2006 <sup>b</sup>	19.17	
1 Nov. 2006	20.11	4.90
1 Sept 2007	20.11	0.00
1 Jan. 2009	21.10	4.92
1 Jan. 2010	23.12	9.57
1 Jan. 2011	22.55	-2.47
1 April 2012	23.88	5.90
1 March 2014 <sup>c</sup>	27.76	16.25
1 April 2015	26.79	-3.49

Source: Ministry of Health data: payroll item.

Notes: <sup>a</sup> Monthly premium with 3% discount.

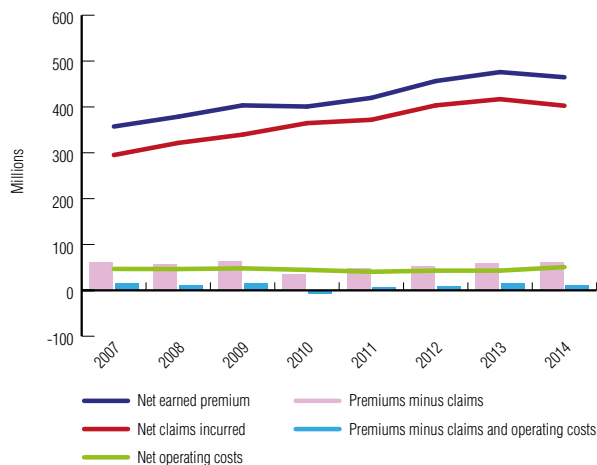
<sup>b</sup> Amending Act on Health Care and Health Insurance.

<sup>c</sup> Fiscal Balance Act.

Disregarding forms of income such as investment that are unrelated to health care services, it is evident that private insurers have had reasonable financial success in recent years (Fig. 17). Total net premiums declined only slightly between 2009 and 2010 from around €403 million to €401 million, and slightly more substantially between 2013 and 2014 (€476 million to €465 million). However, in all years other than 2010, the premiums collected were greater than the sum of claims paid and other operating costs. Between 2009 and 2014, the difference between premiums and claims plus operating costs (i.e. not including investment and other forms of income) averaged

€8.7 million per year. The main reason for profitability has been the slower growth in net claims, particularly in 2011, when claims grew by 2.0% but net premiums increased by 4.7%. Net operating costs have remained largely stable, though they increased by 17.8% between 2013 and 2014, mostly due to increased acquisition costs and in part due to an increase in labour costs (wages and salaries). As a share of total premiums, net operating costs are fairly high, but have fallen from 15.0% in 2008 to a low of 9.0% in 2013, though this share increased to 10.9% in 2014. Between 2009 and 2014, around 12% of CHI premiums were not used to pay for health care; premiums minus claims on average amounted to around €54 million each year.

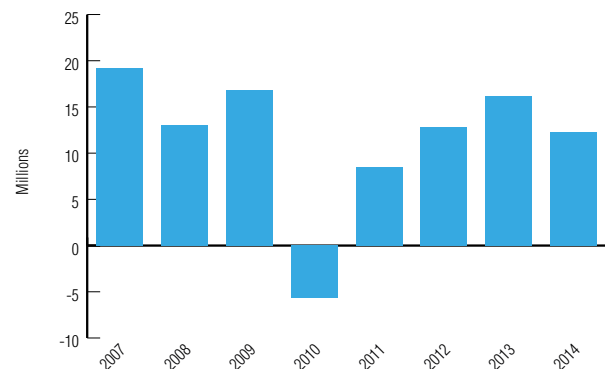
**Fig. 17**  
Profitability of CHI – premiums, claims and operating costs (in € millions), 2007–2014



Source: Insurance Supervision Agency, 2015.

The previous discussion refers only to CHI schemes which cover mandatory co-insurance payments. Aggregating across all forms of CHI (including those schemes that purchase care on behalf of their enrollees), and including all types of earnings and expenses, private insurers profited by an average of €10.1 million each year between 2009 and 2014 (Fig. 18). The year 2010 was the only one since 2006 in which insurers suffered losses (€5.7 million).

**Fig. 18**  
Profits or losses (in € millions) from all CHI operations, 2007–2014



Source: Insurance Supervision Agency, 2015.

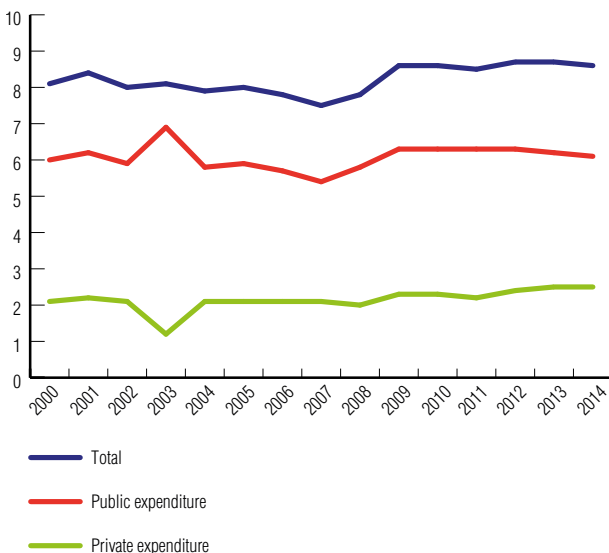
## 4 Health expenditures

In this section we look at health care expenditures, using both National Health Accounts (NHA)<sup>1</sup> and HIIS data, to better understand where there have been significant changes. We begin by discussing overall expenditure trends, followed by trends by financing agent. We then look at more detailed data on expenditures in specific sectors.

### Health expenditure consumes more of GDP since the crisis, but expenditure levels have been almost unchanged since 2009 in nominal terms

Between 2003 and 2008, current health expenditure (excluding capital formation) comprised between 7.5% and 8.1% of GDP (Fig. 19). This share grew rather rapidly, increasing to 8.6% in 2009; however the decline in GDP in 2009 plays a major role in the magnitude of this increase. From 2010 through 2014, current health spending consumed a fairly steady share of GDP – between 8.5% and 8.7% – even as GDP growth slowed or contracted. In 2014, according to preliminary data,<sup>2</sup> total current health expenditure in Slovenia accounted for 8.6% of GDP.

**Fig. 19**  
Total, public and private current health spending as a share (%) of GDP, 2000–2014



Source: SURS data 2000–2013; OECD, 2015; 2014 (preliminary data) calculations by IMAD (Institute of Economic Research).

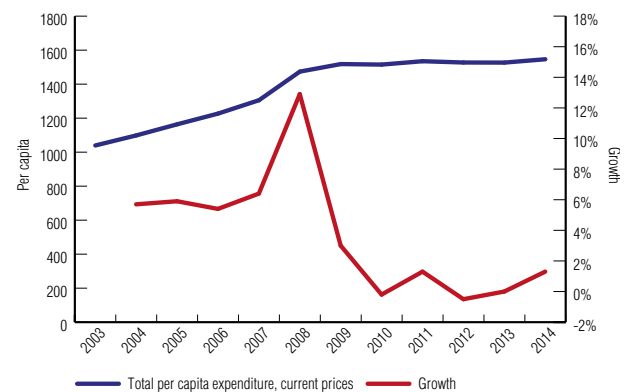
Note: Excluding capital formation; GDP by ESA 2010 revision.

According to NHA data, average annual growth of per capita health expenditure levels in Slovenia was 7.3% between 2003 and 2008 (Fig. 20). This rate fell considerably in 2010 as per person expenditures shrank

by 0.5% in nominal terms. In the following four years, from 2010 to 2014, expenditures grew at an average annual growth rate of only 0.6%.

The slowdown in health expenditure growth as a result of the financial crisis was much more severe in Slovenia than many other countries in the EU. According to data from Eurostat, EU countries with slower average annual growth than Slovenia in per capita expenditures between 2008 and 2011 included Estonia, Hungary, Poland, Portugal, Romania and Spain.<sup>3</sup> In nominal terms, per capita current health spending in Slovenia in 2012 was €2003 (PPP), 91% of the EU28 average (€2193 PPP) (OECD, 2014).

**Fig. 20**  
Total health expenditure per capita (current prices) and growth, 2003–2014



Source: SURS, 2000–2013; OECD, 2015; 2014 preliminary calculations by IMAD.  
Note: Excluding capital formation; GDP by ESA 2010 revision.

### Public expenditure is primarily by HIIS and has slowed considerably

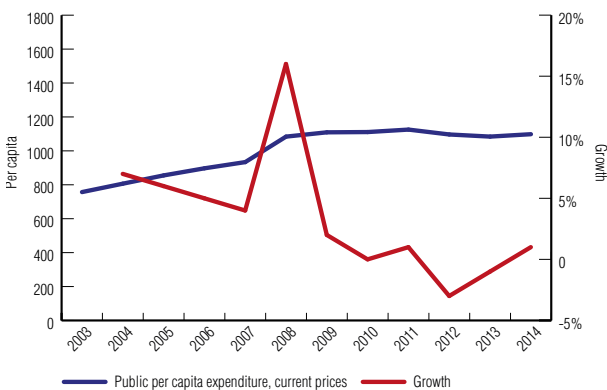
Trends in overall spending are largely driven by public expenditure, as it makes up the majority of health care spending. Although public spending on health appears relatively steady when looking at health as a share of government spending (Fig. 9), this obscures the fact that growth in the level of total government spending has slowed since the crisis, and even declined in 2012 (Fig. 8). Nominal growth in yearly per capita public expenditure on health has been negative in three out of five years between 2010 and 2014 (Fig. 21). In fact in real terms, per capita public health expenditure declined yearly on average by 0.9% between 2010 and 2014 (IMAD, 2015).

1. SURS Health Expenditures and Sources of Funding (data for 2003–2013) and OECD (2015: 2000–2013 and 2014 preliminary data) (both published in July 2015).

2. HIIS data 2014: business report. Data according to the System of Health Accounts (SHA) methodology estimated in conjunction with the SURS.

3. Comparable data is not available from Eurostat for Croatia, Greece and Latvia.

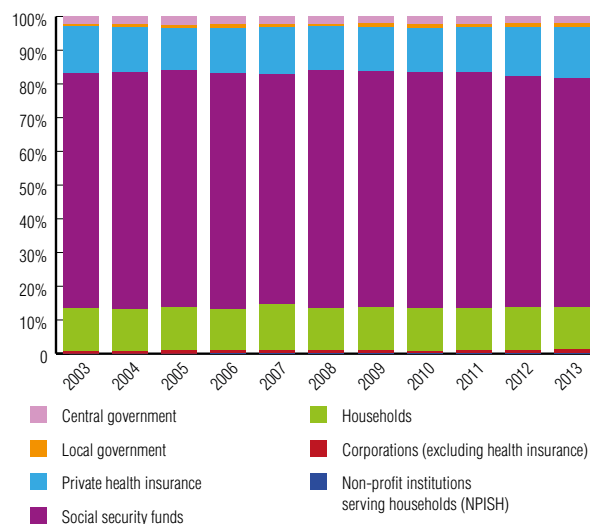
**Fig. 21**  
Public health expenditure per capita (current prices) and growth, 2003-2014



Source: SURS data 2000–2013; OECD, 2015; 2014 preliminary calculations by IMAD  
Note: Excluding capital formation; GDP by ESA 2010 revision.

Public spending as a share of total current expenditure has declined slightly since the crisis began (Fig. 22). Between 2003 and 2007, public spending averaged 72.9% of current health expenditures (excluding capital investment). This increased in 2008 to 73.6%; however, since that time, the public share of total spending has declined in four of six years. As of 2014, according to preliminary estimates, public spending made up 71.4% of total current spending.

**Fig. 22**  
Structure of current health expenditure by source of financing, 2003–2014



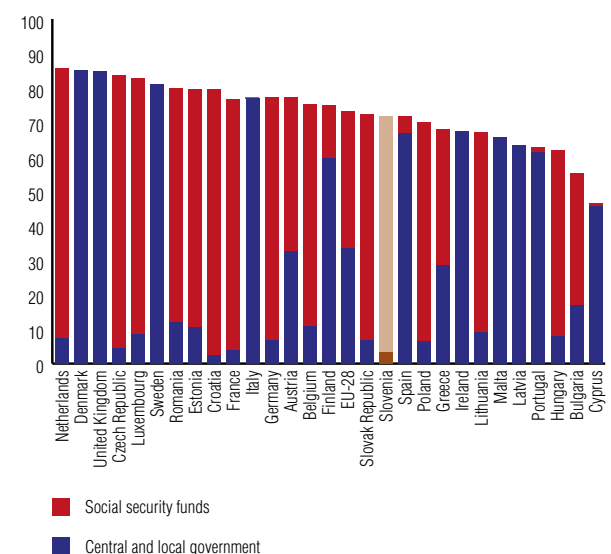
Source: SURS data 2003–2013; OECD, 2015; 2014 preliminary calculations by IMAD.  
Note: Current expenditure excludes capital formation; GDP by ESA 2010 revision.

