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**COMMISSION STAFF WORKING DOCUMENT**

**Assessment of the 2013 national reform programme and stability programme for  
ESTONIA**

*Accompanying the document*

**Recommendation for a Council Recommendation**

**on Estonia's 2013 national reform programme and delivering a Council Opinion on  
Estonia's stability programme for 2012-2017**

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## EXECUTIVE SUMMARY

### Economic Outlook

**After a strong rebound in 2011, Estonia's GDP growth moderated to 3.2% in 2012 and is expected to continue growing above the EU average at 3.0 % in 2013 and 4% in 2014, according to the Commission's spring forecast.** The unemployment rate continued to fall substantially to 10.2% in 2012 and is expected to fall to 9% by 2014. Export-led growth may resume soon, supported by the relatively strong resilience of the Nordic countries to the sovereign debt crisis. Inflation continued its slow decrease to 4.2% in 2012, and is forecast to fall to 3.6% by 2013 and 3.1% by 2014, though wage inflation might soon reappear.

**The budget is expected to remain in deficit at -0.3 % of GDP in 2013 before reverting to a headline surplus of 0.2 % of GDP in 2014.** Estonia's medium-term objective is for a structural budget surplus (minus one-offs and short-term measures), though, according to the Commission spring 2013 forecast, it is expected to slightly deviate from this objective in 2013, with an expected structural deficit of -0.2% of GDP. Government debt, which is the lowest in the EU, is expected to decrease from 10.1% in 2012 (with a slight increase to 10.2% in 2013) to 9.6% in 2014 due to budget surpluses.

### Key Issues

**Reflecting the economy's catching-up potential, real GDP is expected to continue growing above the EU average, while public finances remain among the strongest in the EU.** However, the level of potential growth in Estonia in the years ahead is likely to stay below its pre-crisis rate.

**Estonia has made some progress on addressing the 2012 CSRs, notably by limiting its budget deficit to 0.3 % of GDP, further reducing unemployment, launching education reforms and investing in energy efficiency.** Notwithstanding these commendable achievements, reform efforts are still ongoing, in particular in certain areas of education (tertiary, vocational education and training, and upper secondary), disability and incapacity for work schemes and the energy sector.

**Some reform efforts appear insufficient, in particular given the scale of the challenges on the labour market, the fight against poverty and in the education and energy sectors.** Structural unemployment is still high and competitiveness will soon be hindered by skills mismatches, a lack of qualified professionals (both blue and white collar), weaknesses in local public service provision and relatively weak innovation:

- **Public finances:** The government still needs to fully comply with the new rules in the Treaty on Stability, Coordination and Governance. The structural budget balance rule as set out in the Treaty, which is expected to be introduced this year, should be complemented by more binding expenditure targets. Estonia could improve efficiency by better targeting spending on social security.

- **Labour market:** Bringing more people – particularly skilled people, the long-term unemployed and disabled people – into the labour force is Estonia's most pressing challenge. The shortage of skilled labour could soon lead to higher costs for companies and affect investment and growth potential. In this light, a better targeted education and adult training system is necessary to ensure skills matching labour market needs. Fine-tuning of benefit systems and workplace accessibility could help to provide for incentives to work. A persistent shortage of childcare services hinders an early return of parents, especially women, to the labour market.
- **Innovation:** Estonia's competitiveness could be hampered by weak public-private cooperation, overly broad priorities for research and innovation and a mismatch between the technical skills taught at universities and the needs of the market. Prioritisation and internationalisation of research is a crucial challenge given the small size of the country.
- **Energy/Transport:** Estonia's energy and resource intensity remains amongst the highest in the EU, while the importance of oil shale as an energy source emphasises the need to develop more efficient and less-polluting energy sources. The transport sector does not appear environmentally friendly enough, with an environmental tax system providing too little incentives to change environmentally harmful consumer patterns, insufficiently attractive public transport networks and limited rail infrastructure. Relative isolation due to insufficient cross-border connections limits Estonia's security, diversity of supply and price competition.
- **Public administration:** Regional differences and inefficiencies among the local governments are having an adverse impact on the provision of social services, especially childcare, family support services, long-term care, primary healthcare, education and public transport. In addition, given the significant impact of EU funds on the economy, it is important to ensure the strategic programming of funds for 2014-20 in order to boost growth and employment.
- **Financial sector:** A potential recurrence of excessive credit growth remains a medium-term concern as private-sector indebtedness is relatively high (around 130% of GDP in 2011 for both households and businesses) and is likely to increase again soon. Skills shortages in the labour market may soon drive up wages and feed into this. This risk is compounded by the partial tax deductibility of mortgage interest payments and loan guarantees that encourage borrowing.

## 1. INTRODUCTION

In May 2012, the Commission proposed a set of country-specific recommendations (CSRs) for economic and structural reform policies for Estonia. On the basis of these recommendations, the Council of the European Union adopted five CSRs in the form of a Council Recommendation in July 2012. These CSRs concerned public finances, the fiscal framework, the labour market, education and social policies, energy and transport, research and innovation and modernisation of public administration. This Staff Working Document (SWD) assesses the state of implementation of these recommendations in Estonia.

The SWD assesses policy measures in light of the findings of the Commission's Annual Growth Survey 2013 (AGS)<sup>1</sup> and the second annual Alert Mechanism Report (AMR)<sup>2</sup>, which were published in November 2012. The AGS sets out the Commission's proposals for building the necessary common understanding about the priorities for action at national and EU level in 2013. It identifies five priorities to guide Member States to renewed growth: pursuing differentiated, growth-friendly fiscal consolidation; restoring normal lending to the economy; promoting growth and competitiveness for today and tomorrow; tackling unemployment and the social consequences of the crisis; and modernising public administration. The AMR serves as an initial screening device to determine whether macroeconomic imbalances exist or risk emerging in Member States. The AMR found positive signs that macroeconomic imbalances in Europe are being corrected. To ensure that a complete and sustainable rebalancing is achieved, 14 Member States were selected for a review of developments in the accumulation and unwinding of imbalances.<sup>3</sup> Estonia was not among them.

Against the background of the 2012 Council Recommendation, the AGS and the AMR, Estonia presented updates of its national reform programme (NRP) and stability programme in April 2013. These programmes provide detailed information on progress made since July 2012 and on the future plans of the government. The information contained in these programmes provides the basis for the assessment made in this Staff Working Document.

The programmes submitted went through an inclusive consultation process involving the national parliament and the main socio-economic partners, including through a web-based open consultation process.

Estonia's stability programme was prepared in parallel with the national reform programme and the multi-annual state budget strategy. The stability programme is fully consistent with the code of conduct for the Stability and Growth Pact. The national reform programme is consistent with the guidance provided by the Commission's Secretariat-General. The objectives and measures of the strategy are in conformity with the government's Action Plan and the state budget strategy.

### ***Overall assessment***

The analysis in this SWD leads to the conclusion that Estonia has made some progress on measures taken to address the CSRs in the Council Recommendation. On the positive side, the country has managed to limit its budget deficit to 0.3% of GDP and to further reduce its

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<sup>1</sup> COM(2012) 750 final.

<sup>2</sup> COM(2012) 751 final.

<sup>3</sup> A total of 13 in-depth reviews were published on 10 April 2013. While selected for an in-depth review in the AMR, Cyprus was ultimately not reviewed under the Macroeconomic Imbalance Procedure in view of the advanced preparations for a financial assistance programme.

unemployment level, thanks in particular to better-than-expected economic growth, to engage in education reforms and to invest significantly in energy-efficiency policies. Notwithstanding these commendable achievements, reform efforts appear insufficient, in particular given the scale of the challenges on the labour market, in the fight against poverty, in certain areas of education and in the energy sector. Structural unemployment is still high, and, given the subdued global outlook, may broadly stagnate in 2013. Competitiveness might soon be hindered by skills mismatches, a lack of qualified professionals (both blue and white collar) and relatively weak innovation: Estonia needs to move towards more technology-intensive sources of growth. Also, in the light of the exceptionally high energy intensity of the Estonian economy, further efforts will be needed to reduce the energy bill and improve the carbon performance of the economy. Lastly, small legislative steps have been made to foster municipality mergers, while an action plan to improve local public administration is being prepared. Therefore, in these areas, but also in fiscal frameworks, the challenges identified in June 2012 and reiterated in the AGS still apply.

The policy plans submitted by Estonia are generally relevant and consistent with most of the challenges identified in last year's Staff Working Document. They thereby confirm Estonia's commitment to address shortcomings in the areas of the labour market, education and energy. Beyond measures already scheduled in the 2012 Action Plan for 2011-15, the new Action Plan proposes a number of new measures, in particular in the area of promoting healthy life expectancy and behaviour. However, a number of topics appear insufficiently targeted or less specifically targeted than previously: business angels, professional disease, regional unemployment, energy efficiency in transport and local administration reform.

## **2. ECONOMIC DEVELOPMENTS AND CHALLENGES**

### **2.1. Recent economic developments and outlook**

#### *Recent economic developments*

**Estonia's GDP growth appears broadly balanced.** After a strong rebound in 2011, Estonia's real GDP growth moderated to 3.2% in 2012, supported by robust domestic demand but held back by slower export growth. A favourable labour market situation and strong fixed public investment sustained domestic demand. After large surpluses over the period 2009-11, the external balance reverted to negative values, as Estonia's trade surplus deteriorated and revenue outflows from foreign investment strengthened.

**Inflation continues its slow decrease, but wage inflation might soon reappear.** Average annual HICP (harmonised index of consumer prices) inflation receded from 5.1% in 2011 to 4.2% in 2012, pulled downwards by declining international food and oil prices. As wage growth remains broadly consistent with productivity growth and core inflation remains relatively low, there is no short-term risk of significant wage inflation. However, with the unemployment rate already close to the natural rate of unemployment, this might become an issue in the coming quarters. Indeed, unemployment continued to decline rapidly to 10.2% in 2012 as output growth remained strong. Nevertheless, long-term unemployment remains high, in particular among the low-skilled, and with large regional differences. The labour force participation ratio remains historically high, but inactivity for health reasons is increasing. Indeed, in the EU context, Estonia shows relatively poor health outcomes, especially for male (healthy) life expectancy at birth and the prevalence of chronic conditions.<sup>4</sup>

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<sup>4</sup> Public priorities have been set in a 2009-20 plan designed to address concerns about health outcomes.

**Deleveraging is now reversing, with private sector indebtedness likely to be growing again soon and the indebtedness of enterprises already increasing.** At around 130% of GDP in 2011 (consolidated figures), the stock of private debt (households and enterprises) still reflected the rapid accumulation in the boom years. In addition, higher interest margins and prudent supervisory policies continue helping to maintain the stability of the banking sector.

**Public-sector finances remain among the strongest in the EU, with the lowest debt level, at around 10.1% of GDP in 2012, and a budget deficit limited to 0.3% of GDP,** far better than the 2.6% of GDP planned in the stability programme update of spring 2012 and possibly partly reflecting the volatility of Estonia's economy.

### *Economic outlook*

**Reflecting the economy's catching-up potential, real GDP is expected to continue growing above the EU average over the long term thanks to continuing capital accumulation and productivity gains.** Economic growth is projected at 3.0% in 2013, with a progressive recovery of Estonia's main trading partners from mid-2013. In 2014 growth should continue to converge towards its long-term average of 4%, driven by exports, but also by domestic demand mostly through stronger private investment. Export-led growth may resume soon, supported by Russia's relatively good economic performance and by the relatively strong resilience of the Nordic countries to the sovereign debt crisis. However, as domestic demand increases, maintaining external balances will require improvements in competitiveness to foster exports, while vigilance will still be needed to contain risks to macro-financial stability. The government balance is expected to remain negative at 0.3% of GDP in 2013 before reverting to a nominal surplus of 0.2% of GDP in 2014. The general government debt is expected to fall to 9.6% in 2014, owing to budgetary surpluses.

**Both the national reform programme and the stability programme share the same short-term economic outlook, but neither of them gives any figures on the impact of the planned structural reforms on growth.** For 2013 the outlook is broadly in line with the most recent Commission forecasts. For 2014 the Estonian authorities are more cautious and forecast real GDP growth of 3.6%.

**A number of factors combined could pose a risk of inflationary pressures re-emerging once domestic demand has fully recovered.** Overall, the level of potential growth in Estonia in the years ahead is likely to stay below its pre-crisis rate, when rapid capital accumulation reflected EU accession and swift financial convergence. In addition, the population is ageing, with the working-age population declining. Post-crisis structural unemployment will also be higher, weighing on potential growth. However, steady foreign direct investment inflows should still mean that total factor productivity will make a sizeable contribution to growth, while continuing structural reforms could boost potential growth. In parallel, investment is likely to make a strong contribution to potential growth due to a number of factors, such as the existence of a business and policy climate that favours private investment, public infrastructure investment supported by EU cohesion and structural funds, and the need for further improvements to the housing stock, which should take place when real wage growth resumes.

## **2.2. Challenges**

**Estonia faces considerable challenges as regards the availability of a skilled labour and re-employment of the long-term unemployed or re-integration of the disabled into the labour market.** Overall, the main policy challenges facing the country have not changed

since the 2012 assessment exercise, although some adjustments are needed as the government progresses with its reform agenda.

**First, the government still needs to formalise all the necessary components to comply with the new rules in the Treaty on Stability, Coordination and Governance.** In addition, the (structural) budget balance rule, which is expected to be introduced this year, should be complemented by strengthening the binding nature of the multiannual expenditure targets. In parallel, given the need to preserve a sound fiscal position in view of increasing expenditure pressures, the efficiency of public spending could be improved, in particular through better targeting of public spending on social security.

