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Economic Issues has been dealing with topics that require an economic policy response since its first edition in 2007. This year's publication focuses on fiscal policy and developments as well as responses to demographic change in Slovenia.

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Summary

The state of the public finances has been improving in the last two years, and so Slovenia is exiting the corrective arm of the Stability and Growth Pact (SGP) in 2016. In 2015 Slovenia reduced its general government deficit to 2.9% of GDP, the lowest level since the beginning of the crisis. Thereby it corrected the excessive deficit and is exiting the corrective arm of the SGP in 2016. The growth of public debt, which increased around four-fold during the crisis, slowed in 2015. With the required yields on Slovenian government bonds falling to record lows, interest expenditure dropped for the first time since the beginning of the crisis. Amid a decline in uncertainty in the euro area, the improvement in Slovenia's fiscal position in the last two years stems from the adopted economic policy measures, the recovery of economic activity and the absence of large one-off negative effects.

The structural imbalances accumulated, which weaken Slovenia's growth potential and are reflected in the public finances, and Slovenia's international commitments require the fiscal consolidation process to continue. The persistence of the relatively high structural deficit for many years shows that the consolidation process has not been sufficiently based on changes that would allow for a more sustainable balancing of the public finances. Another factor that is narrowing fiscal policy options is the significant increase in public debt, which was not only the result of measures for mitigating the consequences of the crisis, but also accumulated imbalances (e.g. banking system stabilisation). All this points to the need for further fiscal consolidation, which will strengthen the stabilising and developmental role of the public finances.

The consolidation strategy of the government, which is presented in the 2016 Stability Programme, mainly relies on the existing temporary measures being continued. Consolidation will be based on moderate revenue growth amid almost unchanged expenditure. Amid the more favourable structure of economic growth, increasing revenues also involves measures for restructuring the tax burdens, introducing the immovable property tax, reducing administrative burdens and improving the efficiency in collecting public taxes. In terms of international comparisons and the impact on competitiveness, these measures are indeed a step in the right direction. On the expenditure side, the programme envisages only a modest increase in primary expenditure and a similar decline in interest expenditure, but the measures to be taken in order to achieve this remain largely unspecified. The consolidation will to a great extent rely on the transformation of the temporary, for the most part, intervention and linear measures into permanent ones.

The envisaged consolidation bears considerable risks. We estimate that such measures are unsustainable in the long term: (i) this consolidation path limits the scope of response for other policies that are addressed by austerity measures (e.g. wage and employment policies in the public sector); (ii) amid the improving economic situation, it will become increasingly difficult to reach a social consensus on measures of this kind; and (iii) such measures only delay the balancing of the public finances, which should instead be achieved by addressing the structural weaknesses that have accumulated in recent years. The rules of the preventive part of the SGP also focus on a narrowing of the structural deficit, which is calculated using the estimates of potential GDP and the output gap. These tend to be very volatile and should be used with caution. Interpreted with due caution, the estimates, which are based on a relatively large confidence interval, show a possibility of significant deviations from the SGP's objectives. According to our estimates, Slovenia will be in normal times of the economic cycle as defined in the preventive arm of the SGP in 2016–2019, its debt exceeding 60% of GDP, which will require an annual reduction in the structural deficit of 0.6 percentage points according to the SGP rules. In the Stability Programme 2016, this is envisaged only for 2016, while the deviations in the remaining years are significant. Other indicators (the expenditure rule and the transitional debt rule) also point to the risk of some deviation from the SGP rules from 2017 onwards, particularly if we take into account that the measures needed to support the planned consolidation after 2017 have not been sufficiently specified and adopted.

In order to ensure fiscal sustainability, Slovenia will therefore need to carry out fiscal consolidation through a combination of measures. In order to achieve a more sustainable fiscal balance, it is essential to address the structural imbalances, which appeared before the onset of the crisis and have deepened further during the crisis, instead of relying on the temporary measures that have been implemented so far. It is therefore essential to devise measures that will address (i) growth potential; (ii) the restructuring of revenue and expenditure to support development-oriented priorities and increase efficiency; (iii) demographic change; and (iv) state asset

management. During the crisis, potential GDP growth more than halved in Slovenia, which not only weakened Slovenia's tax capacity but also resulted in an increase in general government expenditure. The restructuring of the public finances should be supported through changes to the budgetary planning procedure. This would allow for a more substantive debate on the allocation of limited public resources to priority areas and shift the focus away from individual expenditure categories. When compared with other EU Member States, Slovenia still has a large share of state-owned assets, but their profitability is relatively low by international standards. The consolidation process should therefore also involve a change in management practices, or indeed privatisation. This would increase the profitability of state-owned assets and reduce public debt. It would also lower the risk of further recapitalisations with public funds, which have already significantly increased public debt in recent years.

Owing to their failure to properly adapt to the ageing population, social protection systems have already become a fiscal burden, and managing demographic change will be one of the main fiscal challenges in the years to come. With the decline in the number of births and an increase in life expectancy, the share of people over 65 has increased from 11% to 18% of the total population since 1990. Demographic projections show that population ageing, which will be accompanied by a decline in the working-age population, will intensify in the years to come. This trend will be even more pronounced than elsewhere in the EU. The share of the older population will therefore double in the next three decades. Under such a scenario, social protection expenditure as a share of GDP would increase from 19% to 25% in this period. If social protection systems remain unchanged, this would put unsustainable pressure on the public finances, given that the transfer from the state budget to the pension fund (ZPIZ) is already close to 4% of GDP with the current ratio of active population to pensioners.

Demographic change will also require adjustments to the labour market, the education system and spatial planning, which means that it will be necessary to implement several measures in different fields. Among the possible measures, we have pointed out those whose effectiveness has already been empirically supported in other countries, while the choice of simulated effects was conditional particularly on the limitations inherent to the models available. By simulating different levels for the effects of individual measures, we have also attempted to present the options available to economic-policy makers in formulating an appropriate set of measures, which is however also dependent on social priorities. The results of the simulations indicate that long-term fiscal sustainability can only be achieved through coordinated measures in all areas.

The main challenge to economic policy is defining measures which will preserve the quality of life amid demographic change but also ensure fiscal sustainability. We are well aware that seeking the right balance will require compromise in arriving at a solution, which will need to be supported by a broad-based social consensus. However, the necessary structural reforms, the benefits of which may only show over the long term, could jeopardise the fulfilment of the fiscal effort target in the short term. However, under the flexibility clause within the SGP rules, Member States implementing major structural reforms are allowed to deviate temporarily from the adjustment path towards the medium-term objective (MTO). Through our assessments of the effects of the selected measures, we therefore wish to encourage debate among policy makers on the preparation of a set of fiscally sustainable measures for dealing with demographic change, which have already been adopted in many EU countries and are being introduced too slowly in Slovenia. It is our view that, given the gradual economic recovery and favourable terms of finance, now is a good time to implement the structural reforms which were too difficult to introduce in times of deep recession.

Demographic change not only brings challenges but also creates opportunities. With rising demand for social protection services in a long-living society, the need to develop these services also represents an opportunity for job creation. Furthermore, in a long-living society, older people also constitute a target group for different economic activities. Opportunities also lie in the development of voluntarism among older people and intergenerational cooperation in meeting requirements that can improve quality of life.

Moreover, a stronger institutional framework for fiscal monitoring would also help balance the budget. The process of allocating limited public resources to priority areas would also be improved through the establishment of an independent fiscal council and a reform of the Public Finance Act, which would endorse the changes to the budgetary planning procedure.

Challenges

- The structural imbalances accumulated, which weaken Slovenia's potential growth and are reflected in the public finances, and Slovenia's international commitments point to the need for fiscal consolidation to continue.

- The persistence of the relatively high structural deficit for many years shows that the consolidation process should rely to a greater extent on structural adjustments that would allow for a more sustainable balancing of the public finances. The consolidation will therefore need to be implemented through a comprehensive set of measures that address: (i) growth potential; (ii) the restructuring of revenue and expenditure to support development-oriented priorities and increase efficiency; (iii) demographic change; and (iv) state asset management.

- The sharp decline in economic activity during the crisis not only weakened Slovenia's tax capacity but also resulted in an increase in general government expenditure. Measures aimed at increasing economic growth would make a significant contribution to the quality of the consolidation process.

- The restructuring of revenue and expenditure to support development-oriented priorities and towards greater efficiency could also be supported by changes in the budgetary planning procedure. This would allow for a more substantive debate on the allocation of limited public resources to priority areas and shift the focus away from individual expenditure categories.

- Slovenia would be able to reduce its public debt directly not only by reducing the general government deficit but also through privatisation; indirectly, the pressure on public finances would be mitigated by the higher profitability of state-owned assets as a result of their better management.

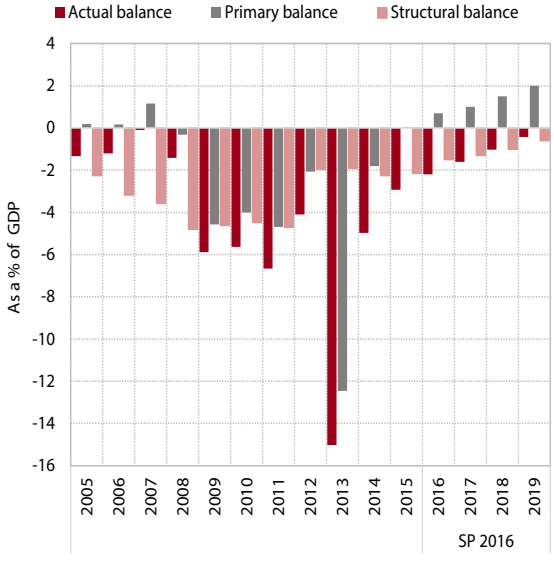
- Against the background of demographic change, the key challenge will be to formulate a set of fiscally sustainable measures that also preserve quality of life. This will require changes to be made particularly in the following areas: (i) social protection systems; (ii) the labour market; (iii) the education system; and (iv) housing, spatial and regional policy.

I Fiscal developments and policy

1 Targets and strategy of medium-term fiscal consolidation in the Stability Programme 2016

The state of the public finances in Slovenia has been improving in recent years. This improvement reflects the fiscal consolidation measures implemented, the recovery of economic activity and the absence of major one-off negative effects. In 2015 the general government deficit thus narrowed to its lowest level since the beginning of the crisis (2.9% of GDP), which resulted in Slovenia correcting the excessive deficit, thereby allowing it to exit the corrective arm of the Stability and Growth Pact (see section 2.2). The fulfilment of fiscal commitments at the EU level and the improvement of economic activity in Slovenia, alongside the lower general uncertainty in the EU and the ECB's measures, have also led to a significant decline in the required yields on Slovenian government bonds in recent years. This reduced interest expenditure last year for the first time since the onset of the crisis despite the further increase in the level of debt. Even with the adopted measures to reduce the deficit, the bulk of the actual deficit remains structural and, according to the latest calculations, accounts for around 2% of GDP.

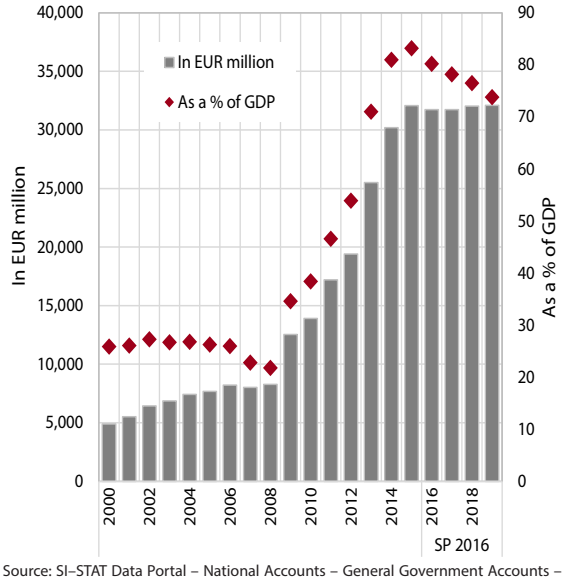
Figure 1: **General government balance, primary balance and structural balance**



Source: SI–STAT Data Portal – National Accounts – General Government Accounts – Main aggregates of the general government, April 2016. For 2016–2019 projections from the Stability Programme 2016.

The growth of general government debt slowed in 2015, while its maturity is being extended. General government debt rose by EUR 1.9 billion in 2015 (2.3 pps of GDP), which again was largely attributable to the additional borrowing related to the pre-financing of the financing requirements for future years. This is significantly less than in the previous two years when a significant share of new borrowing was used for bank recapitalisations, but considerably more than before the crisis, when it had been rising by an average of EUR 0.6 billion per year. At the end of 2015, the level of debt reached 83.2% of GDP, which ranks Slovenia in the middle of the EU Member States, but its growth dynamics have stood out ever since the crisis began. The debt is mainly long term, and its maturity is being extended. The relatively low required yield on new borrowing compared with the costs of matured debt causes a decline in the implicit interest rate on the total debt, which stood at 3.6% last year. This is the lowest implicit interest rate thus far, but is still high given the current and expected growth of nominal GDP.

Figure 2: **General government debt**



Source: SI–STAT Data Portal – National Accounts – General Government Accounts – Main aggregates of the general government, April 2016. For 2016–2019, projections from the Stability Programme 2016.

The government is planning to continue fiscal consolidation and bring the budget close to balance by 2019. The consolidation strategy of the Stability Programme 2016 (SP2016) envisages modest revenue growth amid almost unchanged expenditure levels in 2015–2019 as growth in primary expenditure will be accompanied by a similar reduction in interest expenditure. The actual deficit is planned to be reduced by an average of 0.6 pps of GDP per year in 2015–2019.

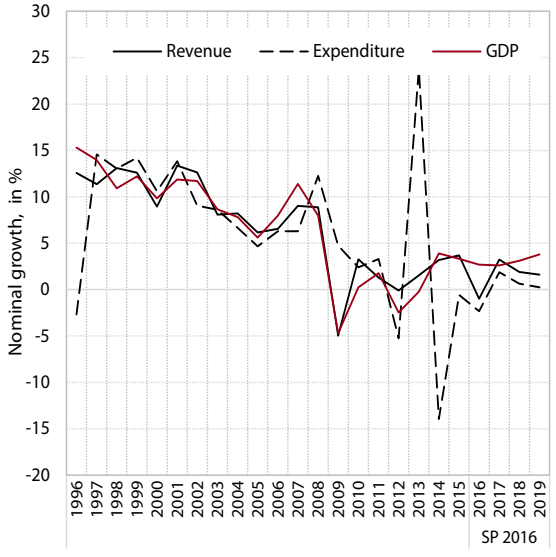
Table 1: **Fiscal objectives of the Stability Programmes 2015 and 2016**

As a % of GDP	SP 2015					SURS	SP 2016			
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
General government revenue	44.7	43.1	42.5	42.0	41.5	45.1	43.5	43.8	43.2	42.3
General government expenditure	47.6	45.3	44.3	43.4	42.4	48.0	45.7	45.4	44.3	42.7
Net lending/borrowing	-2.9	-2.2	-1.8	-1.4	-0.9	-2.9	-2.2	-1.6	-1.0	-0.4
Primary balance	0.2	0.7	0.9	1.1	1.4	0.0	0.7	1.0	1.5	2.0
Consolidated general government debt	81.6	78.7	79.6	79.4	78.2	83.2	80.2	78.2	76.5	73.8

Source: Stability Programme 2016, Stability Programme 2015.

The SP2016 retains the existing short-term measures in place for achieving its fiscal targets. The main policy orientation regarding general government expenditure remains the extension of short-term measures into the systemic legislation. This refers to measures that were previously included in the Fiscal Balance Act, the Implementation of the Republic of Slovenia's Budget Act and the Agreement on Measures in the Field of Salaries and Other Labour Costs in the Public Sector Aimed at Balancing the Public Finances for 2015, while the rest will be replaced by other systemic measures with similar fiscal effects. Besides from a more favourable structure of economic growth, the increase in revenues would also stem from measures for restructuring the tax burdens, introducing an immovable property tax, reducing administrative burdens and improving the efficiency in collecting taxes. Similar to the SP2015, the SP2016 also envisages the modernisation of certain systems, i.e. structural changes, with a special emphasis on health reform, while the pension system is planned to be tackled only by the introduction of individual measures.

Figure 3: **Growth in general government revenue and expenditure and GDP growth**



Source: SI–STA, National Accounts, Main national accounts aggregates; for the 2016–2019 period the Stability Programme 2016.

The path towards consolidation is significantly affected by the weaker medium-term potential economic growth. The macroeconomic assumptions underlying the medium-term consolidation plan in the SP2016 are similar to those from last year (see Box 1). Economic growth is still assumed to be considerably lower than in the pre-crisis period, which limits revenue growth and thus the possibilities for expenditure growth (see Figure 3). This demonstrates the need for a broader macroeconomic policy adjustment in order to strengthen the growth potential of Slovenia's economy (see also IMAD 2016a, 2016b).

The structural deficit is expected to decline gradually. It is projected to narrow from just above 2% of GDP in 2015 to 0.6% of GDP by 2019. A structurally balanced budget is planned to be achieved in 2020, at which point Slovenia would also reach its medium-term budgetary objective (MTO), according to the assessment of the SP2016.[1] The structural effort (i.e. the reduction of the structural deficit) in 2015–2019 would thus total just below 0.4 pps of GDP per year on average, or 1.5 pps for the whole period (see also Section 2.2). The envisaged adjustment is similar to that in the SP2015.

With a stable macroeconomic environment and the discretionary measures in place, general government revenue is expected to see moderate growth. It will lag behind GDP growth, on average, and will mainly arise from *growth in tax revenues and revenues from social contributions.* The increase in these revenues will stem not only from a growth in the tax and contribution bases, but also from discretionary measures related to the introduction of fiscal cash registers[2] and the immovable property tax. *Non-tax revenues*, which fluctuate significantly, will decline in the period as a whole. Despite the improved macroeconomic outlook, property income will fall over the four years to just

[1] In its opinion on the SP2016 and NPR2016, the European Commission pointed out that the MTO chosen in the SP2016 was too low and recommended that Slovenia revise the MTO for 2017–2019 in compliance with the requirement of the SGP, i.e. to +0.25% of GDP; EC (2016d).

[2] When the legal basis for the introduction of fiscal cash registers was being prepared, the effects of this measure on the increase in tax revenues (value added tax, corporate income tax and personal income tax) were estimated at EUR 75 million.

Box 1: **Macroeconomic assumptions of the medium-term consolidation plan in the SP2016**

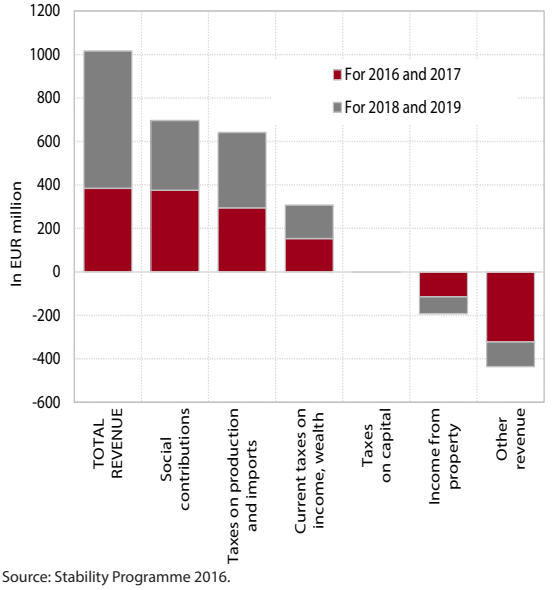
The macroeconomic scenario of the Stability Programme 2016 assumes a further recovery of economic activity. In 2015 the relatively strong GDP growth (2.9%) continued, again largely on the back of exports boosted by growth in foreign demand and a further improvement in competitiveness; amid the recovery of the labour market, private consumption also strengthened. The Spring Forecast 2016 (IMAD, 2016), which constitutes the macroeconomic framework for the fiscal consolidation plan in the SP2016, projects a continuation of the economic recovery in 2016–2019. This will be driven by further growth in exports and domestic demand. The average GDP growth over the Stability Programme horizon will amount to 2.2% in real terms. This is equal to the SP2015 assumption, but with slightly different annual growth dynamics – lower growth in 2016 and higher growth thereafter. The larger-than-projected moderation of economic growth in 2016 is mainly due to the significantly larger year-on-year decline in government investment upon the transition to the absorption of EU funds from the 2014–2020 financial perspective.