Health expenditure by the central government is mostly for investments, governance of the health system, financing for some programmes in the area of public health and prevention, and co-payments for people with very low income. Although central and local governments spend only a small amount of their resources on health care services (3.3% in 2014), this amount has not changed

substantially since prior to the crisis (Fig. 22). However, as a share of total spending (inclusive of capital formation), central and local government expenditure has declined following a high of 8.5% in 2009, and is estimated at 6.3% in 2014. This decline reflects not only lower government expenditure overall, but also lower priority for health – particularly health sector investments – within government budgets. In 2008, the central government spent 1.03% of its budget on health; this fell in every year through 2012, when it reached 0.58%. It has since rebounded slightly, reaching 0.8% in 2014, but health continues to consume less than 1% of the central government budget.

Although public spending remains the primary source of financing in Slovenia, compared to other EU countries, the public share of current health expenditure (i.e. excluding capital formation) (71.8% in 2012) is slightly below the EU average (73.0%) (Fig. 23). Almost all of this spending is by the HIIS; as mentioned, spending by central and local governments makes up a very small percentage of health spending, and is low compared to other European countries. Just 3.2% of current health spending was spent by central and local governments in 2012 in Slovenia; within the EU only Croatia spent a smaller share. However, in many EU countries shown in Fig. 23 that have a high share of spending by social security funds, such as Czech Republic, France, Hungary, Lithuania and Slovakia, a significant percentage of social security expenditure is in fact funded from general government sources. For example, in Hungary more than half of expenditure by social health insurance comes from central government transfers; in Slovenia, the vast majority of social security funds come from enrollee contributions.

**Fig. 23**  
Public share (%) of current health expenditure, 2012



Source: SURS data and OECD, 2014.

### Private spending has substituted for declining public expenditure growth (by design)

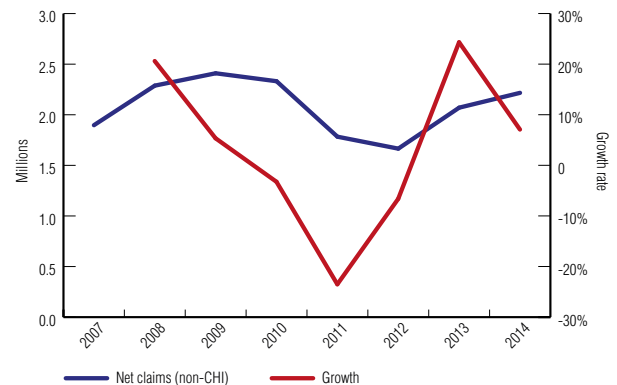
Private spending is primarily comprised of spending by CHI (most of which pays the co-insurance portion of HIIS-covered services) and household spending; corporations also pay for a small portion (mainly for occupational health and capital investments). There was a marked increase in total private spending as a share of GDP as a result of the crisis (Fig. 19). While in 2008 private expenditure accounted for 2.1% of GDP, in 2014, according to preliminary estimates,<sup>4</sup> private health expenditure accounted for 2.5% of total GDP.

CHI is the largest form of private health expenditure; in total CHI paid for 12.9% of current health spending in 2008. This increased every year through 2013, reaching 15.2%, before declining slightly in 2014 to 14.8% (preliminary estimate). The increased share of spending by CHI has two possible explanations. Either (1) people are enrolling in types of supplementary voluntary coverage that pay for more than just HIIS co-insurance payments, for example, coverage that skips queues or provides access to services not covered by the HIIS, or (2) costs have been shifted onto the private sector by way of increasing co-insurance rates for HIIS-covered services or through greater demand for services with relatively higher co-insurance rates. Looking at net expenditure on claims for supplementary CHI coverage, however, we see that the first explanation is unlikely (Fig. 24). Aside from the fact that the level of supplementary CHI claims expenditures is very small, these have fallen substantially since the beginning of the crisis, such that the level of claims expenditure was lower in 2014 than in 2010. Total premiums for supplementary CHI coverage fell dramatically in 2011 – by 35% – however they have increased in each of the following three years. While retaining a very small share of the market, supplementary CHI premiums are consistently much greater than claims; total premiums in 2014 were €7.9 million – 3.5 times as large as claims (€2.2 million).

<sup>4</sup> HIIS data 2014: business report. Data according to the SHA methodology estimated in conjunction with the SURS.

Fig. 24

Net supplementary CHI claims expenditure and growth (in € millions), 2007–2014

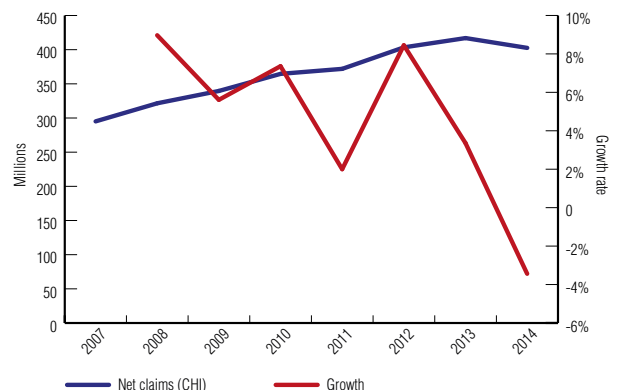


Source: Insurance Supervision Agency, 2015.

Alternatively, net claims for complementary CHI, which covers HIIS co-insurance payments, have increased in all years since 2007, other than 2014, when growth declined by 3.4% (Fig. 25). Therefore, the increased share of private insurance spending seems to be due to greater spending by complementary CHI on co-insurance, rather than more people signing up for CHI to cover non-publicly funded services. It is important to note, however, that throughout this time period of increasing private insurance expenditure, aside from in 2010, CHI remained profitable, as mentioned (Fig. 18).

Fig. 25

Net complementary CHI claims expenditure and growth (in € millions), 2007–2014



Source: Insurance Supervision Agency, 2015.

### Households pay for a small portion of health care because of complementary CHI coverage

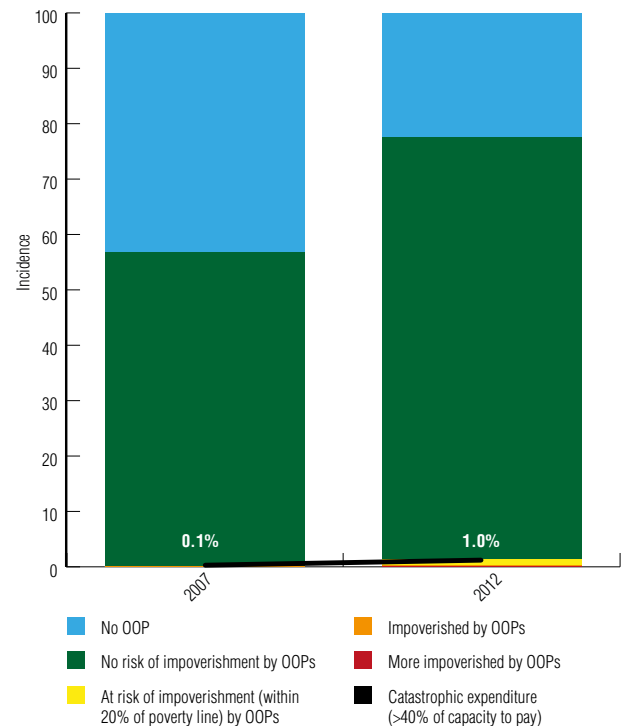
Historically, out-of-pocket (OOP) expenditure in Slovenia plays a relatively small role in financing health care because CHI effectively covers co-payments for HIIS services. OOP expenditure is primarily to purchase goods and services not covered by the HIIS and to access health care from the private sector. During the crisis, households did not increase their share of current health financing substantially; between 2008 and 2014 households paid for

between 12.2% and 12.8% of current health expenditure (Fig. 22). However, according to Household Budget Survey data, since the crisis, the share of total household consumption spent out of pocket on health care has increased from 1.8% in 2008 to 2.3% in 2012. This has been driven by relatively wealthy households, whose increases in OOP spending relative to total household spending are more profound, and who spend higher levels overall than poorer households. Indeed, in 2012, poor households in the first quintile (i.e. the poorest 20% of households based on per equivalized person consumption expenditure) spent €232 per year out of pocket on average, whereas wealthy households in the fifth quintile (i.e. the wealthiest 20% of households) spent €728 per year. As of 2012, nearly two-thirds of OOP spending was on medical products, such as pharmaceuticals and medical equipment. Around one-quarter of spending was for dental services.

Generally OOP expenditure is not a significant barrier to accessing health care in Slovenia. This is confirmed according to EU-SILC data (Eurostat, 2015b), where Slovenia consistently has among the lowest (if not the lowest) levels of unmet health care needs in Europe for all income groups. In 2013 for example, 99.8% of the population declared no unmet needs, which to a great extent is due to the large bundle of rights covered by compulsory and CHI.

Additionally, using a methodology developed by the WHO Barcelona Office for Health Systems Strengthening to measure financial protection, it is evident that Slovenian households are largely protected from the costs of health care (Fig. 26). In 2007, before the crisis, only 0.1% of households experienced catastrophic spending,<sup>5</sup> with more than half of this spending for dental services that are not covered by the HIIS. By 2012, catastrophic spending increased in absolute terms to just 1.0% of households, and more than half of catastrophic spending was still for dental services. Interestingly, in 2007 43.2% of households had no OOP expenditure at all, while this fell to 22.4% in 2012, indicating an increased propensity for households to purchase health care goods and services out of pocket; however, the large majority of households spending out of pocket were still not at risk of impoverishment as a result of OOP health care spending.

**Fig. 26**  
Financial protection from out-of-pocket (OOP) health expenditures



Source: Calculations based on Household Budget Survey data.

Note: More impoverished households are below subsistence levels but have OOP expenditure; impoverished households spend more out of pocket than their capacity to pay; at risk of impoverishment households had consumption minus OOP expenditure below 120% of subsistence levels; no risk of impoverishment are households where consumption minus OOP expenditure is greater than 120% of subsistence levels.

### Overall health expenditure growth has slowed, with some shifting of costs from public to private

In general, there have been only minor changes in recent years in terms of who is paying for health care in Slovenia (Table 3). There has been an overall slowdown in growth, including some years of declines in public expenditure since the crisis, mostly due to lower spending by the HIIS. This decline has perpetuated a slight shift from public financing of health care to private, as CHI covers a larger portion of the health bill through co-insurance payments (Fig. 27).

<sup>5</sup> The incidence of catastrophic expenditure includes households for whom OOP health expenditure is greater than 40% of their capacity to pay, households impoverished by OOP health care expenditures and households living below subsistence levels that incurred OOP health care expenditures.

**Table 3**

Distribution of main sources of financing for current health expenditure (%), 2003–2014

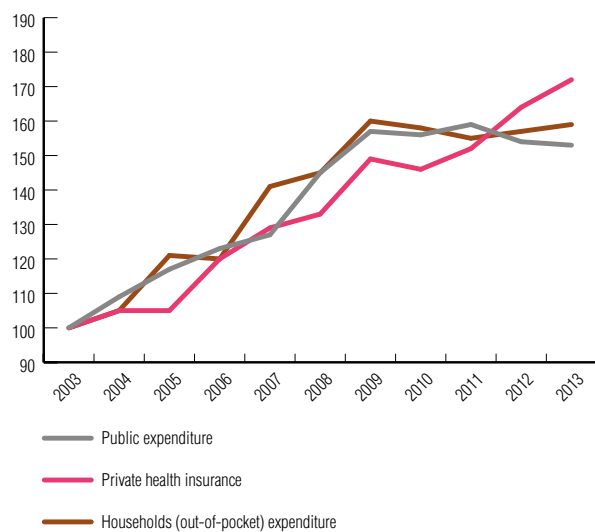
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Public expenditure</b>	<b>72.8</b>	<b>73.4</b>	<b>73.5</b>	<b>73.1</b>	<b>71.50</b>	<b>73.6</b>	<b>73.1</b>	<b>73.3</b>	<b>73.3</b>	<b>71.8</b>	<b>71.0</b>	<b>71.4</b>
Central government	2.2	2.4	2.5	2.4	2.4	2.2	2.30	2.3	2.2	2.1	2.0	2.1
Local government	0.7	0.7	1.0	1.0	0.9	0.8	0.9	1.1	1.1	1.1	1.2	1.2
Social security funds	69.9	70.3	70.0	69.7	68.2	70.5	69.9	69.9	70.0	68.6	67.8	68.1
<b>Private expenditure</b>	<b>27.2</b>	<b>26.6</b>	<b>26.5</b>	<b>26.9</b>	<b>28.5</b>	<b>26.4</b>	<b>26.9</b>	<b>26.7</b>	<b>26.7</b>	<b>28.2</b>	<b>29</b>	<b>28.6</b>
Corporations (excluding health insurance)	0.8	0.8	0.9	0.9	1.0	0.9	0.9	0.8	1.0	1.0	1.1	1.0
Private health insurance	13.9	13.6	12.6	13.6	13.8	12.9	13.3	13.1	13.4	14.6	15.2	14.8
Households	12.5	12.2	13.0	12.3	13.6	12.6	12.8	12.7	12.2	12.5	12.6	12.7
NPISH	0	0	0	0	0	0	0	0.1	0.1	0.1	0.1	0.1

Source: SURS data 2003–2013; OECD, 2015; 2014 preliminary calculations by IMAD.