**Second, as the shrinking of the labour force is a major concern, bringing more people into the labour force is the most prominent challenge.** Limited changes to the benefit systems together with promoting accessibility to reasonably adjusted workplaces could foster labour market entries and prevent disability-related exits. In parallel, long-term and youth unemployment could become persistent due to skills mismatches and the lack of jobs in certain regions, entailing a higher risk of poverty. The range of problems faced by jobless households puts growing pressure on the provision of (and access to) quality social services, while active labour market policies may fall short of what is needed to prevent structural unemployment from weighing on labour supply and from pushing up wages in growing sectors. Lastly, a persistent shortage of childcare services and generous income support for stay-home parents discourage an early return of parents, especially women, to the labour market, while gender pay gap and segmentation may contribute to weaker labour market outcomes.

**Third, shortages of qualified labour may soon contribute to exerting upward pressure on wages, leading to higher costs for companies and affecting investment and growth potential.** This results from a high proportion of people without professional education from the vocational education and training (VET) system or from higher education, a low employment rate of the low-skilled and a still relatively low level of participation in lifelong learning, in particular of the low-skilled and the 50-64 age group. In this light, a better targeted education and adult training system is necessary to ensure an adequate supply of skilled human capital.

**Fourth, productivity growth, and thus medium- and long-term competitiveness, is hampered by inefficiencies in research and innovation (R&I).** Weak public-private cooperation, national priorities for research and innovation policy that are too broad, including a lack of focus on shared priorities between research and business innovation, and a relative mismatch between the technical skills produced by universities and the needs of the market could hamper productivity growth and thus affect the country's medium- and long-term competitiveness. Lastly, prioritisation and internationalisation of the R&I system is a crucial challenge for Estonia, given the small size of the country.

**Fifth, Estonia's energy and resource intensity remains amongst the highest in the EU, while the importance of oil shale as an energy source emphasises the need to develop more efficient and less polluting energy sources** and adequately address the pressing waste issue resulting from energy production from oil shale. Also, the transport sector does not appear environmentally friendly enough, with insufficiently attractive public transport networks and still limited rail infrastructure developments, while the network still lacks intermodal connections for passengers and freight. Lastly, relative market isolation due to

insufficient cross-border connections limits Estonia's security and diversity of supply and, thereby, market competition.

**Sixth, regional differences and inefficiencies among the local governments are having an adverse impact on the provision of public services. This concerns in particular childcare, family support services, long-term care, primary healthcare, education and public transport.** In addition, given the significant impact of EU funds, it is important to create favourable conditions for effective and sustainable service provision to ensure the strategic programming of funds for 2014-20 in order to deliver on the Europe 2020 priorities.

**Lastly, a potential recurrence of excessive credit growth remains a medium-term concern.** Private-sector indebtedness relative to GDP remains relatively high and will likely be increasing again soon. Also, in the present context of reappearing skills shortages, wage pressures may soon resurface and could feed into excessive credit growth relatively soon. This risk is compounded by partial tax deductibility of mortgage interest payments and loan guarantees that still encourage private borrowing. Furthermore, property taxation is underdeveloped and the land tax has been virtually abolished as from January 2013.

### 3. ASSESSMENT OF POLICY AGENDA

#### 3.1. Fiscal policy and taxation

##### *Budgetary developments and debt dynamics*

**The main goal of the Estonian budgetary strategy, as expressed in the 2013 stability programme, is to ensure a sustainable fiscal policy that supports balanced economic growth.** The medium-term objective (MTO), unchanged compared to the previous programme, is a structural surplus. The MTO more than adequately reflects the objectives of the Pact. According to the programme, the MTO was achieved as of 2009. Other fiscal objectives include ensuring sufficient fiscal buffers and reducing the tax burden to the pre-crisis level by lowering labour taxes. During the budget year the government intends to avoid adopting positive supplementary budgets, using windfall revenue to accumulate reserves.

**Estonia achieved a headline budget deficit of -0.3% of GDP in 2012, which was considerably better than the deficit of -2.6% projected in the 2012 programme.** This was primarily a result of significantly stronger than expected economic and employment growth and slower than expected expenditure growth. In addition, the outcome was positively affected by some delays in the implementation of investment projects financed through revenue from the sale of excess greenhouse gas (GHG) emission certificates. The 2013 programme forecasts a deficit of -0.5% of GDP in 2013, which is slightly smaller than projected in the 2012 stability programme. The improvement is a result of strong base effects from 2012 supported by solid tax revenue growth, which has been partially offset by increased expenditure pressures, a 1.2 percentage point (pp) cut in the unemployment insurance premium and delays in the implementation of one-off investments financed through GHG sales revenue. Risks to the fiscal target for 2013 seem balanced overall, with the authorities' macroeconomic projections being realistic. Local elections in October 2013 are not creating significant implementation risks as most municipalities are bound by the net debt ceiling.

**The programme targets a balanced budget for 2014.** The improvement on 2013 primarily stems from a better macroeconomic outlook. That said, one-off expenditure related to the additional payments to the second-pillar pension system and the postponement of investment projects financed through GHG sales revenue add pressures to the budget balance. The

authorities intend to contain growth in government consumption expenditure, which is set to increase at a slower rate than nominal GDP over the whole programme period, in line with the Commission spring forecast. Compared with 2013, expenditure as a share of GDP is expected to decline in all areas with the exception of subsidies and social transfers in kind. The projected consolidation is also supported by the planned revenue-increasing discretionary measures (see Box 1).

For 2015-17, the programme targets a steady improvement in the nominal balance through a gradual build-up of headline surpluses to 0.8% of GDP in 2017. Revenue as a share of GDP is set to decline by 5.4 pps of GDP between 2012 and 2016 as a result of the phasing-out of the EU structural funds, the reversal of temporary consolidation measures and the planned cut in the personal and corporate income tax rate in 2015. It is outpaced by a decline in expenditure. While this strategy is subject to risks, linked to both macroeconomic developments and implementation of the strategy, these risks can be assessed as broadly neutral, in particular given the solid track record of the authorities in meeting the previous targets.

**After achieving the MTO<sup>5</sup> in 2012, according to the programme, the (recalculated) structural balance is expected to temporarily deviate from the MTO in 2013, before improving and returning to surplus of 0.3% of GDP in 2014.<sup>6</sup>** In 2015 and 2016, the programme targets a steady improvement in the (recalculated) structural balance, reaching a surplus of 0.8% of GDP in 2016. The improvement in the (recalculated) structural balance by 0.7 % of GDP corresponding to these targets complies with the requirement for an annual improvement of 0.5% of GDP in 2014 in accordance with the national projections. In parallel, according to the Commission spring 2013 forecast, the deviation from the MTO in 2013 is not significant, with a structural deficit of -0.2% of GDP, while the magnitude of improvement in the structural balance in 2014 and in the (recalculated) structural balance correspond. Both estimates show an improvement in the structural balance after 2013 and a return to the MTO from 2014 onwards. In addition, the estimates should be seen against the uncertainties linked to determining the cyclical position in real time for countries undergoing significant structural adjustments, the ambitious MTO set by the Estonian authorities and the relative closeness of the structural balance to the MTO. Based on the information provided in the programme, the growth rate of government expenditure, net of discretionary revenue measures, in 2014 is projected to exceed the lower rate of 0.85% under the expenditure benchmark and in 2015 the reference medium-term rate of potential GDP growth of 2.11%. This, however, is not expected to undermine the achievement of the MTO in 2014 and is likely to maintain it thereafter, reflecting the volatility of public investment and falling usage of EU funds after the end of the 2007-13 programming period.

According to the programme, the general government debt, which is the lowest in the EU, is projected to increase marginally to 10.2% of GDP in 2013, before gradually declining to 8.3% in 2017. This profile reflects an accumulation of financial assets due to nominal surpluses after 2014. Medium-term debt projections (see Graph below Table V in annex) indicate that full implementation of the programme would lead to an even lower debt-to-GDP ratio in 2020.

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<sup>5</sup> Cyclically adjusted balance net of one-off and temporary measures, recalculated by the Commission on the basis of the information provided in the programme using the commonly agreed methodology. The Commission's spring forecast estimates have been used for the NAWRU estimates for Estonia.

<sup>6</sup> Compared with the (recalculated) structural balance, the programme forecasts a higher structural budgetary position and uninterrupted attainment of the MTO from 2009 onwards without deviation from the MTO in 2013. The discrepancy is mainly due to a difference in assessment of the cyclical position of the economy between the common methodology and the approach taken in the programme.

## Box 1. Main measures

### Main budgetary measures

Revenue	Expenditure
<b>2012</b>	
<ul style="list-style-type: none"> <li>• Abolishing reduced excise rates for special-purpose diesel; net effect (0.11% of GDP)</li> <li>• Lowering the ceiling for total personal income tax deductibility from EUR 3 960 to EUR 1 920 (0.03% of GDP, impact in 2013)</li> <li>• Increasing tobacco excise duty by 10% (0.05% of GDP)</li> <li>• Increasing alcohol excise duty by 5% (0.04% of GDP)</li> </ul>	<ul style="list-style-type: none"> <li>• Reforming special pension schemes (impact not specified)</li> <li>• Increasing the number of state-financed study places at higher education institutions as part of higher education reform (impact not specified)</li> </ul>
<b>2013</b>	
<ul style="list-style-type: none"> <li>• Lowering unemployment insurance contributions from 4.2% to 3% (-0.3% of GDP)</li> <li>• Abolishing the land tax on residential land for plots up to 1 500 m<sup>2</sup> in densely populated areas and up to 2 ha in rural areas (-0.1% of GDP)</li> <li>• Increasing tobacco excise duty by 6% (0.04% of GDP)</li> <li>• Increasing alcohol excise duty by 5% (0.05% of GDP)</li> </ul>	<ul style="list-style-type: none"> <li>• n.a.</li> </ul>
<b>2014</b>	
<ul style="list-style-type: none"> <li>• Increasing tobacco excise duty by 6% (0.03% of GDP)</li> <li>• Increasing alcohol excise duty by 5% (0.07% of GDP)</li> </ul>	<ul style="list-style-type: none"> <li>• n.a.</li> </ul>
<b>2015</b>	
<ul style="list-style-type: none"> <li>• Lowering the personal and corporate income tax rate from 21% to 20% (impact not specified)</li> </ul>	<ul style="list-style-type: none"> <li>• n.a.</li> </ul>
<b>2016</b>	
<ul style="list-style-type: none"> <li>• n.a.</li> </ul>	<ul style="list-style-type: none"> <li>• n.a.</li> </ul>
<p><i>Note:</i> The budgetary impact in the table is the impact reported in the programme, i.e. by the national authorities. A plus sign indicates that revenue/expenditure increases as a consequence of the measure.</p>	

### *Long-term sustainability*

**Estonia does not appear to face short-term, medium-term or long-term sustainability challenges.** In addition, government debt (10.1% of GDP in 2012) is significantly below the Treaty threshold of 60% of GDP. Estonia's very low level of government debt would increase to 13.7% of GDP by 2030, assuming no further policy changes are made. The long-term increase in age-related expenditure is below the EU average, and recent reform measures undertaken in the field of pensions have further reduced sustainability risks. However, as a

result, the projected decline in the benefit ratio could pose a risk to the adequacy of pension entitlements.

### *Fiscal framework*

**The strength of the current fiscal framework lies in the long-standing commitment to keeping the general government budget in balance.<sup>7</sup> The fiscal framework needs to be further strengthened to comply with the new rules set in the Treaty on Stability, Coordination and Governance.** Although the balanced-budget rule has not been formalised in law, all Estonian governments have adhered to it, except in 2008-09. As the rule was adapted only recently to take account of cyclical factors, there are no mechanisms in place that would limit expenditure growth when economic growth is above potential. The balanced-budget rule is complemented by a debt rule applicable at the level of local government. There is a net debt ceiling of 60%<sup>8</sup> of revenue from the main activities in the current fiscal year<sup>9</sup> on borrowing by local governments and dependent units, with no escape clauses. The government still needs to formalise the structural budget balance (or surplus) rule in the State Budget Law to comply with the new rules in the Treaty on Stability, Coordination and Governance. The process of preparing the structural budget balance rule started already in 2011 and the authorities are expected to meet the deadlines set in the Treaty on Stability, Coordination and Governance.

Lastly, the medium-term budgetary framework in place provides a basis for planning beyond the next year's budget. However, the expenditure limits set in the framework are indicative and can be revised in the following year's update. In order to prevent pro-cyclical fiscal loosening in years of high economic growth, the expenditure ceilings could be made more binding and accompanied with multi-annual expenditure rules. The same applies to the system for monitoring and reporting on the strategic targets, including issues of public accountability.

### *Tax system*

**Estonia's tax-to-GDP ratio, which stood at 32.8% in 2011, remains low compared to other EU countries** (EU27 GDP-weighted average at 38.8%). The tax structure is generally considered favourable to growth and the taxation policy framed in terms of a tax system with low tax rates and broad tax bases. With the general government budget close to balance, fiscal consolidation does not appear to be a major challenge in Estonia. The tax burden on consumption, as measured by its implicit tax rate, was 26.1% in 2011, the seventh highest in the EU. The tax wedge on labour at average wages (single, no children), was 40.4% in 2012. By contrast, the implicit tax rate on capital was at 7.9% the second lowest of the 19 Member States for which it is available and taxes on capital represented only 2.2% of GDP in 2011, the second lowest value in the EU, mainly reflecting the design of corporate income tax that is levied on distributed profits only.

In 2011, Estonia adopted a legislative package aimed at further improving the growth-friendliness of taxation by reducing the tax burden on labour, providing incentives to increase participation in lifelong learning and reducing incentives to borrow. They include reducing personal and corporate income tax rates by one percentage point (to 20%) as of 2015,

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<sup>7</sup> The objective of keeping the nominal general government budget in balance (or in surplus since 2007) has been the cornerstone of this budget rule.