Table 2: **Macroeconomic assumptions for fiscal consolidation in the SP2015 and SP2016**

	2015	2016	2017	2018	2019
GDP in EUR m (SP2015)	38,558	39,474	40,701	42,164	43,734
GDP in EUR m (SP2016)	38,543	39,598	40,613	41,880	43,480
Nominal GDP growth, in % (SP2015)	3.5	2.4	3.1	3.6	3.7
Nominal GDP growth, in % (SP2016)	3.3	2.7	2.6	3.1	3.8
Real GDP growth, in % (SP2015)	2.4	2.0	2.1	2.2	2.2
Real GDP growth, in % (SP2016)	2.9	1.7	2.4	2.3	2.3

Source: SURS; IMAD (2015a), IMAD (2016c).

Figure 4: **Change in general government revenue in the SP2016**



Source: Stability Programme 2016.

above half the level recorded in 2015, which is related to the expected persistence of low interest rates, but may also reflect the anticipated smaller participation in companies' profits amid the continuation of the privatisation process. Fluctuations and the decline in other revenue categories are mainly related to the projections for EU fund absorption.[3]

In 2015–2019 expenditure is expected to remain unchanged, which will be achieved through an increase in primary expenditure and a similar reduction in interest expenditure. In the first years of the Stability Programme horizon, when compensation of employees, expenditure on social benefits and transfers and subsidies will increase relatively strongly owing to the relaxation of some austerity measures, investment expenditure and other expenditures, which are mainly related to the decline in capital transfers to the Bank Asset Management Company (the debt to equity swap), will decline. After the sharp fall at the beginning of the new financial perspective in 2016, *investment* will increase only slightly by the end of the programme horizon. This may be due to the increased contribution of investment to the fiscal consolidation efforts or the fact that investment projects in the medium term have not yet been specified. The projections for *employee compensation* for 2016 reflect the wage policy agreements entered into between the social partners. No agreement has yet been reached regarding the wage policy after 2016, but the SP2016 forecasts that expenditure will stagnate in 2017–2019 (see Box 2). *Social transfers and benefits* will increase the most out of all expenditure categories during the programme horizon. Regarding the SP2016 assumptions that the government is planning to retain the measures currently in place in 2018 and 2019 (see Box 2), we estimate that the

[3] Judging by previous experience regarding the absorption of EU funds and the initial delay in the absorption of funds from the new financial perspective, these projections are associated with uncertainties regarding the level and dynamics of the absorption. They are therefore likely to be changed in the next years, which may also alter the projections for some expenditure categories.

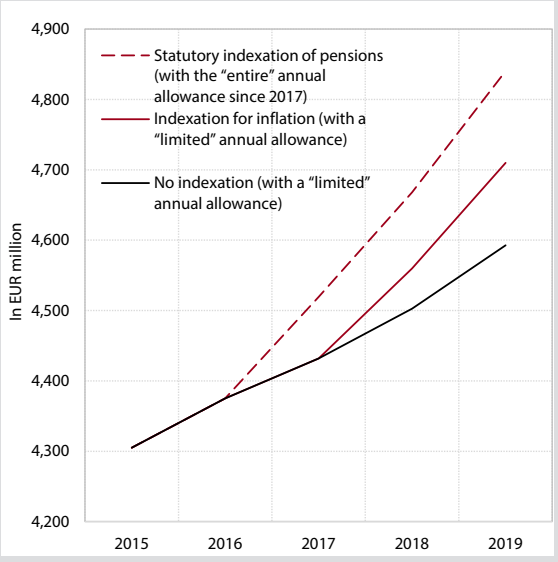
Box 2: **Risks to the deficit reduction in SP2016 projections**

The consolidation measures on the revenue and expenditure sides have not yet been specified, which poses a risk to the deficit reduction in the next two years already. Given that the increase in public sector wages and in certain social benefits and transfers have yet to be agreed, the expenditure projections are particularly uncertain. Even if compensation of employees increased only to the level proposed by the government during its negotiations with the public sector trade unions, the deficit would persist at around 0.7% of GDP at the end of the Stability Programme horizon.[1]

One of the greatest risks to deficit reduction is therefore related to the lack of clarity regarding the wage and employment policies to be adopted in the general government sector after 2016. The SP2016 projection for employee compensation takes into account the Agreement on Measures for Labour Costs and Other Measures in the Public Sector for 2016, according to which expenditure on wages and labour costs will increase by 5% in 2016. Such growth is also partly attributable to the inclusion of costs for managing migration and refugee flows. In 2017 this expenditure category is expected to increase by 2.6%, but only due to the easing of wage policy measures for 2016 towards the end of that year. Beyond 2017, the SP2016 forecasts that employee compensation will stagnate, although the wage and employment policy measures for this period have not yet been set. These assumptions diverge from the starting points that were already presented by the government during its wage policy negotiations with the social partners, which allow for a EUR 292 million increase in employee compensation in 2017–2019.[2] These divergences indicate that the SP2016 projections are surrounded by significant risks.[3]

The government is planning to modernise the systemic legislation in order to make wage setting more flexible. Just before the crisis, a new wage system was implemented in the public sector, which led to a significant increase in the growth of wages in the first years of the crisis. The fiscal consolidation measures which had been introduced in this area and which abolished the majority of motivational wage system components were extended to continue in the following years. The mechanism for rewarding public servants was therefore suspended for several years, but the need to reward good performance led to various circumventions when seeking funding for this purpose as well as the payment of rewards via bonuses for increased workload or various wage supplements. The retention of the existing measures therefore does not constitute a sustainable and high-quality wage policy. The draft acts that are currently under public discussion[4] are aimed at increasing wage-setting flexibility on the basis of the work results and the elimination of automatic wage setting mechanisms.

Figure 5: **Simulations of pension expenditure related to different forms of indexation**



Source: ZPIZ, for 2016–2019, simulations by IMAD.

[1] According to the SP2016, the general government deficit would hover around 1.8% of GDP in 2017–2019 under the no-policy change scenario. The bulk of the additional deficit with regard to the baseline scenario would be due to expenditure on employee compensation, intermediate consumption and social benefits.

[2] The government set the ceiling for growth in employee compensation for 2017–2019 on the basis of a formula incorporating a 1.5 percentage point lag behind nominal GDP growth according to the Spring Forecast by IMAD (MPA, 2016).

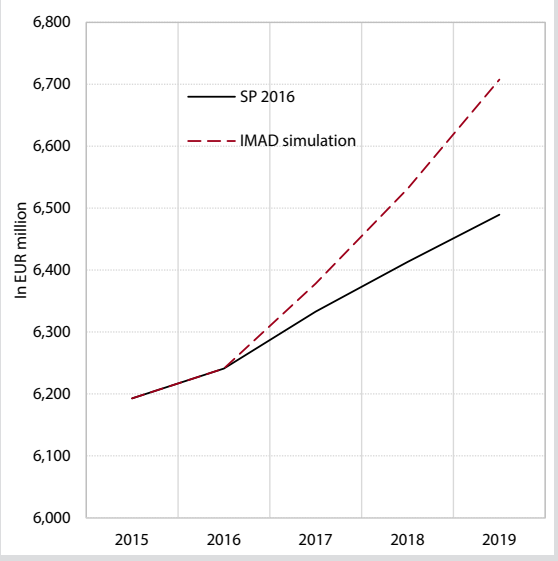
[3] If all the frozen wage policy items were released in 2017–2019 as suggested by the unions, employee compensation would increase even more during this period (EUR 457 million).

[4] The drafts of the Act Amending the Salary System in the Public Sector Act (EVA 2015–3130–0016) and Civil Servants Act (EVA 2015–3130–0017).

The risks also relate to the projections of social benefits and transfers. The SP2016 projections for 2018 and 2019 of the growth in social benefits, the bulk of which are pensions, reflect only the growing number of pensioners and not the regular pension adjustments (although the relevant legislative amendments have not yet entered into force). Simulations show that, with the full indexation of pensions according to the ZPIZ-2 and the payment of the entire annual pension allowance, pension expenditure growth would come close to 4% at the end of the programme horizon, which would also mean a stronger growth in social transfers than envisaged in the SP2016. Calculations by IMAD and PDII show that this could lead to a renewed increase in the state budget transfer to the PDII at a time when Slovenia's budget should be balanced.

The SP2016 projections are also associated with other risks. Owing to the uncertain amount of debt write-offs, debt-to-equity swaps and real estate transactions, which will continue to be carried out by the BAMC in the years to come, the level of expenditure arising from these activities is also uncertain under the current accounting methodology. This is also the reason for the uncertainty regarding the decline in the category of "other expenditures." This category records the second largest decline over the programme horizon, particularly in its early years, and only lags behind the decline in gross fixed capital formation. These uncertainties had already materialised in 2015, when the final effect of the BAMC transactions was significantly greater than expected.[5] On the other hand, we believe that the risks related to the possible shortening of the period of low global interest rates (one of the consolidation strategy assumptions on the expenditure side) have declined in the past year; this is due to the ECB's additional assurances that interest rates will remain low for an extended period of time. The risks on the revenue side are estimated to be less pronounced than on the expenditure side. They are related to the last year of the programme horizon and an increase in tax revenues owing to the revision of property taxation, for which legislative changes are being prepared.

Figure 6: **Risks to expenditure projections for social benefits, which arise from unclear policies regarding pensions and transfers to individuals and households**

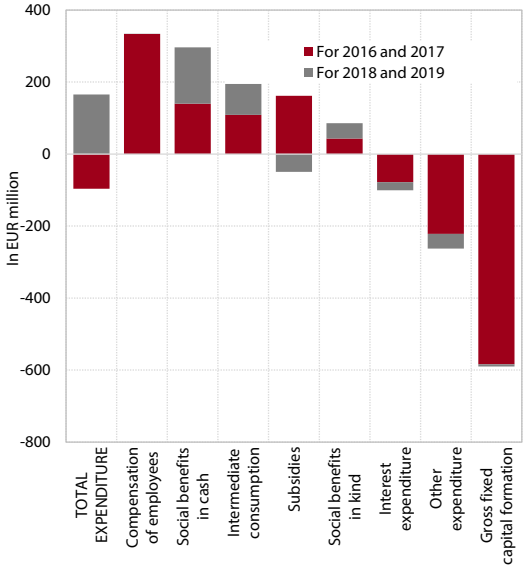


Source: Stability Programme 2016; simulations by IMAD.
Note: The IMAD simulation assumes the full indexation of pensions from 2017 onwards, an increase in the annual pension allowance to the level before the reduction and modest growth in family benefits, but a decline in some cyclical expenditures (transfers to the unemployed).

[5] The SP2016 otherwise states that if the government deems it necessary to ensure an appropriate level of general government expenditure and compliance with the fiscal rule and the Stability and Growth Pact, it will use a single tier management system within the BAMC in order to ensure that the medium-term objective of the general government is achieved. It is also examining the possibility of excluding the BAMC from the general government.

growth of this expenditure, the bulk of which comprises pension expenditure, will arise from the anticipated increase in the number of pensioners and also from rising expenditure on health services. Expenditure projections also include one-off costs associated with migrants/refugees transiting through Slovenia (0.1% of GDP), for which Slovenia would like to enforce the exceptional derogation clause in calculating the structural effort in 2016. These costs also partially contribute to the faster growth of *intermediate consumption expenditure* in 2016. After 2016 the growth in this expenditure category will slow significantly, to historical lows, but the measures for this to be achieved remain unclear. Additional measures are also envisaged for the transformation of *subsidies* into refundable grants. Despite these measures, which have yet to be specified, expenditure on subsidies is projected to increase relatively strongly, particularly at the beginning of the programme horizon. *Interest expenditure will* decline, largely owing to the expected maturing of bonds with high interest rates in 2016 and 2017.[4] These projections do not yet reflect the debt restructuring activities that have been carried out since the SP2016 was adopted, which could lead to an even larger decrease in interest expenditure over the future years as long as other circumstances remain unchanged.[5] Although this cannot entirely offset the risk related to the projections for some other expenditures, it has a certain mitigating effect.

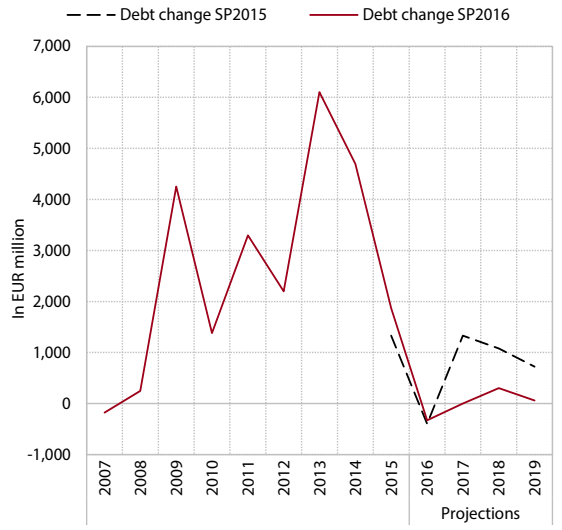
Figure 7: **Change in general government expenditure in the SP2016**



Source: Stability Programme 2016.

According to the SP2016 projections, the general government debt will remain at around EUR 32 billion over the entire projection horizon. A nominal decline is projected only for 2016, when owing to the pre-financing in 2015 the debt will decrease by around EUR 300 million. The debt-to-GDP ratio will fall from 83.2% in 2015 to 73.8% in 2019 and 70.8% in 2020. This significantly faster decline in the debt-to-GDP ratio than that which was assumed in the Stability Programme 2015 (which envisages a 3.4 percentage point decline in GDP in four years) is also due to pre-financing carried out under favourable borrowing conditions.

Figure 8: **Annual changes in the consolidated general government debt in the SP2015 and the SP2016**



Source: Stability Programme 2015, Stability Programme 2016.

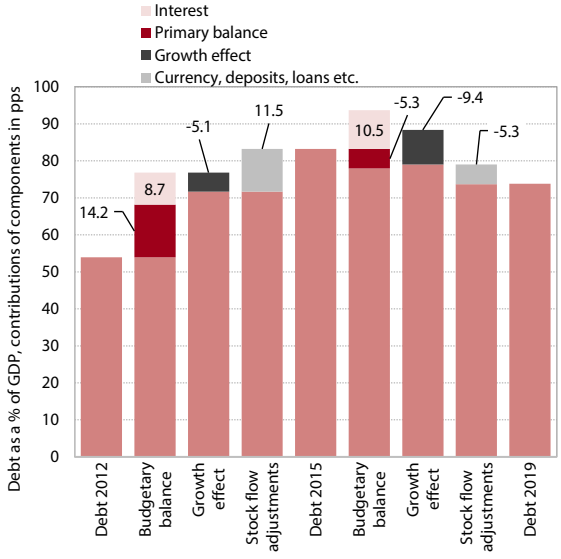
Positive contributions to the decline in the debt-to-GDP ratio will come from the primary surplus and GDP growth, but GDP growth will not be sufficient in itself to entirely offset the negative impact of interest expenditure. The breakdown of contributions to the debt change (see Figure 9) shows a shift towards a more favourable contribution by the primary balance over the projection horizon when compared with previous years; the contribution of economic growth will also be more favourable. Owing to the debt increase in recent years, the average annual contribution of interest will remain almost unchanged despite the lowering of the implicit interest rate and favourable borrowing terms. Owing to the partial use of funds obtained by pre-financing, other factors, i.e. stock-flow adjustments, would also play a role in reducing debt over the projection horizon,

[4] In 2016 around EUR 2.7 billion in bonds with an approximately 4.4% average interest rate will fall due; in 2017 around EUR 800 million in bonds will fall due with an average interest rate of around 3.5%.

[5] In an attempt to find ways to alleviate the burden of interest expenditure, in May 2016 the Ministry of Finance made a partial buyback offer for three bonds (in the amount of just over EUR 1 billion) issued in USD in 2012–2014 with high coupon rates, which – the only among the currently issued RS bonds – carry coupon rates higher than 5% (5.25%, 5.5% and 5.85% respectively). The debt will nevertheless remain unchanged, as the buyback was financed by two additional issues of the existing bonds with coupon rates of around 2.2%. As a result of these two transactions, interest expenditure will decline, but this was not taken into account in the SP2016 projections. According to IMAD estimates, the total savings of this transaction could amount to around EUR 30 million per year (the difference between the costs of interest on the repurchased debt and the annual interest on the additionally issued bonds) over the SP2016 horizon.

contributing a total of around 5 pps of GDP. Given the rapid debt accumulation in Slovenia during the crisis, simulations indicate that the debt-to-GDP ratio would decline more slowly than on average in other advanced economies (IMF, 2016) – even if GDP increased faster in real terms than expected in the Spring Forecast 2016 (IMAD). Analyses show that, in advanced economies, approximately 1 percentage point of additional real GDP growth would be needed during the next 10 years, on average, in order for the debt-to-GDP ratio to return to its pre-crisis level. In Slovenia, GDP growth that is 1 percentage point higher than assumed in the baseline scenario would reduce the share of general government debt to around 50% of GDP by 2026. However, a significantly higher additional growth would be required in order to bring the debt-to-GDP ratio to its pre-crisis level.[6]

Figure 9: **Breakdown of debt change in 2012–2019**



Source: Stability Programme 2016; calculations by IMAD.
Note: The figure shows debt, its changes and components that contribute to changes between years. The contributions of individual components to the change of debt between two years are shown in pps. The stock flow adjustments represent the adjustment of debt for deficit.

Medium- and long-term analyses reveal the risk to general government debt sustainability. The short-term sustainability of Slovenia's debt is not in question, which is also indicated by the values of the S0 indicator[7] calculated by the European Commission. However, both the European Commission and IMAD debt sustainability analyses (see Box 3) reveal risks to medium- and long-term debt sustainability,[8] which arise from the high debt incurred, pressures related to population ageing, and potential changes in other factors that may affect the level of debt.

The possibility of guarantees and sureties being called represents another risk to the debt increase. Although the number of government guarantees and sureties that have been called in recent years is low, this could change if there is a prolonged period of relatively low economic growth and low inflation. At the end of 2015 the stock of guaranties and sureties granted by the RS amounted to EUR 7.1 billion (18.3% of GDP), which is EUR 1.2 billion less than at the end of 2014.[9] The increase during the crisis – at the end of 2008, guarantees and sureties totalled around EUR 4.7 billion (12.4% of GDP) – was almost entirely due to the guarantees and sureties extended for the purpose of containing the effects of the financial crisis, while the stock of usual guarantees and sureties contracted by EUR 200 million between the end of 2008 and the end of 2015. Around 80% of all guarantees were given to domestic entities. Most of the guarantees (just over one-third) were extended to the transportation and storage sector, primarily DARS d.d., and around one-fifth to the financial and insurance sector, particularly the BAMC. The remaining one-fifth mainly involves guarantees to foreign international institutions, especially the EFSF,[10] the programme that provided assistance to euro area countries during the most recent crisis. In this regard, Slovenia has already drawn attention to its above-average level of exposure. The search for solutions to this issue will come to the fore in the future, with a possible restructuring of Greece's debt.[11]

[6] Bringing the debt-to-GDP ratio to the pre-crisis level (i.e. to around 25% of GDP) in 2026 would take average GDP growth as much as 3.5 pps higher. Our calculations are made using similar assumptions to those of the IMF (2016). For the period until 2019, the figures from the IMAD Spring Forecast 2016 (IMAD, 2016c) and data on general government expenditure from the SP2016 projections were used; beyond 2019 it is assumed that the implicit interest rate and nominal GDP growth will remain at their 2019 levels. Expenditure thus follows this assumption for nominal GDP growth, while revenue follows the nominal growth, which is determined by the additional real growth according to the scenario. In the higher-growth scenario we assumed elasticities to the additional real GDP growth of 1 for revenue and 0 for expenditure. The interest rates remain unchanged in the higher-growth scenario.

[7] The S0 indicator is designed for the early detection of fiscal stress and relies on several indicators related to short-term fiscal trends and financial indicators.

[8] The results of a long-term debt sustainability analysis by the European Commission (presented in the form of the S2 indicator) are largely based on the costs of population ageing (for more see EC, 2015a; EC, 2016b; and Appendix to Chapter II). Debt Sustainability Analysis (DSA) represents the medium-term response of debt to the usual and standardised macroeconomic shocks (see Box 3).

[9] The highest stock of guarantees was recorded at the end of 2013 (EUR 8.3 billion or 23.0% of GDP).

[10] The European Financial Stability Mechanism or its successor, the European Stability Mechanism, two funds which are intended for the provision of assistance to euro area countries in financial distress.

[11] At the Eurogroup meeting on 9 May 2016, Slovenia pointed out that, according to Eurostat figures for intergovernmental lending from 21 April 2016, it had the highest exposure among euro area countries as a share of GDP (3.0% of GDP). In the discussions regarding the possible restructuring of Greece's debt, Slovenia has therefore been pressing for a more even distribution of the burden between the countries and a form of restructuring that would reduce its exposure to a default by Greece (MF, 2016a). The Eurogroup is ready to reconsider the need for additional measures for managing Greece's loans when the programme of assistance to Greece concludes (MF, 2016b).