Note: Excluding capital formation; GDP by ESA 2010 revision; NPISH – non-profit institutions serving households.

**Fig. 27**

Real growth of health expenditure, 2003–2014



Source: SURS data 2003–2013; OECD, 2015; 2014 preliminary calculations by IMAD. Note: Excluding capital formation; GDP by ESA 2010 revision; GDP deflator is used for calculation of health expenditure in constant prices.

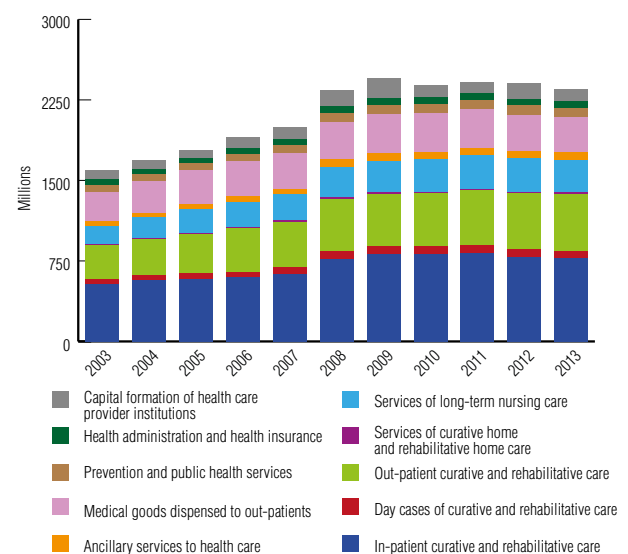
### The types of goods and services purchased have not changed very much in recent years

Overall, the level of public spending on health increased most significantly between 2007 and 2008 and has been relatively stable since then. The increase between 2007 and 2008 was primarily due to increases in spending for inpatient, outpatient and day care, driven mostly by increased spending across the board due to the public sector wage reform (Fig. 28). Since 2008, there have been only minor variations in the distribution of public health

care spending. The distribution of spending compares favourably with the EU average. Based on the Organisation for Economic Co-operation and Development (OECD) Health at a glance 2014 report, Slovenia spent a slightly smaller percentage than the EU average on outpatient care, and slightly more on medical goods, administration and prevention (aggregated as a single category) in 2012.

**Fig. 28**

Public expenditure on health by function, 2003–2013



Source: SURS data 2003–2013; calculated by IMAD.

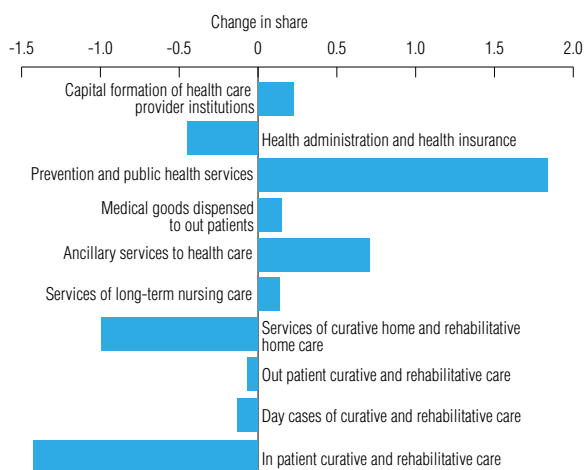
Among the small shifts in the distribution of spending that have occurred between 2008 and 2013, the changes appear generally positive from an efficiency perspective (Fig. 29). For example, the share of public spending on

administration declined by 0.1 percentage points between 2008 and 2013 (2.6% to 2.5% of total government health spending), continuing a fairly steady decline since at least 2003. Compared to other EU countries in the OECD, Slovenia's expenditure on administration as a share of total current health care spending is somewhat high – fourth among the 18 EU countries with 2013 data available in the OECD health database (OECD, 2015). However, private health insurance administration is a major reason for high overall administrative costs. Private health insurance administration accounts for 1.8% of total health expenditure, or alternatively, around half of total administrative expenditure, despite only paying for around 15% of current health expenditures. Among the nine EU countries with 2013 data available, Slovenia had the highest share of current expenditure spent on private administration, but the second lowest share of current expenditure spent on administration by the public sector.

There has also been less public expenditure on medical goods dispensed to outpatients, which likely reflects declines in prices, increased co-insurance rates and other measures rather than a lower volume of drugs consumed. One reason to suspect this is that the number of prescriptions between 2008 and 2012 increased from 15 795 million to 16 763 million (National Institute of Public Health data from 2014). The share of spending on medical goods dispensed to outpatients declined from 15.1% to 14.3% during this time period, with the level of spending in nominal terms lower in 2012 than in 2008.

However, the largest decline in the share of spending has been for capital formation, which could be problematic if investments are needed to maintain facilities or improve capacity (see section 7 on capital investments below for more discussion). Capital formation last experienced fairly large increases in 2008 and 2009.

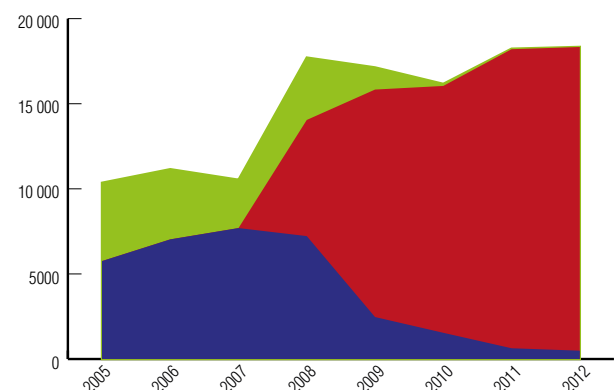
**Fig. 29**  
Change in distribution of public health care expenditure, 2008–2013



Source: SURS data 2015.

Although expenditure reductions in some areas have allowed for an increased share of resources to be spent on curative and rehabilitative care, there is evidence that Slovenia could achieve savings by continuing to shift towards more outpatient or day care. For example, Slovenia's number of inpatient surgical procedures per 100 000 persons is fairly high (7577 procedures as of 2010) compared to the EU average of 6779 procedures in 2009 (the year with the latest EU data available) (WHO, 2015b). There has already been some success in this area though. Using cataract surgeries as a case study, it is evident that there has been a clear shift away from inpatient cataract surgery towards less resource-intensive settings, such as outpatient care (Fig. 30). Additionally, in 2015 health care providers committed in a General Agreement to shift patients from inpatient care to day-hospital care and outpatient specialist care. Waiting periods are to be shortened for first visits to outpatient specialist care and, where possible, home care services will be better developed and/or patients will be dismissed as early as possible and transferred to rehabilitative spa institutions (2015 General Agreement, Article 2, para. 1, point 7).

**Fig. 30**  
Cataract surgeries, 2005–2012



Source: Eurostat, 2015b.

### Slower expenditure growth has resulted from reduced spending across many different types of services

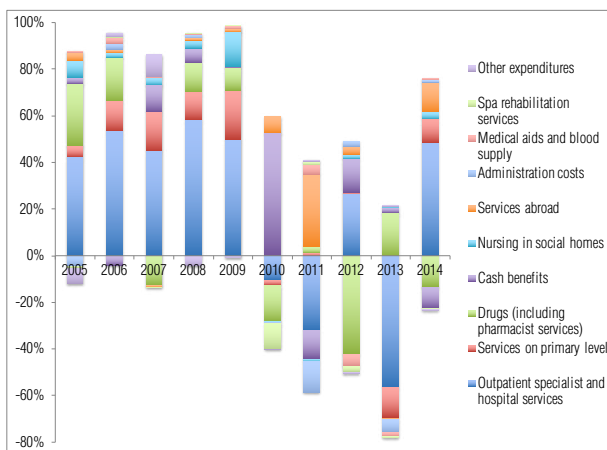
Although most public spending is by the HIIS, it is helpful to examine HIIS expenditure data in addition to NHA data. As mentioned, overall expenditure by the HIIS has slowed considerably; while between 2004 and 2008 average annual nominal growth in expenditures was 6.9%, between 2008 and 2014 growth averaged only 1.0% per year. In three of the six years from 2008 to 2014, annual growth was negative.

This slowdown in spending has been driven by reductions in spending for all types of services, with the exception of spending on services abroad (Fig. 31). The largest expenditure category is outpatient specialist and hospital services and, in general, it is an important determinant of aggregate patterns. This category has



grown at a modest 1.1% average annual nominal growth from 2008 to 2014. This is a notable slowdown from average annual growth of 9.3% between 2004 and 2008 (although, again, much of this growth occurred due to wage reform in public sector in 2008, so that average annual growth between 2004 and 2007 was a more modest 6.2%).

**Fig. 31**  
Contribution to growth of HIIS spending, by services,  
2005–2014



Source: HIIS data 2015.

Note: This figure shows expenditure growth weighted by the relative share of total HIIS expenditures and constrained to sum to 100%. In 2011, 2012 and 2013 growth rates are negative, so the weights are inverted (i.e. multiplied by -1).

Year by year, different services have been the primary driver of slowdowns through measures such as price reductions, increases in co-insurance rates and delayed payments (see section 5 for a description of key measures to reduce expenditures in each year). In 2010, the first year of near 0% expenditure growth for the HIIS (0.4%), savings were achieved due to reductions in spending on drugs, spa rehabilitative services, and outpatient specialist and hospital services, effectively cancelling out increases in cash benefits of 10.3%. In 2011, reductions of 0.3% in expenditures overall were driven by lower spending on outpatient specialist and hospital services, administration, and cash benefits. For 2012, there was almost no aggregate growth, however this masks significant variation: relatively large reductions in drug spending, medical aids and blood supply, spa rehabilitative services and “other” types of spending, with positive growth in all other areas. In 2013 and 2014, outpatient specialist and hospital services, again, were responsible for most of the variation in growth.

The only area with notable increases during the crisis has been services delivered abroad that are paid for by the HIIS; this is primarily due to delays paying other countries – particularly Bosnia – for care provided to Slovenian citizens abroad. In 2008, 0.6% of all expenditures were for current transfers abroad, yet by 2014 this had increased to 1.6%. In 2011, services delivered

abroad grew by 58.6%; in 2014 they increased by 37.1%. The increase in spending for services abroad between 2010 and 2011 (+€14.4 million) almost entirely cancelled out the reduction in spending on outpatient specialist and hospital services (-€14.6 million).

This is also reflected in aggregate OECD data, where, between 2007 and 2012, there has been 7.4% average annual growth in the importing of health care services; nevertheless, it only represents 0.33% of total expenditure in 2012 (OECD, 2014). In fact, there has actually been greater growth in health services exports, which grew 23.7% per year on average from 2007 to 2012, and comprising 1.6% of total health care spending.

Lastly, but of note, the HIIS has become responsible for paying for certain non-service delivery items, such as provider training and specializations. Prior to 2008 these costs were paid from the state budget; however since that time they have been funded by HIIS. In 2014, expenditures for specializations funded by the HIIS amounted to €45 821 329 and for trainees €16 919 965. Also, on 30 May 2013, the Republic of Slovenia Budget for 2013 and 2014 Act increased the general VAT rate from 20% to 22% and increased the reduced VAT rate from 8.5% to 9.5%. This contributed approximately €1.5 million of additional HIIS expenditures in 2013; annualized, it is estimated that the VAT rate increase contributes about €3.5 million to HIIS expenditure. The HIIS is also financing research and postgraduate education (approximately €17.3 million annually). No additional funds were provided to the HIIS to compensate for this new spending.

## 5 Key drivers of changes to health spending

This section discusses some of the key actions that have facilitated the slowdown in public health care expenditure growth and the shift towards private financing. Importantly, the HIIS operates in accordance with the Stability Pact, whereby the HIIS is not allowed to record a loss at the end of the year or go into debt, although it can obtain short-term loans from the treasury throughout the year. Bearing this in mind, there are essentially four ways that health expenditure trends are altered in Slovenia to prevent the HIIS from incurring debt while maintaining care delivery:

- changes in prices (i.e. maintaining the volume of services despite reductions in revenues)
- changes in co-insurance rates
- delayed expenditure by the HIIS
- reductions to HIIS administrative costs.