<sup>8</sup> The net debt ceiling (debt stock) can be expanded up to 100% of revenue for municipalities with high self-financing capability.

<sup>9</sup> Revenue including transfers but excluding net revenue from sales of fixed assets, financial revenue and earmarked grants for acquisition of fixed assets.

abolishing the fringe-benefit tax on work-related studies and lowering the ceiling for total personal income tax deductibility (linked in particular to mortgage interest payments) by about 40% as of 2012. In addition, the government decided in late 2012 to lower unemployment insurance contributions from 4.2% to 3.0% (-0.3% of GDP), as of 2013.

From 2013, Estonia has abolished the land tax on small and medium-sized residential plots, if the primary residence of the taxpayer is located on that land. The share of property taxes in Estonia was already the lowest in the EU (0.3% of GDP in 2011) and was levied only on land, based on outdated land registry values. While the fiscal effect of abolishing the land tax is rather small (-0.1% of GDP), it could weaken the counter-cyclical policy instruments available to influence housing sector developments. It also reduces the policy potential to strengthen and diversify budgetary revenue without harming growth.<sup>10</sup>

Environmental taxation in Estonia (2.8% of GDP) was above the EU-27 average in 2011 (2.4% of GDP), reflecting high revenue from transport fuel taxes. Transport taxation, excluding fuel taxes, was the second lowest in the EU, at 0.1% of GDP. There is no vehicle taxation, except for heavy-goods vehicles, and no measures have been taken so far to increase transport taxation. New cars in Estonia had the highest average emissions per km in the EU in 2011 (156.9 g CO<sub>2</sub>/km, 16% above the EU average). The price effect of motor fuels due to increased fuel excise duties and high world oil prices has not had any strong effect so far on car purchase decisions. Despite the increase, diesel excise duty is still slightly below the EU average and excise duty on petrol is well below. Introducing or raising taxes on sources of energy and also on transport and waste (e.g. road tax, energy consumption-linked tax on motor vehicle use or ownership, in line with the Commission communication,<sup>11</sup> or landfill taxes) could help to achieve environmental goals and further diversify budgetary revenues.

**Thanks to the simple tax system and widespread use of e-government, Estonia has relatively low tax compliance costs.** The relative share of informal work is about 10% of employment, which is below the EU average.<sup>12</sup> To improve tax compliance, Estonia has recently taken relevant measures to gain better control over low enforcement areas by amending the VAT law to prevent tax fraud in gold-related transactions and by limiting access to the zero VAT rate for excise goods in excise warehouses. The Tax and Customs Board systematically works on tax compliance issues, focusing on improving tax collection in construction, catering and accommodation. In parallel, the government is planning further measures: (i) for all excise goods, limiting imports from third countries by private persons, starting from late 2013; (ii) reinforcing the rules on registering employees to reduce undeclared work; and (iii) introducing an electronic receipts system to improve VAT collection and limit scope for VAT fraud.

### **3.2. Financial sector**

**Estonia's banking sector remains sound, with strong capital buffers, satisfactory asset quality and high provision coverage, but a medium-term financial stability risk persists.** The total loan portfolio of the banking sector is growing again, with enterprises' indebtedness

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<sup>10</sup> See, for example, European Commission (2012), Tax reforms in EU Member States 2012, European Economy No 6/2012. See also OECD (2012), OECD Economic Surveys: Estonia 2012, OECD Publishing.

<sup>11</sup> Commission Communication COM(2012) 756, 14.12.2012.

<sup>12</sup> See Hazans, M. (2011). Informal Workers across Europe. Evidence from 30 European Countries. The World Bank, Policy Research Working Paper. December 2011. Alternatively, it has been assessed that the prevalence of undeclared work in Estonia amounted to around 7-8% of GDP in 2005-06, being more or less in line with the weighted EU-27 average (European Employment Observatory Review: Spring 2007; European Commission (2012). Tax reforms in EU Member States 2012).

relative to GDP increasing anew. Credit growth could accelerate as the reserve requirement for banks is low, there is no rule setting a maximum loan-to-value ratio for mortgages, and real wage growth is increasingly positive. Further incentives to borrow still exist, including the partial deductibility of mortgage interest payments and loan guarantees, thereby also contributing to maintaining a medium-term macro-financial stability risk. The total value and the number of real estate transactions increased by 13% and 12% respectively in 2012, while the housing affordability index is high and a growing number of people (11%) intend to buy real estate in the next 2-3 years, opening the possibility of a new property bubble.<sup>13</sup> Overall, promoting savings remains desirable as the loan-to-deposit ratio still exceeds 100%.<sup>14</sup> The reduction in the land tax base that entered into force in January 2013 (see section 3.1) could have a - probably only limited - effect in the opposite direction. Furthermore, there is no longer any talk of updating the land registry values used as a basis for the existing land tax, which date back to 2001.

### *Access to finance*

**Access to finance for small and medium-sized enterprises (SMEs) - despite improving over the previous year - remains difficult.** Since the onset of the crisis, sources of financing such as the stock and bond market have been virtually frozen. In addition, relatively few Estonian companies have access to bond financing or international markets anyway. However, banks report a rise in the number of clients, deposits, foreign transactions, leasing contracts and card usage. Also, their loan portfolio is composed less of real estate projects than during the previous boom period, which gives greater access for companies active in other sectors. Nevertheless, this has so far mostly benefited larger companies or projects and utilities. For SMEs, lending conditions remain very strict: limited liability is largely a fiction, as very often entrepreneurs have to collateralise their own assets. This reduces the availability of credit to further invest and grow.

In parallel with the planned use of financial engineering instruments from EU funds to improve the access of SMEs to finance, the government is continuing to support companies through the institutions created for this purpose in previous years: KredEx, Enterprise Estonia and the Estonian Development Fund. The latter is being made more project-based. Enterprise Estonia is focusing on the market segments that appear more promising (ICT, medicine and medical technologies, wood and food) and on key clients. Two important new organisations or bodies were created in 2012 in order to facilitate access to seed and equity capital: the Estonian Business Angels Network and the Baltic Innovation Fund, which will invest in private equity and venture capital funds in the Baltic countries, focusing on metal/machinery, electronics, ICT, shared services and logistics.

### **3.3. Labour market, education and social policies**

In 2012, as economic growth continued, more unemployed people found a job and real wages increased. As employment continues to grow, the national target in this respect appears achievable, partly facilitated by the shrinking working-age population (denominator effect). However, **persistent youth and long-term unemployment, skills mismatches, and labour force losses due to chronic conditions<sup>15</sup> or health problems resulting in growing**

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<sup>13</sup> Study commissioned by the Estonian Association of Real Estate Companies.

<sup>14</sup> About 110% in early 2013.

<sup>15</sup> At the level of local governments, which were hit harder by the economic crisis, the general reduction in social protection costs was more than 8% in 2010 compared with 2009, even though the number of disabled persons has increased each year over the last five years. The total increase has been more than 11%.

**workforce shortages** remain the main source of concern and a potential bottleneck to sustainable growth. Lastly, a persistent lack of childcare facilities and/or possibilities delays the return of parents, especially women, to the labour market, while the gender pay gap and segmentation might prevent higher qualified women from fully contributing to labour market outcomes.

**In 2012, the Council recommended that Estonia improve incentives to work by streamlining the social benefits system and increase flexibility in the allocation of benefits, while ensuring adequate social protection.** In response, several measures have been introduced. Others are only in their development phase, will need implementation or are double-edged, while further measures could have been considered. **Progress has been limited on the Council recommendation.** In line with the commitments, the rate of the unemployment insurance premium has been reduced for employers and employees from January 2013, along with the personal and corporate income tax rates as of 2015 (see under section 3.1 'Tax system'). However, an envisaged increase in the basic exemption from personal income tax has been postponed. To alleviate the high poverty risk of the unemployed, the unemployment allowance has been increased substantially from EUR 65 to EUR 101.50 (around 35% of the national minimum wage) per month from 2013.

Discussions on the revision of the incapacity for work schemes have started, while plans for establishing the long awaited insurance scheme against accidents at work have been deferred by several months:<sup>16</sup> submission of the scheme to parliament is now announced for winter 2013-14 and it is unlikely to enter into force before mid-2015. In spite of the growing poverty, Estonia has not sufficiently ensured better accessibility to efficient and quality services (see also under section 3.5 'Modernisation of public administration'). Also, the social contribution 'minimum' and the absence of unemployment benefits for part-time workers<sup>17</sup> do not facilitate a smooth transition from unemployment/inactivity to work via part-time jobs.<sup>18, 19</sup> An increase in the minimum wage to EUR 320, i.e. 35% of the average wage, has strengthened work incentives for low-wage earners, but has contributed to raising labour costs. It is important that minimum wage increases remain fully consistent with productivity growth in the economy as a whole, especially as the share of the low-skilled in the total labour force is relatively large. Lastly, the data-management interoperability of the social benefit system in general remains insufficient,<sup>20</sup> thereby limiting evidence-based policy response in terms of higher flexibility and better targeting in benefit allocation, leading to possible overlaps/inefficiency and unemployment/inactivity traps.

**To address the recommendation on better targeting family and parental benefits and removing distortionary income tax exemptions related to children, some steps in the right direction have been made, but further progress is needed, not least in the area of childcare possibilities.** The government has addressed the need for better targeting family benefits by approving an additional child benefit as from July 2013 for families living in relative poverty, and by raising the child allowance for the third and subsequent child to EUR

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<sup>16</sup> Reform plans no longer involve the occupational disease part of the insurance scheme under consideration.

<sup>17</sup> Unemployment benefits for part-time workers, but within limits to prevent abuses.

<sup>18</sup> R. Leetmaa, K. Nurmela and PRAXIS (July 2012), 'European Employment Observatory' – Long-term unemployment in Estonia', A. Vork (2009), 'Labour supply incentives and income support systems in Estonia', OECD (2012), 'Country Economic Survey – Estonia', European Employment Observatory (April 2013), 'Template for Post-Assessment of National Reform Programmes – national SYSDM experts (EU-27)'.

<sup>19</sup> Estonia has one of the lowest rates of part-time work in the EU.

<sup>20</sup> i.e. the lack of one central system linking both national and local levels (see also under section 3.5).

76.72 per month. Also, these additional benefits are not included in the calculation of the subsistence benefit. Furthermore, Estonia plans to modify the parental benefits formula during 2013 to ensure that the time profile of benefits encourages parents to go back to work. However, the focus in Estonia on income support measures in the event of childbirth<sup>21</sup> may be comparatively cost effective than childcare services in increasing fertility rates, while having a negative impact on women's employment.<sup>22</sup> At the same time, measures which have proven to have a stronger positive impact on birth rates and female employment, such as the provision of childcare services, remain underfinanced<sup>23</sup> (see under section 3.5 'Modernisation of public administration'). In particular, the draft reform of the Pre-School Act is still under discussion in the Ministry of Education and Research, as it was already in spring last year.<sup>24</sup>

**The recommendation on increasing the return of the long-term unemployed to the labour market has only been partly implemented, with limited progress so far.** Despite a continued improvement in bringing the unemployed back into work, the proportion of long-term and very long-term unemployed in the total workforce remains high. The government is responding with some tailor-made and complex activation measures, although their intensity and coverage are still low. However, active labour market policy measures (ALMPs) are only partly effective in addressing this challenge as problems affecting the long-term unemployed are many-sided (e.g. indebtedness, addiction, health problems, caring obligations), requiring additional services by other institutions and administrative levels (see also under section 3.5 'Modernisation of public administration'). This is further exacerbated by the high level of low-skilled unemployed and high regional disparities. In this respect, there is no coordinated response for developing basic economic activities and encouraging job creation in regions affected by high unemployment.<sup>25</sup>

**In response to the recommendation on increasing the employment of young people, the progress in addressing youth unemployment has been limited so far and therefore this part of the CSR has been partly implemented.** The government has increased the provision of career counselling, work-related training and job-search workshops. However, overall, although the youth unemployment rate has dropped substantially, from 32.9% in 2010 to 20.9% in 2012, it has remained high and the youth employment rate is still below the pre-crisis level due to difficulties in reaching young people with existing measures. Indeed, only

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<sup>21</sup> At 1.5% of GDP in 2010, the share of income support measures, including parental benefits was the highest among EU-27 Member States.

<sup>22</sup> In 2011, the employment rate of women with children in the 20-49 age group was more than 20 pps lower than that of childless women, one of the highest differentials in the EU.

<sup>23</sup> Overall, according to surveys of child day-care services in municipalities, commissioned by the Ministry of Social Affairs, the waiting list for childcare places grew from 4 830 in January 2009 to 5 890 in January 2012 (*Ainsaar, M., Soo, K. Kohalikud omavalitsused ja lastega pered 2011; Ainsaar, M., Soo, K. Kohalike omavalitsuste toetus lastega peredele 2008 ja laste päevahoid 2008-2009 Eestis*). In particular, the low availability of quality childcare possibilities for children under three remains a factor that hinders parents' return to work.

<sup>24</sup> Last year's draft adjustments considered establishing day-care facilities at public primary schools throughout the country, making them more accessible for families and giving local authorities additional financial means for creating new places and new facilities.

<sup>25</sup> The long-term unemployment in North-Eastern Estonia is a particular source of concern, combining causes such as an unfavourable place of residence, where industrial activities are partly obsolete, a lesser knowledge of the Estonian language and an insufficient education background for at least half thereof. Not surprisingly, the group of those living in North-Eastern Estonia had the highest regional unemployment rate in Estonia as well as the highest persistence of unemployment.

around a third of the young jobless were registered as unemployed in 2012 and benefited from ALMPs.