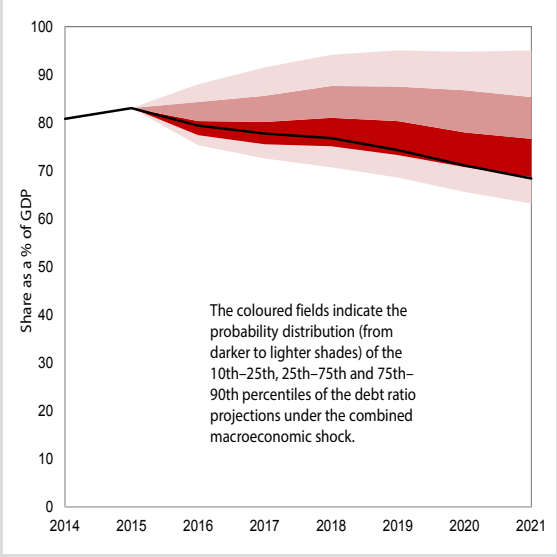
Box 3: **Analysis of general government debt sustainability and its assumptions**

A debt sustainability analysis shows a country's capacity to finance its liabilities, which also arise from its past and future fiscal policy orientations. The framework for the debt sustainability analysis developed by the International Monetary Fund[1] consists of a baseline scenario which relies on macroeconomic projections and alternative scenarios that show debt vulnerability to different shocks. The responsiveness of, or changes to, the dynamics and level of general government debt show a country's vulnerability to various shocks that are not included in the baseline scenario; in reality, the actual shocks may differ in terms of direction and size from those assumed in the analysis. The results of the debt sustainability analysis must always be assessed against country-specific circumstances, including the particular features of a given country's debt, as well as its fiscal policy track record and restrictions to which fiscal policy is exposed.

Our debt sustainability analysis relies on the baseline scenario of the SP2016 and the Spring Forecast by IMAD. The framework for the analysis covers the 2016–2021 period, in which the fiscal aggregate projections for the period between the end of the SP2016 projection horizon and the end of the period analysed (2020–2021) were complemented on the basis of unit revenue and expenditure elasticities. The alternative scenario of lower real GDP growth assumes one-half standard deviation shocks to real GDP growth in 2005–2015, taking into account the elasticities of inflation and interest rates to changes in GDP and in the primary balance of 0.25 and -0.25 respectively. Under this scenario, real GDP will stagnate in 2017 and 2018 (growing at rates of almost 2.5% in the baseline scenario). The alternative scenario of deterioration in the primary balance is based on a long-term deviation and interest rate elasticity that is equal to that for the shock to real GDP. Under this scenario the total primary balance surplus in 2016–2021 is approximately half that under the baseline scenario. The interest rate shock is a standard 200 bp deviation shock applied to the interest rate from the baseline scenario.

The analysis indicates the presence of risks to debt sustainability in the medium term. The risks are asymmetrically distributed, concentrated on the high side of debt projections (see Figure 10). The upside risks to debt sustainability over the medium term mainly arise from the possibility of lower economic growth; to a lesser extent, they also stem from the deteriorated primary balance. In both cases, the level of debt could climb close to 85% of GDP in just a few years; in the event of a combined macroeconomic-fiscal shock it could rise to around 90% of GDP. In contrast, exchange rate fluctuations would pose a relatively small risk to debt sustainability, as the share of foreign currency debt is relatively low and most of it is hedged against currency risks. The interest rate shock also has no significant impact on the level of debt,[2] which is attributable to (i) the favourable primary balance dynamics in the baseline scenario, a high level of pre-financing and, consequently, relatively low needs for debt financing through new borrowing; (ii) relatively high implicit interest rates in comparison with the assumed interest rates on new borrowing; and (iii) the breakdown of debt by interest rate type, where only a small share is floating-rate debt. The relatively low sensitivity of simulation results to standardised shocks in comparison with the increase in general government debt during the crisis can be explained by the significantly higher actual shocks in the economy during the crisis (particularly bank recapitalisations).

Figure 10: **Distribution of general government debt projections**



Source: IMF, the framework for the analysis available at: https://www.imf.org/external/pubs/ft/dsa/mac.htm; calculations by IMAD.

[1] The framework for the analysis is available at: https://www.imf.org/external/pubs/ft/dsa/mac.htm.
[2] Nevertheless, in the event of a 200 bp change in the interest rate, as envisaged in the debt sustainability analysis, annual interest expenditure could increase by an average of around EUR 200 million, according to our estimates.

2 Assessment of the medium-term fiscal policy orientation

2.1 Fiscal consolidation measures

Fiscal policy has thus far addressed the consolidation challenges largely through temporary and mostly non-systemic measures. Slovenia joined the EU countries which during the crisis introduced measures to mitigate the rise in the general government deficit and to ensure its gradual reduction with a delay of several years. In 2012 Slovenia adopted a package of austerity measures that mainly affected earnings in the public administration, social benefits, material costs and public investment. These measures, which were comparable to those implemented in other EU Member States, reduced the general government deficit and restored investor confidence in the Slovenian economy at a time of high uncertainty and difficulties in tapping financial markets. However, extending these measures for several years has revealed their weaknesses, for example, a negative impact on economic activity and the undermining of other policies. An even more serious flaw to this approach is that it does not offer permanent solutions for establishing fiscal sustainability by eliminating problems at their source.

The transformation of short-term measures into systemic measures remains the main fiscal consolidation strategy of the SP2016; however, such approach is only suitable for a minor part of measures. For example, when economic growth is predominantly export-led, this is reflected in only a gradual recovery of tax revenue. Against the backdrop of a reduction in certain tax rates during the crisis, it may be appropriate to make the short-term VAT hikes permanent, which has already been done. However, for a number of other measures, especially on the expenditure side, this approach may be less appropriate. Measures which have significantly contributed to deficit-reduction in the short term but are unsustainable in the long term include, for example: the policy of linearly restricting wages and recruitment in the public sector; the linear reduction of expenditure on goods and services; the containment of expenditure growth in health care by delaying investments and regulating medicine prices; limiting growth in pension expenditure by not indexing pensions, with the population retiring too early given their life expectancy; and resolving problems related to the over fragmented local government system by limiting per capita transfers to municipalities; etc.

In our assessment, in order for fiscal policy to be oriented towards a more permanent structural adjustment and to break away from the current policy of extending temporary measures, it should focus primarily on a gradual solution to the structural and long-term problems in the following areas:

(i) Strengthening economic potential.
(ii) Restructuring revenue and expenditure to support development-oriented priorities and greater efficiency. Systemic streamlining in individual categories of general government expenditure based on an in-depth review of expenditures and a programming approach to budgetary planning that would allow for a more substantive debate on the earmarking of limited public funds to priority areas.
(iii) Reform of social protection systems and their adjustment to demographic trends (pensions, health care, long-term care).
(iv) Management of assets aimed at achieving higher returns and the consequent mitigation of risks that led to the spike in public debt in the latest crisis.
(v) Active debt management with a view to reducing the debt and interest burden, including by revenue from privatisation.

An effective institutional framework could also help Slovenia reach its fiscal objectives, but Slovenia is also lagging behind regarding the implementation of solutions in this area. The adoption of the Fiscal Rule Act in 2015 set the foundations for establishing a fiscal council for the independent monitoring of fiscal policy. In our view, one of the key reasons why the fiscal council has not yet been appointed is the solution selected. It envisages the establishment of a completely new body with relatively few members, who have to be approved by the National Assembly by a two-thirds majority. Despite the relatively broad scope of the council's tasks, members are expected to work mostly part time with the assistance of only a small support staff. The establishment of a fiscal council would also be necessary due to the institutional changes establishing a fiscal council at the EU level, which will require counterparts at the national level. The process of allocating limited public funds to priority areas would also be improved through the reform of public finance legislation. Through changes to the budgetary planning procedure, this would allow for a more substantive debate on the allocation of limited public resources to priority areas and shift the focus away from individual expenditure categories (such as wages, material costs, etc.) or budget users.

2.2 Compliance with the requirements of the preventive arm of the Stability and Growth Pact

In 2015 the general government deficit totalled 2.9% of GDP, which resulted in Slovenia exiting from the excessive deficit procedure and, therefore, from the corrective arm of the Stability and Growth Pact (SGP). In the corrective part, the main indicator of compliance with the fiscal objectives was to bring the deficit below 3% of GDP. Slovenia entered into the corrective part of the SGP and the excessive deficit procedure on the basis of the EU Council decision of December 2009. The deadline for correcting the excessive deficit was initially set for 2013, but in June that year it was extended to 2015 owing to the unexpected significant changes in the macroeconomic environment. Since 2016, Slovenia will be subject to the rules of the preventive arm of the SGP, which focus on the medium-term budgetary objective (and therefore the structural and not just the actual general government balance) and the pace of convergence towards it (see Box 4).

The indicators of compliance with the rules need to be interpreted with caution. The rules of the preventive arm of the SGP focus on indicators calculated using the estimates of potential GDP and the output gap. These estimates are, however, particularly volatile (see Box 5). The indicators of compliance with the SGP rules that rely on these estimates should therefore be interpreted with caution and complemented by the qualitative analysis.

Box 4: **Rules of the preventive part of the SGP and the Fiscal Rule Act**

The preventive arm of the SGP focuses on the attainment of the medium-term budgetary objective (MTO).[1] The MTO, which is defined as general government balance in structural terms, is based on the estimate for achieving medium-term fiscal sustainability. It is revised by the European Commission every three years[2] according to the following criteria: (i) that it provides a safety margin with respect to the deficit limit of 3% of GDP, which is based on the estimate of fluctuations in economic activity and the estimate of elasticity of the general government balance to the output gap; (ii) that it ensures sustainability or rapid convergence towards the sustainability limit, which depends on the level of general government debt and costs arising from population ageing; and (iii) that it corresponds to at least –1% of GDP. As the MTO, the highest value is set among the criteria (i)–(iii).

The Member State must achieve its MTO or, if it has not been achieved yet, ensure appropriate progress towards it. The pace of convergence, i.e. the fiscal effort, depends on the level of general government debt, the S1 indicator of medium-term fiscal sustainability[3] and the economic cycle. The structural effort is not required only in exceptionally bad times, i.e. when the economic situation is deteriorating or the output gap is estimated to be below –4%. The adjustment required increases with the improvement in the economic situation or with a higher level of debt. It can also be higher than 1 percentage point of GDP if general government debt exceeds 60% of GDP, the output gap is estimated to be greater than 1.5% while GDP growth exceeds growth in potential GDP. The normal phase of the economic cycle is interpreted as an output gap of between –1.5% and +1.5%. In this case, a structural adjustment of 0.5 pps of GDP per year is required for Member States with debt-to-GDP ratios below 60%, or greater for those with debt levels above 60% of GDP (this is conventionally understood to be at least 0.6 pps of GDP[4]).

Slovenia defined the method and timeframe for the implementation of the concept of medium-term budgetary balance in the Fiscal Rule Act. The Act provides that government budget revenues and expenditures shall be deemed balanced in the medium term, without borrowing, if the structural balance of the general government in one single year is not lower than the minimum value set in the ratified intergovernmental treaty regulating stability, coordination and governance in the economic and monetary union, while in the medium term it is close to balance or in surplus. The act stipulates that, during the period of convergence to the medium-term fiscal objective, the government budgets are regarded to be balanced in the medium term if the structural balance of the general government approaches the medium-term fiscal objective at a pace determined pursuant to the SGP, as described above.

[1] In force since 1998 – Council Regulation (EC) No. 1466/97.
[2] A Member State's MTO must be at least at the level determined by the European Commission.
[3] The S1 is one of the indicators for monitoring fiscal sustainability that are used in the EU budgetary surveillance framework (alongside the S0 and S2 indicators). The S1 is an indicator of medium-term fiscal sustainability, which shows the effort (expressed as the primary balance) required for a Member State to reach a 60% public debt-to-GDP ratio (the Maastricht Treaty reference value) by 2030. The calculation factors in the growth of ageing-related expenditure (pensions, health care and long-term care) until 2030 (EC, 2015). If the S1 is above 2.5, the country in question is deemed to be high risk.
[4] EC (2016a); Box 1.6.

In the event of structural reforms or government investment, the rules regarding the achievement of the MTO also permit some deviations from the required structural effort.[5] Through the provisions regarding a possible temporary deviation from the MTO or from the adjustment path towards it specified in the communication on flexibility within the SGP rules,[6] the European Commission sought to boost the implementation of structural reforms and government investment without jeopardising fiscal sustainability. Structural reforms and investments may otherwise impede the fulfilment of the fiscal targets in the short term; however, if they have a positive effect on economic growth, they also have a positive fiscal impact over the long term. During the period of allowed temporary deviation from the MTO, the actual general government deficit must not exceed 3% of GDP and it must be ensured that the Member State returns to its MTO within a four-year period.

Another significant indicator of fiscal sustainability under the preventive arm of the SGP is the expenditure rule.[7] It was introduced because, owing to a number of assumptions used, the estimates of the structural balance are uncertain and subject to revision, and because the deviation of the structural balance from the MTO is in fact determined precisely by expenditure since revenue usually follows general economic activity. The calculation of the appropriate rate of expenditure growth excludes some expenditure categories that cannot be influenced directly (such as interest payments, the cyclical component of unemployment benefits and spending on EU programmes financed by EU funds) and takes into account the fact that government investment may fluctuate significantly.[8] Expenditure growth must not be higher than potential GDP growth; in Member States that have yet to reach their MTO targets, it must be lowered even further, i.e. adjusted to take account of the so-called "convergence margin" that ensures compliance with the expenditure rule through appropriate structural adjustments.

The surveillance of the public finances also involves monitoring the level of general government debt. According to the rules of the Fiscal Compact,[9] the general government debt of a Member State that is in the preventive arm of the SGP must decrease by 1/20th of the gap to 60% of GDP per year on average over a three-year period. For Member States (i) which were in the excess deficit procedure on 8 November 2011,[10] (ii) which are exiting from the corrective arm of the SGP, and (iii) whose general government debt is greater than 60% of GDP, a three-year transition period applies.[11] This gives them time to adapt their structural adjustments to the level required to comply with the debt reduction rule (which demands an average annual debt reduction of 1/20th) at the end of the transition period. During the transition period, the pace of debt reduction is assessed on the basis of the progress made towards compliance with the minimum linear structural adjustment path (MLSA).[12]

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[5] A deviation that does not jeopardise medium-term sustainability is also permitted if exceptional circumstances arise. Such deviation was introduced with the Treaty on Stability, Coordination and Governance in the Economic and Monetary Union and has not been invoked thus far. The Commission indicated the possibility of using this provision for the costs associated with the increased migration flows (EC,2015b: p. 44 and EC, 2015c).

[6] Communication from the Commission COM (2015) 12 final, 13.01.2015.

[7] This does not apply for countries with better fiscal positions than the MTO.

[8] For more on this calculation see EC (2016a).

[9] The Fiscal Compact has been binding on all euro area countries since January 2013. It is part of the intergovernmental Treaty on Stability, Coordination and Governance of the Economic and Monetary Union signed in 2012 by all EU Member States except for the Czech Republic, the United Kingdom and Croatia (the latter acceded to the EU after the Treaty had been signed).

[10] When the amendments to the SGP (the "Six-Pack") were adopted.

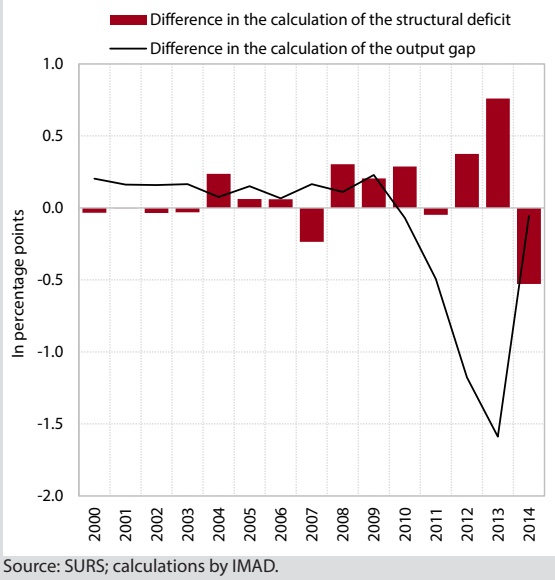
[11] A three-year transition period applies from the year in which the criteria for exiting the excessive deficit procedure have been met. Slovenia is expected to be in the transition period in 2016–2018.

[12] For the calculation of this indicator see EC (2016a). Annex 6.

Box 5: **Volatility of the estimates of the output gap and the structural balance**

The volatility of potential GDP and output gap estimates is caused by several factors. In addition to methodological changes,[1] it is mainly attributable to revised estimates of past economic growth, differences in the length of the forecast horizon and changes in the forecasts precipitated by the altered conditions and prospects in the domestic and international environments.[2] A comparison of the IMAD calculations for 2000–2014, which were made in 2014 and 2016 using the production function approach agreed at the EC level, therefore reveals significant differences in the estimates of the output gaps and structural deficits for past years, which are larger in the years towards the end of the period. With a much wider negative output gap in the more recent estimate for 2013, the structural deficit is significantly smaller, mostly owing to the new estimate of the output gap and, to a lesser extent, the revised level of the general government deficit (together by 0.8 pps). Owing to changes in forecasts, the likelihood of revisions to the output gap estimates for the coming years is all the greater, which may have a crucial impact on the assessments of the fiscal effort and on how Slovenia complies with EU rules (see Box 6). Interpreting the compliance with these rules therefore requires caution, especially as a strictly technical interpretation may lead to the adoption of short-term interventionist measures that are not substantively justified or may even prove unnecessary or harmful at a later time. What is particularly problematic about the binding balanced budget provisions of the Fiscal Compact is that a violation of such a volatile rule may ultimately trigger sanctions.

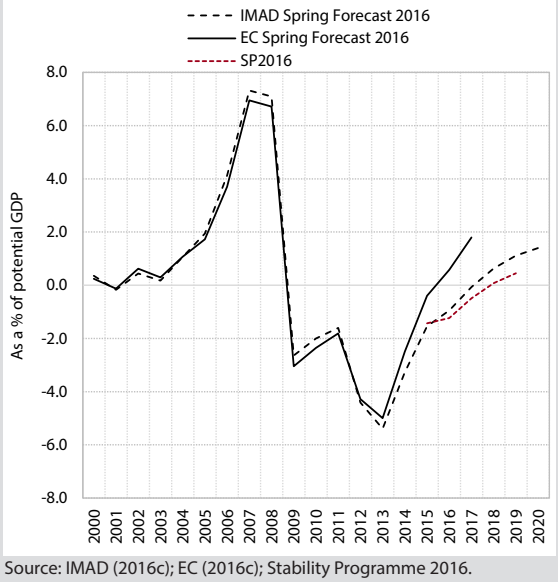
Figure 11: **Differences between the 2014 and 2016 calculations of the estimated output gap and structural deficit**



Source: SURS; calculations by IMAD.
Note: The calculation of the lower structural deficit for 2004 is largely a consequence of the revision of the actual general government deficit (SURS figure in 2014: −2.3% of GDP; SURS figure in 2016: −2.0% of GDP) and, to a lesser extent, the revision in the output gap estimate.

The impact of the different input data on disparities in the calculations of potential GDP was particularly relevant for Slovenia this year upon the transition to the preventive arm of the SGP. According to the spring forecast of the European Commission,[3] Slovenia's output gap in 2017 is estimated positive at 1.8% of potential GDP, which means that Slovenia would be in the "good phase" of the economic cycle and should provide a structural adjustment of 1 percentage point of GDP in 2017 instead of the 0.6 pps required for 2016 when it is still experiencing the "normal phase" according to the Commission's calculations. However, the Commission's calculations differ from the estimate in the Stability Programme 2016 and IMAD's calculations, which indicate that the output gap will still be negative in 2017. Given the uncertainty regarding the calculation of the output gap, several Member States, including Slovenia,[4] suggested that the output gap estimates taken into account in assessments should cover a longer forecast horizon. In its opinion on Slovenia's SP2016 and NRP2016,[5] the Commission acknowledged that the specific situation in Slovenia indeed required such an alternative approach in assessing the phase of the economic cycle. Accordingly, it changed its estimate for Slovenia for the phase of the economic cycle in 2017 and, hence, its estimate of the required fiscal effort from 1.0 to 0.6 pps of GDP.

Figure 12: **Comparison of the latest output gap estimates by institution**



Source: IMAD (2016c); EC (2016c); Stability Programme 2016.

[1] For example, in 2012 we estimated the output gap using an altered production function methodology (instead of the Hodrick–Prescott filter we used a bivariate Kalman filter), which changed the output gap estimates for the entire period since 2000 (for more details, see IMAD, 2012, p. 19).
[2] For more on the volatility and output gap estimates and its implications for fiscal policy see IMAD, 2015b, pp 13–17.
[3] EC (2016c).
[4] See MF (2016c) and the Initiative of Member States to the European Commission (2016).
[5] EC (2016).