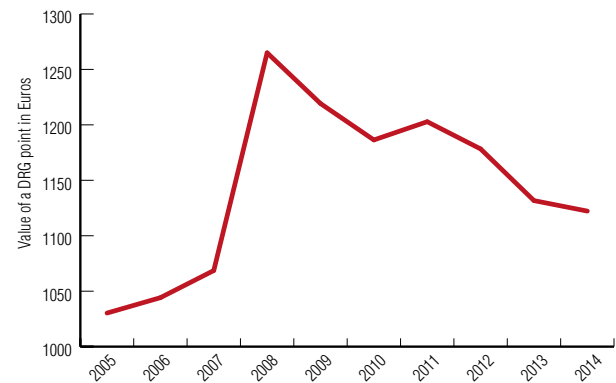
### Changes in the value of DRG points have a significant effect on public spending

One of the key factors behind the slowdown in expenditures has been the declining value of diagnosis-related group (DRG) points, which reflect the price paid for hospital services (Fig. 32). Between 2007 and 2008, the price of a DRG point increased dramatically, from €1068.62 to €1264.98, mainly due to wage reform in the public sector. This 18.4% increase coincided with a 19.2% increase in HIIS spending on outpatient specialist and hospital care, and a 13.8% increase in HIIS expenditures overall. Since 2008, the price of a DRG point has declined continuously every year, so that by 2014, a DRG point was only worth €1122.23.

Results of a Eurostat/OECD project on comparing hospital prices internationally show that Slovenia in 2011 had price levels for hospital services that were 82% of the average EU price level, whereas, for example, in Ireland hospital services were priced at 181% of the EU average, in Austria at 156%, France 123% and, on the other hand, Czech at 60% (Koechlin et al., 2014).

The value of a DRG point is a function of the revenues available to cover contracted services: as revenues fall and the volume of services stays mostly constant, reductions in the price of services are required to prevent the HIIS from incurring debt. The DRG point value is subsequently revised during the year as data become available on the level of resources that are expected to be available to HIIS for the rest of that year.

Fig. 32  
Changes in the average annual value of a DRG point



Source: HIIS data 2015.

There is naturally a strong correlation ( $= 0.85$ ) between annual growth in the price of a DRG point and annual growth in HIIS spending on outpatient specialist and hospital services between 2005 and 2014. While declines in the value of a DRG point have led to savings for the HIIS, this comes at the expense of lower payments to hospitals, which have to reduce costs and operate efficiently. However, some also suffer financial losses and extension of waiting times for certain services (see section 6). Ultimately, an extra payment in 2014 was made to providers for procedures whose volume is not capped and for those procedures that are reimbursed for 10% over the planned contracted volume; if a provider had an increase in first visits then they also received an extra payment.

Changes in DRG points also lead to changes in costs of CHI. If the HIIS is paying lower prices for services, then CHI will also benefit from lower payments, assuming that co-insurance rates do not change simultaneously. This would suggest that decreases in the value of DRG points can also produce savings for CHI. However, there is not a strong correlation between changes in net claims for CHI and changes in DRG points for the years with data available, in part because co-insurance rates have also been changing and because CHI continues to pay the co-insurance portion of services that are delivered above HIIS contracted volumes.

### Changes in co-insurance rates reduce public spending but shift costs onto CHI

Although reductions in prices lead to lower public spending at the expense of providers, another tool to lower public spending in Slovenia has been to raise co-insurance rates. This lowers the public burden by shifting it to private – but still pooled – funding provided by CHI, since nearly all Slovenians have CHI coverage. The comparatively low public share of total health expenditures in Slovenia compared to other EU countries is maintained to some extent because of high co-insurance levels for the public benefit package (Fig. 23).

Changes to co-insurance rates have been an important driver of the shift from public to private financing. The level of co-insurance paid by the HIIS differs both for specific services as well as, in many cases, over time (Table 4). Actual co-insurance rates must conform to legislatively set minimum and maximum co-insurance rates, depending on the type of service. For some goods and services, the HIIS is required by law to cover a minimum share of the cost of care. For example, as of 2011, the HIIS must cover at least:

1. 100% of the cost for prevention, of children, pupils and students, obligatory vaccination, some hospital treatments, emergency medical treatment, medicines on the positive list and organ transplants;
2. 90% of the cost for treatment abroad, intensive therapy, radiotherapy, dialysis, diagnostics, and therapeutic and rehabilitative services;
3. 80% of the cost for outpatient services, outpatient, hospital and spa services as an extension of hospital care, non-medical care in hospitals and in spas as an extension of hospital care, except for injuries outside work, treatment of dental and oral diseases, medical and technical aids;
4. 70% of the cost for outpatient, hospital and spa services as an extension of hospital care and the

non-medical part of the hospital and spa services as a continuation of hospitalization, medical devices relating to the treatment of injuries outside work, medicines on positive list.

5. For other services, the HIIS is required to cover no more than:
6. 60% of the cost for transport services, spa treatment, which is not the continuation of hospital treatment;
7. 50% of the cost for medicines and dietary foods for special medical purposes from intermediate lists, adult dental prosthetic treatment, medical devices to improve eyesight for adults.

While co-insurance is often used in other health systems in an effort to reduce demand, since it is paid for by CHI in Slovenia in nearly all instances, it cannot do this effectively. In fact, co-insurance may increase demand, because some services are only reimbursed by the HIIS up to a contracted volume cap, whereas CHI always reimburses the co-insurance portion of any care delivered within the HIIS benefits package, since CHI has no way of knowing when contracted volumes have been met. This may incentivize more services with high levels of co-insurance to be provided, although there is no evidence that this occurs systematically.

**Table 4**  
Percentage of health care price that is paid by HIIS

Date	1 Jan. 1995	19 Sept. 1996	18 July 2009	27 March 2010	5 Jan. 2013
	%	%	%	%	%
1. Groups, diseases, services and injuries at work covered in full price	100	100	100	100	100
2. Very sophisticated medical services	99	95	95	95	90
3. Medical services on primary level, dentistry – adults – treatment (diseases and injuries outside work which are not included in groups in 1. above)	85	85	85	85	80
4. Outpatient specialist and hospital services, spa rehab. which is continuation of hospital treatment (for diseases, not for injuries)	95	85	85	85	80
5. Medical aids (diseases)	95	85	85	85	80
6. Injuries outside work (outpatient specialist and hospital services, spa rehab. which is continuation of hospital treatment and medical aids)	80	75	75	75	70
7. Drugs positive list	80	75	75	75	70
8. Drugs intermediate list	50	25	10	10	10
9. Spa treatment, which is not a continuation of hospital treatment	60	40	15	10	10
10. Dentistry – adults – dental prosthetics	45	25	10	10	10
11. Non-urgent ambulances	60	30	30	10	10
12. Medical devices for vision	50	25	25	10	10

Source: HIIS data 2015.

### When in doubt, the HIIS avoids debt spending by delaying expenditures until the following year

In cases where liabilities exceed revenues and there is no option to reduce prices, the HIIS has in many instances delayed payments until funds are available, effectively passing its debt on to providers. In the period 2010 to 2013, the HIIS postponed payment of liabilities arising from the current year until the next year to ensure a balanced cash flow. In 2011, €41 million was passed on to be paid in 2012, in 2012 €64 million was passed on to be paid in 2013, and in 2013 €49 million was passed on to be paid in 2014. In 2014, the HIIS paid all liabilities without needing to transfer any expenditures to 2015.

### The HIIS can also reduce its own administrative expenditure, though current administrative spending is quite low

In addition to the aforementioned approaches, the HIIS is able to reduce health expenditure somewhat by reducing its own expenditures on employees and other administrative costs. HIIS administrative spending (i.e. expenditures on HIIS salaries, benefits, interest and capital expenditure, etc.) is already quite low. In 2008, this comprised 2.3% of total HIIS expenditure; HIIS expenditure on administration declined in 2010, 2011 and 2013, and reached 1.8% of HIIS expenditure in 2014. In nominal terms, administrative expenditure was lower in 2014 than it was in 2003. The maximum number of employees the HIIS is allowed, as determined by the central government, has been reduced every year since at least 2006, when the HIIS was allowed 952 employees; in 2015, the HIIS was allowed a maximum of 857 employees. Given that public health administrative costs are quite low, particularly relative to other OECD countries (see section 4), further reductions are not likely to achieve significant savings for the health system.

## Specific actions taken to reduce HIIS expenditure since 2009

This section describes some of the specific actions taken to reduce health expenditure since 2009.

In 2009, the HIIS adopted several measures to ensure the financial sustainability of the health care budget: reduction of health care service prices by 2.5%; selective reduction of material costs in health care service prices; rationalization of operations for provision of funds for the promotion of employees; reduction of the calculated share of wages in the price of health care services by 5%. In 2009, these measures brought €96.3 million of savings, while the savings at the annual level amounted to €138.9 million.

The measures adopted in 2009 also applied in 2010. Moreover, in 2010, Slovenia amended the Decision on Determining the Percentage of the Payment of Health Services Provided in Compulsory Health Insurance, which increased the share of the cost of certain health services covered by CHI. In 2011, the government adopted additional austerity measures to ensure the financial stability of the HIIS of a total value of €25 million on an annual basis, through:

- lowering the percentage of the value of health care services covered under CHI by 5%;
- reducing the percentage of remuneration for periods of absence from work chargeable to CHI up to 90 days by 10%, with some exceptions;
- change in levels of contribution for the unemployed (from 12.92% to 11.92%);
- abolishing the salary compensation during temporary absence from work for the unemployed;
- abolishing the possibility of lowering and cancellation of HIIS debt resulting from contributions for CHI;
- lowering prices for medical technical aids;
- increasing pre-established compensation from the compulsory car insurance premium (from 6.5% to 8.5%);
- health care price reduction by 3% because contracted volumes were maintained (with 1.5. 2012);
- lowering of the basis for parental compensation by 10% (other than maternity compensation) and reducing the highest compensation (lowering of revenues from the contributions for CHI), indexation of pensions and other transfers, providing missing contribution rates.

In 2012, the above measures brought the HIIS around €52.82 million of savings (that is, €103.58 million of savings annually). These austerity measures were

short-term solutions; once GDP growth exceeded 2.5% growth in 2014, these intervention measures were meant to be partly corrected.

In October 2013, changes to the Health Care and Health Insurance Act were adopted; these included implementation of the cross-border health care directive and new contributions to the HIIS (e.g. income from copyright contracts, larger contributions from self-employed people). The financial gains for the HIIS are estimated at €35.8 million yearly.

There have been other measures to reduce HIIS expenditures in 2014. These include: changes to the Act amending and supplementing social protection benefits, which abolished funeral costs and assistance as a right under CHI. Instead, assistance in the field of social security benefits is provided (two new forms of extraordinary cash social assistance). Because of this law, the HIIS's expenses reduced by approximately €9.6 million per year. In addition, health service prices were not indexed by the average growth of prices (inflation) and the HIIS saved approximately €13 million. The HIIS also did not take into account: additional calculative assets arising from promotion in the health sector and additional calculative funds for health services arising from the elimination of the third quarter of disparities in basic salary (HIIS saved €64 million).

## 6 Health care goods and services

This section reviews hospitals, pharmaceuticals and long-term care. In many instances, detailed provider-level data is not available to conduct a comprehensive performance assessment.

### Hospitals

Hospitals have borne the brunt of reductions in HIIS expenditure. Total expenditures in hospitals declined in 2012 and 2013, going from €1.28 billion in 2011 to €1.24 billion in 2014. Nominal expenditure levels in 2014 were on par with spending levels in 2010.

These expenditure reductions put pressure on hospital finances, though there is limited data available to assess provider efficiency and ability to cope with fewer resources because of a lack of cost accounting by providers. There is, however, considerable variation across hospitals in terms of their profitability. For example, by the end of 2014, 19 out of 27 hospitals had a profit, while 7 hospitals had losses (Table 5). Hospitals have not been profitable in aggregate since 2009. The number of hospitals with cumulative losses peaked at 15 in 2013; in aggregate, public hospitals had around €131 million in cumulative losses by 2014 (Table 6). The main driver of losses in hospitals in 2013 in 2014 was elimination of the third quarter of disparities in basic salaries which occurred throughout the public sector. In accordance with the Ministry of Health and Ministry of Finance, the HIIS did not provide additional funds for hospitals for this purpose. The HIIS did not have sufficient funds on its own (approximately €64 million) and, according to the Ministry of Finance, all budgetary users must cover this using their own funds. In 2013, additional uncovered expenses just in hospitals amounted to €24.6 million. The majority of hospitals paid only the first half of their obligations, while the other half was paid in 2015 and recorded in 2014.