### *Education policies*

Estonia is confronted with relatively significant **skills mismatches** resulting in particular from a major structural shift from non-tradable to tradable sectors in recent years. Despite public spending on education above the EU average, Estonia is also faced with **a high proportion of people without any professional qualifications**, since about 32% of Estonians aged 25-64 years have not graduated either from VET or from higher education. A persistent lack of graduates in science, technology, engineering and mathematics (STEM) is also an issue.

**In response to the recommendation on linking training and education more effectively to the needs of the labour market, ambitious reforms of the tertiary, VET and upper secondary education systems are in progress, with more results still expected. Overall, some progress has been made on addressing this part of the CSR.**

**At tertiary education level, performance agreements have been signed between the Ministry of Education (MoE) and higher education institutions under the new Higher Education Act, and will be implemented as of September 2013.** This reform could help steer study outcomes towards fields required by the economy (e.g. STEM). In parallel, new scholarships have been set up for students in the STEM fields that present the greatest demand, in order to boost the number of graduates. It is important that this reform is fully implemented by Estonia in the future, including through ensuring adequate funding and, in parallel, that the high degree of autonomy of tertiary education institutions is maintained.

**A draft new VET Institutions Act is in parliament.** An ambitious modernisation of vocational education curricula is planned, with the aim of increasing the share of apprenticeship in the curricula and better matching study outcomes with the skills required by the labour market. Accreditation experts coming from enterprises have already delivered positive assessments of seven out of 40 sectors of teaching in VET, as part of a regular review process. Preliminary plans include establishing a managing centre for apprenticeship training, with the aim of creating 2 000 apprenticeship places in cooperation with VET institutions and employers. This will, however, require a high degree of cooperation with social partners, in particular - but not exclusively - the enterprise sector, and appropriate financing. Both aspects currently appear to be partly missing.

**The government has recently updated its general education development plan (2007-13) with a view to improving the quality and efficiency of the education system and reducing the number of early school leavers.** The national mechanism for tracking early school leaving is being implemented. In parallel, the government has launched a long-awaited and ambitious reform of the upper secondary general education school network, whose objective is to raise the quality of education and bring it more into line with the needs of the job market, and to align the network of upper secondary schools with Estonia's demographic situation. In this context, a draft new Basic and Upper Secondary Schools Act is currently in parliament with a view to establishing a clearer separation of basic schools and upper secondary schools, with the possible longer term objective of moving towards state-owned upper-secondary schools, which is a lengthy process. Lastly, it remains to be seen whether this long-term rationalisation of the upper secondary schools network can be implemented independently of a more ambitious reform of local authorities (see under section 3.5 'Modernisation of public administration').

**Estonia is also investing heavily in the use of new technologies and digital skills**, by e.g. updating the ICT skills of students, teachers and teachers of educators in general and vocational education and in higher education. Also, the Estonian government has very recently launched a pilot project for computer-based statistics education in lower and upper secondary schools.

**An inter-ministerial skills task force was set up in 2012 to find solutions for better matching people's skills to labour market needs.** Work has started and an inventory of competencies has been created in a State Register of Occupational Qualifications and a cross-link between online registers has been established.<sup>26</sup> Entrepreneurship skills are included in the university curricula and on a voluntary basis in secondary education. **Still, one of the main bottlenecks in the Estonian economy remains the lack of skilled workforce at both high and low ends, including of highly qualified managers.**

**In response to the recommendation on increasing opportunities for low-skilled workers to improve their access to lifelong learning, limited progress has been registered concerning this part of the CSR.** As regards low-skilled workers, relevant existing programmes are continuing for unemployed 16-29 year-olds with or without basic education, while the 'back to school' vocational education programme is also ongoing. In parallel, an inter-ministerial task force set up in 2012 is in charge of drafting the future national lifelong learning strategy for 2014-20. However, the currently insufficient inclusion of the low-skilled and older workers in lifelong learning is still not sufficiently addressed and the training activities do not always credibly meet labour market needs in terms of relevance and quality. Limited progress has been made on the draft adjustments to the Adult Training Act since spring 2012, with the revision of the training licences system for training providers and changes to the financing system of adult training still in the hands of the MoE. Lastly, adult and unemployed training could benefit more from the modernised VET Centres and the modernised vocational curricula.

### **3.4. Structural measures promoting growth and competitiveness**

#### ***Energy, transport, infrastructure, climate change and the environment***

Estonia's energy and carbon intensity are still among the highest in the EU, in particular in transport, where the new car fleet is the most energy-intensive in the EU.<sup>27</sup> The importance of oil shale as an energy source emphasises the need to develop more efficient and less polluting energy sources and adequately address a pressing waste issue. Also, there is a need to improve knowledge of the true cost of the water resource as an economic factor in a context of water abundance. The transposition of several EU Directives in the energy sector has not yet been fully completed. Lastly, Estonia needs to connect its energy markets to other EU electricity and gas networks in order to increase security of supply and diversify energy sources, develop cross-border trading and avoid congestion.

**In 2012, the Council recommendation mentioned the need to improve energy efficiency, in particular in buildings and transport, and environmental incentives concerning vehicles.** Given the scope of the challenges, and despite some clear progress in insulating public buildings, the measures undertaken so far have had a limited impact, not least those

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<sup>26</sup> Also the hiring of high-skilled foreign workers has been facilitated by establishing a fast-track procedure for obtaining the work permit.

<sup>27</sup> While the overall share of public transport in Estonia is still slightly above the EU average, the number of trips made with public transport has been in steady decline and the use of passenger rail transport remains one of the lowest in the EU.

designed to increase energy efficiency in the transport sector. **Therefore, some progress has been made on this part of the recommendation.**

Estonia is proceeding with its investment programmes in the building and transport sectors. In the *building sector*, this continued up to the end of 2012, when most CO<sub>2</sub> projects in the government buildings sector were almost finished and the EU funding-related projects had largely been completed. The government is waiting for the new financial programming of EU funds (2014-20) to continue with the insulation of apartment blocks and individual houses. Additionally, Estonia introduced measures to improve energy efficiency in power generation and in district heating and has planned measures to promote high-efficiency cogeneration, in particular in the use of biomass. However, considerable amounts of money could still be invested to improve energy efficiency and reduce carbon intensity of buildings, both residential and industrial. Measures targeted at the industrial sector are planned.

With respect to *transport*, Estonia does not use tax incentives to improve the energy efficiency of its car fleet. Its action remains limited to the use of public funds to support environmental projects. The 2012-14 Electro-Mobility Programme continues to provide public support for the acquisition of electric cars and for establishing a quick charging infrastructure covering the whole country. Estonia has also undertaken a financing programme (EUR 86 million) focused on energy efficiency in public transport. In this context, pilot projects for LPG buses are being initiated. To promote public transport, Tallinn city has introduced free public transport for its residents as from 2013, with a decrease in private traffic intensity of some 10% so far. However, if this initiative is to be a complete success, it will have to be ensured that the loss of ticket revenue does not compromise service quality, investment in new vehicles and in transport infrastructure.

The new Transport Development Plan 2014-20 (currently in preparation) is expected to put forward a comprehensive strategy for a more environmentally friendly and innovative transport sector, including enhancing public transport networks, continuing rail infrastructure developments, creating car-pooling stations and improving intermodal connections for passengers and freight. In parallel, the draft 'Estonian Business Growth Strategy 2020' has proposed logistics and transport engineering among the top development priorities. Innovative approaches will be even more important to fully exploit the economic potential of the Rail Baltic project, whose building works have been planned for 2018-23, and which aims to improve Estonia's connectivity with western Europe.<sup>28</sup> In this context, the decision made by the Estonian authorities to significantly reduce the amount of EU structural funds investment in transport infrastructure during the next programming period (2014-20) is a source of concern.

**Overall, it is unlikely that these measures will be sufficient to contain the modal shift away from public transport towards private cars and, more generally, to contain the ongoing increase in non-ETS GHG emissions.** Most recent data point to Estonia's non-ETS emissions increasing more than expected in the 2011 projections and being already above the Effort Sharing Decision target for 2013 (see in the Overview table, p. 23). It can even be expected that Estonia will fail to meet its GHG emission target for 2020 in the absence of additional measures to improve energy efficiency, in particular in the field of transport and housing, and to reduce the energy intensity of its car fleet.

**In response to the recommendation on strengthening environmental incentives related to waste, some progress has been made with the increase in royalties on oil shale**

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<sup>28</sup> Also, ensuring adequate air connectivity appears essential to Estonia's economic development.

**production, and more results are expected in 2013. However, given the need and scope for further measures in the areas of oil shale, municipal waste and waste water, this part of the Council recommendation has been only partly implemented.** The importance of oil shale as an energy source adds to the need to reduce the waste it generates and to develop sustainable options and economic incentives to use the waste accumulated from the oil shale already mined. The increase in royalties on the production of oil shale from 2013 is a step in the right direction. With respect to incineration, 50% of municipal waste will be used in a cogeneration plant being built close to Tallinn and to be completed in June 2013. However, a number of barriers to reaching the 2020 recycling targets for municipal waste remain as the producer responsibility in place appears insufficient to cover the full costs of separate collection, sorting and recycling of the waste streams, while the pay-as-you-throw scheme has limited coverage. Regarding waste water, Estonia is implementing the EU Directive relatively slowly, and additional efforts will be needed to reach full compliance. In terms of efficiency of the water utility companies, there is a lack of emphasis on setting standards, limits or requirements for processes in the water industry in order to ensure that technological changes actually take place.

**As regards the recommendation on fostering renewable energy use, including through upgraded infrastructure and legislation, the progress made can be considered to have been substantial and the challenge temporarily addressed. However, attention could be paid to avoiding changes affecting the legitimate expectations of investors in the formal agreements reached with private actors.** Estonia has reached its 2011-12 interim target for renewable energy production, distribution and use. Moreover, the country is preparing new development plans extending to the horizon of 2050. The overall objective is to further diversify the portfolio of energy sources, i.e. relying even less on fossil fuels and increasing still further the share of renewable energy in primary sources. In January 2013, Estonia fully opened its electricity market to competition. An amendment to the Electricity Market Act is under discussion in parliament, but may end up retroactively introducing unfavourable changes to the support conditions for wind generators, renegeing on previous agreements with industry. Transposition of the third internal energy market package of energy-related EU Directives needs to be completed, especially as Estonia is close to full compliance.<sup>29</sup> With respect to transmitting the wind energy produced on the west coast to eastern Estonia, expropriation measures for extending the infrastructure are nearly in place. Regarding the transport sector, the share of renewable energy in all modes has stayed very low, far behind the target of 10%. As a result, the government is planning to introduce an obligation to incorporate 5-7% of biofuel in motor fuel and to thereby increase the use of renewable energy in public transport.

**With respect to the recommendation on continuing the development of cross-border connections to end relative energy market isolation, some progress has been registered so far. Further progress depends partly on factors outside Estonia's control. Given the scale of the existing challenges, this part of the CSR can be considered to have been only partly implemented.** Cross-border electricity connections with Latvia (third cable) and Finland (second cable) are being strengthened, and power grid systems synchronised: Estonia has recently joined the Nord Pool Spot market by creating the Estlink price area for day-ahead market trading in the power exchange. It is continuing its efforts to unbundle its gas sector and address its dependence on long-term oil-indexed contracts with Russia. Progress is being registered with respect to the country's first liquefied natural gas (LNG) terminal: decisions

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<sup>29</sup> A limited number of articles have not been fully transposed.

are expected to be made relatively soon, as the conclusions of a study on the best place to establish the necessary terminal have been unveiled.

### ***Research and innovation***

All actors in the research and innovation sector in Estonia are highly dynamic: government, universities and the business sector. However, a weak link between the public research sector and the economy at large translates into weak public-private cooperation,<sup>30</sup> too broad national priorities for limited resources and a relative mismatch between the technical skills produced by universities and the needs of the market. In practice, the challenge for Estonia is to boost innovation in traditional industries, while at the same time focusing its limited resources and supporting growth of knowledge-intensive companies, mostly in sectors where Estonia already has or can easily develop a competitive advantage. Also, the governance of the R&I system could take more account of the needs of both universities and businesses when designing policy measures. In addition, internationalisation of the R&I system is a crucial challenge for Estonia, given the small size of the country. **Overall, progress has been limited and the part of the CSR related to the R&I system is considered as only partly implemented.**

**With respect to the recommendation on enhancing cooperation between businesses and academia, the challenge of weak public-private cooperation in the field of R&I persists,** despite a few measures in place such as the existence of technology transfer offices in universities, R&D grant schemes for collaboration between companies and universities, Competence Centres, and Innovation Vouchers. The government approach in supporting start-ups and fast-growing enterprises is highly appreciated by the business community and the new Baltic Innovation Fund will be beneficial in further providing the necessary financial support for these types of companies. However, further development of instruments such as public procurement for innovation would be helpful for better determining the governmental demand for R&I, with a view to increasing competitiveness and addressing societal challenges. Part of the solution can also be found through university-industry research mobility and exchange schemes.

**In response to the part of the recommendation on fostering prioritisation of the research and innovation systems,** Estonia is currently preparing both a national research and innovation strategy and a national innovation and entrepreneurship strategy. These strategies are at present undergoing public consultation and are due to be adopted by the end of June 2013. They are expected to identify knowledge-intensive sectors that could push the country up on the international value chain and give access to wider markets, as well as concentrate public resources on a more limited number of fields of science and technology that reflect Estonia's strengths, as identified by international benchmarking. However, there are two separate strategies and these did not benefit from a broad consultation exercise involving the private sector and universities during their early development, which may affect the final results. Furthermore, there is a concern that research and business innovation will not be brought into a single or at least strategically coordinated and politically endorsed framework.