The overview of the three indicators of compliance with the preventive arm of the SGP by year does not provide for uniform conclusions regarding the compliance of fiscal policy with SGP rules over the medium term:

- ***Fiscal effort:*** According to SP2016 calculations, corroborated by the latest calculations by IMAD (see also Box 5), in 2016–2019 Slovenia will be in the normal phase of the economic cycle according to SGP rules (an output gap of ±1.5%) and among Member States with debt-to-GDP ratios above 60%. This means that it will be required to reduce its structural deficit by at least 0.6 pps of GDP per year. In the Stability Programme 2016, this is envisaged only for 2016. In the years that follow, the fiscal effort (taking into account the current calculations of the output gap and the structural deficit) is expected to be lower than required both in a single year and on average in two consecutive years, which is also monitored (see Box 6).[12] Deviations are not significant, except in 2018. Throughout the entire period, the planned structural deficit complies with the minimum benchmark, which under normal cyclical conditions ensures that the actual deficit remains below 3% of GDP.[13]

- ***The expenditure rule:*** The expenditure rule indicates a risk of significant deviations, particularly in 2016 and 2017, while expenditure growth in 2018 and 2019 is below, but very close to, the level of growth permitted. The possibility of non-compliance with the expenditure rule is also indicated for the cumulative two-year indicators, except for 2019, but the assumptions regarding the expenditure projections in the SP2016 for 2019 are fraught with significant risks (see Box 2).

- ***The transitional debt rule:*** With regard to debt reductions, special transitional arrangements apply for Slovenia in the three-year transition period of 2016–2018 following the abrogation of the excessive deficit procedure (see Box 4). According to the transitional debt rule (the MLSA indicator), the structural adjustment[14] will be appropriate in 2016, but not in the remaining two years of the transition period, when the deviation will increase (see Box 6).

According to IMAD's estimates, under the assumptions in the SP2016 regarding the output gap and the structural deficit, the fiscal policy would comply with the requirements of the preventive arm of the SGP at the beginning of the programme period, but the risks of deviations increase towards the end of the SP2016 horizon,[15] particularly considering that a significant portion of measures that significantly contribute to fiscal consolidation according to the SP2016 projections have yet to be defined. This demonstrates the need for a better definition or formulation of measures that will provide for a sustainable reduction in the general government deficit over the medium term.

The estimates of the state of public finances may be affected by changes to the output gap estimates; however, the currently established deviations point to significant risks regarding compliance with SGP rules. The output gap estimates by the MF, IMAD and EC for the next two years have been revised by between –0.9 and 0.7 pps in the last two years. With the given elasticities of the cyclical part of the balance to the output gap, such changes may alter the estimate of the structural balance by between –0.5 and 0.4 pps, which is still within the range of deviations permitted by the SGP. The estimate of compliance with the expenditure rule (which also takes into account potential GDP growth) can also change, but it is less volatile as it covers a longer horizon. This means that caution is required when interpreting the estimates of the size of deviations currently indicated on the basis of the SP2016 assessment. Nevertheless, they represent a signal to economic policy that significant risks of non-compliance with the SGP rules exist in the medium term, and indicate a timeframe for the adoption of appropriate measures. At the same time, they also suggest that these risks could be significantly reduced or eliminated by front-loading the measures.

[12] The structural effort is not expected to be reached, even taking into account the exception due to the costs related to migration flows invoked by Slovenia in the SP2016. The EC will be able to take these requirements fully into account only in 2017 when the ex-post assessment of the structural effort in 2016 will be made on the basis of the actual outturn figures.

[13] The minimum benchmark (the threshold value for the structural deficit) is 1.7% of GDP in 2016 and 1.4% of GDP in 2017–2019 (EC, 2016a, Annex 2).

[14] In calculating the MLSA, the stock-flow adjustment (an adjustment of debt for deficit) plays a significant role. As this figure is not available in the SP2016, we assumed that it would be equal to the entire difference between the estimated debt change and the deficit size. The difference between the deficit reduction and the cumulative deficit in 2016 and 2017 amounts to around EUR 1.8 billion. This assumption neglects the effect of growth on debt change, but is consistent with the pre-financing of the future borrowing requirements in previous years and hence the high short-term liquidity buffer of the general government. If debt is not adjusted for the deficit, the required cumulative structural adjustment in 2016–2018 totals 2.5 pps instead of 1.5 pps.

[15] The Commission's standard procedure in assessing Stability Programmes covers only the years t (the year of Stability Programme Amendments) and t+1. For a more medium-term perspective and based on data availability, we included the years t+2 and t+3 in our analysis.

Box 6: **Rules on deviations from the requirements under the preventive arm of the Stability and Growth Pact**

The European Commission assesses deviations from the requirements under the preventive arm of the SGP according to the standard procedure and, if necessary, triggers procedures for their correction.[1] Based on the size of deviations,[2] the Commission decides whether they require a special treatment or, if they are significant, represent a basis for an assessment of high risk of non-compliance with the requirements under the preventive arm in the case of an ex-ante assessment based on projections (Stability Programme, Convergence Programme, Draft Budgetary Plans), or for launching a significant deviation procedure (SDP)[3] in the case of an ex-post assessment.

The key factors in assessing deviations from the requirements under the preventive arm of the SGP are the achievement of the MTO and compliance with the expenditure rule. The Member State that is not at its MTO is assessed to be in significant deviation if the deviation from the required structural adjustment exceeds 0.5% of GDP in one year or 0.25% of GDP on average over two consecutive years. Similarly, regarding expenditure, the Member State is in significant deviation if its expenditure exceeds the expenditure benchmark by more than 0.5% of GDP in one year or more than 0.5% of GDP cumulatively over two consecutive years. The compliance with the expenditure rule is less strict for those Member States that have achieved or exceeded their MTOs or for those where expenditure increased in excess owing to extraordinary events beyond their control.

The conclusion that there is a significant deviation or a risk of a significant deviation is reached if at least one of the two indicators significantly diverges from the required values on an ex-post basis. Only in this case can a significant deviation procedure be launched.[4] Before reaching the final conclusion on triggering the procedure, the Commission analyses a wider set of indicators, especially the factors that have led to the deviation from the MTO or the expenditure rule, paying particular attention to cases when only one of the two indicators diverges from the requirements. In the transition period, compliance with the required debt adjustment is assessed on an ex-post and ex-ante basis, but the significant deviation procedure can be launched only on the basis of ex-post data.

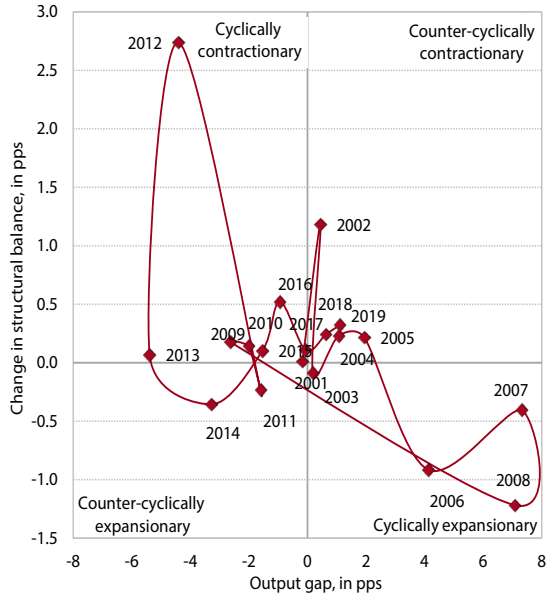
An excessive deficit procedure can also be launched against a Member State that is in the preventive arm of the SGP. This occurs if its deficit exceeds the 3% of GDP threshold or if the debt is above 60% of GDP and not diminishing at the required dynamics. Member States that have exited from the corrective arm of the SGP are granted a transition period, during which time they are required to make sufficient progress to ensure an average debt reduction of 1/20th of the difference to the 60% threshold per year by the end of this period. The extent of this structural adjustment is determined by MLSA indicators. The deviations from the required MLSA (minimum linear structural adjustment) can amount to: (i) 0.25% of GDP at the annual level, where (ii) the remaining annual structural adjustment should not exceed 0.75% of GDP (if it does, this condition does not apply).

[1] The requirement for this assessment is specified in Council Regulation (EU) No. 1466/97.
[2] The Commission ranks the Member State in question into one of the following categories: (i) there are no deviations; (ii) there are some deviations (this category includes all deviations that are not significant); and (iii) there are significant deviations.
[3] This starts with the Commission's warning to the Member State in question and may, ultimately, also involve sanctions in the form of an interest-bearing deposit of up to 0.2% of GDP.
[4] EC (2016a): Table 1.2, p. 56.

2.3 Alternative indicators to assess the fiscal position and the fiscal stance

Over the next few years fiscal policy will be relatively neutral in terms of its relation to the economic cycle. After a severe deterioration of the fiscal position in 2008, when fiscal policy was strongly cyclical and expansionary, its stance was fairly neutral in the three years that followed. In 2012, against the backdrop of a significant decrease in the deficit, fiscal policy became strongly contractionary and acted cyclically given the wider negative output gap. This fiscal policy stance was determined by fiscal restrictions associated with Slovenia's commitments under the excessive deficit procedure and very limited access to financing. It was practically impossible to take a substantially different fiscal policy stance during this period. In contrast to these circumstances and taking the latest output gap calculations by IMAD into account, the deficit reduction envisaged in the SP2016 indicates that over the next medium-term period fiscal policy will be much more neutral in terms of its relation to the economic cycle than in most years of the economic crisis (see Figure 13).[16]

Figure 13: **Assessment of the cyclical stance of fiscal policy**



Source: Output gap according to IMAD's calculations; IMAD's calculation of the structural balance, on the basis of SP2016 projections.

Additional indicators to assess the fiscal position (other than those prescribed by the SGP) show a slightly more favourable picture, but also provide no uniform conclusions on fiscal policy compliance with the SGP rules over the 2016 Stability Programme horizon. Significant deviations from the reference values are observed only for some indicators related to meeting the MTO, while there are no deviations (or no significant deviations) with regard to compliance with the adjusted expenditure rule and the debt rule.

- Fiscal effort: The complementary assessments of the structural effort do not give unequivocal results. On the basis of the production function and the Hodrick–Prescott filter, according to IMAD's estimate,[17] the fiscal effort is even smaller than that according to the SP2016 projections. The fiscal effort, assessed without taking into account the estimate of potential GDP[18] is sufficient in 2016 and 2017.
- We also assessed expenditure according to the proposal of an adjusted expenditure rule,[19] which, in contrast to the expenditure rule in the SGP, measures nominal expenditure and is therefore not based on the forecast GDP deflator. It also excludes any one-off effects and includes debt level correction.[20] This expenditure indicator shows a very small deviation from the reference values in 2016 and 2017, and significantly less growth in general government expenditure and a larger downward deviation from the expenditure growth limit benchmarked by the proposed rule in the years towards the end of the SP2016 programme horizon. In contrast to the SGP indicator, no significant deviations are observed, even at the beginning of the SP2016 horizon.
- The rule regarding gradual reduction in general government debt, which will begin to apply for Slovenia only after a 3-year transition period, would be met. The average debt reduction (–2.4 pps of GDP) is more than twice the reduction required (around –1.2 pps of GDP; a 1/20th annual reduction of the difference to the 60% of GDP threshold value). However, if the indicator for the average debt change over three years is taken into account, the rate of debt reduction deviates from the rate required in 2016, or is just at the threshold value in 2017, as a result of debt increases in 2014 and 2015.

In this case neither, can the assessment of the fiscal policy stance in the period that follows be based solely on an interpretation **of the technical calculations of the additional indicators.** They must be complemented by a qualitative analysis of measures that ensure a deficit reduction over the medium term (see Box 2 and section 2.1). However, this analysis reveals that the projected improvement in the actual balance is actually based on assumptions on measures that remain unspecified or are even unsustainable in the long term, as they rely on extension of the current temporary measures. This may also pose a risk to a further reduction in the actual and structural balances, even in years when the complementary indicators reveal no significant deviations.

[16] According to an IMF analysis (2016; p. 17), Slovenia is among the countries with a rising debt level and limited room for a counter-cyclical fiscal policy during recession in terms of fiscal space indictors or the extent of its sustainable expansionary fiscal policy.

[17] In both cases, potential GDP projections take into account the IMAD's estimates and fiscal projections in the SP2016.

[18] Determined on the basis of 5-year GDP averages.

[19] Claeys, Darvas and Leandro (2016).

[20] In calculating the adjusted expenditure rule we also took into account: (i) the proposed correction for the transition period, during which the general government deficit exceeds 2% of GDP (the permitted expenditure growth is reduced by 0.5 pps); and (ii) excessive debt correction (the allowed maximum expenditure growth is reduced by 0.02 times the difference between the debt level in the previous year and the 60% of GDP debt criterion).

Appendix I: Compliance with the requirements of the preventive arm of the Stability and Growth Pact and additional indicators

Table 1: **Compliance with the requirements under the preventive arm of the SGP in the Stability Programme 2016 horizon**

	2015	2016	2017	2018	2019	Note/Source
General government balance	-2.9	-2.2	-1.6	-1.0	-0.4	SURS; SP 2016
Primary balance	0.0	0.7	1.0	1.5	2.0	SURS; SP 2016
MTO	0.0	0.0	0.0	0.0	0.0	SP 2016
Structural balance	-2.1	-1.5	-1.3	-1.0	-0.6	SP 2016
Structural primary balance	0.9	1.4	1.3	1.5	1.8	SP 2016, IMAD calculation
General government debt	83.2	80.2	78.2	76.5	73.8	SURS; SP 2016
Adjustment towards the MTO						
Structural effort	-0.5	0.6	0.2	0.3	0.4	SP 2016
Required fiscal effort		0.6	0.6	0.6	0.6	SGP
Deviation		0.0	-0.4	-0.3	-0.2	
Structural effort (2 years)		0.05	0.4	0.25	0.35	SP 2016
Required structural effort (2 years)		0.6	0.6	0.6	0.6	SGP
Deviation		-0.55	-0.2	-0.35	-0.25	
Minimum required structural balance (MB)		-1.7	-1.4	-1.4	-1.4	SGPR (Vade mecum 2016)
Difference between the structural balance and the MB		0.2	0.1	0.4	0.8	
Expenditure rule						
Expenditure growth (real)	0.4	2.8	1.6	-1.1	-1.7	SP 2016, IMAD calculation
Threshold growth in general government expenditure (real)	0.5	-0.7	-0.8	-0.8	-0.8	SPR
Deviation (as a % of GDP)	0.0	1.4	1.0	-0.1	-0.3	SP 2016, IMAD calculation
Cumulative two-year deviation (as a % of GDP)	-13.8	1.4	2.4	0.9	-0.4	SP 2016, IMAD calculation
Compliance with the debt rule						
Debt measures in the transition period:						
Baseline scenario (constant structural balance)		80.5	81.8	82.5		SP 2016, IMAD calculation
- cyclically adjusted debt				77.5		SP 2016, IMAD calculation
- ex-post measure of debt				78.5		SP 2016, IMAD calculation
- ex-ante measure of debt (two years)				74.5		SP 2016, IMAD calculation
The required structural adjustment with regard to:						
- cyclically adjusted debt		0.8	0.5	0.9		SP 2016, IMAD calculation
- ex-post measure of debt		0.6	0.9	1.1		SP 2016, IMAD calculation
- ex-ante measure of debt (two years)		0.6	0.9	1.2		SP 2016, IMAD calculation
MLSA		0.6	0.5	0.9		SP 2016, IMAD calculation
Deviation of the structural adjustment		0.0	-0.3	-0.6		SP 2016, IMAD calculation
memo:						
Output gap	-1.4	-1.2	-0.5	0.1	0.5	SP 2016
Output gap	-4.0	0.6	1.8			EC, Spring forecasts 2016
Output gap	-1.5	-1.0	-0.1	0.6	1.1	IMAD
Output gap	-2.4	-1.9	-1.7	-1.2	0.0	IMAD-HP

Source: IMAD.

Table 2: **Risks to the compliance with the requirements of the SGP**

	2015	2016	2017	2018
		Preventive arm of the SGP		
General government deficit	YES	YES	YES	YES
Medium-term budgetary objective		NO	NO	NO
Structural adjustment		YES	NO+	NO-
Expenditure rule		NO-	NO-	YES
Debt reduction		NO+	NO+	NO-

Source: IMAD.
Note: YES: the SGP rule is met; NO+: the rule is not met, no significant deviation; NO–: the rule is not met, significant deviation.

Table 3: **Alternative indicators of the fiscal stance**

	2015	2016	2017	2018	2019	Notes/Source
MTO						
Structural balance	-2.1	-1.6	-1.5	-1.3	-1.0	IMAD
Structural effort	0.1	0.5	0.1	0.2	0.3	IMAD
Structural effort (2 years)	0.1	0.3	0.3	0.2	0.3	IMAD
Structural balance	-1.7	-1.1	-0.7	-0.4	-0.4	IMAD-HP
Structural effort	0.3	0.6	0.4	0.3	0.0	IMAD-HP
Structural effort (2 years)	0.2	0.5	0.5	0.4	0.1	IMAD-HP
Structural effort without the output gap estimate	0.0	1.1	0.5			IMAD, 5-year GDP average
Difference between the structural balance and the MTO		-1.3	-1.1	-0.8	-0.4	Condition for applying the clauses allowing deviations from the MTO
Expenditure rule						
Adjusted expenditure rule according to Claeys, Darvas, Leandro (2016)	2.4	1.5	2.3	-0.3	0.0	Claeys, Darvas, Leandro (2016)
Allowed adjusted expenditure growth according to Claeys, Darvas, Leandro (2016)	1.6	1.6	2.2	2.2	2.3	Claeys, Darvas, Leandro (2016)
Deviation	0.8	-0.2	0.1	-2.5	-2.3	IMAD
Expenditure according to SGP with regard to potential growth	-0.7	1.3	0.0	-2.8	-3.6	SP 2016
Expenditure according to SGP with regard to potential growth	-0.3	2.1	0.5	-1.1	-1.7	EC, Spring forecasts 2016
Expenditure according to SGP with regard to potential growth	-0.6	1.7	0.1	-2.7	-3.5	IMAD
Expenditure according to SGP with regard to potential growth	-1.6	0.6	-0.8	-3.6	-4.3	IMAD-HP
Debt						
Debt – change	2.3	-3.0	-2.0	-1.7	-2.7	SURS; SP 2016
Debt – reduction, centred, 3 years (t-1 to t+1)		-0.9	-2.2	-2.1		SP 2016; calculations by IMAD
Debt – reduction, past 3 years (t-2 to t)		3.1	-0.9	-2.2	-2.1	SP 2016; calculations by IMAD
Required debt reduction (1/20 of the surplus over 60% in t-1)		-1.2	-1.0	-0.9	-0.8	SP 2016; calculations by IMAD
Contribution of the snowball effect to debt change, of which:	0.4	0.0	0.3	-0.5	-0.7	SP 2016; calculations by IMAD
- Interest expenditure	3.0	2.9	2.6	2.5	2.4	SP 2016; calculations by IMAD
- Effect of GDP growth	-2.3	-1.9	-1.8	-1.9	-1.8	SP 2016; calculations by IMAD
- Effect of inflation	-0.3	-1.0	-0.6	-1.1	-1.2	SP 2016; calculations by IMAD
memo:						
Output gap	-1.4	-1.2	-0.5	0.1	0.5	SP 2016
Output gap	-4.0	0.6	1.8			EC, Spring forecasts 2016
Output gap	-1.5	-1.0	-0.1	0.6	1.1	IMAD
Output gap	-2.4	-1.9	-1.7	-1.2	0.0	IMAD-HP
Potential growth	1.1	1.5	1.6	1.8	1.9	SP 2016
Potential growth	0.7	0.7	1.1			EC, Spring forecasts 2016
Potential growth	1.1	1.1	1.5	1.6	1.8	IMAD
Potential growth	2.1	2.2	2.4	2.5	2.6	IMAD-HP

Source: IMAD

II Response to demographic change

Like most developed countries, Slovenia is experiencing changes in the age structure of its population. These changes include a contraction in the number of working-age people (20–64 years) and an increasing number of older people. According to EUROPOP2013 demographic projections, the process of population ageing, which is already well under way, will be more intense in Slovenia than in other EU countries. This increase in the share of older people is a trend that will continue in the decades to come, with older people estimated to account for almost one-third of the population by 2060. Although these projections are conditional on the materialisation of their key assumptions (the change in net migration and the number of births and deaths), all the demographic scenarios for Slovenia indicate that population ageing is inevitable. Its continued onset will have significant social and economic implications, which are explained in more detail in the appendix to this chapter. In the sections that follow, some possible measures to be taken in response to this issue are proposed.