**Table 5**  
Current losses and profits in public hospitals

	Losses €	Number of hospitals with loss	Profits €	Number of hospitals with profit	Total losses €	Accrued income €	Share %
2014	11 579 853	7	8 490 256	19	3 089 597	1 240 230 974	-0.25%
2013	41 329 630	17	1 439 187	9	39 890 443	1 197 389 506	-3.33%
2012	17 273 724	12	4 058 965	14	13 214 759	1 253 918 513	-1.05%
2011	11 579 174	8	4 020 088	18	7 559 086	1 268 856 087	-0.60%
2010	10 329 966	7	4 296 683	19	6 033 283	1 235 680 065	-0.49%
2009	2 072 743	1	12 860 401	25	10 787 658	1 222 889 983	0.88%
2008	0	0	29 675 892	26	29 675 892	1 153 116 898	2.57%
2007	16 713 329	8	4 093 203	16	12 620 126	962 091 505	-1.31%

Source: Data from the Agency of the Republic of Slovenia for Public Legal Records and Related Services.

**Table 6**  
Cumulative losses and profits in public hospitals

	Losses €	Number of hospitals with loss	Profits €	Number of hospitals with profit	Total loss €	Total revenues €
2014	131 350 567	14	10 895 066	12	120 455 501	1 240 230 974
2013	123 107 086	15	10 718 038	11	112 389 048	1 197 389 506
2012	83 900 907	13	13 078 753	13	70 822 154	1 253 918 513
2011	71 270 551	11	16 324 036	15	54 946 515	1 268 856 087
2010	61 632 454	12	19 820 521	14	41 811 933	1 235 680 065
2009	51 653 023	12	17 567 922	14	34 085 101	1 222 889 983
2008	56 123 885	12	14 138 523	14	41 985 362	1 153 116 898

Source: Balance sheets from the Agency of the Republic of Slovenia for Public Legal Records and Related Services.

As of October 2013, six state-owned hospitals have been receiving liquidity loans from the state treasury just to repay suppliers. At one point, there were threats that all supplies would be stopped due to long delays in payment – however this did not materialize. Other hospitals are also receiving loans from the Ministry of Finance, with the total overdue obligations as of the end of 2014 amounting to around €100 million. In 2015 the Ministry of Finance decided that all loans must be paid back by the end of the year.

Despite these financial pressures, many hospitals continued to deliver services to patients above contracted volume levels, even though they were no longer receiving payment from the HIIS. For example, in 2013 alone there were 15 696 instances of inpatient care that were delivered above the contracted volume – using DRG weights, this amounts to 25 652 DRG points, or alternatively, around €30 million of uncompensated care (assuming 100% payment by the HIIS).

In some instances, this reduction in payments to hospitals coincided with increases in waiting times. In 2014, according to data from the National Institute of Public Health, the number of patients waiting for health care services increased from 155 862 to 182 498, whereby the number of patients waiting longer than the maximum waiting period rose by almost one-third (from 14 770 to 24 815 patients). In the years before the crisis, funds had been directed towards reducing waiting periods for certain ambulatory care services and surgeries (IMAD, 2015).

Generally, given the dearth of information on how hospitals spend their resources, it is difficult to conclude whether hospitals could achieve efficiency gains. Since many hospitals remained profitable during the economic crisis, at least part of the issue regarding financial losses in some hospitals would appear to be due to poor management; this would be more easily evaluated with better data from providers on how resources are used. Nevertheless, data from the Agency of the Republic of Slovenia for Public Legal Records and Related Services shows that nominal costs for public hospitals in 2014

(€1 243 million) were lower than in 2011 (€1 276 million), mostly due to reductions in labour costs and depreciation costs, indicating that, overall, hospitals have found ways to improve efficiency. Additionally, some other basic indicators of hospital resources and activities also show that Slovenia improved efficiency during the crisis. The number of curative (acute) care beds has been reduced from 3.8 per 1000 population in 2008 to 3.6 in 2013; however, the OECD average is still a bit lower at 3.3 in 2013. In the same period, average length of stay in hospitals decreased from 7.5 days to 6.8, below the OECD average (7.3 days) and the number of hospital discharges increased by 7.4% (2013: 18 151 per 100 000; the OECD average was 15 550) (OECD, 2015). However, in the absence of data on health outcomes or case-mix, it is not possible to firmly conclude that reductions in inputs led to efficiency gains.

### Pharmaceuticals

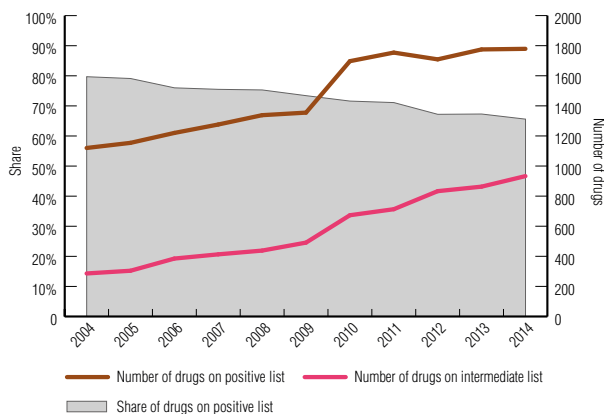
The share of HIIS spending that goes to drugs has fallen from a high of 18.2% in 2006 to 14.4% in 2014 (Fig. 31). This has occurred for a variety of reasons. For example, in 2009, the HIIS increased the co-insurance for medicines from the intermediate list from 85% to 90%, and in 2012 increased the co-insurance for medicines from the positive list from 25% to 30%. Additionally, in 2010 there was an agreement with the pharmaceutical industry for a 3% discount on drug prices, followed by a 6% discount in 2011 and a 9% discount in 2012. Likewise, in 2013 savings were achieved through introduction of a new system of therapeutic drug groups, which made it so that drug prices are based on the lowest priced medicine within a group of therapeutically comparable medicines, rather than among a group of medicines that share the same active pharmaceutical ingredient; this led to savings for the HIIS as well as for private insurance companies. HIIS expenditure on drugs in 2014 (€278 million) was only 1.5% higher than in 2007.

This fall in pharmaceuticals spending as a share of total HIIS expenditure is also due to shifts in the share of drugs on the positive versus intermediate lists. The total

number of drugs on both the positive and intermediate lists has increased between 2004 and 2014 (Fig. 33). However, the relative share on the positive list has declined substantially, which is important because drugs on the positive list have significantly lower co-insurance; only 10% of the price of drugs on the intermediate list was paid for by the HIIS, compared to 70% of the price of drugs on the positive list. Whereas in 2004, 79.7% of drugs were on the positive list, by 2014, only 65.6% were on the positive list. The largest shift was in 2012, when the share of drugs on the positive list fell by 3.9 percentage points. This coincided with a 7.4% decline in growth of total HIIS expenditure on drugs. Of note, any drug prescribed for the population that is exempt from co-insurance (e.g. pregnant women, children, some chronic diseases, etc.) is covered 100% by the HIIS.

**Fig. 33**

Changes in number of drugs on positive and intermediate lists



Source: HIIS data 2015.

According to NHA data, 14.6% of current health expenditure went towards prescribed medicines in 2013, which was the fourth highest among EU countries in the OECD database with data available (considerably less than the top three: Hungary – 29.3%, Slovak Republic – 26.5% and Latvia – 24.5%).<sup>6</sup> Of this expenditure, 5.3% was by private insurance, by far the highest percentage among countries with data available; 9.1% of this expenditure was by the HIIS, with only 0.2% paid out of pocket by households.

All public pharmacies have remained profitable between 2007 and 2014, though profit margins have fallen from a high of 5.8% in 2008 to just 1.8% in 2014 (according to data from the Agency of the Republic of Slovenia for Public Legal Records and Related Services). Public pharmacies have done this, in part, by cutting their costs at an average annual rate of 2.4% between 2010 and 2014.

### Long-term care

Long-term care is an important area to look at given the ageing of the population. In Slovenia, based on the data obtained from the EU-SILC survey, in 2012, 26% of older people aged 65 or more reported that their disabilities were of a serious nature and limited their ability to perform everyday activities (EU: 20.5%), whereas this share in the 75 years and over age group amounted to 34% (28%), and in the 85 years and over age group it was 44% (EU: 40%).

As of 2013, according to NHA data, expenditure on long-term health care comprised 9.6% of current health expenditure. This represents a gradual increase since 2003 when it was 8.1% of total spending. The majority of this expenditure is public. Across most European countries, with the notable exception of Finland, the share of health spending that goes to long-term care has increased similarly or stayed mostly constant over this time period. Including social care services in addition to long-term health care, the private sector foots a larger share of the bill. Private expenditure has been increasing much faster than public expenditure for a number of years, in real terms on average almost 7.0% annually between 2003 and 2013 (Fig. 34 and Table 7).

Long-term care is organized via many different pieces of legislation, which in practice means that different payers pay for different services and cover different populations. Around three-quarters of long-term care expenditure (health and social care) is paid for by the public sector, with a slight shift towards the private sector between 2003 and 2013. The public sector covers primarily health care (96.2% of long-term health care was paid for publicly in 2013), whereas private expenditure covers mostly long-term social services, primarily surcharges for accommodation and nutrition in homes for elderly and other forms of institutional care and household expenses for home assistance. HIIS covers almost half of total public expenditure for long-term care (47% in 2013). The Pension and Disability Insurance Institute of Slovenia contributes around 23% of expenditure for long-term care, the state and municipal budgets cover around 20%, and 10% is paid for by the Ministry of Labour, Family and Social Affairs.

6. It should be noted that this comparison is also a function of salary and other expenditure levels. For example, salaries in Hungary are much lower than in Slovenia, while drug prices are comparable, resulting in the drug share of total expenditure being higher in Hungary.

**Table 7**

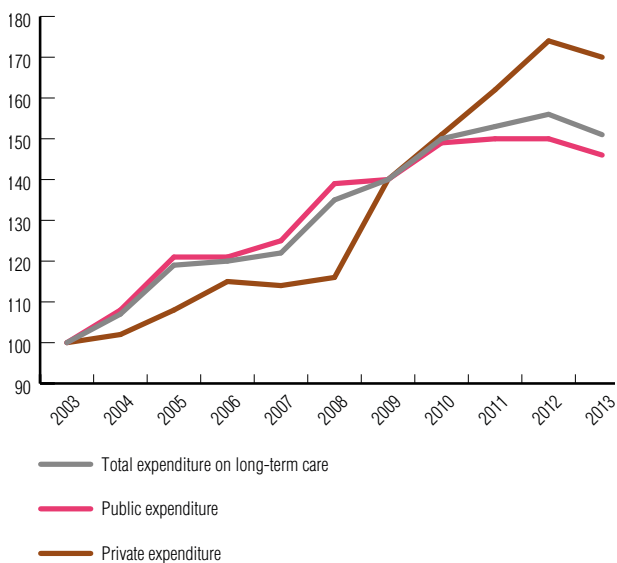
Expenditure on long-term care by source of financing and by function, 2003–2013

	2003	2005	2010	2012	2013	Nominal growth index	Average annual real growth rate, in %
<b>Expenditure on long-term care by source of financing (in million €)</b>							
Total	254	314	450	480	471	186	5.3
Public	192	245	339	349	342	178	4.8
Private	62	70	111	131	130	209	6.9
<b>Share of GDP (%)</b>							
Total	0.99	1.08	1.24	1.33	1.30		
Public	0.75	0.84	0.94	0.97	0.94		
Private	0.24	0.24	0.31	0.36	0.36		
<b>Structure (%)</b>							
Public	75.5	77.8	75.3	72.7	72.5		
Private	24.5	22.2	24.7	27.3	27.5		
<b>Expenditure on long-term care by function (in million €)</b>							
Total	254	314	450	480	471	186	5.3
Health care (HC.3)	179	230	315	327	314	176	4.6
Social care (HC.R.6.1)	75	84	134	153	157	209	6.9
<b>Structure (%)</b>							
Health care (HC.3)	70.4	73.3	70.2	68.1	66.7		

Source: OECD, 2015.

**Fig. 34**

Real growth index for expenditure on long-term care in Slovenia, 2003–2013



Source: SURS data; calculation by IMAD.

Note: Data are based on the OECD, Eurostat, WHO System of Health Accounts 2011 methodology; GDP deflator is used for calculation of long-term care expenditure in constant prices.

Slovenia lags behind the OECD average in terms of the population's integration in long-term care, but less

than indicated by previous estimates;<sup>7</sup> the share of the population exceeding 65 years that is integrated into long-term care amounts to 11.9%, while the average of 21 OECD countries is 12.9%. Of long-term care recipients, 35% are in institutional care, 34% are recipients of long-term care services at home, about 30% of recipients receive only an attendance allowance to pay for home care and only 1% of recipients are included in long-term care day cases. In Scandinavian countries, the ratio between institutional and home care expenditure is the opposite, while it hovers around 50:50 in the EU as a whole. In the last decade, the ratio in Slovenia deteriorated further, with growth in public expenditure on long-term care at home in Slovenia being the lowest among the 19 countries of the OECD. While the majority of the OECD countries intensified public investment in long-term care at home in 2000–2011 (home-nursing service, care at home, cash benefits), Slovenia still recorded much higher public investment in institutional care (IMAD, 2015)

7. At the end of 2014, SURS published, for the first time, data on long-term care recipients in Slovenia according to the international OECD definition. For the first time, the evaluation of the home-nursing service was also taken into account, in addition to the recipients of long-term care; the share of those integrated in long-term care is therefore higher than stated in previous analyses, in particular the share of those integrated in long-term care at home.