**Regarding the part of the recommendation on fostering the internationalisation of the research and innovation systems,** the Estonian authorities acknowledge a need for special attention. However, while the measures in place regarding highly skilled professionals are going in the right direction, as a small country it is unlikely that Estonia will solve the talent

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<sup>30</sup> The Community Innovation Survey shows that whereas there are numerous innovative SMEs in Estonia, universities are generally not among the first three preferred collaboration partners.

challenge alone. In addition, where Estonian top scientists are well integrated internationally, this is not the case for the overall research community in Estonia. Evident channels are via the European Framework Programmes and European Research Area initiatives alongside various collaborations with the Baltic-Nordic countries.

### *Internal market and competition*

**Estonia generally enjoys a business-friendly regulatory environment, and the availability of e-government tools is exceptionally high.** The administrative burden imposed on businesses appears reasonable, and the state also scores well in terms of its own efficiency (for instance, the state spends a much smaller share of revenues to collect taxes than in other EU countries, including quite efficient ones). On the other hand, the impact assessment of regulations could be improved, in terms of both content and the time available to stakeholders to provide feedback.

**The government is taking action to improve the insolvency procedure, one of the few areas where Estonia lags behind her EU peers.** A review of the situation is ongoing with a view to facilitating agreed debt restructuring and finding alternative ways of dealing with insolvencies.

### **3.5. Modernisation of public administration**

**At local level, the mismatch between fiscal capacity and devolved responsibilities places great pressure on public service provision by local governments. This situation is aggravated by the small size of many municipalities and the low population density** in most counties, leading to generally low local administrative capacity. In August 2011, at Estonia's request, the OECD produced a review<sup>31</sup> that highlighted inadequate efficiency, weak interoperability in terms of data and systems and fragmented tools and processes. Also, strengthening of the central/local relationship was advocated, through greater institutional coordination and collaboration (see also under section 3.3 'Labour market, education and social policies'), including the data-management interoperability of the social benefit system. Lastly, the financing system of municipalities does not currently include incentives for local governments to support entrepreneurship and job creation and thereby to increase their revenue, while the equalisation fund in favour of weaker municipalities in its current form might reduce municipalities' motivation to make extra efforts to increase revenues.

**The quality service provision required from local governments by law appears ineffective in most sectors - transport, education, social services, including childcare, long-term care and primary healthcare.** Due to the small size of most municipalities, their capacity to recruit competent professionals who would be sufficiently occupied is limited. In particular, the integration of the long-term unemployed into the labour market is made more challenging by the ineffectiveness of local governments in providing support services, since this target group usually requires the provision of a range of local social services as a precondition for re-employment or activation. Without first improving the provision of social and other support services at the level of local governments, ALMPs are expected to remain partly ineffective.<sup>32</sup> A sound framework for effective delivery of public services at local level is also required for the implementation of EU funds.

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<sup>31</sup> OECD Public Governance Reviews, 'Estonia: Towards a Single Government Approach', OECD, Paris, August 2011.

<sup>32</sup> e.g. unemployed people who want to be registered, a prior condition to benefit from various ALMP measures and health coverage, are not systematically granted transport benefits by local governments, but the Unemployment Insurance Fund seeks to remedy local governments' possible failures.

**In response to the Council recommendation on improving the efficiency of local governments and ensuring effective service provision, limited progress has been registered so far, since the measures already introduced or currently under consideration do not appear sufficiently advanced or comprehensive at this stage to be totally credible, while further measures could be considered.** Amendments to the Act on the Administrative Division of the Territory and to the Promotion of Local Government Merger Act entered into force in March 2013, with the aim of facilitating voluntary mergers of municipalities, by increasing the financial support for mergers and by allowing mergers between municipalities without common border. In parallel, the Ministry for Regional Affairs has published a draft proposal for local government reform based on an 'attraction centre' model that could result in Estonia having no more than 30-50 local governments by the year 2017. However, the reform proposal has not received full government support yet. On the ground, while since 1996 voluntary mergers have reduced the number of municipalities only from 254 to 226, seven mergers of a total of 18 local administrations are planned in 2013. No revision of the financing system for municipalities is being considered so far.

With respect to services, an action plan to improve public administration is being prepared, and a pilot project in the areas of care for the elderly and waste management has been undertaken. The results of this project will be used as examples for joint service provision and joint procurements, while the optimal size of cooperation area has been defined. In parallel, the current draft of the new Basic Schools and Upper Secondary Schools Act brings more clarity to the respective responsibilities of the state and local municipalities in the education sector (see under section 3.3 'Education policies'). However, data and systems interoperability in the central/local relationship remains insufficient, in particular in the social benefits area.

The new Civil Service Act modernising public administration entered into force on 1 April 2013. In parallel, the implementation of a new national reform programme for raising the quality of financial reporting by the state, and of another aimed at improving the systems for managing and implementing EU structural funds, is currently in progress. In June 2012, parliament also adopted a new Anti-corruption Act. These developments are expected to reinforce the already good credentials of Estonia in these essential and sensitive areas.

#### 4. OVERVIEW TABLE

2012 commitments	Summary assessment
<b>Country-specific recommendations (CSRs)</b>	
<p><b>CSR 1: Preserve a sound fiscal position by implementing budgetary plans as envisaged, ensuring achievement of the MTO by 2013 at the latest, and compliance with the expenditure benchmark. Complement the planned budget rule with more binding multi-annual expenditure rules within the medium-term budgetary framework, continue enhancing the efficiency of public spending and implementing measures to improve tax compliance.</b></p>	<p><i>Estonia has made substantial progress in implementing the budgetary plans</i> mentioned in the CSR. <i>However, no progress has been registered so far on the fiscal framework issue.</i> The medium-term objective was achieved in 2012, one year before the deadline. The temporary deviation from the MTO in 2013 is not significant and a structural surplus is forecast to be reached from 2014 onwards. The government is expected to fulfil its commitment under the Treaty on Stability Coordination and Governance and to adopt the structural budget balance rule in time. However, the authorities are not planning to introduce an expenditure rule. The government has taken steps to improve tax compliance.</p>
<p><b>CSR 2: Improve incentives to work by streamlining the social benefits system and increasing flexibility in the allocation of disability, unemployment and parental benefits, while ensuring adequate social protection. Improve delivery of social services, while better targeting family and parental benefits and removing distortionary income tax exemptions related to children. Increase the participation of the young and the long-term unemployed in the labour market.</b></p>	<p><i>Estonia has made limited progress in implementing the CSR.</i> With the aim of increasing labour supply, it has reduced the unemployment insurance premium for both employers and employees from January 2013 and the personal and corporate income tax rates as of 2015. Little progress has been made so far on the overhaul of the incapacity for work schemes and on the long awaited insurance scheme against accidents at work. The government has also improved the targeting of family benefits in favour of families living in relative poverty. As current activation measures can only partly address the complex problems faced by the long-term and young unemployed, the activation level is still insufficient.</p>
<p><b>CSR 3: Link training and education more effectively to the needs of the labour market, and enhance cooperation between businesses and academia. Increase opportunities for low-skilled workers to improve their access to lifelong learning. Foster prioritisation and internationalisation of the research and innovation systems.</b></p>	<p><i>Estonia has made some progress in implementing the CSR.</i> The government has initiated a process of addressing skills mismatches by setting up a skills taskforce and has started preparing the 2014-20 Lifelong Learning Strategy. There has been a noticeable increase in the participation of adults in lifelong learning but the level of participation by the low-skilled and older workers in 2010-11 was still very low. Performance agreements have been signed between the MoE and tertiary education institutions. A new major VET modernisation reform is under way. Weak cooperation between business and universities remains the main issue in R&amp;D, together with the internationalisation of the R&amp;I system. Prioritisation is expected to be addressed in two new strategies which are due to be adopted in late spring 2013. It remains to be seen to what extent the two strategies will be brought into a strategically coherent framework.</p>

<p><b>CSR 4: Improve energy efficiency, in particular in buildings and transport, and strengthen environmental incentives concerning vehicles and waste, including by considering incentives such as the taxation of vehicles. Foster renewable energy use, including through upgraded infrastructure and legislation. Continue the development of cross-border connections to end relative market isolation.</b></p>	<p><i>Estonia has made limited progress in implementing the CSR.</i> The government has taken action to improve the energy efficiency and reduce the carbon intensity of government buildings. Limited action has been undertaken for non-government buildings despite the huge potential. In transport, measures undertaken so far (electromobility programme, energy-efficient public transport fleet) are relevant, but insufficient given their overall very limited impact. There is no vehicle taxation except on heavy-goods vehicles. So far consumer patterns have been slow to change. Some progress has been made in energy efficiency but it is difficult to evaluate whether the support instruments will be sufficient to foster energy efficiency in the short and medium term. Steps have been taken in the right direction for strengthening environmental incentives in the area of waste, although it is still unlikely that the 2020 recycling target for municipal waste will be reached and further effective measures for improving waste management, especially in relation to waste generated from oil shale, would be required. Estonia has reached its interim target for 2011-12 for renewable energy consumption. Estonia would need to complete the second electricity interconnection with Finland, and diversify its natural gas supply with a regional LNG terminal in the Baltic States and a possible interconnection with Poland. The internal Baltic transmission grid should be strengthened for both electricity and gas to contribute to the security of supply and regional trade.</p>
<p><b>CSR 5: Enhance fiscal sustainability of municipalities while improving efficiency of local governments and ensure effective service provision, notably through stronger incentives for the merger of or increased cooperation between municipalities. Relevant reform proposals should be put in place within a reasonable timeframe.</b></p>	<p><i>Estonia has made limited progress in implementing the CSR.</i> Limited adjustments have been made to two Acts to facilitate voluntary mergers of municipalities, but cover neither local government revenue nor services, and their possible impact is likely to be small. With respect to services, an action plan is being prepared and pilot projects are ongoing, while some clarity may soon be brought to respective responsibilities in the upper secondary education sector. Nevertheless, low accessibility and quality of services provided at local level remain a hindrance to the re-employment of the long-term unemployed.</p>
<p><b>Europe 2020 (national targets and progress)</b></p>	
<p>Employment rate target set in the 2011 NRP</p> <p>76%</p>	<p>Employment rate (%)</p> <p>66.7% in 2010</p> <p>70.4% in 2011</p> <p>71.7% in 2012.</p> <p>Around 43 000 people must be brought into the</p>

	<p>labour market in absolute terms to achieve the target of 76%. The employment rate continues to grow due to more previously unemployed people being re-employed and more inactive people joining the labour force.</p>
<p>R&amp;D target set in the 2011 NRP: 3% by 2020</p>	<p>2.36% in 2011, already surpassing the intermediate target of 2% set for 2015. However the steep increase from 2010 (1.63%) was due mainly to one investment in a shale-oil testing facility that was recorded as a private investment, resulting in private R&amp;D expenditure in 2011 doubling in absolute terms compared to 2010. This one-off investment is not expected to be reproduced next year. Without this investment, the Estonian authorities estimate that the increase in private R&amp;D expenditures would have been 20 % instead of 100% between 2010 and 2011. The investment was made by Energy Estonia, which is a public enterprise, but it was registered as a private R&amp;D investment due to statistical procedures. It is therefore expected that next year Estonia's R&amp;D intensity will decrease to some extent, but will still be well on track to meet the 2020 target.</p>
<p>Greenhouse gas (GHG) emissions target: limit the increase in non-ETS emissions to no more than +11% compared to 2005</p>	<p>According to the national projections submitted to the Commission lately and when existing measures are taken into account, the target is expected to be missed: +12% in 2020 compared to 2005 (representing a projected gap of (only) 1 percentage point compared to the target).</p> <p>However, according to the most recent inventory data non-ETS greenhouse gas emissions increased by 9% between 2005 and 2011 and are already above the target for 2013 set by the Effort Sharing Decision. It can therefore be expected that the GHG emission target will not be reached.</p>
<p>Renewable energy target: 25% by 2020</p> <p>Share of renewable energy in all modes of transport: 10%</p>	<p>The share of renewable energy in gross final energy consumption was 25.9% in 2011 and 0.2% in transport (Source: Eurostat April 2013. Only formally reported biofuels compliant with Articles 17 and 18 of Directive 2009/28/EC are included).</p>
<p>Indicative national energy efficiency target for 2020: stabilisation of final energy consumption in 2020 at the level of 2010.</p> <p>This means reaching a 2020 level of 6.5 Mtoe primary consumption and 2.84 Mtoe final energy consumption.</p>	<p>Estonia has set an indicative national energy efficiency target in accordance with Articles 3 and 24 of the Energy Efficiency Directive (2012/27/EU). It has also expressed it, as required, in terms of an absolute level of primary and final energy consumption in 2020 and has provided information on the basis on which this has been calculated.</p>
<p>Early school leaving target: 9.5%</p>	<p>Early school leaving: 10.9% in 2011 and 10.5% in 2012. Estonia performs slightly better than the EU average for the early school leaving rate (10.5% vs 12.9% in 2012). It is getting close to both the EU headline target for 2020 (10%) and its national</p>

	<p>target (9.5%). It is also worth noting that a significant reduction in the early school leaving rate for males has taken place in recent years.</p> <p>As regards the period 2010-11 the early school leaving rate has decreased by 0.7 pps.</p> <p>Early leavers from education and training (percentage of the population aged 18-24 with at most lower secondary education and not in further education or training):</p> <p>2010: 11.6%</p> <p>2011: 10.9%</p> <p>2012: .</p>
<p>Tertiary education target: 40%</p>	<p>Tertiary education attainment: 40.3% in 2011 and 39.1% in 2012. Estonia performs also better than the EU average for the tertiary attainment rate (39.1% as against 35.8% in 2012). It has in this area almost reached both its national target and the EU target for 2020. In addition, a strong increase in tertiary attainment of females was noted for Estonia. In the period 2011-12 the tertiary attainment rate decreased by 1.2 pps, however:</p> <p>2010: 40.0%</p> <p>2011: 40.3%</p> <p>2012: 39.1%.</p>
<p>Target for the reduction of population at risk of poverty: 15% in 2020</p>	<p>2010: 15.8%</p> <p>2011: 17.5%.</p> <p>A reduction in the at-risk-of-poverty rate from 17.5% in 2010 (income year) to 15% in 2020 (income year) means that the number of people who are at risk of poverty will be reduced by 36 248.</p> <p>With the increase in 2011 and given the previously stable level of around 18-19%, the task of meeting the target is very challenging.</p>