Social protection systems need to be reformed as soon as possible in order to ensure their continued functioning and sustainability. It would be prudent for Slovenia to begin responding to demographic change and to adjust its social protection policy and systems as soon as possible, a process that some other countries started in the previous decade. This response requires coordinated changes to be made to many public policies. The number of indicators suggesting that demographic change is already reducing the efficiency of social protection systems is on the rise. Moreover, the fiscal sustainability assessments conducted all indicate that the rising expenditure on social protection is already affecting the sustainability of the public finances. According to the European Commission, Slovenia ranks among the countries that are a high medium-term fiscal sustainability risk and face a high fiscal sustainability risk over the long term (EC, 2015a). The experiences gained from other countries and an analysis of the situation in Slovenia show that demographic change should be addressed by measures aimed at achieving the following objectives: (i) the provision of a sufficient supply of labour; (ii) the adaptation of social protection systems; and (iii) the adjustment of housing and living environments and the education system. By assessing the effects of some possible measures, the options available to economic policy makers in formulating an effective set of measures for dealing with demographic change are presented. The effects of specific measures on the long-term fiscal sustainability indicators were also assessed, which revealed that individual measures do indeed reduce the risk to fiscal sustainability, but that long-term fiscal sustainability can only be ensured by a combination of coordinated measures in several areas.

Some of the possible measures for tackling demographic change have also been simulated by different models. We selected measures whose effectiveness had already been empirically supported in other countries, and the choice of the effects simulated was especially dependent on the intrinsic limitations of the models available. The effects of labour market reforms are usually assessed empirically through panel analyses and structural macroeconomic models, and we used DSGE[21] and various regression models for this purpose. The effects of possible pension system reforms were simulated using a microsimulation model (MSM) developed by the Institute for Economic Research (IER). The effects of the specific measures presented in the following sections were assessed separately and therefore cannot be considered cumulatively. Moreover, since the models used cannot fully capture all the changes in the economy's structure, the results of the simulation should be interpreted with caution.

1 Providing a sufficient supply of labour

The demographic changes under way are reducing the supply of labour, which could limit the possibilities for providing for and improving the welfare of the population in the future. Among the possible solutions to the dwindling labour supply, international institutions[22] point to measures that not only permit higher levels of immigration but also increase labour market participation, particularly the involvement of women and older people (of both genders), i.e. population groups that usually have lower activity rates. A comparison with other countries shows that Slovenia has below-average activity and employment rates, particularly for young and older people, which is why it would make sense to encourage these two population groups to become more involved in the labour market. Against a backdrop of higher demand for labour, the participation of young people could be increased by: (i) introducing a dual system of vocational education, which has facilitated the rapid transition of young people to employment in many other countries; (ii) matching tertiary education programmes with labour market needs; and (iii) strengthening active labour market policy schemes that make it easier for young people to find work. The employment rate of older people could be raised through (i) pension system reforms (e.g. by increasing the age and length of service required for retirement; (ii) effective lifelong learning programmes which enhance the employability of older people; and (iii) active labour market policy programmes which encourage the recruitment of older people. Empirical

[21] A dynamic stochastic general equilibrium model QUEST (D'Auria et al., 2009), which was developed by the European Commission to assess the results of structural reforms and is also used to quantify the impact of individual structural reforms from national reform programmes in the EU.

[22] EC (2014), OECD (2006), and IMF (2004).

analyses also show that labour market participation can be boosted by reducing the tax wedge on labour, i.e. the level of labour taxation. Another factor that could increase the supply of labour is a migration policy that increases net migration.

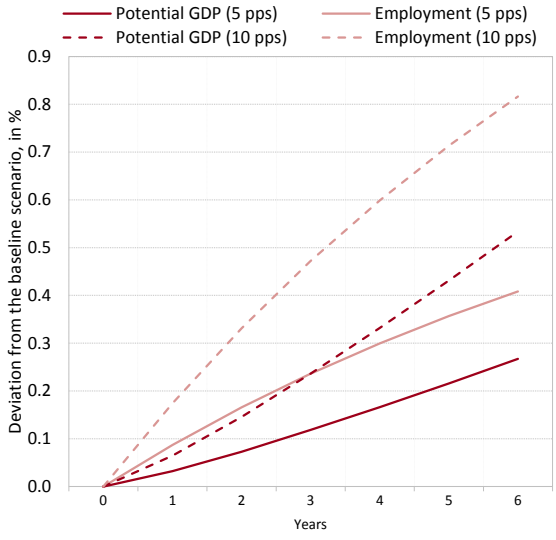
Using the model infrastructure available, we were able to simulate the effects of three possible responses to the lack of a sufficient supply of labour caused by demographic change. We assessed the effects of (i) strengthening the implementation of the active labour market policy (ALMP), focusing on education and training programmes for young and older people; (ii) cuts in the tax wedge on labour; and (iii) an increase in the positive net migration of the working-age population.

1.1 Empirical assessment of the effects of measures to increase the labour market participation of young and older people

The labour market participation of population groups can be increased through activation policy measures. Since the activity and employment rates of young (15–29 years) and older people (55–64 years) in Slovenia is low when compared with other EU Member States (see Figure 4 in the Appendix), one possible way to respond to demographic change is by formulating measures to increase the labour market participation of these two groups. Measures that could boost labour market participation, reduce unemployment and raise the employment rates of these two groups include an increase in spending on ALMP[23] and implementing the ALMP programmes more efficiently.

A positive impact on employment and economic growth was recorded in simulations where spending was increased on ALMP programmes targeted at young and older people. By increasing spending on ALMP[24] training and education programmes, we simulated the effects of activation policies not only on the employment rates of older and younger people but also on potential GDP (using the production function). We simulated 5 and 10 pp increases in spending on ALMP. Assuming a similar efficiency of measures to the average of the EU Member States[25] that are included in the analysis by Bouis and Duval (2011), these rises in ALMP spending would increase the employment rate for young people in Slovenia by around 0.5 pps and 1.1 pps respectively within a five-year period, and the employment rate for older people by 0.7 pps or 1.4 pps, depending on the increase. The next step was to convert the higher employment rates for young and older people into aggregate employment growth and, by applying the production function, growth in potential GDP.[26] The simulations show that employment would increase as soon as the first year after implementing the measure; within five years, it would be around 0.4% and 0.7% above the baseline respectively. Higher employment would also have a positive impact on GDP growth, which would be around 0.2% and 0.4% higher respectively in five years.

Figure 1: **Effect on employment and potential GDP of increasing spending on ALMP training programmes**



Source: IMAD estimates.

1.2 Assessing the effects of lowering the tax wedge on labour

Another way to stimulate employment could be by making work more attractive by lowering the tax burden on labour. The level of labour taxation (the tax wedge on labour)[27] has a significant impact not only on an individual's decision as to whether to participate in

[23] The resources allocated for active employment policy in Slovenia totalled 0.37% of GDP in 2013 (the OECD average being 0.56% of GDP).

[24] We used a variable that reflects the level of spending on ALMP training programmes per unemployed person as a share of GDP per capita. This variable is defined in analyses by Bassanini and Duval (2006) and Bouis and Duval (2011) and aims to control for the effects of a country's size and number of unemployed people, which can significantly alter international comparisons of ALMP spending levels. Since Slovenia was not included in the sample used to calculate the elasticity coefficients, these results should be interpreted with caution.

[25] The efficiency of measures expressed as the elasticity of the employment rate to the 1 pp increase in ALMP expenditure totals 0.27 pp for young and 0.35 pp for older people. The full effect of the increase on the employment rate is not immediately apparent, showing only after a longer period has elapsed. For more, see Bouis and Duval (2011).

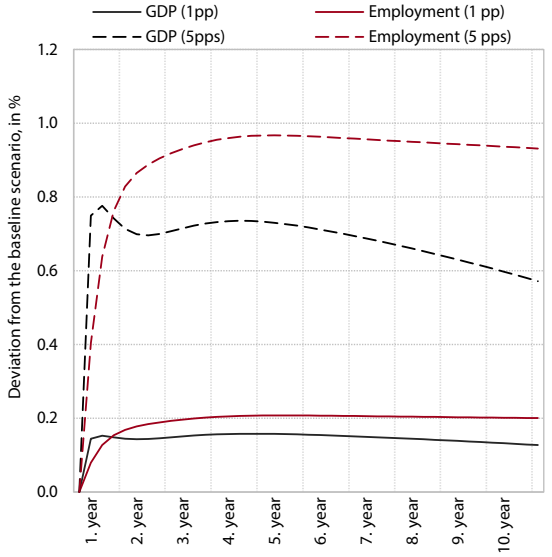
[26] Assuming that the number of working-age people remains unchanged.

[27] The tax wedge on labour is a ratio of the worker's net earnings to the employer's labour costs.

the labour market but also on an employer's decision to recruit. In 2014 the tax wedge in Slovenia totalled 42.5%,[28] which was one of the highest among the OECD countries (OECD, 2015a). Empirical studies generally show that reducing the tax wedge can have a favourable impact on employment, as it makes the prospect of work more attractive by increasing net earnings (Cahuc and Zylberberg, 2004). A measure such as this could entice individuals to return to the labour market or increase the number of hours worked by existing workers, particularly those with lower earnings.

Simulations of tax wedge cuts indicate positive effects on GDP and employment, particularly the employment of low-skilled workers. The measure of lowering the tax wedge was simulated using a DSGE model. We used 1 and 5 pp reductions as a shock and evaluated their effects on employment and GDP. The results of the simulation show that employment would increase by between approximately 0.2% and 1% within the next ten years, depending on the reduction. The employment of low-skilled people would increase the most (by between 0.2% and 1.2%), as the tax wedge cut could incentivise businesses to recruit, particularly those categories of people that are currently too expensive for the value added they create. The effect on the employment of people with upper secondary education would be slightly smaller (0.9%), while the employment of those with higher education would be up by 0.5%.[29] The model-based simulations also show a positive impact on GDP, which would increase soon after the implementation of the measure and be between 0.1% and 0.5% higher in ten years. A reduction in the tax wedge decreases general government revenue over the short term, thereby making fiscal consolidation more difficult; however, the changes can also be introduced in a fiscally neutral way amid a concomitant restriction in other expenditure categories or those that prove inefficient and do not contribute to the achievement of strategic social priorities.

Figure 2: **Effect of reducing the tax wedge on employment and GDP**



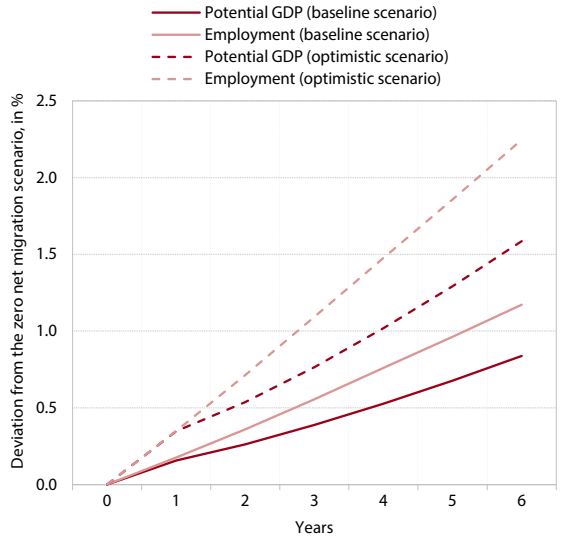
Source: IMAD estimates.

[28] For a single person earning the average wage.
[29] The different responses on employment by education group are a consequence of different elasticities of labour force demand and supply and their different shares in total employment.

1.3 Assessing the effects of higher net migration

The simulations of different assumptions for net migration indicate its importance for employment and GDP growth. The impact of the change in the number of inhabitants on employment and GDP was simulated with respect to the amount of net migration. Two net migration scenarios were selected, which were then compared with the zero net migration scenario. These two scenarios were: i) the baseline scenario (EUROPOP2013), which has not been borne out in recent years and assumes a net migration rate of 4,700 persons per year, of which 3,300 are in the age group of 15–74 years; and ii) an optimistic scenario which assumes a very high net migration rate (double that of the baseline scenario). The next step was to convert the movements of the working-age population according to these two scenarios into employment growth and, using the production function, growth in potential GDP.[30] The

Figure 3: **Effect of the movement of the number of people according to different scenarios of net migration on employment and potential GDP**



Source: IMAD estimates.

[30] In order to eliminate other factors (ceteris paribus), we assumed for the purpose of this simulation that labour market participation would remain at the initial level and that the contributions of capital and labour efficiency would remain unchanged between the scenarios. Therefore all changes in employment arise from changes in the number of working-age people.

simulations show that higher net migration would have a positive effect on GDP, which would be up by between 0.8% and 1.6% over the medium term (depending on the amount of net migration) compared with the zero net migration scenario. Employment would also rise by between 1.2% and 2.2%. The simulation of the impact of a higher labour force supply owing to higher net migration made using an IER microsimulation model also indicates a significant impact on the sustainability of the pension system. However, owing to the intrinsic assumptions of the microsimulation model that appropriately qualified foreigners will immediately find jobs, the simulations of these effects are overrated.

2 Adjusting social protection systems

Population ageing makes it increasingly difficult to finance social protection systems. The funding for the current social protection systems, which are based on the Bismarck model, mainly depends on social protection contributions paid by those in work. However, as the potential for employment growth decreases with the ageing of the population, social protection systems will have to be adjusted accordingly through the implementation of appropriate measures in the following areas: (i) expanding tax/contribution bases and thus revenue to ensure the long-term sustainability of funding; (ii) ensuring the long-term sustainability of the level of expenditure; and (ii) encouraging people to work longer, while strengthening health promotion and adjusting working conditions to older people. The following sections present some possible measures to improve long-term fiscal sustainability in the pension, health and long-term care systems.

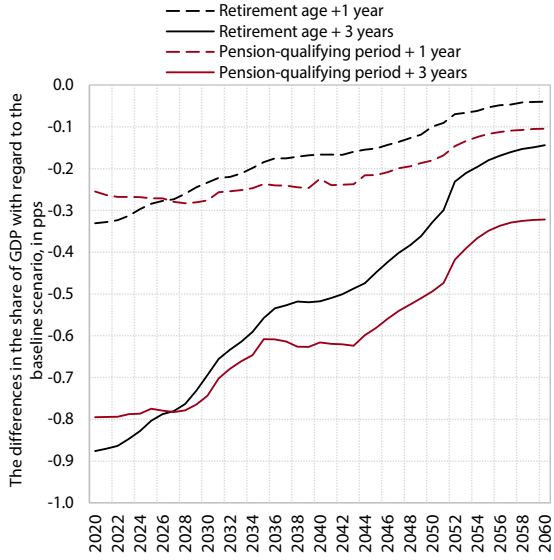
2.1 The pension system

Demographic change is deteriorating the ratio of insured persons to pensioners and, consequently, increasing expenditure on pensions amid lower sources of funding. According to European Commission projections, pension expenditure would increase from 11.8% of GDP in 2013 to 15.3% of GDP in 2060 under the no-policy change scenario (see Appendix, Figure 6). The long-term sustainability of the pension system could be improved by the following measures, or a combination thereof: raising the retirement age; lengthening the pension-qualifying period; extending the reference period for calculating the pension base; and changing the rules for pension indexation to increase the role played by consumer prices. In designing measures to increase long-term sustainability, it is however also vital to take into account the high poverty risk among the elderly and pursue the objective of ensuring decent pensions.

By simulating individual measures, we present the effects of individual changes on pension expenditure as a share of GDP. Using a microsimulation model (MSM)[31] developed by the Institute for Economic Research (IER), we simulated the effects of increases in the retirement age, the pension-qualifying period, the reference period for calculating the pension base and the adjustment of pensions for inflation.

Increases of one year in the retirement age and the pension-qualifying period have similar effects, and these are at their greatest in the first decade after implementation. When simulating the effects of a change in the retirement age, we assumed that the retirement age would increase by 1 and 3 years in 2020 and then remain unchanged until 2060. The effects on the level of expenditure in relation to GDP decrease proportionally to the increase in years and are higher at the beginning of the period. The increase in the pension-qualifying age has similar results. The effects of both measures exhibit similar trends if the number of required years is increased. Raising the retirement age and the pension-qualifying age by three years brings the largest savings in the first 15 years after implementation. In our view, this is a consequence of the deferred retirement of pensioners who would meet the criteria immediately after the change in legislation. The simulations also show that these two measures contribute to an increase in the average pension, provided that all other conditions remain unchanged.

Figure 4: **A reduction in pension expenditure as a share of GDP with increases in the retirement age and the pension-qualifying period of one and three years in 2020**

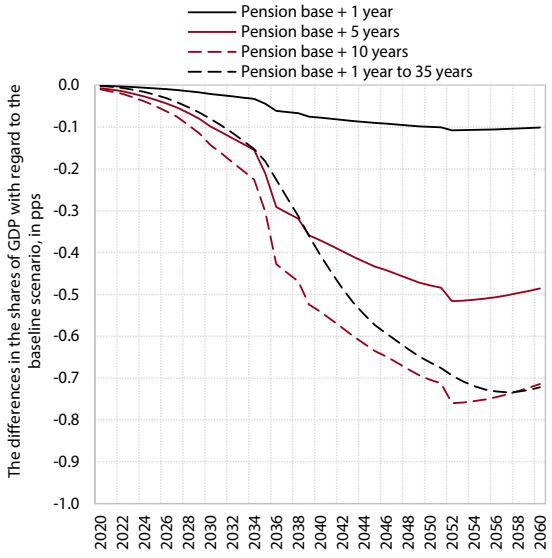


Source: SORS; IMAD simulation.

[31] The MSM variant at our disposal includes data for 2007. For more on the model, see Majcen et al. (2012).

A 10-year extension of the reference period for calculating the pension base would reduce pension expenditure relative to GDP by just under one percentage point. Four simulations were made for this measure – increases in the reference period of 1 year, 3 years and 10 years and a gradual increase of one year annually to the target of 35 years (in 2031). The effects of the simulated increases of 1 year (to 25 years) and 5 years (to 29 years) exhibited similar trends, while the effect of the 10-year extension (to 34 years) was smaller; in our estimation, this was because more pensioners do not reach this period than in previous cases and retire with the shorter period taken into account. The effects of a gradual one-year increase in the pension base are similar.

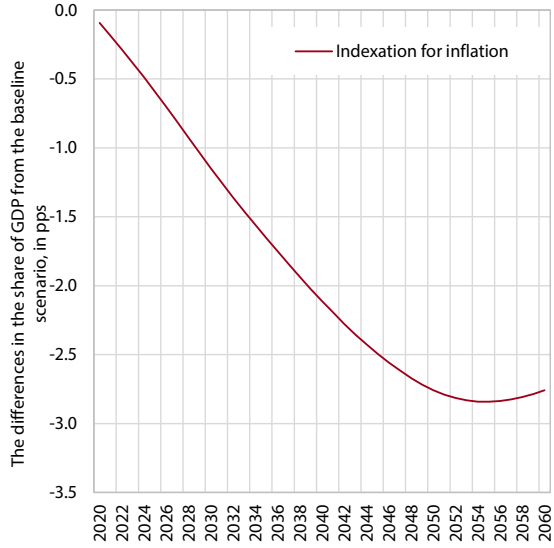
Figure 5: **A reduction in pension expenditure as a share of GDP, with the lengthening of the reference period for calculating the pension base in 2020 by one, five and ten years and a gradual extension of the reference period for calculating the pension base**



Source: SORS; IMAD simulation.

Upward pressures on expenditure can also be contained by changing the pension indexation model, tying pensions only to consumer price growth, which retains the real value of pensions. International institutions point out that if pensions are also adjusted for the growth of productivity or wages, higher productivity does not ease upward pressures on expenditure. This can be addressed by decreasing the weight of wage growth in the pension indexation formula, which nevertheless still makes it possible to retain the real value of pensions.[32] A gradual reduction in the weight of wages in the pension indexation formula, and thus a gradual transition to indexing pensions to the consumer price index in a period when other measures become less effective, also features among the possible measures detailed in the White Paper on Pensions (MDDSZ, 2016). The effect of the change in pension indexation is greater than the effects of other measures, largely due to the carryover of the effects from year to year.[33]

Figure 6: **A reduction in pension expenditure as a share of GDP with a changed pension indexation formula (adjustment for inflation), starting in 2020**



Source: SORS; IMAD simulation.

In order to improve the long-term sustainability of the pension system, it would be necessary to design a mix of different measures and incentives for people to save for old age to ensure decent pensions. Since Slovenia has one of the lowest actual retirement ages and employment rates for older people in the EU, the extension of the pension-qualifying period and the retirement age is unavoidable. However, in reforming the system, it is important to remember that the poverty risk for older people, women in particular, is higher in Slovenia than the EU average. Although IER model simulations show that these risks decrease with higher rates of employment and higher levels of education of the generations of women who will retire in the future (higher pensions), it is necessary to pursue the objective of ensuring an adequate level of pensions when reforming the pension system. Experience gained from other countries shows that ensuring income security for older people is also the responsibility of other policies (social policy, tax policy, promotion of complementary retirement saving of individuals).