## 7 Labour and capital costs

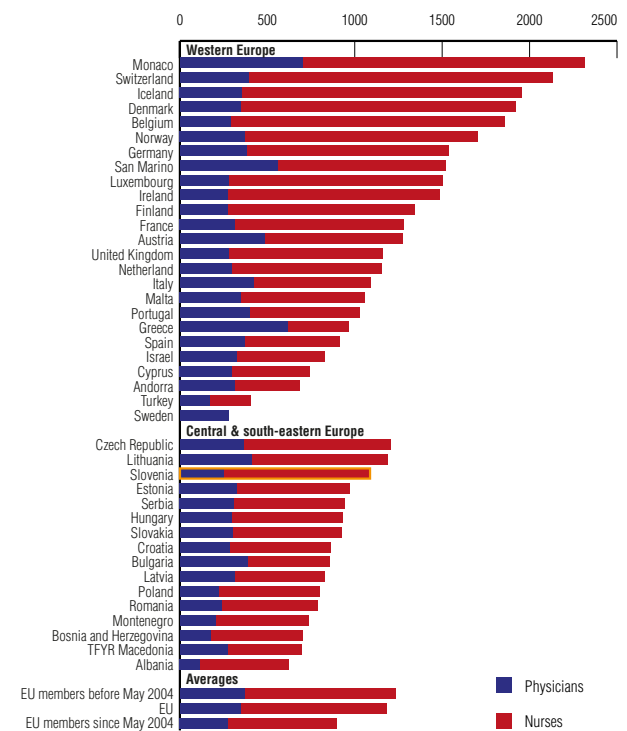
This section reviews labour and capital in the health sector to understand whether these resources are sufficient and being used effectively.

### Physician density is low relative to many other EU countries, but this is changing

The supply of doctors and nurses is somewhat low in Slovenia compared to other EU countries (Fig. 35). As of 2012, the number of doctors per capita was the third lowest among OECD countries (2.5 per 1000 population) (OECD, 2015); however, the numbers are increasing due to graduates emerge from the new medical faculty at the University of Maribor. In total, as of May 2015 there were 5712 professionally active physicians in Slovenia, approximately 2.8 per 1000 population. The number of nurses (8.2 per 1000 population in 2012) is slightly above the EU28 average (8.0) and has increased by 1.5 per 1000 population since 2000. Slovenia has a fairly high nurse to doctor ratio (3.2 nurses per doctor), well above the EU average. The comparatively larger nursing supply makes the total density of both physicians and nurses appear high when compared to other central and south-eastern European countries. The average number of pharmacists per 1000 inhabitants in the EU Member States is 0.74 while in Slovenia the average is only 0.55, including pharmacists employed in the health care sector, the HIIS, the National Institute for Public Health and National Laboratory for Health, Environment and Food (OECD, 2015).

Fig. 35

Physicians and nurses per 100 000 population across Europe, latest available year

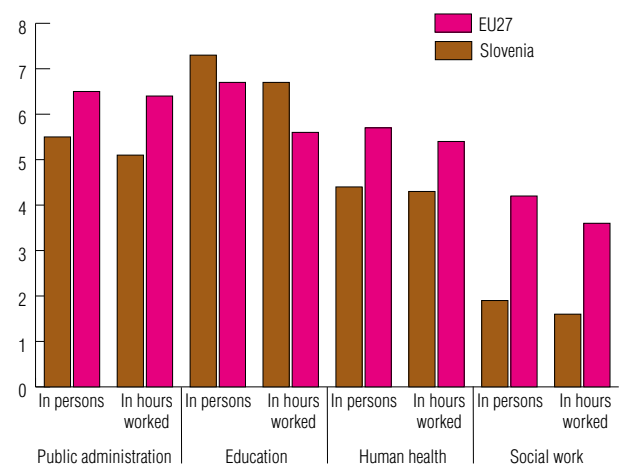


Source: WHO, 2015b.

Within Slovenia, health sector employment is relatively low compared to other public sectors. There are fewer people working in health compared to education and public administration, though more people are employed in health than in social work (Fig. 36). Correspondingly, the number of hours worked by health workers is also quite low, below the EU average.

Fig. 36

Shares of employment (%) in public service activities in total employment in Slovenia and in the EU, in persons and in hours worked, 2012

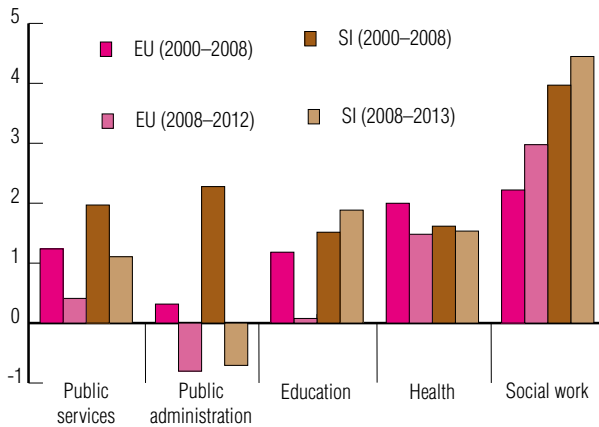


Source: Eurostat and SURS data; calculations by IMAD.

Notes: Shares in total employment according to National Accounts.

Despite relatively low supply of health workers, growth in employment has been on a par with the EU average since the crisis (Fig. 37). Before the crisis, growth was slower, at 1.6% average annual growth compared to 2.0% average annual growth in the EU between 2000 and 2008.

**Fig. 37**  
Growth in employment in public service activities before and during the crisis, Slovenia and EU

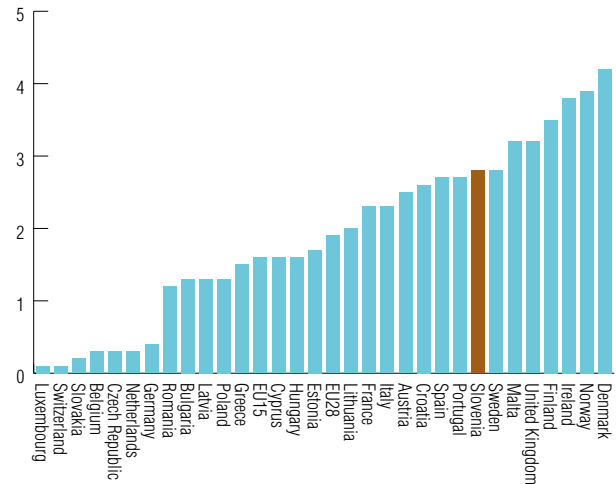


Source: Eurostat, 2015b and IMAD.

### Health sector salaries increased in the 2008 reform but have not kept pace with other sectors since

As mentioned throughout this report, a key reason behind the overall increase in spending in 2008, just preceding the crisis, is the public sector salary reform. In 2008, a new public sector wage system was initiated to replace separate collective bargaining at the level of individual professional groups with centralized collective bargaining at the level of whole public sector. The intention was to improve transparency and equalize wage levels across comparable positions. In the short term, this led to a one-time spike in the salary levels of health workers. According to Eurostat data, government compensation of health employees grew by 15.3% in 2008 and 11.2% in 2009, but then grew by less than 1% per year (or declined) through 2012. Growth in 2013, however, was positive, at 6.1%. Compared to other EU countries, health sector compensation makes up a fairly large share of GDP (Fig. 38).

**Fig. 38**  
Government expenditure for compensation of employees in health as % of GDP, 2013

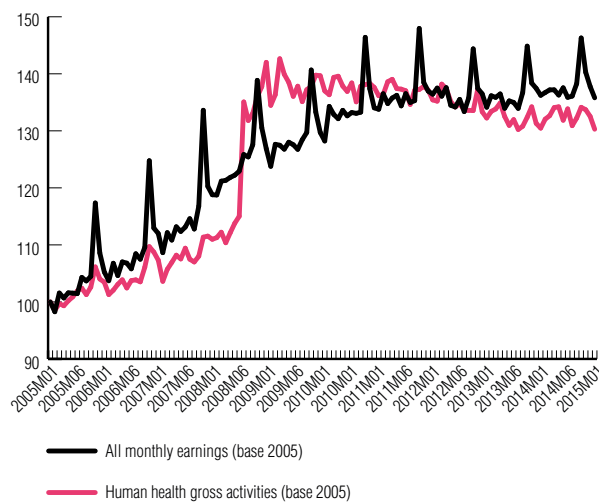


Source: Eurostat, 2015b.

To understand how health worker salaries compare to those of other types of workers in Slovenia, we compare growth in monthly gross earnings using January 2005 as a base (Fig. 39). We can see that while health workers earn higher monthly salaries than other types of workers (all activity workers earn an average of €1515.98 per month, while health workers earn €1850.04 per month as of February 2015), growth in earnings for health workers has not kept up with earnings growth in other activities. Although the 2008 salary reform served to correct this imbalance temporarily, since that time health worker earnings have consistently grown more slowly than earnings overall. On the one hand this is due to austerity measures taken in the public sector between 2009 and 2015, and on the other, due to a minimum wage increase in 2010 and employment structure changes during the crisis caused by laying off employees with the lowest wages; both of the latter factors positively affected wage growth in the private sector.

Fig. 39

Comparison of gross earnings growth between health workers and all types of earners



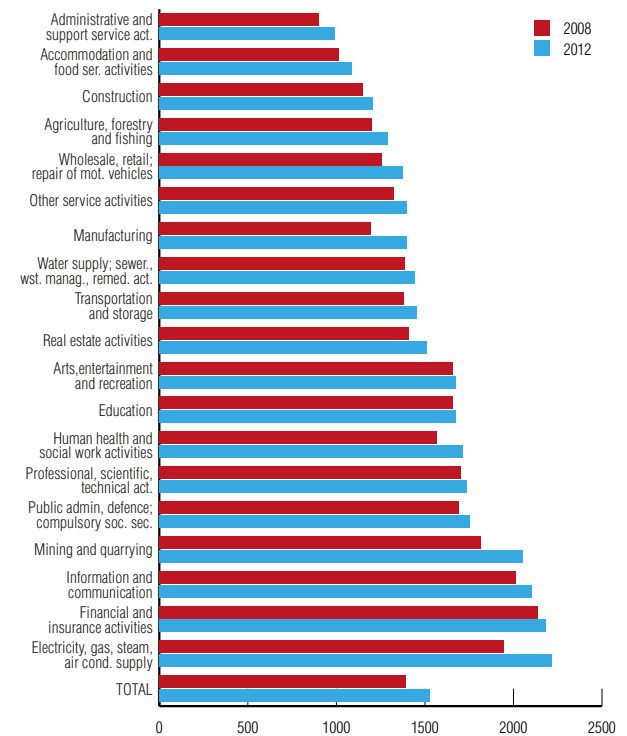
Source: SURS, 2015.

Compared to different types of workers, employees in the health and social work sector do not have particularly high earnings (Fig. 40). As of 2012, these workers, overall, earned above-average salaries; however, they earned less than workers in the following fields:

- electricity, gas, steam, air conditioning supply;
- financial and insurance activities;
- information and communication;
- mining and quarrying;
- public administration, defence; compulsory social security; and
- professional, scientific, technical activities.

Fig. 40

Average monthly gross earnings (€) by activity



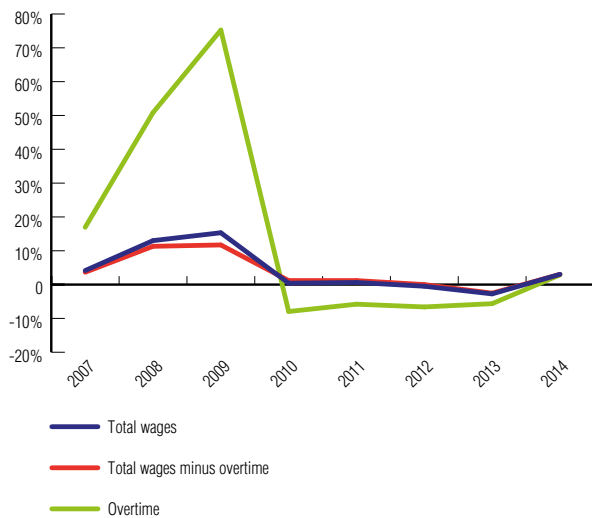
Source: SURS, 2015.

However, this masks considerable variation in the costs of labour, particularly across types of health workers. According to OECD health statistics (data not shown), while GPs and specialists earned approximately 2.3 times the average wage in Slovenia in 2012, nurses – who make up a large share of health employment – earn just 97% of the average wage. Even for physicians however, this figure is not particularly high compared to other countries. Out of 18 countries with data available, Slovenia had the twelfth highest specialist income to average wages ratio.