## 5. ANNEX

### Table I. Macroeconomic indicators

	1995-1999	2000-2004	2005-2009	2010	2011	2012	2013	2014
<b>Core indicators</b>								
GDP growth rate	5.7	7.3	1.6	3.3	8.3	3.2	3.0	4.0
Output gap <sup>1</sup>	-4.3	2.7	4.4	-6.0	0.5	1.4	1.2	1.3
HICP (annual % change)	10.2	3.5	5.2	2.7	5.1	4.2	3.6	3.1
Domestic demand (annual % change) <sup>2</sup>	6.4	9.7	0.8	1.1	9.8	7.6	2.6	3.7
Unemployment rate (% of labour force) <sup>3</sup>	10.0	11.3	7.5	16.9	12.5	10.2	9.7	9.0
Gross fixed capital formation (% of GDP)	27.3	28.8	31.1	19.1	21.7	25.0	24.7	25.3
Gross national saving (% of GDP)	20.9	22.3	22.6	23.3	26.1	25.0	25.4	26.0
<b>General Government (% of GDP)</b>								
<b>Net lending (+) or net borrowing (-)</b>	<b>-0.2</b>	<b>0.7</b>	<b>0.3</b>	<b>0.2</b>	<b>1.2</b>	<b>-0.3</b>	<b>-0.3</b>	<b>0.2</b>
<b>Gross debt</b>	<b>7.1</b>	<b>5.3</b>	<b>4.9</b>	<b>6.7</b>	<b>6.2</b>	<b>10.1</b>	<b>10.2</b>	<b>9.6</b>
<b>Net financial assets</b>	<b>34.3</b>	<b>29.6</b>	<b>29.8</b>	<b>36.5</b>	<b>35.2</b>	<b>n.a</b>	<b>n.a</b>	<b>n.a</b>
Total revenue	39.2	35.8	37.6	40.9	39.5	40.2	39.3	37.8
Total expenditure	39.5	35.1	37.3	40.7	38.3	40.5	39.6	37.6
<i>of which: Interest</i>	0.4	0.2	0.2	0.1	0.1	0.2	0.2	0.2
<b>Corporations (% of GDP)</b>								
<b>Net lending (+) or net borrowing (-)</b>	<b>-7.6</b>	<b>-5.6</b>	<b>-2.3</b>	<b>7.1</b>	<b>6.1</b>	<b>4.4</b>	<b>4.8</b>	<b>4.4</b>
<b>Net financial assets; non-financial corporations</b>	<b>-105.2</b>	<b>-121.7</b>	<b>-169.5</b>	<b>-160.6</b>	<b>-146.0</b>	<b>n.a</b>	<b>n.a</b>	<b>n.a</b>
<b>Net financial assets; financial corporations</b>	<b>-7.7</b>	<b>-16.6</b>	<b>-1.4</b>	<b>0.5</b>	<b>2.6</b>	<b>n.a</b>	<b>n.a</b>	<b>n.a</b>
Gross capital formation	20.6	22.5	20.3	12.1	15.7	16.7	16.8	17.9
Gross operating surplus	23.4	30.6	29.5	28.6	31.0	30.0	30.2	30.7
<b>Households and NPISH (% of GDP)</b>								
<b>Net lending (+) or net borrowing (-)</b>	<b>0.5</b>	<b>-3.3</b>	<b>-5.5</b>	<b>-0.7</b>	<b>-1.8</b>	<b>-3.3</b>	<b>-3.7</b>	<b>-3.8</b>
<b>Net financial assets</b>	<b>51.1</b>	<b>48.2</b>	<b>62.6</b>	<b>51.2</b>	<b>49.6</b>	<b>n.a</b>	<b>n.a</b>	<b>n.a</b>
Gross wages and salaries	37.5	34.2	37.1	36.9	35.6	36.4	36.2	36.1
Net property income	1.0	2.3	1.8	1.8	2.8	2.4	2.2	2.0
Current transfers received	18.2	15.6	13.9	16.6	14.9	14.1	14.0	13.7
Gross saving	3.9	0.2	0.3	3.8	3.1	1.9	1.6	1.6
<b>Rest of the world (% of GDP)</b>								
<b>Net lending (+) or net borrowing (-)</b>	<b>-7.9</b>	<b>-8.2</b>	<b>-7.5</b>	<b>6.7</b>	<b>4.8</b>	<b>0.3</b>	<b>0.4</b>	<b>0.4</b>
<b>Net financial assets</b>	<b>27.5</b>	<b>60.4</b>	<b>78.6</b>	<b>73.0</b>	<b>59.0</b>	<b>n.a</b>	<b>n.a</b>	<b>n.a</b>
Net exports of goods and services	-8.9	-5.6	-4.9	6.7	3.9	0.5	1.0	1.3
Net primary income from the rest of the world	-0.9	-4.3	-4.8	-5.6	-5.2	-4.5	-4.0	-4.0
Net capital transactions	0.5	0.5	1.7	3.5	4.2	3.4	2.6	2.4
Tradable sector	49.9	49.7	45.2	45.7	46.7	45.6	n.a	n.a
Non tradable sector	38.5	39.4	42.7	41.5	40.4	41.1	n.a	n.a
<i>of which: Building and construction sector</i>	5.6	5.6	8.1	5.1	5.6	6.5	n.a	n.a
Real effective exchange rate (index, 2000=100)	80.4	89.1	120.1	125.2	121.6	123.5	125.5	127.1
Terms of trade goods and services (index, 2000=100)	86.7	94.7	102.9	101.4	98.2	97.7	97.7	97.8
Market performance of exports (index, 2000=100)	75.0	88.5	93.6	98.2	112.2	118.1	120.5	122.1
<b>Notes:</b>								
<sup>1</sup> The output gap constitutes the gap between the actual and potential gross domestic product at 2005 market prices.								
<sup>2</sup> The indicator on domestic demand includes stocks.								
<sup>3</sup> Unemployed persons are all persons who were not employed, had actively sought work and were ready to begin working immediately or within two weeks. The labour force is the total number of people employed and unemployed. The unemployment rate covers the age group 15-74.								
<i>Source:</i>								
Commission services' 2013 spring forecasts (COM); Stability programme (SP).								

**Table II. Comparison of macroeconomic developments and forecasts**

	2012		2013		2014		2015	2016	2017
	COM	SP	COM	SP	COM	SP	SP	SP	SP
Real GDP (% change)	3.2	3.2	3.0	3.0	4.0	3.6	3.5	3.5	3.5
Private consumption (% change)	4.4	4.5	3.3	3.8	3.5	3.8	4.3	3.6	3.6
Gross fixed capital formation (% change)	21.0	20.9	3.0	5.2	7.3	5.8	6.1	7.2	7.2
Exports of goods and services (% change)	5.6	5.6	4.1	4.5	6.2	6.0	6.5	6.8	6.8
Imports of goods and services (% change)	9.1	9.1	3.6	5.1	5.9	5.9	7.0	7.2	7.2
<i>Contributions to real GDP growth:</i>									
- Final domestic demand	7.6	7.6	2.7	3.4	3.7	3.5	3.8	3.8	3.9
- Change in inventories	-0.3	-0.4	-0.1	0.0	0.0	-0.1	0.0	0.0	-0.1
- Net exports	-2.9	-2.9	0.5	-0.5	0.3	0.1	-0.5	-0.4	-0.4
Output gap <sup>1</sup>	1.4	1.6	1.2	1.4	1.3	1.1	0.9	0.8	0.6
Employment (% change)	2.2	2.5	0.3	0.3	1.0	0.4	0.0	0.0	0.0
Unemployment rate (%)	10.2	10.2	9.7	9.1	9.0	8.3	7.8	7.5	6.9
Labour productivity (% change)	1.0	1.1	2.7	2.7	3.0	3.2	3.5	3.5	3.5
HICP inflation (%)	4.2	4.2	3.6	3.6	3.1	2.9	2.9	2.9	2.8
GDP deflator (% change)	3.2	3.2	3.1	3.5	3.3	3.1	3.0	2.9	2.8
Comp. of employees (per head, % change)	6.7	7.4	5.7	4.9	6.1	4.9	8.4	6.5	6.1
Net lending/borrowing vis-à-vis the rest of the world (% of GDP)	0.3	2.2	0.4	2.0	0.4	1.4	-0.2	-1.1	-1.0

Note:

<sup>1</sup>In percent of potential GDP, with potential GDP growth recalculated by Commission services on the basis of the programme scenario using the commonly agreed methodology.

Source:

Commission services' 2013 spring forecasts (COM); Stability programme (SP).

**Table III. Composition of the budgetary adjustment**

(% of GDP)	2012	2013		2014		2015	2016	2017	Change: 2012-2017
	COM	COM	SP	COM <sup>1</sup>	SP	SP	SP	SP	SP
<b>Revenue</b>	<b>40.2</b>	<b>39.3</b>	<b>39.4</b>	<b>37.8</b>	<b>37.3</b>	<b>35.5</b>	<b>34.8</b>	<b>35.4</b>	<b>-4.8</b>
<i>of which:</i>									
- Taxes on production and imports	14.3	14.1	14.1	13.9	13.8	13.7	13.5	13.2	-1.1
- Current taxes on income, wealth, etc.	7.0	7.0	7.1	6.9	7.0	6.8	6.9	7.0	0.0
- Social contributions	11.9	11.4	11.5	11.1	11.2	11.2	11.1	11.0	-0.9
- Other (residual)	7.1	6.8	6.7	5.9	5.3	3.8	3.3	4.2	-2.9
<b>Expenditure</b>	<b>40.5</b>	<b>39.6</b>	<b>39.9</b>	<b>37.6</b>	<b>37.3</b>	<b>35.3</b>	<b>34.1</b>	<b>34.6</b>	<b>-5.9</b>
<i>of which:</i>									
- Primary expenditure	40.3	39.5	39.7	37.4	37.1	35.1	33.9	34.3	-6.0
<i>of which:</i>									
Compensation of employees	10.8	11.1	10.6	11.0	10.3	10.0	9.7	9.4	-1.4
Intermediate consumption	7.4	6.7	7.3	6.1	7.1	7.0	6.8	6.7	-0.6
Social payments	13.1	13.0	12.9	12.9	12.7	12.7	12.5	12.2	-0.9
Subsidies	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.1	0.1
Gross fixed capital formation	5.6	5.0	5.2	4.2	3.8	2.4	2.3	3.5	-2.1
Other (residual)	2.4	2.6	2.8	2.2	2.2	2.0	1.5	1.4	-1.0
- Interest expenditure	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.1
<b>General government balance (GGB)</b>	<b>-0.3</b>	<b>-0.3</b>	<b>-0.5</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>	<b>0.7</b>	<b>0.8</b>	<b>1.1</b>
<b>Primary balance</b>	<b>-0.1</b>	<b>-0.1</b>	<b>-0.4</b>	<b>0.4</b>	<b>0.1</b>	<b>0.4</b>	<b>0.9</b>	<b>1.1</b>	<b>1.2</b>
One-off and other temporary measures	-0.8	-0.5	-0.5	-0.3	-0.6	-0.4	-0.3	-0.3	0.5
<b>GGB excl. one-offs</b>	<b>0.6</b>	<b>0.2</b>	<b>0.0</b>	<b>0.5</b>	<b>0.6</b>	<b>0.6</b>	<b>1.0</b>	<b>1.1</b>	<b>0.5</b>
Output gap <sup>2</sup>	1.4	1.2	1.4	1.3	1.1	0.9	0.8	0.6	-0.7
Cyclically-adjusted balance <sup>2</sup>	-0.7	-0.6	-0.9	-0.2	-0.3	-0.1	0.5	0.6	1.3
<b>Structural balance (SB)<sup>3</sup></b>	<b>0.2</b>	<b>-0.2</b>	<b>-0.4</b>	<b>0.2</b>	<b>0.3</b>	<b>0.3</b>	<b>0.8</b>	<b>0.9</b>	<b>0.7</b>
<i>Change in SB</i>	<i>0.8</i>	<i>-0.4</i>	<i>-0.6</i>	<i>0.3</i>	<i>0.7</i>	<i>0.1</i>	<i>0.4</i>	<i>0.1</i>	<i>-</i>
<i>Two year average change in SB</i>	<i>0.6</i>	<i>0.2</i>	<i>0.1</i>	<i>0.0</i>	<i>0.1</i>	<i>0.4</i>	<i>0.2</i>	<i>0.3</i>	<i>-</i>
Structural primary balance <sup>3</sup>	0.3	0.0	-0.2	0.3	0.5	0.5	1.0	1.2	0.9
<i>Change in structural primary balance</i>		<i>-0.4</i>	<i>-0.6</i>	<i>0.3</i>	<i>0.7</i>	<i>0.1</i>	<i>0.4</i>	<i>0.2</i>	<i>-</i>
<b>Expenditure benchmark</b>									
Applicable reference rate <sup>4</sup>	1.01	2.26	2.26	2.11	0.85	2.11	2.11	n.a.	-
Deviation <sup>5</sup> (% GDP)	-0.3	0.1	-0.1	0.0	0.9	1.0	-1.1	n.a.	-
Two-year average deviation (% GDP)	1.0	-0.1	-0.8	0.1	0.4	0.9	-0.1	n.a.	-
<b>Notes:</b>									
<sup>1</sup> On a no-policy-change basis.									
<sup>2</sup> Output gap (in % of potential GDP) and cyclically-adjusted balance according to the programme as recalculated by Commission services on the basis of the programme scenario using the commonly agreed methodology.									
<sup>3</sup> Structural (primary) balance = cyclically-adjusted (primary) balance excluding one-off and other temporary measures.									
<sup>4</sup> Reference medium-term rate of potential GDP growth. The (standard) reference rate applies from year t+1, if the country has reached its MTO in year t. A lower rate applies as long as the country is adjusting towards its MTO, including in year t. The reference rates applicable to 2014 onwards have been updated in 2013.									
<sup>5</sup> Deviation of the growth rate of public expenditure net of discretionary revenue measures and revenue increases mandated by law from the applicable reference rate. The expenditure aggregate used for the expenditure benchmark is obtained following the commonly agreed methodology. A positive sign implies that expenditure growth exceeds the applicable reference rate.									
<i>Source:</i>									
<i>Stability programme (SP); Commission services' 2013 spring forecasts (COM); Commission services' calculations.</i>									