[32] IMF (2015a).

[33] Owing to a smaller adjustment in the initial year, the baseline for the next adjustment is lower. The increase in expenditure in the years following is therefore smaller and the "savings" increase from year to year.

2.2 Health

Long-term projections for the health care sector indicate a rapid increase not only in health expenditure but also in the gap between revenue and expenditure. The growing needs arising from demographic and technological changes and the current system of funding reveal a gap between revenue and expenditure, which will need to be closed through the implementation of appropriate measures. To this end, it will be necessary to strike a balance between fiscal sustainability goals, access to care and the quality of the health system. Analyses undertaken and experiences gained from other countries show that the long-term sustainability of the health system can be improved through activities aimed at: (i) improvement in the health status of the population; (ii) changes in health system financing; and (iii) increasing the efficiency of the health system.

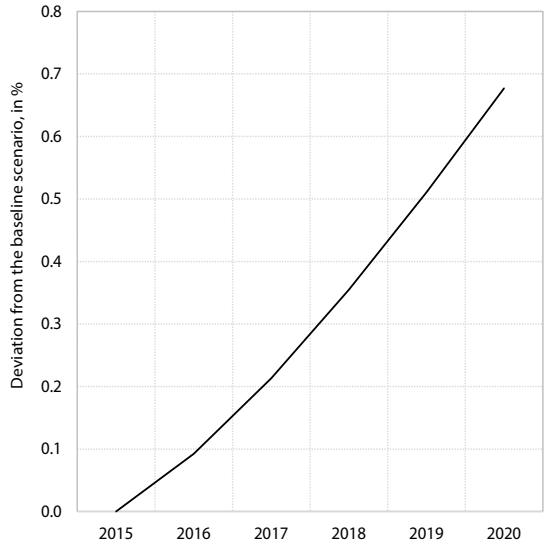
The positive effects of the measures presented on the health status of the population and cost efficiency have been supported by empirical studies. Since the direct effects on productivity and economic growth cannot be calculated for most measures, we simulated only the effect of reducing absenteeism and a possible long-term contribution of measures for increasing health system efficiency to the moderation of growth in public expenditure on health as a share of GDP. We also present some of the other measures being taken in other countries to ensure the long-term sustainability of the system and improve the health status of the population.

2.2.1 Improving the health status of the population

Measures that improve the health status of the population can significantly contribute to an increase in revenue and a slowdown in health expenditure growth. Studies[34] show that the most cost effective measures for increasing the number of healthy life years (which are also important for Slovenia, given the health status of its population) include: (i) increasing investment in public health and disease prevention measures (e.g. extending the programmes for early cancer detection and measures to reduce risky behaviours (such as raising the prices of products that are harmful to health, reducing access to these products, limiting advertising));[35] (ii) lowering health inequalities;[36] (iii) increasing safety at work and other measures to reduce absenteeism.[37]

Reducing absenteeism would make a significant contribution to productivity and economic growth. We assumed that the number of working days lost could be reduced to the OECD average through various measures to improve health status and measures to reduce absenteeism. Workers in Slovenia took 11.3 days of sick leave on average in 2014 (NIJZ, 2015a), compared with the OECD average of around 9 days (OECD Stat, 2015). In 2014 the direct costs of sickness benefits totalled EUR 226 million for the Health Insurance Institute of Slovenia (HIIS) and around EUR 332 million for employers (ZZZS, 2015). We assumed a reduction in absenteeism of 2.3 working days within five years or an increase in the average number of hours worked per employee of 0.2% per year (i.e. around 1% in five years). When compared with the expenditure figures for 2014, the calculations show that the HIIS and employers would directly save an average of 4.7% of expenditure on sickness benefits each year (or 23% in five years). A simulation with a production function shows that, owing to better attendance at work, GDP would be around 0.1% higher than the baseline in the first year and around 0.7% higher in five years after the adoption of measures.[38]

Figure 7: **The effect of reducing absenteeism on the level of GDP**



Source: IMAD estimates.

[34] Rehm et al., (2012); Merkur et al., (2013); Sassi et al., (2013), Cecchini et al., (2015).

[35] Estimates for Slovenia show that direct and indirect costs related to smoking account for as much as 5% of GDP. A 10% increase in the prices of tobacco products would reduce the consumption of tobacco products by 4% and the share of smokers by 1–2% (NIJZ, 2015b). The costs associated with alcohol in OECD countries are estimated at 1% of GDP. According to OECD estimates, preventive programmes of anti-alcohol policy in the Czech Republic, for example, would cost less than EUR 30 million per year, while direct alcohol-related health expenses are estimated at EUR 112 million per year and the indirect costs of chronic diseases and injuries at a further EUR 73 million per year (Ceccini et al., 2015).

[36] For example, through programmes for strengthening the health status at the local community level, such as the Together for Health project (NIJZ, 2015c).

[37] The measures should be focused on increasing employer responsibility for health and safety at work, regulations regarding temporary disability and sickness benefits, evaluations of incapacity for work, reducing waiting times in health care and preferential treatment for incidences of long-term sickness leave.

[38] Under the explicit assumption that the productivity of those workers who would take fewer days off due to illness is equal to the average productivity of all workers.

2.2.2 Changes in health system financing

Since the growth in health insurance contributions, which are linked to income from work, will decrease owing to the decline in the working-age population, many countries are seeking new sources of funding. In the last decade, a number of the countries that implemented the Bismarck model of health insurance have already adopted measures to broaden the revenue base by extending contributions to other income (such as rents and dividends in Slovakia), raising contribution rates for the non-active population (France and Croatia) and seeking new tax sources for health care (France, Germany, Hungary, Denmark and Austria).[39] It would therefore also be sensible for Slovenia to explore the possibilities for equalising the contribution rates for compulsory health insurance as well as extending the contribution bases. Specifically, in Slovenia there are significant differences in the contribution rates for the same scope of rights between formally employed and self-employed persons (sole proprietors, craftsmen, farmers, etc.) and those insured persons whose contributions are paid by the government (pensioners, social categories) or are not paid at all (family members, children).[40]

2.2.3 Increasing health system efficiency

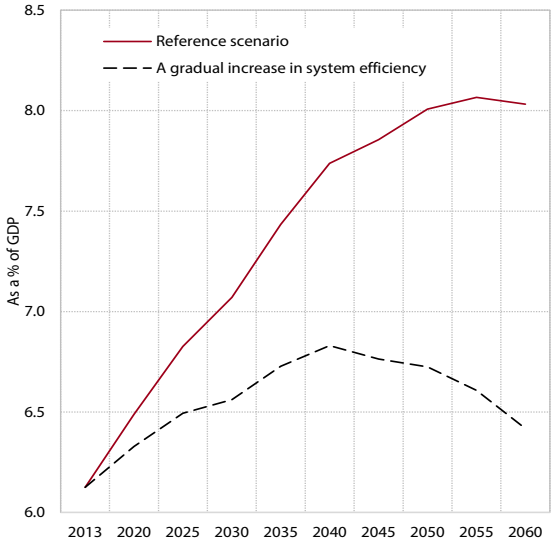
Increasing the efficiency of the health system can make a significant contribution to its long-term sustainability.[41] Experiences gained from other countries and an analysis conducted of the Slovenian health system indicate that measures should be aimed towards reducing the extent of unnecessary and cost-ineffective services and treatments and medicine use.[42] On the supply side, the health system analysis for Slovenia revealed the need for adjustments in the following areas:[43] (i) reforming provider payment mechanisms; (ii) introducing incentives to increase employee performance; (iii) reforming the process of purchasing medical services and its management; and (iv) centralising the public procurement of medicines, medicinal devices and equipment.[44] The analysis also points to the following areas in which the demand for health services could be limited through appropriate measures: (i) redefining the health benefit basket and establishing a national system of health technology assessment (HTA);[45] (ii) strengthening primary care and the gatekeeping system and introducing clinical pathways; (iii) investing in e-health and introducing ICTs to home care; (iv) improving the coordination of health care; and (v) establishing a system of long-term care.

The simulation shows that improving the efficiency of the health system could have a considerable long-term effect.[46] The EC study not only finds that some EU countries achieve better results regarding the health status of the population and greater health system efficiency with equal inputs, it also assumes that other countries could also reach the same performance over the long term with a smaller-than-projected increase in public expenditure (Medeiros and Schwierz, 2015). In line with this study, we assumed that by consistently implementing the measures for improving the efficiency of the system, Slovenia too could, over the long term, slow the growth of the share of public health spending in GDP, so that the share would increase 0.5% less every year than the baseline projection of the EC.[47] However, the simulation shows that the share of public expenditure on health would nevertheless continue to increase for over 20 years, starting to decline only after 2040 when the effects of structural measures would prevail over the rising demand.[48] At the end of the period, the share of public health expenditure in GDP would be only 0.3 pps higher than in 2013, which is much less than under the EC reference scenario, which projects an increase

[39] OECD (2015b).
[40] In 2012 the Health Insurance Institute of Slovenia simulated the effects of introducing a uniform contribution rate (13.45%) for all categories of insured persons, and assessed the determination of the lowest contribution base for some categories of the insured who pay very low contributions because they report very low income. The assessment showed that, under the above-mentioned assumptions, revenue from complementary health insurance contributions could increase by as much as around 27% or EUR 626 million (ZZZS, 2012).
[41] OECD (2015b); IMF (2015); EC (2016e).
[42] Stadhouders, N. et al. (2016).
[43] MZ, Evropski observatorij, SZO (2015).
[44] According to the Ministry of Health, in 2015 a total of 20% of funds were saved on medicines owing to the centralisation of the public procurement function, and over 30% of funds were saved through the joint purchase of medical equipment for emergency centres (NPR, 2016).
[45] In Slovenia there is no list of services that are paid from compulsory health insurance (except for medicines); furthermore, Slovenia is the only EU country that has yet to establish a system of health technology assessment (HTA) for determining the future package of rights from compulsory health insurance based on the quality, efficiency and safety of health care provision (Ministry of Health, European Observatory, WHO; 2015).
[46] The WHO estimates that, on average, 20–40% of total health spending makes no significant contribution to the health status of the population (Chrisholm and Evans, 2010). According to an OECD assessment (OECD, 2010), with the same inputs in place, life expectancy across the OECD as a whole could be increased by two years.
[47] The reference AWG scenario, which is used in the calculation of the indicators of medium- and long-term fiscal sustainability, also takes into account a 50% increase in healthy life years, alongside changes in the demographic structure of the population. Income elasticity of public expenditure on health declines from 1.1 at the beginning to 1.0 at the end of the period of the reference AWG scenario, i.e. 2060 (EC, 2015a).
[48] It is also assumed that the pressure of non-demographic factors will become increasingly smaller after 2040.

of 1.9 pps of GDP. By 2060, Slovenia could therefore save slightly more than 20% on public expenditure on health and significantly reduce the upward pressures on spending related to old age.[49]

Figure 8: **The share of public health expenditure in GDP in 2013–2060 according to the reference scenario of the EC and the simulation of a gradual increase in system efficiency**



Source: SURS, EC (2015a); calculations by IMAD.
Note: The simulation is based on the EC study (Medeiros and Schwierz, 2015).

2.3 Long-term care (LTC)

Since population ageing has caused the needs for long-term care (LTC) to increase even faster than the needs for health care, single systems for the organisation, provision and financing of LTC are being set up. In some developed countries, long-term care is already recognised as a new separate branch of social security, which ensures a greater degree of solidarity with elderly people and better meets their needs. Since the funding of the LTC system in Slovenia is currently fragmented, it would be prudent to establish a single system for this purpose, similar to those in place in some other countries. Experiences from other countries also reveal that the long-term sustainability of the LTC system can also be increased through the following measures: (i) improving the health status of the population and preventing functional limitations; and (ii) increasing the efficiency of the system on the supply and demand sides.

We focus mainly on measures that are already being implemented in other countries. Since there was no model enabling simulations for LTC measures available and the effects of most individual measures cannot be directly quantified, only examples of selected measures and good practices from other countries are presented.

[49] See also Majcen (2015).

2.3.1 Establishing a single system for financing long-term care

Merging the existing public sources of finance into a new form of social insurance for LTC would increase the efficiency of the LTC system. Given the overlap between services and cash benefits, the non-transparency of the system, the administrative costs and the provision of LTC, it would be sensible to merge the existing public sources of finance into one single source for a new social insurance for LTC, which would allow for more efficient use of existing public sources. According to estimates by the Ministry of Labour, Family, Social Affairs and Equal Opportunities, a further EUR 100–120 million would be needed in addition to the current public funds if the new system were to be introduced. A portion of the additional funds for the health part of LTC could be obtained by adapting the current health benefit basket to the changing needs of the ageing population (additional programmes for palliative care, nursing, early rehabilitation). When setting up LTC systems, some countries also seek new public sources of funding: for example, when adopting the LTC insurance act, Germany abolished one day of public holidays and allocated revenue to a fund for LTC. Similarly, owing to the rise in demand, France introduced a solidarity day, dedicating one day of revenue for financing long-term care (OECD, 2015b). At the end of 2015 France also introduced another public source for funding LTC – a "solidarity contribution for the autonomy of elderly people" of 0.3% to be paid by pensioners whose annual income exceeded EUR 13,956 if they were single, or EUR 21,408 if they lived as a couple (Bihan, 2016). In Luxembourg the electricity tax was raised when the new system for LTC was introduced, and the additional revenue allocated for financing LTC.

2.3.2 Improving health status and preventing limitations

The share of persons with severe activity limitations,[50] which is above the EU average in Slovenia, could be reduced through the implementation of appropriate measures. Measures that have proved successful in other countries include: (i) improving health status and preventing functional limitations, not only through programmes for managing risky behaviours, but also programmes that promote physical activity among older people and prevent frailty;[51] (ii) preventing falls;[52]

[50] In Slovenia, the share of persons with severe limitations in the total population is close to 10%; in the population aged 80 and above, it is over 40% and higher than the EU average (Eurostat; EU–SILC).

[51] MZ – Ministry of Health (2016), Ministry of Health, European Observatory, WHO (2015), MOPACT (2016), AHA.SI (2016).

[52] Falls are the most frequent reason for hospital admission among older people, the incidence of which rises rapidly with age (AHA. SI, 2015). An evaluation of the Life Age Link programme from the

(ii) developing programmes for early rehabilitation after injuries;[53] (iv) developing integrated health and social care at home, which can reduce the risk of complications, prevents hospitalisations and lower the costs of health care and long-term care.[54]

2.3.3 Increasing the efficiency of the long-term care system

Experiences from other countries show that, in order to deliver LTC services effectively, it is necessary to adopt measures that increase the quality of supply and provide services that allow elderly and disabled people to continue living independently at home. On the supply side, measures should be taken in the following areas: (i) improving the supply of nursing staff on the labour market (appropriate education and training programmes for formal and informal caregivers and the recruitment of LTC staff through appropriate migration policies); (ii) providing support for informal caregivers (training, enabling them to balance informal care at home with formal work obligations);[55] (iii) organising voluntary work with elderly people at the community level, particularly through the involvement of younger pensioners;[56] (iv) introducing information communication technologies (ICTs) into care at home, which significantly reduces the need for staff. On the demand side, measures in the following areas appear to bring results: (i) the development of more cost effective community care arrangements; (ii) better coordination of health and social care at home; (iii) the introduction of ICT solutions for independent life at home;[57] and (iv) the removal of physical barriers to autonomy at home and further afield (e.g. lifts) and incentives for investment in the construction of age-friendly settlements.[58]

United Kingdom showed that exercise programmes designed to improve balance reduced the likelihood of falls by 50% and that each British pound spent on fall prevention programmes reduced the costs of medical and social services by GBP 1.35.

[53] The "Fredericia model" in Denmark is presented as a particularly suitable example of good rehabilitation practice. This programme is intended for elderly people returning from hospital and involves activities that enable their rapid recovery and help them restore personal autonomy (Larsen N. and Svensen V.L., 2011).

[54] In Canada, integrated care at home is delivered through the Equinoxe programme using the latest technology (Equinoxe, 2016), while the Buurtzorg programme in the Netherlands is a comprehensive system of care in small communities carried out by medical nurses in cooperation with other professional carers (Buurtzorg, 2016).

[55] An example of good practice in support to informal carers can be found in Austria, where a pilot project is carried out that enables people needing 24-hour care and their family members access to professional counselling (Drole, Lebar, 2014).

[56] As in France, where voluntary work by older people is included in the new package of LTC measures adopted at the end of 2015.

[57] As an example of good practice, the European Commission emphasises the telecare programme carried out in Scotland, which monitors elderly persons in their own homes, using ICT to detect the need for action.

3 Other areas of adjustment to demographic change

In order to preserve the quality of life in a long-living society, adjustments to spatial, housing and regional policies will also be necessary alongside the above-mentioned responses to demographic change. Population ageing also changes the demands on housing and spatial planning policies, which should ensure an age-friendly environment (free of barriers) and a good transport policy and public transport system. As demographic projections indicate uneven levels of ageing across the regions, the response should be prepared at the local level. The decline in the working-age population can also have negative financial implications for municipalities, a problem which is even more pronounced in Slovenia due to their significant fragmentation and small size. The latter may drive inequalities in access to the services that ensure a high quality of life in a long-living society.

Experience gained from other countries shows that spatial and housing policy measures should work towards the following objectives:

(i) Increasing housing mobility, which alongside other ways to solve the housing problems of elderly people (such as cohousing) should enable and encourage elderly people to exchange or sell their real estate and buy or rent a sheltered or smaller flat.[59] These measures should be accompanied by measures to increase the number of sheltered flats and the number of rental flats adapted to the needs of older people.

(ii) Ensuring access to services of general interest,[60] which will require the implementation of different measures in urban and rural areas. In rural areas, the main problem will be depopulated areas such as border and mountainous regions, where accessibility will need to be provided through an effective, well-managed network of services of

[58] In France, the new package of LTC measures also includes adaptation of 80,000 private apartments for the elderly and elimination of obstacles for elderly people in multi-apartment buildings.

[59] Higher housing mobility of the population is also one of the long-term strategic objectives of the Resolution on National Development Projects 2015–2015 (ReNSP 15–25), which could also be achieved by a package of measures focussing on the elderly population. This package mainly involves housing solutions that not only enable quality health care and other care (secured or sheltered housing), but also allow for social inclusion in and mutual assistance (mix communities, the proximity of social activities, functional adaptation of single-dwelling buildings to enable co-existence of generations).

[60] I.e. services carried out to the public benefit. They can be non-economic (for example, education, health care, social work, etc.) or economic (for example, public utility activities, telecommunications, energy, postal services, etc.).

general non-economic and economic interest and public passenger transport.

(iii) Building cities and towns adapted to the needs of older people because the need for a barrier-free environment (roads, pavements, pathways, public buildings, flats, etc.) will be rising in urban areas; this will need to be addressed through appropriate measures to ensure accessibility, particularly in the areas of urban planning, transportation and the construction of age-friendly communities and cities (see also DEMOCHANGE, 2012; Urban Challenge, 2015).

(iv) Reducing housing-related expenditure and renovating the housing stock to enable longer independent living of elderly people. In order for this to be achieved, the legislation should be complemented with requirements for age-friendly architectural and technical solutions, which would become the norm for the construction of buildings and also benefit other population groups (children, families, disabled people, etc.). The renovation of the housing stock should also involve financial measures to ensure they are carried out in a way that reduces housing-related costs.

(v) Increasing the inclusion of elderly people in local communities and active and healthy ageing, which involves measures in the areas of education, health promotion and intergenerational co-existence.[61] Through the activities they carry out in a broader social community, elderly people can also contribute significantly to the strengthening of intergenerational relationships and the functioning of local communities (e.g. by volunteering), as well as to the conservation of the building stock and the cultural landscape in rural areas (see also DEMOCHANGE, 2012; Urbani Izziv, 2015). Such measures can be implemented as pilot projects within local communities through cohesion policy instruments or other EU financial instruments.

The adaptation of living and housing conditions to demographic change may involve additional public and private investments, which can slow the consolidation of the public finances. Certain housing and spatial development measures may increase public expenditure and make fiscal consolidation more difficult over the medium term. Nevertheless, they can also be introduced in a fiscally neutral way, accompanied by measures to contain other expenditures that have proved inefficient in realising their strategic social priorities. Over the longer term, these changes can also contribute to slower growth in expenditure on health and long-term care.

[61] Day centres for elderly people or intergenerational centres are also envisaged in the ReNSP 15–25.