Additionally, across public hospitals, pharmacies, primary care public health centres, and other public health centres, total wages (including overtime) consumed 47.5% of total expenditures in 2014. This varies substantially (although not unexpectedly) across types of providers, from a low of 11.2% in public pharmacies to a high of 69.2% in primary care public health centres. However, since 2008, when total wages comprised 44.5% of expenditures, a greater percentage of expenditure has been spent on labour costs.

The increased share of expenditures going to labour has not come about as a result of excessive or continuous growth in total wages. Although there was positive total wage growth in 2008 and 2009, spending on wages has been fairly stagnant since 2010 (Fig. 41). During this time, the total wage share of expenditures has still increased by nearly one percentage point (from 46.6% in 2010 to 47.5% in 2014).

**Fig. 41**  
Growth in health wages and overtime, 2007–2014



Source: Statement of revenue and expenditures by cash flow, from the Agency of the Republic of Slovenia for Public Legal Records and Related Services.

There may be concerns, particularly due to the relatively low supply of physicians, that one reason for growth in spending on labour could be increased spending on overtime. Paying a physician to work overtime can be expensive; rates depend on salary grade and other bonus factors, including:

- bonus for overtime work that is determined by the collective agreement for the public sector (30%);
- bonus for night work 15%;

**Table 8**  
Examples of overtime payment calculations

Salary + overtime (per month)	Monthly basic salary	Basic salary per hour	16 <sup>b</sup> hours overtime on working days (Monday to Saturday) including 7 hours of work at night	16 hours overtime on Sunday, including 7 hours of work at night	Total 32 hour overtime <sup>c</sup>	Total (basic salary and overtime work)
<b>2015</b>	<b>1</b>	<b>2 = 1/174 hours</b>	<b>3</b>	<b>4</b>	<b>5 = 3 + 4</b>	<b>6 = 1+5</b>
Specialist doctor – 57 salary grade <sup>a</sup>	€3 814	€22	€479	€615	€1 094	€4 908
Specialist doctor – 50 salary grade	€2 930	€17	€368	€472	€840	€3 770
Trainee specialist – 45 salary grade	€2 422	€14	€304	€390	€694	€3 116
Trainee specialist – 40 salary grade	€2 001	€12	€251	€322	€574	€2 575
<b>Average</b>	<b>€2 792</b>	<b>€16</b>	<b>€351</b>	<b>€450</b>	<b>€800</b>	<b>€3 592</b>

Notes: Ministry of Health data.

a. Maximum salary grade for doctors.

b. 16 hours overtime is the maximum allowed by law in two consecutive working days.

c. 32 hours overtime is the maximum allowed by law of uninterrupted working time.

- bonus for Sunday work 37.5%; and
- bonus for holiday work 45%.

Table 8 provides examples of how overtime payments are calculated.

Most overtime occurs in public hospitals (nearly 80%), with primary care making up almost all of the rest. However, it appears that the slowdown in wage growth during the crisis is not compensated for by increases in overtime payments, at least in aggregate. One important reason is that overtime payments make up just a small percentage of total wages. Between 2006 and 2014, the year with the largest percentage of total wages spent on overtime payments was 2009, when it was 8.6%; this was mostly due to a large increase in overtime payments that resulted from the salary reform. Since then, the percentage of total wages spent on overtime has declined in every year, reaching 6.7% in 2014. This decline in the share of total expenditures spent on overtime has come at a time of declining wage growth when one might expect health workers to seek additional overtime hours, which makes it unlikely that overtime is commonly used to compensate for declining wages. Indeed, subtracting overtime payments from total wages has a negligible effect on wage growth, as shown above in Fig. 41.

Nevertheless, overtime payments could have an impact on expenditures in the future, as a large amount of overtime work currently goes unpaid. As of 31 January 2015, over half a million overtime hours had remained

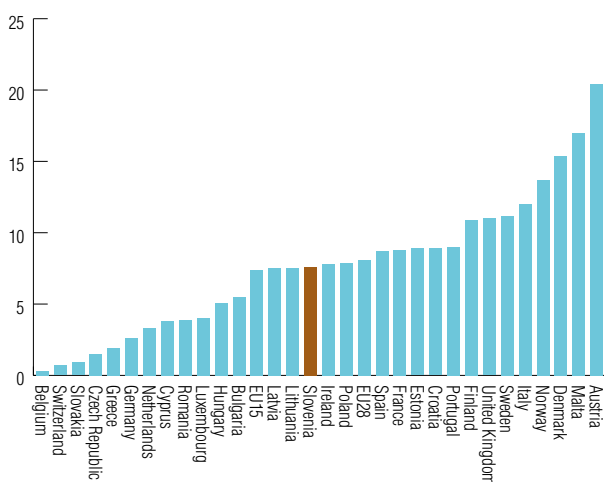
unpaid. This affects 14 328 workers for an average of 38.7 extra hours worked but not remunerated. Interestingly, more than half of these workers with unpaid overtime are nurses, who already have relatively low salaries and make up a large portion of the workforce. Many unpaid overtime hours are also for non-medical workers who, correspondingly, are likely paid low wages.

A possible explanation for the prevalence of overtime work could be the slightly higher incidence of sick leave in the health care sector compared to other areas of the public sector. For example, according to data from the National Institute of Public Health, the average health care worker spent 4.5% of their planned work-time in 2014 on sick leave, whereas across the public sector, only 3.7% of work-time was spent absent due to illness.

### Capital investment has historically been irregular

Capital investment has historically varied as a share of total health spending. Before the crisis, according to NHA data, the share varied around 5.5%, while during crisis it fell to around 4.5% of total health expenditure (EU average in 2013 was 3.6% of total health expenditure). Most capital formation is undertaken by the general government (with very little paid for by the HIIS) and around one-third is paid for by the private sector. According to the most recent data available, the share of total government spending on gross capital formation that goes to the health sector is 7.6% – just below the EU average of 8.1% (Fig. 42).

**Fig. 42**  
Government expenditure for gross fixed capital formation in health as % of total government expenditure for gross fixed capital formation, 2013

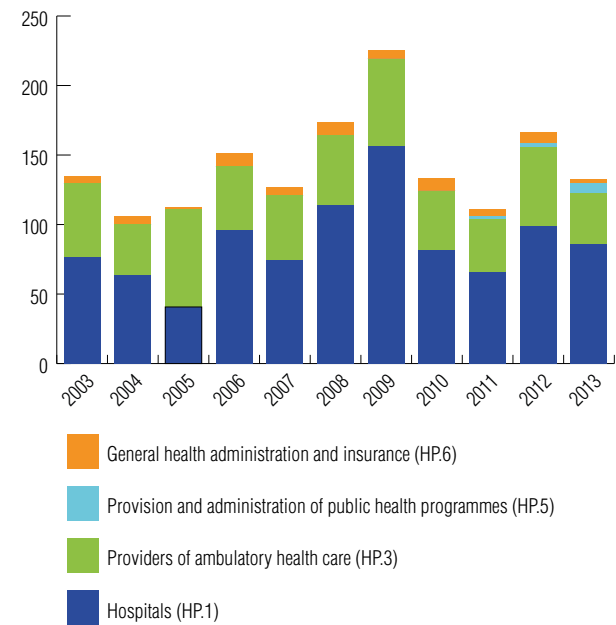


Source: Eurostat, 2015b (according to COFOG methodology).

However, it is difficult to compare cross-sectional data on capital formation expenditure because there are often large changes in growth of capital investment from year to year. For example, capital formation increased 36.8% in 2008 and decreased 49.4% in 2010. In 2012, capital investment accounted for only around 5% of total health

expenditure, which is slightly above the average among OECD countries with data available in the last five years (4.2%). In Slovenia, most of this investment each year has gone to hospitals, followed by ambulatory health care (Fig. 43).

**Fig. 43**  
Distribution of capital formation expenditure in the health sector (€ millions), 2003–2013

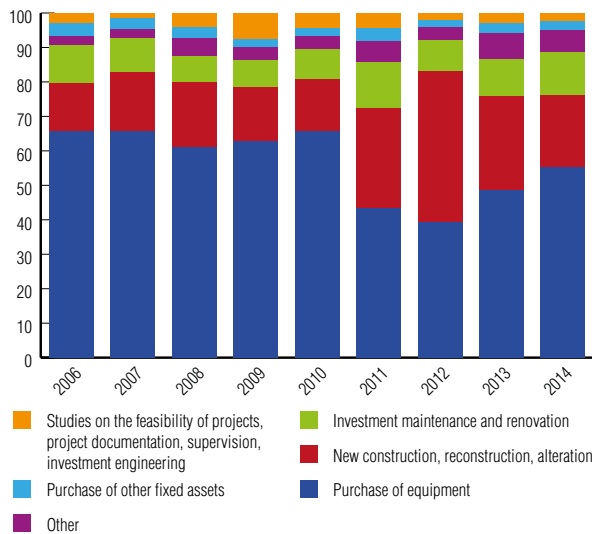


Source: OECD, 2015 (NHA).

Note: In Slovenia nursing homes are not included in nursing and residential care facilities, despite the fact that most long-term nursing care in Slovenia is provided in nursing homes. Therefore, there is no capital formation in nursing and residential care facilities (HP.2).

According to data from financial statements, within public hospitals, from 2006 to 2010 most investment was to purchase equipment (Fig. 44). However, in 2011 through 2014, spending on equipment decreased substantially. In its place, there was an increase in new construction, reconstruction and restoration. This increase in new construction was not maintained, however, and the level of spending declined drastically in 2013 (63.3%) and 2014 (25.5%). Some depreciation is accounted for in HIIS contracts with public hospitals. In 2013, among public hospitals reporting to the Ministry of Health, only approximately €160 000 in estimated depreciation was not compensated.

**Fig. 44**  
Distribution of capital expenditure within public hospitals



Source: The Agency of the Republic of Slovenia for Public Legal Records and Related Services, Cash flow data 2015.

Although there was an increase in capital formation between 2012 and 2013, many investment projects in Slovenia have gone uncompleted due to a lack of resources. Therefore, one consequence of the irregular levels of capital investment is that there is variability in hospitals in terms of their modernity: 10 out of 26 hospitals have yet to be modernized to be more energy efficient. There is also considerable variation in the amount spent on utilities (water, electricity, gas), ranging from €17.30 per square metre to €117.10 per square metre in 2013. While the highest costs were in the Institute of Oncology in Ljubljana, and therefore likely due to running expensive medical equipment, some of the variation may reflect differences in capital investment in energy efficient technology.

Space in facilities is not always utilized effectively, though it is difficult to say why based on available information. The facility with the worst use of space uses only 47.8% of its available space for health care activities, much less compared to the hospital that uses the most space for health care activities, 85%. Across all hospitals, there is only a small positive correlation between use of available space and cost of energy per square metre (correlation = 0.2), implying that using more space does not imply significantly greater overhead costs.

In terms of capital expenditures on equipment, Slovenia has comparatively low density of medical imaging equipment. Although data on medical imaging technology are notoriously difficult to compare, in 2013, there were only 1.2 CT scanners per 100 000 population and even fewer MRIs (0.87 per 100 000). There were 33.2 MRI scans per 1000 population in Slovenia in 2012, well below the OECD average of 50.6 per 1000 population using data for countries reporting. Slovenia also had

52.6 CT exams per 1000 population, though the data only reflect hospitals; other countries only reporting hospital CT scans include the UK (75.7 scans), Portugal (132.1 scans), Ireland (71.3 scans), Austria (133.4 scans) and New Zealand (26.7 scans). Likewise, depreciation expenses of medical equipment in public hospitals have increased considerably, rising from €335 million in 2007 to €533 million in 2014. Taken together, it would appear that there is a deficiency of investment in medical equipment in Slovenia.

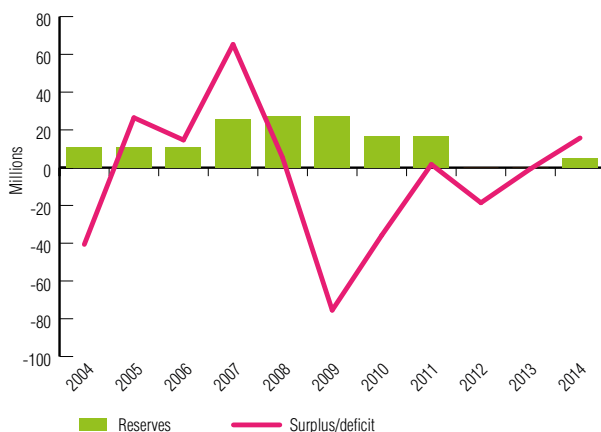
## 8 Implications for recent and future trends

The crisis has had a profound effect on revenue generation and expenditure in the Slovene health sector and across the government as a whole. Declines in economic activity and employment have led to lower social insurance contributions and, to compensate, the HIIS has taken measures to reduce its expenditures. These mostly include reducing the prices paid for care, shifting costs onto CHI, and delaying payments until funds are available.