**Table IV. Debt dynamics**

(% of GDP)	Average 2007-2011	2012	2013		2014		2015	2016	2017
			COM	SP	COM	SP	SP	SP	SP
<b>Gross debt ratio<sup>1</sup></b>	<b>5.7</b>	<b>10.1</b>	<b>10.2</b>	<b>10.2</b>	<b>9.6</b>	<b>9.9</b>	<b>9.3</b>	<b>8.8</b>	<b>8.3</b>
Change in the ratio	0.4	3.9	0.1	0.1	-0.6	-0.3	-0.6	-0.5	-0.5
<i>Contributions<sup>2</sup>:</i>									
<b>1. Primary balance</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.4</b>	<b>-0.4</b>	<b>-0.1</b>	<b>-0.4</b>	<b>-0.9</b>	<b>-1.1</b>
<b>2. “Snow-ball” effect</b>	<b>0.0</b>	<b>-0.2</b>	<b>-0.4</b>	<b>-0.5</b>	<b>-0.5</b>	<b>-0.5</b>	<b>-0.4</b>	<b>-0.4</b>	<b>-0.2</b>
<i>Of which:</i>									
Interest expenditure	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.3
Growth effect	0.0	-0.2	-0.3	-0.3	-0.4	-0.3	-0.3	-0.3	-0.3
Inflation effect	-0.2	-0.2	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.2
<b>3. Stock-flow adjustment</b>	<b>0.3</b>	<b>4.0</b>	<b>0.4</b>	<b>0.2</b>	<b>0.3</b>	<b>0.3</b>	<b>0.2</b>	<b>0.8</b>	<b>0.8</b>
<i>Of which:</i>									
Cash/accruals diff.									
Acc. financial assets									
<i>Privatisation</i>									
Val. effect & residual									
			2013		2014		2015	2016	2017
		2012	COM/ SP <sup>3</sup>	SP <sup>4</sup>	COM/ SP <sup>3</sup>	SP <sup>4</sup>	SP	SP	SP
<b>Gap to the debt benchmark<sup>5,6</sup></b>		n.r.	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.
<b>Structural adjustment<sup>7</sup></b>		n.r.	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.
<i>To be compared to:</i>									
<b>Required adjustment<sup>8</sup></b>		n.r.	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.
<b>Notes:</b>									
<sup>1</sup> End of period.									
<sup>2</sup> The snow-ball effect captures the impact of interest expenditure on accumulated debt, as well as the impact of real GDP growth and									
<sup>3</sup> Assessment of the consolidation path set in SP assuming growth follows the COM forecasts.									
<sup>4</sup> Assessment of the consolidation path set in the SP assuming growth follows the SP projections.									
<sup>5</sup> Not relevant for Member States that were subject to an EDP procedure in November 2011 and for a period of three years following the									
<sup>6</sup> Shows the difference between the debt-to-GDP ratio and the debt benchmark. If positive, projected gross debt-to-GDP ratio does not									
<sup>7</sup> Applicable only during the transition period of three years from the correction of the excessive deficit for EDP that were ongoing in									
<sup>8</sup> Defines the remaining annual structural adjustment over the transition period which ensures that - if followed – Member State will comply with the debt reduction benchmark at the end of the transition period, assuming that COM (SP) budgetary projections for the previous years are achieved.									
<i>Source:</i>									
Stability programme (SP); Commission services' spring 2013 forecasts (COM); Commission services' calculations.									

**Table V. Sustainability indicators**

	EE		EU27	
	No-policy change scenario	Programme (SCP) scenario	No-policy change scenario	Programme (SCP) scenario
S2	1.2	0.4	3.0	1.3
<i>of which:</i>				
Initial budgetary position (IBP)	0.5	-0.6	0.8	-0.9
Long-term cost of ageing (CoA)	0.7	1.0	2.2	2.2
<i>of which:</i>				
Pensions	-0.1	0.2	1.0	1.1
Health care	0.7	0.7	0.9	0.8
Long-term care	0.2	0.2	0.6	0.6
Others	-0.2	-0.1	-0.4	-0.3
S1 (required adjustment)*	-3.4	-4.1	2.2	0.5
<i>of which:</i>				
Initial budgetary position (IBP)	-0.4	-0.9	0.0	-1.8
Debt requirement (DR)	-3.1	-3.5	1.9	1.9
Long-term cost of ageing (CoA)	0.2	0.2	0.3	0.4
S0 (risk for fiscal stress)**	0.22		:	
Debt, % of GDP (2012)	10.1		87.0	
Age-related expenditure, % of GDP (2012)	19.1		25.8	

**Note:**

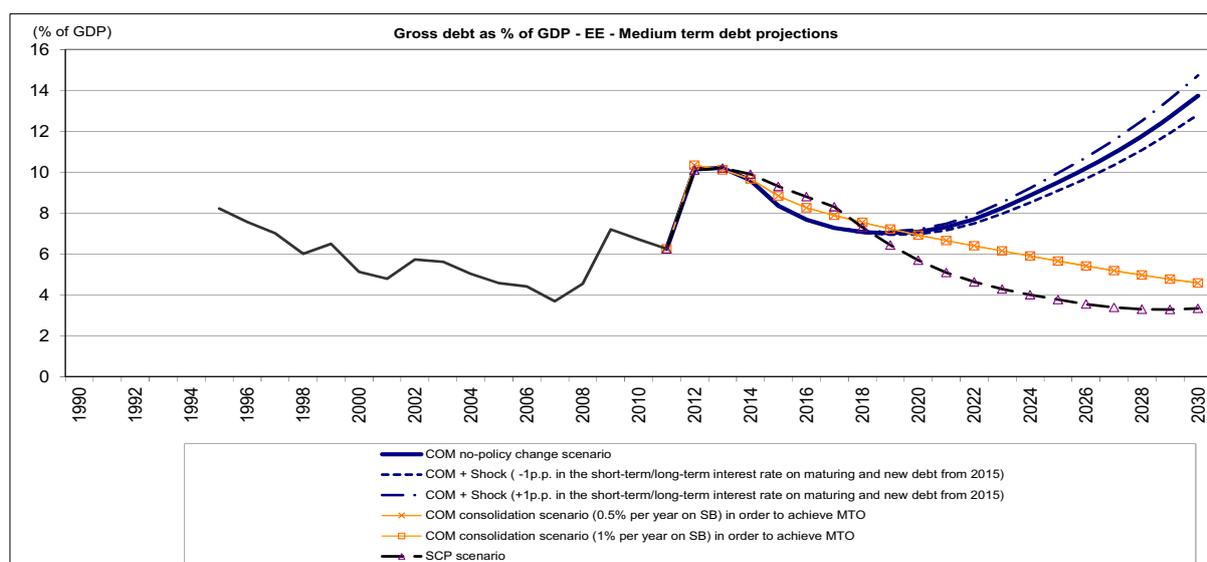
The 'No-policy change' scenario depicts the sustainability gap under the assumption that the budgetary position evolves according to the Commissions' spring 2013 forecast until 2014. The 'Programme (SCP)' scenario depicts the sustainability gap under the assumption that the budgetary plans in the programme are fully implemented.

\* The required adjustment of the primary balance until 2020 to reach a public debt of 60% of GDP by 2030.

\*\* The critical threshold for the S0 indicator is 0.44.

**Source :**

Commission services; 2013 stability programme.



**Table VI. Taxation indicators**

	2002	2006	2008	2009	2010	2011
<b>Total tax revenues</b> (incl. actual compulsory social contributions, % of GDP)	31.0	30.7	31.9	35.9	34.1	32.8
<b>Breakdown by economic function</b> (% of GDP) <sup>1</sup>						
Consumption	11.9	13.0	11.7	14.5	13.6	13.6
of which:						
- VAT	8.4	9.1	7.9	8.9	8.8	8.5
- excise duties on tobacco and alcohol	1.6	1.6	1.3	2.5	1.7	2.0
- energy	1.5	1.8	2.0	2.6	2.6	2.5
- other (residual)	0.4	0.5	0.5	0.5	0.5	0.6
Labour employed	16.7	14.9	17.1	18.2	17.8	16.7
Labour non-employed	0.2	0.3	0.3	0.5	0.4	0.4
Capital and business income	1.6	2.0	2.1	2.2	1.7	1.6
Stocks of capital/wealth	0.6	0.6	0.6	0.6	0.6	0.6
<i>p.m.</i> Environmental taxes <sup>2</sup>	2.0	2.2	2.3	3.0	3.0	2.8
<b>VAT efficiency</b> <sup>3</sup>						
Actual VAT revenues as % of theoretical revenues at standard rate	69.7	80.7	66.6	66.3	68.5	68.8
<b>Note:</b>						
<sup>1</sup> Tax revenues are broken down by economic function, i.e. according to whether taxes are raised on consumption, labour or capital. See European Commission (2013) Taxation trends in the European Union, for a more detailed explanation.						
<sup>2</sup> This category comprises taxes on energy, transport and pollution and resources included in taxes on consumption and capital.						
<sup>3</sup> The VAT efficiency is measured via the VAT revenue ratio. The VAT revenue ratio is defined as the ratio between the actual VAT revenue collected and the revenue that would theoretically be raised if VAT was applied at the standard rate to all final consumption. A low ratio can indicate a reduction of the tax base due to large exemptions or the application of reduced rates to a wide range of goods and services ('policy gap') or a failure to collect all tax due to e.g. fraud ('collection gap'). See European Commission (2012), Tax reforms in EU Member States, European Economy 6/2012 and Taxation Papers 34/2012 for a more detailed explanation.						
<i>Source: Commission</i>						

**Table VII. Financial market indicators**

	2008	2009	2010	2011	2012
Total assets of the banking sector (% of GDP)	136.1	154.8	141.8	119.1	116.5
Share of assets of the five largest banks (% of total assets)	94.8	93.4	92.3	90.6	...
Foreign ownership of banking system (% of total assets)	97.1	94.9	...	...	...
Financial soundness indicators:					
- non-performing loans (% of total loans) <sup>1)</sup>	1.9	5.2	5.4	4.1	3.4
- capital adequacy ratio (%) <sup>1)</sup>	18.9	22.3	22.1	18.6	19.6
- return on equity (%) <sup>1),2)</sup>	13.4	-24.6	2.1	33.3	13.9
Bank loans to the private sector (year-on-year % change)	0.0	-4.8	-4.4	-3.5	-0.4
Lending for house purchase (year-on-year % change)	0.0	-1.8	-2.1	-1.5	0.2
Loan to deposit ratio	203.9	184.0	169.0	145.2	134.0
CB liquidity as % of liabilities	...	...	...	0.0	0.1
Banks' exposure to countries receiving official financial assistance (% of GDP)	...	...	...	...	...
Private debt (% of GDP)	101.5	113.6	104.2	90.4	86.3
Gross external debt (% of GDP) <sup>4)</sup>					
- Public	3.1	6.1	5.2	3.4	6.0
- Private	48.1	51.6	53.2	50.5	51.0
Long term interest rates spread versus Bund (basis points)*	4.2	4.8	3.2	...	...
Credit default swap spreads for sovereign securities (5-year)*	524.8	373.9	107.2	102.6	101.2
<b>Notes:</b>					
<sup>1)</sup> Latest data (September 2012).					
<sup>2)</sup> Branches of foreign banks are excluded.					
<sup>3)</sup> Latest data 2012Q3.					
* Measured in basis points.					
<b>Source:</b>					
Bank for International Settlements and Eurostat (exposure to macro-financially vulnerable countries), IMF (financial soundness indicators), Commission (long-term interest rates), World Bank (gross external debt) and ECB (all other indicators).					