A long-living society also creates opportunities for economic activity. With rising demand for social protection services in a long-living society, the need to develop these services also represents an opportunity for the creation of jobs, not only for elderly people, but also for those with a lower level of education. Moreover, in a long-living society, older people also constitute a target group for economic activities. The term "silver economy" covers new market opportunities arising from public/private expenditure related to the rights, needs and demands of those aged 50 and above. Opportunities also lie in new forms of intergenerational cooperation and voluntarism by older people in meeting the needs of a long-living society, which can improve quality of life.

4 Effects of individual measures on long-term fiscal sustainability

Simulations of the effects of selected measures to address demographic change show that it will be necessary to design a comprehensive set of measures to ensure long-term fiscal sustainability. Simulations of the effects of the measures presented in the first two chapters were also used to calculate their impact on the long-term fiscal sustainability indicator S2.[62] Although each of the measures presented would reduce the indicator of long-term fiscal sustainability, most of them, if applied alone, would not suffice to bring it below 6.0 pps of GDP.[63] This means that a comprehensive mix of measures will have to be devised as only the combined effect of measures in various policy areas will contribute to long-term fiscal sustainability and ensure a comprehensive response to the variety of challenges presented by a long-living society.

Analyses show that the required adjustments to demographic change can also be supported by structural reforms that increase productivity. By raising productivity, we could ease the impact of demographic change on the decline in economic growth potential owing to the shrinking labour force. As Slovenia's productivity is already relatively low in comparison with other more developed economies, and its growth may be slowed further by demographic change, an appropriate response in this area is essential in order for Slovenia to create an economically stable environment that allows it to finance ageing-related needs. Simulations

[62] S2 is the indicator of long-term fiscal sustainability which shows the adjustment to the primary balance required in order to prevent the debt-to-GDP ratio from increasing relative to the reference year over the long term.

[63] This is the limit value that determines whether the risk for the long-term fiscal sustainability is high or medium. The lower limit of risk is set at S2 = 2.0 pps of GDP (see EC (2016b) – Annex A11).

Table 1: **Changes in the level of age-related expenditures and the S2 indicator due to the implementation of individual measures**

	2030	2060	
	Share in GDP, in %		S2, in pps of GDP
Age-related expenditure according to the baseline scenario	26.5	31.4	6.8
	Differences with regard to the baseline scenario, in pps of GDP		
1. Measures to ensure sufficient labour supply			
- Increasing ALMP spending (5 pps)	-0.14	-0.56	-0.55
- Lowering the tax wedge across the board (5 pps)	-0.08	-0.09	-0.23
- Migration (medium variant)	-0.50	-2.00	-1.65
2. Measures in the area of pensions			
- Retirement age + 1 year	-0.23	-0.04	-0.24
- Pension-qualifying period + 1 year	-0.28	-0.10	-0.29
- Pension base + 1 year up to 35 years	-0.08	-0.72	-0.68
- Pension base + 5 years	-0.10	-0.49	-0.52
- Indexation for inflation	-1.15	-2.76	-2.39
3. Measures in the area of health care			
- Increasing the efficiency of the health system	-0.71	-2.21	-1.85
- Reducing absenteeism	-0.20	-0.24	-0.36

Source: EC (2015a), EC (2016b); calculations by IMAD.
Note: Total age-related expenditure (as defined in the Ageing Report) totalled 24.7% of GDP in 2013. In the baseline scenario, the calculations of the European Commission are taken into account. The threshold of the S2 indicator, which reflects a high risk for the long-term fiscal sustainability, totals 6.0 pps of GDP. We made static and partial simulations of the changes in age-related expenditure and the S2 indicator based on the results of the measures from Chapters 1 and 2. The results of the simulated effects of measures on age-related expenditure and on the S2 indicator are mostly linear.

of some possible measures to enhance productivity in Slovenia (such as raising the efficiency of R&D spending, the deregulation of services, reducing administrative barriers) indicate the possibility of a GDP increase of between 0.1% and around 1% over the long term for an individual measure (for more, see IMAD, 2016a). Among the complementary measures required to offset the impact of the declining labour supply, the International Monetary Fund recommends measures that provide the labour force with the skills necessary for employment and with the capital required to increase productivity (IMF, 2004).

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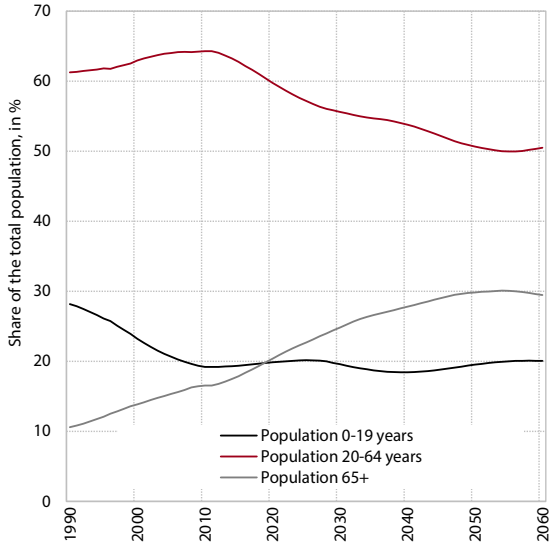
Appendix II: Demographic change and its economic and social consequences

1 Demographic trends in Slovenia

In Slovenia the demographic transition to a society with an increasing share of elderly people is ongoing and this trend will accelerate in the coming decades. This is evident from demographic projection scenarios which factor in various combinations of key assumptions: changes in the number of births, deaths and net migrations.

Since independence Slovenia's population has been hovering at around two million, but the share of elderly people has been increasing. The trend has been driven by the declining number of births, which dropped after 1992 and sharply reduced the rate of natural increase. At the same time life expectancy has been increasing, with the share of those over 65 increasing in 1990–2015 from 10.6% to 17.9%. These trends indicate that the demographic transition is already under way in Slovenia and will intensify in the coming years.

Figure 1: **Projected demographic picture – main scenario EUROPOP2013**



Source: SORS, after 2013 Eurostat EUROPOP2013.

[64] The projections are made by Eurostat in collaboration with national statistical offices.

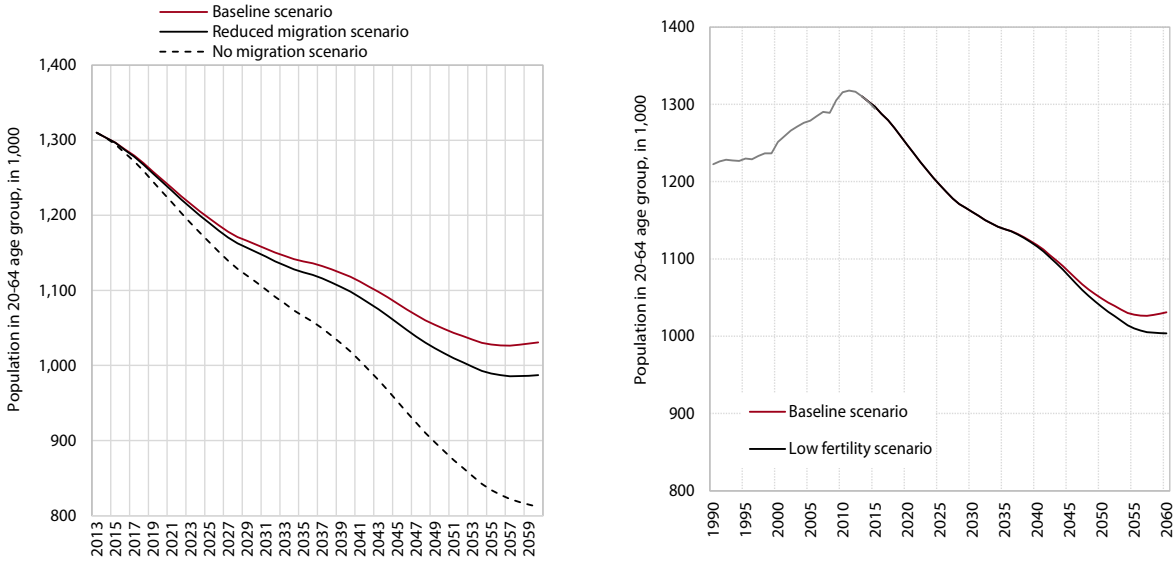
[65] The age dependency ratio is the ratio between the number of young people (0–19 years) and the over 65s relative to the size of the working age population (20–64).

According to the main scenario of the EUROPOP2013[64] population projections, the size of the population will not change significantly in the next decades, but elderly people will account for almost a third of the population by 2060. The main scenario assumes that Slovenia's population will be 2.041 million in 2060, a figure similar to 2013, the baseline year of the projections. However, the age structure will be significantly different. Less populous generations entering the working age population (20–64) coupled with larger generations of elderly people and increasing life expectancy will increase the age dependency ratio[65] from 57.1 in 2013 to 98.0 in 2060. The main scenario assumes a relatively high migration increase in the future, despite modest migration flows in recent years, and envisages birth rates that exceed the averages of the past 30 years towards the end of the projection period.

Assuming the migration increase is smaller than in the main projection scenario, the population would shrink in the coming decades, most notably in the 20–64 age group. The net migration increase, the most uncertain factor in the projections, has been strongly contingent on the structure of Slovenia's economic growth over the past ten years. When economic growth peaked in 2007–2009, driven by construction activity, it was high; in the last three years, however, it has been almost non-existent. The main EUROPOP2013 scenario assumes a migration growth of 4,700 persons per year, an assumption that has not been borne out in recent years, which have been marked by weak economic growth and an unsuitable migration policy. In the absence of migration growth in the future, the population would shrink, especially the 20–64 age group, which represents the working age population. By 2060 the working age population would be as much as half a million smaller than in 2013. The age dependency ratio would therefore increase to 110.9 by 2060, meaning that the number of elderly people would exceed the size of the working age population.

In the event that the fertility rate is lower, the population size would also be smaller than under the main scenario. The decline of the number of births since 1980 has led to a sharper decrease in the number of women of childbearing age in recent years, a trend that will continue in the future. The main projection scenario already assumes an increase in the fertility rate from the average of 1.56 in recent years to 1.75 by 2060, but given the smaller number of women through 2060 the average annual number of child births would be around 2,000 less than in recent years. This assumption is also subject to risks since it is unlikely that the current family policy and related measures, which are relatively favourable in international comparisons, would increase the birth rate. Under the low fertility scenario, which assumes a decrease in the fertility rate to 1.40 by 2060, around 2,000 fewer children would be born annually in 2014–2060 compared to the main scenario.

Figure 2: **Expected size of 20–64 population under different assumptions of migration increase and fertility compared to the main scenario of EUROPOP2013 projections**



Source: SORS, Eurostat EUROPOP2013.
Note: The main scenario assumes that by 2060 the fertility rate will have increased to 1.75 children per woman of childbearing age, average life expectancy will be 84.3 years for men and 88.9 years for women, and an average of 4,675 persons will immigrate each year in the period 2013–2060. The lower fertility scenario assumes that the fertility rate will drop to 1.40 children per woman of childbearing age by 2060. The reduced migration scenario assumes that net migration to Slovenia will average 3,744 persons per year in 2013–2060. The no migration scenario assumes zero net migration throughout the entire period covered by the projections.

2 The impact of demographic change on the labour market and education

Demographic change is already reducing the supply of labour. Assuming migrations remain modest, even higher employment among young and elderly people will not suffice to meet the increased recruitment needs required by stronger economic activity. The altered age structure of the shrinking labour force could also slow down productivity growth and reduce the potential for economic growth. Demographic change raises the required capacities in the education system by increasing the demand for lifelong learning and the teaching of skills for life and work.

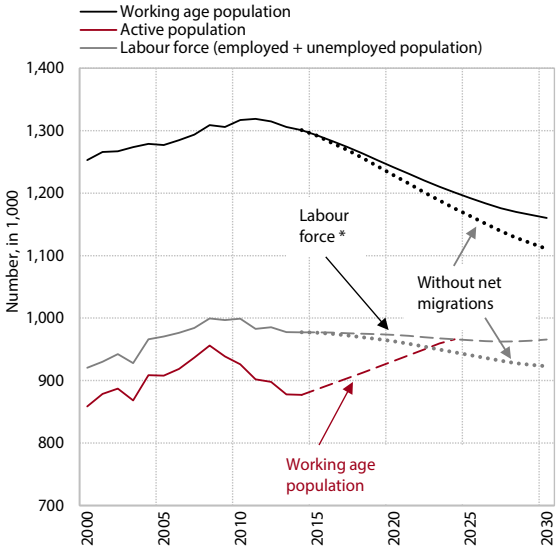
Demographic change is already reducing the supply of labour. The shrinking size of the working age population has been reducing the supply of labour for the past few years; however, since demand was modest during the crisis period, it had not yet become a limiting factor to employment growth. The assessment of the demographic effect[66] shows that by 2020 the labour force could contract on average by 8,000 persons per year. Both the number of employed and unemployed persons would drop.[67]

A limited supply of labour will become a drag on economic growth. A sufficient supply of labour is an important factor in maintaining economic growth as a key precondition for the prosperity of the population. Based on the scenarios of the labour force trends, we made an assessment of how long employment can increase before demographic pressure curbs its growth. The optimistic scenario of the labour force growth is based on the increased employment of women as well as young and elderly people, groups which have thus far encountered employment rates below the overall rate. Assuming the expected demographic pressures materialise, this scenario would at best allow for the preservation of the existing size of the labour force. Assuming a 1% annual growth in employment, which Slovenia has recorded in the past, labour force growth would come to a halt in the next ten years and then start dropping. Additional participation of non-active persons in the labour market would be limited in this period

[66] The demographic effect is estimated as the impact of the change of the size of the age groups in the working age population on the labour force (employed persons and the unemployed according to LFS data). The process involves keeping the shares of the various age groups of employed (and unemployed) people in the population unchanged from the baseline year into the future. This methodology does not factor in all interactions between the supply of and demand for labour on the labour market; instead, it assumes a stagnant economy with a constant share of employed and unemployed persons in the population. Given the population projection assumptions, all changes in the labour force consequently stem from structural demographic changes in the age groups. A similar method for assessing the demographic effect was also used by Peschner and Fotakis (2013, 20

[67] The most significant change in the labour force is among employed persons, but unemployment drops as well. The unemployment rate drops as a result of the ageing of the workforce, the transition to inactivity and the fact that older workers are less likely to be unemployed than younger workers since they change jobs less frequently and have higher employment security (Sneddon Little and Triest, 2001).

Figure 3: **Scenarios of changes in the size of the working age population, labour force and active population**

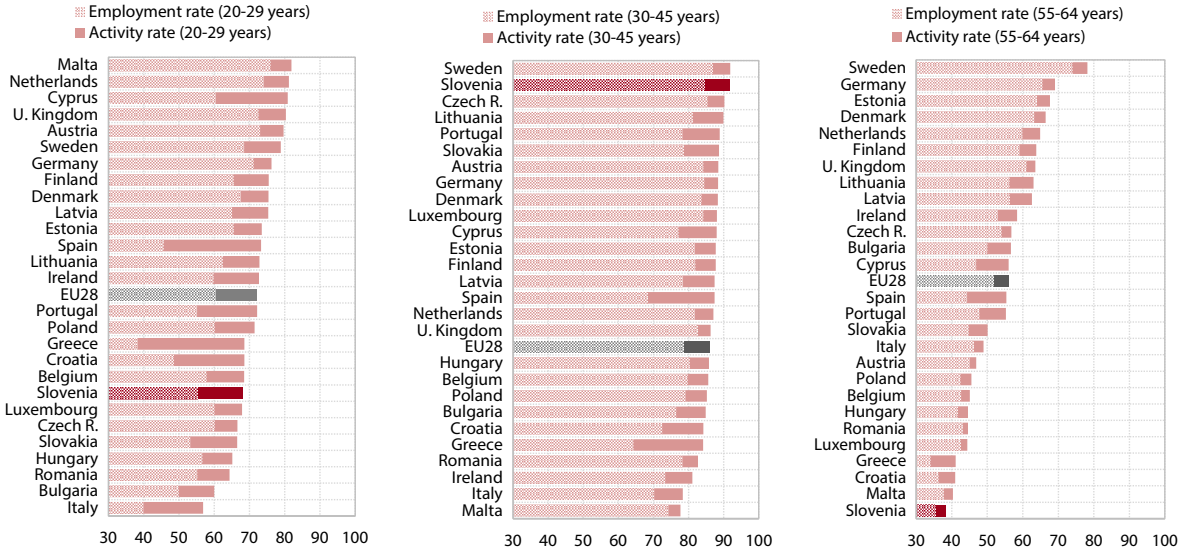


Source: Eurostat, EUROPOP2013; IMAD calculations.
Note: *The simulation is based on the EUROPOP2013 population projections. The assumptions used for the labour force: (i) continuation of the growth of the share of the highly educated; (ii) equalisation of the (lower) activity rate of women with the (higher) activity rate of men by 2030; and (iii) a 20 p.p. increase in the activity rate of elderly people by 2030. For a detailed description of the methodology, see Peschner and Fotakis (2013, 2015).

given the already high activity rate. In the absence of net migration, employment growth would become negative approximately a year earlier than under the assumed positive net migration scenario. Such a hypothetical scenario would mean that in the next ten years the economy would absorb all unemployed persons through recruitment. Since this is highly unlikely, not least due to the structural imbalances between labour demand and supply, the pressure on employment would occur several years earlier and escalate as unemployment gradually dropped.

In comparison with the EU, the activity rate in Slovenia is high among the adult population, but is below the average among young and elderly people. Activity among adults (30-54) is among the highest in the EU, one significant factor being the highest female activity rate in the EU.[68] The below-average employment rate of young people (20-29) is a consequence of the above-average rate of participation in education; however, due to structural imbalances and a shortage of experience, their transition from education to employment is not necessarily rapid. The absence of a dual vocational system, which in other countries has proved to be a significant factor in the successful transition to employment, is a downside. Against the backdrop of modest demand for labour, the result is the relatively late entry of young people into the labour market. The employment rate among the older population (55–64), on the other hand, is among the lowest in the EU, which is mostly a consequence of early retirement due to the low retirement age of those with the required statutory years of pensionable service and insufficient incentives to remain in employment. Other factors include: (i) undeveloped age management in companies; (ii) a failure to adapt work conditions to older workers; and (iii) an active employment policy and educational policy that does not promote lifelong learning among the older population and fails to equip them with the right skills.

Figure 4: **Activity rate and employment rate by age group, EU countries, 2014**



Source: Eurostat.
Note: *The simulation is based on the EUROPOP2013 population projections. The assumptions used for the labour force: (i) continuation of the growth of the share of the highly educated; (ii) equalisation of the (lower) activity rate of women with the (higher) activity rate of men by 2030; and (iii) a 20 p.p. increase in the activity rate of elderly people by 2030. For a detailed description of the methodology, see Peschner and Fotakis (2013, 2015).

[68] We estimate that one of the reasons for the high employment rate among women is the relatively high availability of pre-school education, which is also borne out by data showing the participation of children aged 3–5 in kindergarten being above the EU average.

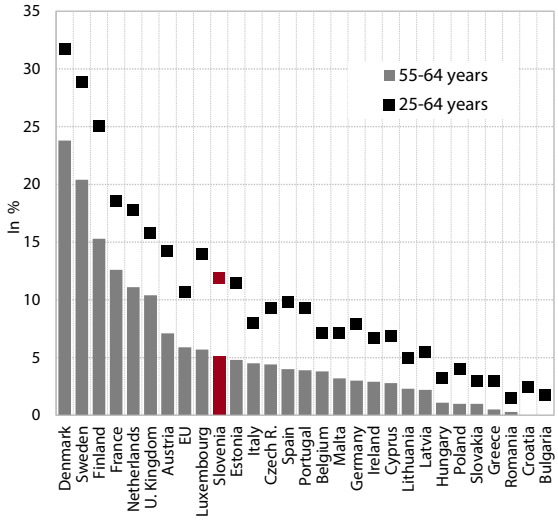
Age management is poorly developed in Slovenian companies. The findings of the MEET Change project show that 42% of companies do not carry out activities to adapt to an ageing workforce.[69] Furthermore, most of Slovenian companies do not plan measures to encourage older workers to work longer or are not interested in the following: (i) implementation of training programmes for older employees in the context of lifelong learning; (ii) implementation of programmes to change opinions and stereotypes about older employees; and (iii) promotion of intra-company active ageing strategies.[70]

The migration policy has thus far not helped attract workers into bottleneck professions. Even though the employment rate of young and elderly members of the population can be increased, there will be rising demand for more migration given the growth of the economy and the demand for labour. The inflow of foreign labour into Slovenia in the past ten years was hardly the result of a comprehensive strategy or measures to attract bottleneck professions; it was instead a consequence of the rapid growth of individual sectors of the economy. Moreover, Slovenian citizens have been emigrating in recent years.[71]

The ageing and shrinking of the workforce is a process that could slow down productivity growth. The level of productivity (expressed in purchasing power standards) reached 82% of the EU average in 2014, a similar level to ten years ego. Given the limited employment growth, demographic change could also affect productivity growth[72] and the long-term capacity to provide and increase prosperity as it could reduce the economic growth potential.