Expenditure reductions have in fact been more substantial than revenue reductions to date, which in 2014 led to a surplus for the HIIS (Fig. 45). This is not so uncommon historically, though there had not been a substantial surplus since 2007, when the HIIS surplus increased from €14.5 million in 2006 to €65.2 million. This contributed significantly to the accumulation of reserves, which is an important source for counter-cyclical spending on health during economic downturns.

At least 25% of a yearly surplus is dedicated to a reserve fund. It is formed before the balance sheets are closed, and as a result represents outcomes for the current year. Between 2004 and 2014 there was some money in reserves in all years other than 2012 and 2013, when the reserves from former years were depleted. Whether the HIIS continues to run a surplus from 2015 onwards will depend on the state of the economy (in the case of revenue generation) and the potential to continue reducing public expenditures through price reductions and cost-shifting.

**Fig. 45**  
HIIS surplus/deficit and reserves (millions)

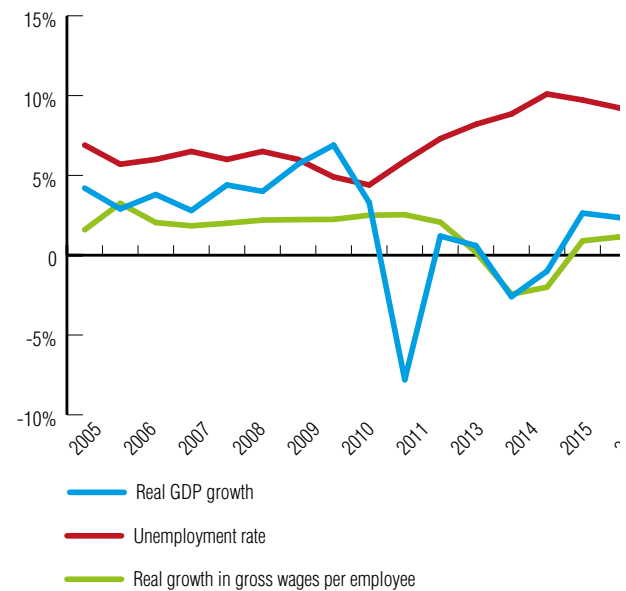


Source: HIIS data 2015.

### Projections for economic activity suggest a return to modest positive growth for social contributions

Economic activity is the key determinant of revenues for the health sector. Projections of GDP, employment and gross wages suggest that Slovenia's economy has already begun to improve following the crisis (Fig. 46). The expectations for 2015–2017 are that real GDP will continue to grow, though at a slightly lower annual average rate of around 2.1% (IMAD). Unemployment rates are expected to have peaked in 2013 and are projected to continue to decline steadily, reaching 7.9% by 2017. While this is above the historical pre-crisis average since 2000, it should lead to modest positive growth in revenues as social contributions from employees increase. Likewise, projections of wage growth also indicate a turnaround that again is more tempered compared to the pre-crisis period.

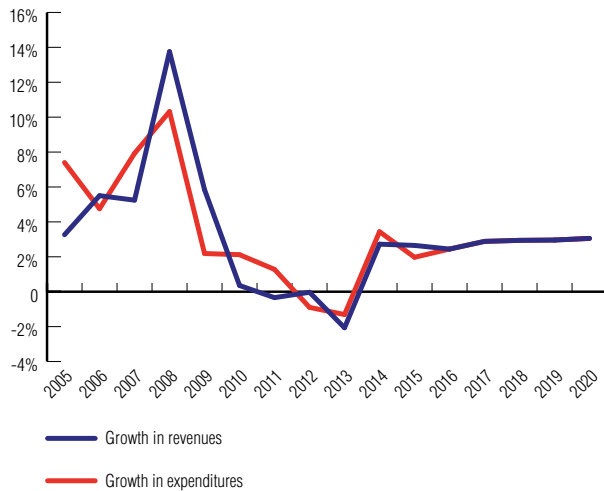
**Fig. 46**  
Projections for GDP, employment and gross wages (%)



Source: IMAD, 2015.

Projections made by the HIIS are also consistent with this simple assessment (Fig. 47). While revenue growth is anticipated to slow in 2015 relative to 2014, the overall expectation is that revenue (and expenditure) will grow at approximately 3.0% per year from 2016 through 2020 as the economy improves.

**Fig. 47**  
Projections of revenue and expenditure growth, HIIS



Source: HIIS data 2015.

### Expenditure growth will depend on political decisions and the resources available to the HIIS

Because the HIIS is unable to go into debt, health care expenditure growth in Slovenia in aggregate is almost entirely dependent on the revenues available to HIIS in a given year. Because of reductions to revenues, the overall approach in recent years has been to reduce prices, to shift costs onto CHI to maintain the volume of services and to delay payments to providers. However, reduced prices meant that a number of hospitals generated losses in recent years; it may not be feasible to reduce prices much more without carefully evaluating hospital finances and management capacity.

The expectation by the HIIS is that expenditures will continue to grow at less than 3% per year through 2020. While it may be possible to achieve this, it is much slower than average annual growth between 2004 and 2007 (4.7%) prior to both the crisis and the salary reform. The HIIS should be prepared and have sufficient resources to afford higher expenditure growth than is currently projected.

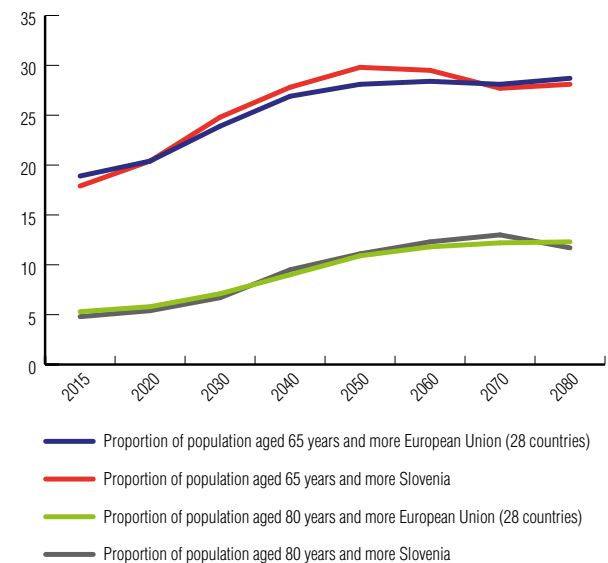
### Changing demographics present some additional challenges for public sector revenues and expenditure

Demographic changes have consequences for public finances and, in particular, for the health sector, pensions and long-term care. However, ageing by itself only contributes a small amount to aggregate growth in the health sector (Rechel et al., 2013), whereas the effect of non-demographic factors, such as increases in health sector prices and technological advancements, are much more important determinants.

As of 2015, Slovenia is estimated to have the seventeenth largest population over 65 years out of 31 European countries: 17.9% of the population are over 65, compared to the EU average of 18.9% (Fig. 48). However,

under the main projection scenario from Eurostat, the ageing of Slovenia's population is expected to outpace the European average. By 2020, Slovenia will be on a par with the EU average (20.4% of the population over 65) and rank tenth among the 31 European countries. Slovenia's over-65 population will be the seventh largest in Europe in 2040 and peak in 2050 when people over 65 will make up 29.8% of the population. These projections are dependent on various factors, including longevity, migration and fertility.

**Fig. 48**  
Proportion of population aged 65 and over and aged 80 and over, Slovenia and EU28



Source: Eurostat, 2015b.

Older populations have important implications for social protection systems in general – not only the health sector. In terms of health system revenues, older populations contribute less per person to the HIIS than the employed. Without increasing the tax funding component of the health financing system or significant gains in employment and wage growth to counterbalance the growing older population, this will put downward pressures on revenue generated through social insurance contributions.

Forecasts by the Ageing Working Group (AWG; European Commission, 2015) indicate that between 2013 and 2060, given the baseline scenario, age-related health care spending in Slovenia is expected to consume 1.2 additional percentage points of GDP; age-related long-term care spending is expected to consume 1.5 additional percentage points of GDP (Table 9). Out of 28 EU countries, Slovenia ranks tenth most affected in terms of the burden of age-related health care relative to GDP between 2013 and 2060, and seventh most affected in terms of its age-related burden for long-term care. It is important to note that the baseline projections of long-term care only assume the effects of changes in



demographic structure and the assumption that 50% of projected gains in life expectancy are spent without disability (i.e. without demand for care). It means that baseline projections do not take into account any policy change in the qualifying rules for different long-term care services in the current system. Similarly, projections for health care expenditure assume only the effects of ageing, the assumption that one-half of remaining years of life we will live in good health and income elasticity of 1.1, which takes into account only very moderate effects of non-demographic factors. However, accounting for a stronger impact of non-demographic factors (e.g. changes in technology, medical prices, employment, etc.) in the AWG risk scenario, Slovenia ranks twelfth most affected in health care relative to GDP and sixteenth most affected in long-term care relative to GDP. Of note, these 2015 projections are slightly more pessimistic than those that were completed in 2012, primarily as a result of new demographic projections.

## Summary of key findings

This review finds that the economic crisis revealed the susceptibility of the health system to fluctuations in social insurance contributions. Social insurance contributions declined during the crisis because of lower wage growth, increases in the share of inactive enrollees who make comparatively low monthly contributions, high unemployment and insufficient counter-cyclical mechanisms to finance the health care system. The slowdown in revenue growth for the HIIS was more pronounced than growth in total government revenues: between 2005 and 2013 total government revenues as a share of GDP increased by 1.8 percentage points, while HIIS revenues increased by only 0.3 percentage points. Health care spending by central and local governments remains low by EU standards, despite slight increases in spending in recent years.

Health care expenditures are linked closely to HIIS revenues, since the HIIS must be financed without any borrowing from the central government and without increases in insurance contribution rates. Nevertheless, despite fewer resources, the mix and volume of services purchased has not changed notably throughout the last few years; in fact, the HIIS has continued to pay for items that it did not fund in years prior to the crisis, such as provider training and specializations, and has also had to cover higher VAT rates. Savings measures were adopted with the aim of preserving the level of health care programmes and accessibility of services. The volume of services was maintained by decreasing prices, delaying payments, and shifting costs onto complementary health insurers. These complementary health insurers have remained profitable throughout most of the crisis, though the profits amount to only a small share of total health expenditures (around 0.3% of total health expenditures in 2014); private insurers have also protected households from experiencing catastrophic expenditures and, to a small extent, subsidized public providers. However, there is evidence of longer waiting times and a number of providers have suffered losses, with some require loans from the public treasury to maintain supply. Better provider data is needed to comprehensively assess how provider performance has been affected by expenditure reductions, as well as to identify areas for efficiency gains. Health worker salaries are not particularly high overall, but this is generally due to low salaries for nurses and other non-physician workers; there are concerns regarding overtime payments and, while these are fairly high, they make up only a small share of expenditures.

According to current baseline forecasts, ageing is expected to lead to larger increases in health and long-term care expenditure relative to GDP as compared to the EU28 average. In the long-term, due to increasing demand and slow growth in revenues from social insurance contributions, there will be a need to find

alternative sources of revenue, or to reduce the basket of services provided by HIIS, or to cut prices continuously to maintain volume and quality of care.

**Table 9**

Ageing Working Group 2015 projections of health and long-term care spending as a share of GDP, with contribution of ageing between 2013 and 2060, reference and risk scenarios for Slovenia and EU

Health care spending as % of GDP												
AWG reference scenario												
	2013	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060	CH 13–60
Slovenia	5.7	5.7	5.9	6.2	6.4	6.6	6.8	6.8	6.9	6.9	6.8	1.2
EU	6.9	7.0	7.2	7.3	7.5	7.6	7.7	7.8	7.9	7.9	7.8	0.9
AWG risk scenario												
Slovenia	5.7	5.8	6.1	6.5	6.8	7.1	7.3	7.4	7.5	7.5	7.5	1.9
EU	6.9	7.1	7.4	7.6	7.8	8.1	8.3	8.5	8.5	8.6	8.5	1.6
Long-term care spending as % of GDP												
AWG reference scenario												
Slovenia	5.7	5.7	5.9	6.2	6.4	6.6	6.8	6.8	6.9	6.9	6.8	1.5
EU	6.9	7.0	7.2	7.3	7.5	7.6	7.7	7.8	7.9	7.9	7.8	1.1
AWG risk scenario												
Slovenia	1.4	1.5	1.7	1.9	2.2	2.5	2.9	3.2	3.6	3.9	4.2	2.7
EU	1.6	1.7	1.9	2.0	2.2	2.5	2.8	3.1	3.5	3.8	4.1	2.4

Source: European Commission, 2015.

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