**Table VIII. Labour market and social indicators**

<b>Labour market indicators</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
Employment rate (% of population aged 20-64)	76.8	77.0	69.9	66.7	70.4	72.1
Employment growth (% change from previous year)	0.7	0.2	-9.9	-4.8	7.0	2.2
Employment rate of women (% of female population aged 20-64)	72.5	72.8	68.8	65.7	67.6	69.3
Employment rate of men (% of male population aged 20-64)	81.4	81.7	71.0	67.7	73.5	75.2
Employment rate of older workers (% of population aged 55-64)	60.0	62.4	60.4	53.8	57.2	60.6
Part-time employment (% of total employment, 15 years and more)	8.2	7.2	10.5	11.0	10.6	10.4
Part-time employment of women (% of women employment, 15 years and more)	12.1	10.4	13.8	14.5	15.4	14.9
Part-time employment of men (% of men employment, 15 years and more)	4.3	4.1	7.0	7.1	5.6	5.8
Fixed term employment (% of employees with a fixed term contract, 15 years and more)	2.1	2.4	2.5	3.7	4.5	3.7
Transitions from temporary to permanent employment	0.6	0.1	0.9	0.5	0.5	:
Unemployment rate1 (% of labour force, age group 15-74)	4.6	5.5	13.8	16.9	12.5	10.2
Long-term unemployment rate2 (% of labour force)	2.3	1.7	3.8	7.7	7.1	5.5
Youth unemployment rate (% of youth labour force aged 15-24)	10.1	12.1	27.5	32.9	22.3	20.9
Youth NEET rate (% of population aged 15-24)	8.9	8.8	14.9	14.5	11.8	12.5
Early leavers from education and training (% of pop. 18-24 with at most lower sec. educ. and not in further education or training)	14.4	14.0	13.9	11.6	10.9	10.5
Tertiary educational attainment (% of population 30-34 having successfully completed tertiary education)	33.3	34.1	35.9	40.0	40.3	39.1
Formal childcare (from 1 to 29 hours; % over the population less than 3 years)	1.0	1.0	4.0	2.0	4.0	:
Formal childcare (30 hours or over; % over the population less than 3 year)	14.0	16.0	21.0	19.0	15.0	:
Labour productivity per person employed (annual % change)	6.6	-4.3	-4.5	8.5	1.2	1.1
Hours worked per person employed (annual % change)	-0.2	-1.5	-6.9	2.6	2.3	-1.6
Labour productivity per hour worked (annual % change; constant prices)	6.8	-2.8	2.5	5.8	-1.1	2.8
Compensation per employee (annual % change; constant prices)	12.0	4.0	-1.8	1.1	-3.0	3.0
Nominal unit labour cost growth (annual % change)	17.2	14.6	1.4	-6.2	-1.4	5.6
Real unit labour cost growth (annual % change)	5.0	8.7	2.8	-6.8	-4.2	2.3
<b>Notes:</b>						
<sup>1</sup> Unemployed persons are all persons who were not employed, had actively sought work and were ready to begin working immediately or within two weeks. The labour force is the total number of people employed and unemployed.						
<sup>2</sup> Long-term unemployed are unemployed persons for at least 12 months.						
<b>Sources:</b>						
Commission (EU Labour Force Survey and European National Accounts)						

<b>Expenditure on social protection benefits (% of GDP)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
Sickness/Health care	3.74	4.00	4.78	5.41	4.80
Invalidity	1.14	1.12	1.45	1.90	1.95
Old age and survivors	5.41	5.24	6.35	8.12	7.90
Family/Children	1.45	1.38	1.77	2.28	2.28
Unemployment	0.11	0.14	0.30	1.23	0.76
Housing and Social exclusion n.e.c.	0.04	0.02	0.02	0.03	0.05
<b>Total</b>	11.96	11.96	14.76	19.08	17.88
of which: means tested benefits	0.10	0.07	0.06	0.10	0.15
<b>Social inclusion indicators</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>
At-risk-of-poverty or social exclusion <sup>1</sup> (% of total population)	22.0	21.8	23.4	21.7	23.1
At-risk-of-poverty or social exclusion of children (% of people aged 0-17)	20.1	19.4	24.5	24.0	24.8
At-risk-of-poverty or social exclusion of elderly (% of people aged 65+)	35.4	40.9	35.6	19.0	17.0
At-Risk-of-Poverty rate <sup>2</sup> (% of total population)	19.4	19.5	19.7	15.8	17.5
Severe Material Deprivation <sup>3</sup> (% of total population)	5.6	4.9	6.2	9.0	8.7
Share of people living in low work intensity households <sup>4</sup> (% of people aged 0-59)	6.2	5.3	5.6	8.9	9.9
In-work at-risk-of poverty rate (% of persons employed)	7.8	7.3	8.1	6.5	7.9
Impact of social transfers (excluding pensions) on reducing poverty	23.0	21.1	23.9	36.5	29.7
Poverty thresholds, expressed in national currency at constant prices <sup>5</sup>	2669	3118	3155	2905	2764
Gross disposable income (households)	8213	8828	8351	8034	8610
Relative median poverty risk gap (60% of median equivalised income, age: total)	20.2	20.3	17.0	23.2	26.0

Notes:

<sup>1</sup> People at-risk-of poverty or social exclusion (AROPE): individuals who are at-risk-of poverty (AROP) and/or suffering from severe material deprivation (SMD) and/or living in household with zero or very low work intensity (LWI).

<sup>2</sup> At-risk-of poverty rate (AROP): share of people with an equivalised disposable income below 60% of the national equivalised median income.

<sup>3</sup> Share of people who experience at least 4 out of 9 deprivations: people cannot afford to i) pay their rent or utility bills, ii) keep their home adequately warm, iii) face unexpected expenses, iv) eat meat, fish, or a protein equivalent every second day, v) enjoy a week of holiday away from home once a year, vi) have a car, vii) have a washing machine, viii) have a colour tv, or ix) have a telephone.

<sup>4</sup> People living in households with very low work intensity: share of people aged 0-59 living in households where the adults (excluding dependent children) work less than 20% of their total work-time potential during the previous 12 months.

<sup>5</sup> For EE, CY, MT, SI, SK, thresholds in nominal values in Euros; HICP - index 100 in 2006 (2007 survey refers to 2006 incomes)

Sources:

For expenditure for social protection benefits ESSPROS; for social inclusion EU-SILC.

**Table IX. Product market performance and policy indicators**

<b>Performance indicators</b>	<b>2003-2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
Labour productivity <sup>1</sup> total economy (annual growth in %)	6.0	-4.3	-4.5	8.5	1.2	1.0
Labour productivity <sup>1</sup> in manufacturing (annual growth in %)	7.5	-6.3	-17.5	30.9	6.9	0.3
Labour productivity <sup>1</sup> in electricity, gas, steam and air conditioning supply (annual growth in %)	0.9	-9.3	8.4	-12.6	10.6	n.a.
Labour productivity <sup>1</sup> in the construction sector (annual growth in %)	-1.7	7.8	-3.7	27.4	-2.2	11.6
Total number of patent <sup>2</sup> applications per million of labour force	22.1	49.3	63.3	74.6	n.a.	n.a.
<b>Policy indicators</b>	<b>2003-2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
Enforcing contracts <sup>3</sup> (days)	425	425	425	425	425	425
Time to start a business <sup>3</sup> (days)	44	7	7	7	7	7
R&D expenditure (% of GDP)	1.0	1.3	1.4	1.6	2.4	n.a.
Tertiary educational attainment (% of 30-34 years old population)	30.3	34.1	35.9	40.0	40.3	40.0
Total public expenditure on education (% of GDP)	4.90	5.59	6.09	n.a.	n.a.	n.a.
	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
Product market regulation <sup>4</sup> , Overall (Index; 0=not regulated; 6=most regulated)	n.a.	1.3	n.a.	n.a.	n.a.	n.a.
Product market regulation <sup>4</sup> , Retail (Index; 0=not regulated; 6=most regulated)	n.a.	1.8	n.a.	n.a.	n.a.	n.a.
Product market regulation <sup>4</sup> , Network Industries <sup>5</sup> (Index; 0=not regulated; 6=most regulated)	2.5	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Notes:</b>						
<sup>1</sup> Labour productivity is defined as gross value added (in constant prices) divided by the number of persons employed.						
<sup>2</sup> Total number of patent applications to the European Patent Office (EPO) per million of labour force						
<sup>3</sup> The methodologies, including the assumptions, for this indicator are presented in detail on the website <a href="http://www.doingbusiness.org/methodology">http://www.doingbusiness.org/methodology</a> .						
<sup>4</sup> The methodologies of the product market regulation indicators are presented in detail on the website <a href="http://www.oecd.org/document/1/0,3746,en_2649_34323_2367297_1_1_1_1,00.html">http://www.oecd.org/document/1/0,3746,en_2649_34323_2367297_1_1_1_1,00.html</a> . The latest available product market regulation indicators refer to 2003 and 2008, except for Network Industries.						
<sup>5</sup> Aggregate Energy, Transport and Communications Regulation (ETCR).						
*figure for 2007.						
<b>Source:</b>						
Commission, World Bank - <i>Doing Business</i> (for enforcing contracts and time to start a business) and OECD (for the product market regulation indicators).						

**Table X. Green Growth**

		2002-2006	2007	2008	2009	2010	2011
<b>Green Growth performance</b>							
<i>Macroeconomic</i>							
Energy intensity	kgoe / €	0.67	0.59	0.59	0.62	0.70	0.65
Carbon intensity	kg / €	2.27	2.05	2.00	1.93	2.34	n.a.
Resource intensity (reciprocal of resource productivity)	kg / €	3.35	3.67	3.41	3.69	n.a.	n.a.
Waste intensity	kg / €	n.a.	n.a.	1.98	n.a.	2.17	n.a.
Energy balance of trade	% GDP	-2.6%	-3.5%	-4.2%	-2.3%	-1.6%	-1.3%
Energy weight in HICP	%	n.a.	11	12	13	13	14
Difference between change energy price and inflation	%	n.a.	7.2	14.9	3.7	3.9	1.3
Environmental taxes over labour taxes	ratio	13.0%	13.8%	13.1%	16.0%	16.3%	n.a.
Environmental taxes over total taxes	ratio	6.8%	7.0%	7.3%	8.4%	8.8%	n.a.
<i>Sectoral</i>							
Industry energy intensity	kgoe / €	0.34	0.31	0.32	0.29	0.26	n.a.
Share of energy-intensive industries in the economy	% GDP	9.6	9.8	10.1	9.9	n.a.	n.a.
Electricity prices for medium-sized industrial users**	€ / kWh	n.a.	0.05	0.06	0.06	0.07	0.07
Gas prices for medium-sized industrial users***	€ / kWh	n.a.	0.02	0.03	0.03	0.03	0.03
Public R&D for energy	% GDP	n.a.	0.02%	0.02%	0.02%	0.02%	0.02%
Public R&D for the environment	% GDP	n.a.	0.04%	0.03%	0.03%	0.08%	0.05%
Recycling rate of municipal waste	ratio	16.5%	23.4%	20.4%	20.7%	19.9%	n.a.
Share of GHG emissions covered by ETS*	%	n.a.	72.7%	68.9%	63.7%	72.6%	70.7%
Transport energy intensity	kgoe / €	n.a.	0.63	0.67	0.72	n.a.	n.a.
Transport carbon intensity	kg / €	n.a.	1.80	1.91	2.07	n.a.	n.a.
<b>Security of energy supply</b>							
Energy import dependency	%	n.a.	23.8%	24.0%	21.4%	13.1%	11.7%
Diversification of oil import sources	HHI	n.a.	0.25	0.29	0.28	0.26	n.a.
Diversification of energy mix	HHI	n.a.	0.44	0.41	0.40	0.47	0.49
Share renewable energy in energy mix	%	n.a.	9.9%	11.0%	13.5%	13.9%	13.5%
<p><u>Country-specific notes:</u></p> <p>The year 2012 is not included in the table due to lack of data.</p> <p><u>General explanation of the table items:</u></p> <p>Source: Eurostat unless indicated otherwise; ECFIN elaborations indicated below</p> <p>All macro intensity indicators are expressed as a ratio of a physical quantity to GDP (in 2000 prices)</p> <p>Energy intensity: gross inland energy consumption (in kgoe) divided by GDP (in EUR)</p> <p>Carbon intensity: Greenhouse gas emissions (in kg CO<sub>2</sub> equivalents) divided by GDP (in EUR)</p> <p>Resource intensity: Domestic Material Consumption (in kg) divided by GDP (in EUR)</p> <p>Waste intensity: waste (in kg) divided by GDP (in EUR)</p> <p>Energy balance of trade: the balance of energy exports and imports, expressed as % of GDP</p> <p>Energy weight in HICP: the share of the "energy" items in the consumption basket used in the construction of the HICP</p> <p>Difference between energy price change and inflation: energy component of HICP, and total HICP inflation (annual %-change)</p> <p>Environmental taxes over labour or total taxes: from DG TAXUD's database "Taxation trends in the European Union"</p> <p>Industry energy intensity: final energy consumption of industry (in kgoe) divided by gross value added of industry (in 2005 EUR)</p> <p>Share of energy-intensive industries in the economy: share of gross value added of the energy-intensive industries in GDP</p> <p>Electricity and gas prices medium industrial users: consumption band 500 - 2000MWh and 10000 - 100000 GJ; figures excl. VAT.</p> <p>Recycling rate of municipal waste: ratio of municipal waste recycled over total municipal waste</p> <p>Public R&amp;D for energy or for the environment: government spending on R&amp;D (GBAORD) for these categories as % of GDP</p> <p>Share of GHG emissions covered by ETS: based on greenhouse gas emissions as reported by Member States to EEA (excl LULUCF)</p> <p>Transport energy intensity: final energy consumption of transport activity (kgoe) divided by transp industry gross value added (2005 EUR)</p> <p>Transport carbon intensity: greenhouse gas emissions in transport activity divided by gross value added of the transport sector</p> <p>Energy import dependency: net energy imports divided by gross inland energy consumption incl. energy consumption international bunkers</p> <p>Diversification of oil import sources: Herfindahl index (HHI), calculated as the sum of the squared market shares of countries of origin</p> <p>Diversification of the energy mix: Herfindahl Index over natural gas, total petrol products, nuclear heat, renewable energies and solid fuels</p> <p>Share renewable energy in energy mix: %-share in gross inland energy consumption, expressed in tonne oil equivalents</p> <p>*Provisional data (15 April 2013). Commission Services and EEA.</p> <p>** For 2007 average of S1 &amp; S2 for DE, LU, NL, FI, SE &amp; UK. Other countries only have S2.</p> <p>*** For 2007 average of S1 &amp; S2 for IT, NL, FI, SE &amp; UK. Other countries only have S2.</p>							