Demographic change has already resulted in decreased enrolment at the secondary and tertiary levels, whereas the skills imbalance has increased the need to strengthen lifelong learning capacities. EC projections[73] show that enrolment in primary schools will continue to increase until 2020, whereas the number of students enrolled in secondary schools and tertiary programmes will continue to drop. Population ageing also accentuates the need for an increase in the currently relatively low participation of adults in lifelong learning, in particular of the older population. A study by the EC[74] shows that over three-quarters of Slovenian respondents believe those over 55 often lack the skills for the workplace. The same share believe that people are more likely to be excluded from training in the workplace as they get older. Both shares are above the EU average. As the share of persons with tertiary education increases, there is already an imbalance of skills: almost a third of companies[75] have difficulties finding staff with the right skills.[76]

Figure 5: **Participation of adults (aged 25–64 and 55–64) in lifelong learning, EU countries, 2014**



Source: Eurostat.

3 Problems faced by social protection systems and the impact of demographic trends on age-related expenditure

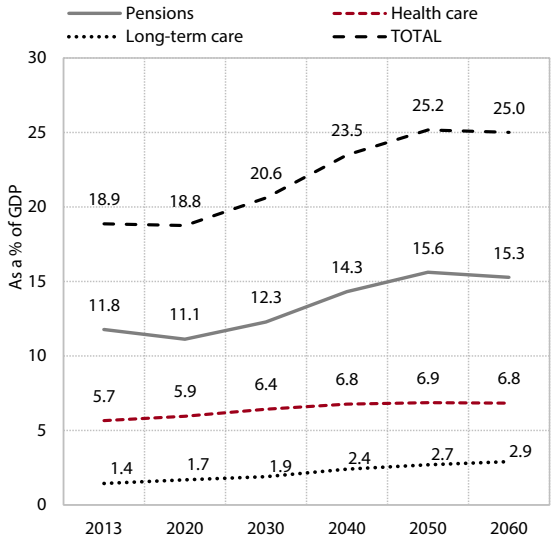
Demographic trends will affect fiscal sustainability. The shrinking size of the employed population will restrict financing sources, whereas the growing share of elderly people will increase the pressure on age-related public expenditure: pensions expenditure and expenditure on health care and long-term care.

Provided that the current social protection systems are preserved, demographic change will increase public expenditure. Long-term projections by the European Commission[77] show that, in a no-policy-change scenario, Slovenia's age-related public expenditure would reach about a third of GDP by 2060. This increase, and the headline share, would be among the highest in the EU,

[69] Ackermann, G. et al (2014).
[70] Žnidaršič, J. (2008).
[71] On average 8,000 citizens emigrated per year in 2012–2014.
[72] Empirical studies are not unanimous on the impact of population ageing on productivity: some studies emphasise that the effects of the ageing of the workforce are either negligible or even increase productivity due not only to older workers being more experienced but also the promotion of new innovations and organisational improvements (e.g. Romer (1987), Cutler et al. (1990), Sneddon Little and Triest (2001)). Skirbekk (2004), on the other hand, concludes that individual productivity decreases with age, whereas Feyrer (2007) finds that aggregate productivity declines as the share of the older population increases.
[73] EC (2015).
[74] EC (2012).
[75] Third European company survey: first findings (2013).
[76] Cedefop (2015).
[77] (EC, 2015).

hence the European Commission calculations showing that Slovenia is the only EU country which faces a high long-term risk regarding its fiscal sustainability, and it also ranks among the group of countries with a high risk over the medium-term.[78] These projections are based on the baseline demographic projection scenario in EUROPOP2013; in the event that the risks to the underlying assumptions are realised, the pressure on public expenditure would be even stronger. The demographic factors which represent risks regarding expenditure growth are compounded by non-demographic factors in some areas (health care and long-term care).

Figure 6: **Long-term projections of age-related public expenditure, reference scenario, Slovenia**



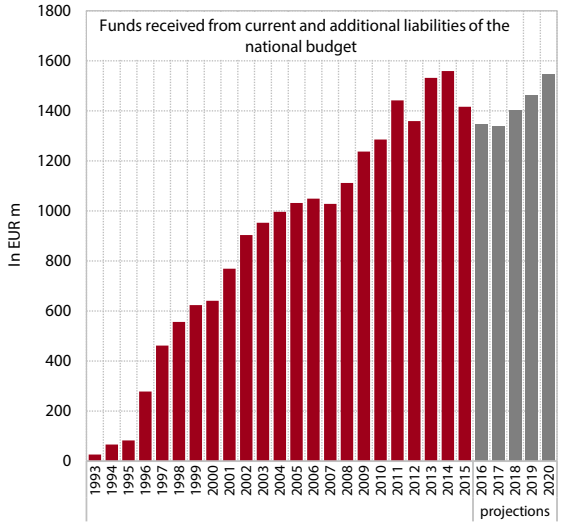
Source: EC (2015).
Note: For health care and long-term care, the reference scenario primarily factors in the effects of ageing and includes the assumption that half the additional years of life are spent healthily; non-demographic factors are taken into account to a lesser extent. Public expenditure on health care is included on the basis of the methodology of the System of Health Accounts (SHA), including capital investments but excluding expenditure on long-term nursing care. The projections include public expenditure on long-term care according to SHA methodology (0.98% of GDP in 2012) and selected cash receipts under the ESSPROS methodology (disability allowance) amounting to 0.4% of GDP.

In Slovenia the effect of ageing on public expenditure is particularly acute with regard to pensions, which represent the bulk of age-related expenditure. This is a reflection of early exiting from the labour force, itself largely a consequence of pension legislation in the past and the retirement of the most populous generations, which will also enjoy a longer retirement due to their increased longevity. Coupled with the ongoing decrease in the working age population, this has resulted in the last pension reform managing to only defer the increase in pension expenditure as a share of GDP, as spending will start to increase ten years after the reform was adopted.

[78] EC (2016).

The budget transfer to the pension fund (ZPIZ), which has exceeded a billion euros annually in recent years, shows that the pension system is already unsustainable. In the last twenty years the key forces driving the increase of the budget transfer for the coverage of pension expenditure included the reduction to the employer contribution for pension and disability insurance (1996), the progressively worsening ratio between insured persons and pensioners since 2001 (2000: 1.80; 2015: 1.37) owing to the increasing number of pensioners (mass retirement in the early 1990s), and the shrinking size of the generations entering the labour market. The stabilisation of the ratio between insured persons and pensioners in 2015 after a long period of deterioration is transitional given the increased intensity of demographic change in the future. According to European Commission projections,[79] the number of pensioners will exceed the number of insured persons in about two decades. In the current system this would exert significant pressure on the active population and increase the share of pension expenditure not covered by contributions. One of these sources of the budget transfer to the ZPIZ, which is estimated to fall until 2017, whereupon it could rise again assuming a continuation of the indexation of pensions, is an increase in the annual allowance for pensioners to the previous level, and the continued deterioration of the ratio between ensured persons and pensioners.[80]

Figure 7: **Budget transfer to the ZPIZ**



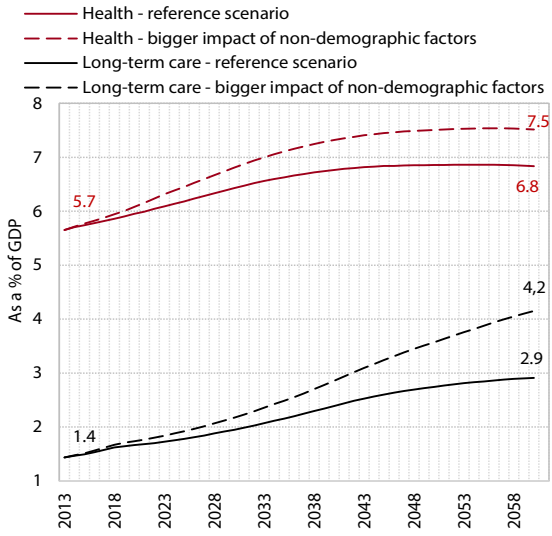
Source: Ministry of Finance (2016), Ministry of Labour, the Family, Social Affairs and Equal Opportunities (2016).
Note: 1993–2015 actual data, 2016–2020 ZPIZ projection. Current RS liabilities involve the settlement of the liabilities of compulsory insurance arising from the recognition or assessment of pension and disability insurance rights under special conditions or due to default in the payment of contributions (Article 161 of the ZPIZ-2). Additional liabilities comprise funds for the settlement of the gap between ZPIZ expenditure and revenue from contributions and other sources (Article 162).

[79] EC (2015).
[80] Assuming the contributions base expands as projected in the Spring Forecast, IMAD (2016).

The health care system will demand an ever greater share of GDP, whereby the projections already factor in improvements to some of the assumptions. Demographic as well as non-demographic factors affect the growth of health care expenditure. The basic EC projections for health care expenditure, which assume an increase from 5.7% to 6.8% of GDP, mainly reflect the effects of demographic factors;[81] non-demographic factors are included to a lesser extent. These projections already come with the built-in assumption that the health of the population will improve, and the assumption that some measures will be taken to manage expenditure growth and improve the efficiency of the systems. According to several studies conducted on Slovenia, the efficiency of the health care system is average,[82] but with a gradual improvement in efficiency, it would be possible to significantly slow expenditure growth over the long term. Several basic health status indicators reveal the current situation in Slovenia to be favourable;[83] however, the number of healthy life years is very low compared to other EU countries. This wide gap is largely attributed to unhealthy lifestyles and a high burden of chronic diseases. In terms of long-term sustainability, the population's health is crucial not just for slowing expenditure growth, it also plays a significant role in increasing revenue: various studies have proved a strong correlation between the population's health and the share of employed persons, and the positive impact of health on economic development.[84] The EC's risk scenario, which assumes a greater impact of non-demographic factors, shows that the pressure on the growth of health care expenditure will escalate in the future and could result in spending increasing to 6.8% of GDP as early as 2030, growing to 7.5% of GDP by 2060. One of the key non-demographic factors, aside from the population's growing expectations about health care, is new health technologies which expand treatment possibilities and improve the quality of service. This in turn expands the health benefits basket and increases the demands on long-term care due to the growing number of persons with chronic conditions that depend on foreign assistance in the long term. The projections suggest it will be difficult to preserve the currently broad health benefits basket and highlight the need for a flexible adjustment thereof to the altered demographic circumstances (more chronic diseases, palliative care, long-term nursing care).

[81] Health care expenditure starts to grow rapidly after the age of 60 and more than doubles by the age of 80, from just over EUR 1,000 per individual at 60 to around EUR 2,400 by the age of 80; ZZZS (2015).
[82] Medeiros and Schwierz (2015); Joumard et al. (2010); Hribernik and Kierzenkowski (2013); IMF (2015); EC (2014). For possible effects of improved efficiency on expenditure projections, see also Majcen (2015) and IMAD (2016a).
[83] E.g. infant mortality and the indicator of life expectancy.
[84] EC (2010), Figueras et al. (2008); Suhrcke and Urban (2010). The same studies warn that the correlation between health and economic activity is neither unidirectional nor linear, as a higher level of economic development improves the health of individuals and the entire population.

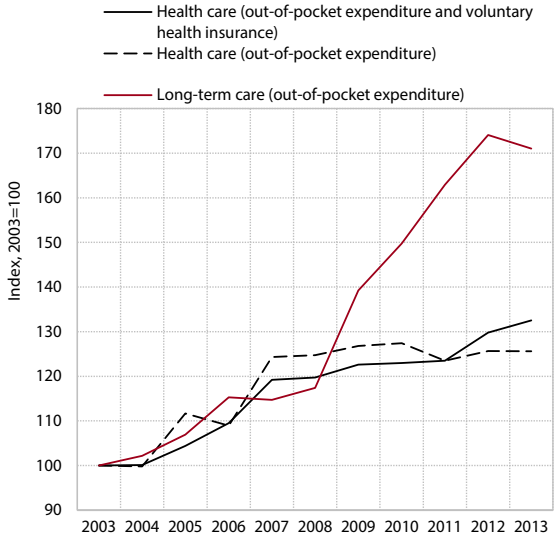
Figure 8: **Public expenditure on health care and long-term care, scenarios of long-term projections depending on scope of inclusion of non-demographic factors**



Source: EC (2015).
Note: The reference scenario, i.e. the scenario which assumes a low impact of non-demographic factors, primarily takes into account the effects of ageing and includes the assumption that half the additional years of life are spent healthily; non-demographic factors are taken into account to a lesser extent. The scenario which gives non-demographic factors greater weight, i.e. the risk scenario, takes into account non-demographic factors to a greater extent. Public expenditure on health care is included on the basis of the methodology of the System of Health Accounts (SHA), including capital investments but excluding expenditure on long-term nursing care. Included are public expenditure on long-term care according to the SHA methodology (0.98% of GDP in 2012) and also selected cash receipts under the ESSPROS methodology (disability allowance) amounting to 0.4% of GDP.

In Slovenia there is no comprehensive system for long-term care; as a result of the fragmentation of financing it is non-transparent and the sources are not used efficiently. The right to services and cash receipts for those who depend on assistance of others

Figure 9: **Real growth of private expenditure on health care and long-term care, Slovenia**



Source: SORS (2015), IMAD calculations.

are determined by multiple laws, which do not have the same eligibility standards. In some segments there is an overlap between services and receipts; in others, many needs remain unmet. Consequently, in the past ten years out-of-pocket payments have been increasing rapidly, much faster in fact than in health care, which exacerbates the accessibility issue. The need for long-term care can therefore strongly reduce the disposable income of individuals and their families. In the long term this can become a heavy burden on informal caregivers in the family circle,[85] which reduces their productivity and availability on the labour market, leads to early retirement, increases poverty, and leads to excessive use of the more easily available health services.[86]

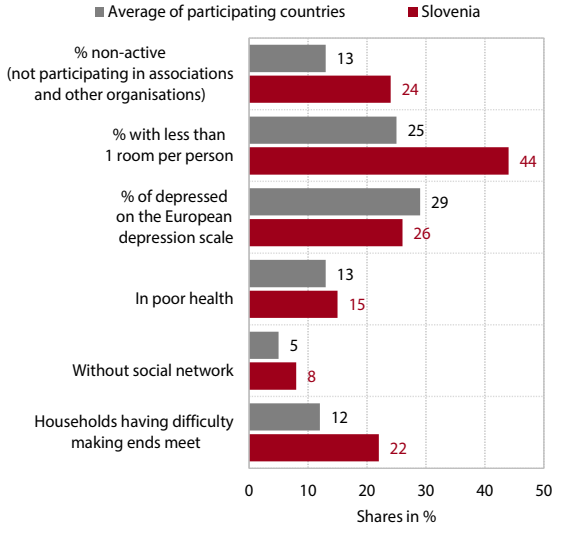
The demand for long-term care will start increasing at a brisker pace after 2025, when the most populous generations start turning 80. The main driving force behind growing expenditure on long-term care is the size of the population in need of assistance in basic activities of daily living, the share of which expands significantly with age.[87] EC projections assume that elderly people will be healthier in the future and less limited, which means that the share of the population dependent on assistance of others at a certain age will gradually decrease. Notwithstanding this assumption, public expenditure on long-term care will more than double (to 2.9% of GDP) by 2060, even under the assumptions of the reference scenario. The pressure on expenditure growth will be further compounded by non-demographic factors, especially the coverage of the formal care network and the growing cost of long-term care services. The EC scenario, which has this assumption built in, shows that the share of public expenditure on long-term care will more than triple (to 4.2% of GDP) by 2060. This scenario assumes that the transition from informal to formal care will accelerate in the future, as the coverage of the formal care network is below the EU average given the estimated size of the severely limited population.[88] Slovenia lags behind in particular with regard to formal home care. The projections under this scenario also assume that expenditure on long-term care could grow further owing to the shortage of available staff, which is already very severe in several more developed European countries that have a higher share of formal care.

4 Other areas where adaptation to demographic change will be required

An above-average share of the elderly population already experience social exclusion; as it continues to swell, the problem could become even more severe. Among the elderly population there is a high share of owner-occupied housing and an above-average share live on farms or in detached houses. Their housing deprivation is nevertheless severe and the provision of some long-term care services difficult. Demographic changes increase the need for spatial planning, construction and transport policies adapted to elderly people. The projections indicate increased unevenness of population ageing across regions.

The prevalence of social exclusion among the elderly in Slovenia is above the EU average. Slovenia ranks among the countries where the at-risk-of-poverty rate among the over 65s is significantly higher than in the 18–64 population.[89] It is also above the EU average,

Figure 10: **Indicators of social inclusion of the over 50s, comparison between Slovenia and the average of countries participating in the SHARE study**



Source: SHARE study, wave 4, summarised from Filipovič Hrast, M. and Srakar, A. (2015).

[85] Informal caregivers are typically partners, especially women, and other family members, relatives or friends who provide assistance, mostly with instrumental activities of daily living. The EC estimates that informal caregivers outnumber formal caregivers by a factor of almost two. According to the SHARE study results for Slovenia, approximately 48,000 persons aged 50+ provided personal care or practical household help outside their own household in 2013 and approximately 37,000 provided regular personal care assistance in their own household (Nagode in Srakar, 2015). The estimate is even higher in the study by Ramovš et al. (2013), which shows that over 55,000 persons over 50 take care of their parents and over 50,000 take care of their partners.

[86] Normand (2015); EC, 2016a; Dominkuš et al. (2014).

[87] The share pf the population rises from 3.5% in the 16–44 age group to 40% in the group over 85 (Eurostat, 2015). The figures are based on the EU SILC survey question "Has the surveyed person been limited in ordinary activities in the past six months or more due to health problems and, if so, to what extent?" when the answer is "Yes, severely limited".

[88] SI: 28%; EU: 31%; EC (2015).

[89] In 2014 the at-risk-of-poverty rate in the over-65 age group was 3.4 p.p. higher than in the 18–64 age group; in the EU, on the other hand, the average at-risk-of-poverty rate among the elderly was 3.3 p.p. lower than in the 18–64 age group.

especially among elderly women.[90] Pensions are the principal source of income for elderly people and they are frequently below the poverty line. In 2015 the average net old age pension amounted to EUR 610, whereby almost a half of pensioners received less than EUR 600. A low degree of social inclusion is also evident from the SHARE study, where the social inclusion of the over 50s is measured with additional indicators of housing deprivation, health, community participation and interpersonal relations. The proportion of those excluded from three or more areas at the same time stands at 15%, the second highest share among the participating countries.[91]

Slovenia places among the countries with a high share of owner-occupied housing among its elderly population. Among the elderly population there is a high share of owner-occupied housing[92] and an above-average share live on farms or in detached houses.[93] The rate of housing deprivation[94] of the over 65s is also significantly above the average. This can also result in: (i) problems due to excessive housing consumption, which limits the elderly in terms of meeting their other needs; and (ii) the high costs of providing home services given the dispersion of settlements. On the other hand, there are advantages to this way of living; owner-occupied housing, in particular, is an asset that can be drawn upon to secure social protection. Nevertheless, elderly people are characterised by their very poor housing mobility[95] due to their "attachment to real estate". There is also a lack of non-profit rental housing, and the market value of the "housing" assets of elderly people is often low.

Demographic change increases the demand for spatial planning, construction and transport policies adapted to elderly people. Ensuring that the elderly remain independent for as long as possible increases the demand for functional housing renovation, elderly-accessible housing and sheltered housing. The dwelling location is inextricably linked to urban concept, the efficient use of services of general interest, and population mobility. The elderly also have different needs in the use of public transportation, and the accessibility thereof makes it possible for them to stay more independent for longer.

[90] In 2014 the at-risk-of-poverty rate of the over 65s was 17.1% (EU: 13.8%), but it stood at 21.6% (EU: 15.8%) for older women.
[91] Filipovič Hrast and Srakar (2015).
[92] As many as 87% of elderly Slovenian households own their dwelling, the third highest share among the countries participating in the SHARE study (Mandič, 2015).
[93] According to the SHARE study, 64.5% of those older than 50 live on farms or in detached houses in Slovenia, the second highest share among the countries participating in the SHARE study and significantly above the average of the participating countries (34,7%).
[94] The rate of housing deprivation measures the share of persons exhibiting at least one of the deprivation measures: (i) poor housing condition (leaking roof, moist walls or floors, rotten window frames), (ii) lack of bath or shower in the dwelling, (iii) lack of flushing toilet for own use, (iv) dwelling too dark. Eurostat data show that the deprivation rate for the over 65s in Slovenia was 33% in 2014 compared to the EU average of 13.1%.
[95] The SHARE study shows that the over 50s have lived in their current dwelling the longest among all participating countries, on average for 32 years.

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