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**COMMISSION STAFF WORKING DOCUMENT**

**Assessment of the 2014 national reform programme and stability programme for  
ESTONIA**

*Accompanying the document*

**Recommendation for a COUNCIL RECOMMENDATION**

**on Estonia's 2014 national reform programme and delivering a Council opinion on  
Estonia's 2014 stability programme**

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## EXECUTIVE SUMMARY

**Estonia's economy relies heavily on exports as a source of economic growth. This makes the country vulnerable to weaknesses in foreign demand and to external competition.**

Estonia's economy is expected to regain momentum in 2014 and 2015 as external demand recovers progressively and capacity utilisation closes in on its long-term average. Nonetheless, competitiveness and corporate investment could be affected if wage growth further accelerates. Estonia's economy grew by only 0.8 % in 2013, yet unemployment fell to 8.6 % as a result of both strong growth seen in 2012 and the effect of a shrinking population. Real wages rose significantly, driven by persistent skill mismatches and the consequent growing number of vacancies, recent minimum wage increases and pay agreements for health workers and teachers. In addition, wages have been rapidly catching-up with those in neighbouring Finland in some traded services sectors. The budget outcome was a small deficit of 0.2 % of GDP.

**Overall, Estonia has made some progress in addressing the 2013 country-specific recommendations.** Some progress has been made in the areas of fiscal policy and labour market policies, social inclusion, and in energy efficiency. Some progress has been made in improving the relevance of education and training for the labour market. Estonia has made substantial progress in reducing both unemployment among young people and long-term unemployment, mainly by continuing to implement active labour market policies. Estonia has also made substantial progress in waste management and in reducing the volume of municipal waste being sent to landfill sites. Progress has been limited with respect to the local government reform.

**Nevertheless, a number of challenges remain.** These include the availability of qualified labour and the reintegration of the lower-skilled long-term unemployed and the inclusion of disabled workers into the labour market, the energy-intensity of the economy, regional disparities and inefficiencies in local government.

The national reform programme submitted by Estonia is ambitious, with a focus on educated and inclusive society, competitive business environment, sustainable economy and energy sector as well as adaptative public sector. However, the document is relatively generic and lacks the necessary elements to allow a quantitative assessment of the policies considered. The attached Estonia 2020 action plan provides a list of relatively detailed measures, albeit not quantified, that nevertheless offer a more precise picture of the measures that are considered.

- **Fiscal policy:** in adopting the new State Budget Act that includes a rule on the structural budget balance, Estonia has broadly fulfilled the commitments made under the Treaty on Stability, Coordination and Governance. The four-year expenditure ceiling is not binding within the medium-term budgetary framework however, and no progress has been made towards introducing a multiannual expenditure rule.
- **Labour market, education and social policy:** despite substantial progress being made in addressing unemployment among young people and long-term unemployment, production capacity constraints are increasing. Long-term unemployment remains relatively high among lower-skilled workers and the combination of limited labour force with a lack of qualified workers has started to exert upward pressure on wages. In addition, Estonia still faces some poverty-related challenges. Improving the skills of people in a weak position in the labour market, re-training them for work in a different field and improving workers' overall ability to adapt will require significant measures to be taken in the areas of lifelong learning and vocational education and training. Estonia is still facing the broader and longer-term

issue of the shrinking labour force, a consequence of the ageing population, emigration and the growing trend of people leaving the labour force for health reasons. As a result, it is necessary to improve work-incentives for low-wage earners, make family policy more cost-effective and to adopt and implement the planned work capacity reform. Internationalisation and synergies between research, development and innovation are also of high importance for promoting technological development, increasing productivity and strengthening competitiveness.

- **Energy efficiency and waste management:** Estonia's economy remains one of the most energy-intensive in the EU. The transport sector is a key area where efforts could be made to ensure more resource-efficient mobility and reduce carbon dioxide emissions, by improving the effectiveness of the sector and providing incentives for the utilisation of more energy-efficient vehicles and transport modes. Significant steps have been taken in the areas of waste management and landfilling of municipal waste, but further efforts are needed to ensure that recycling will be economically viable. Promising developments have occurred in cross-border energy connections.
- **Modernisation of public administration:** the provision of quality services at local government level, especially of social services encouraging employment remains problematic. Local governments are not able to generate sufficient revenue to discharge their devolved responsibilities and currently there are no incentives for municipalities to cooperate or promote entrepreneurship in the regions. The fragmented structure of local government and the uneven population density across the country meanwhile result in limited economies of scale, which has an impact on the quality and availability of public services.

## 1. Introduction

In May 2013, 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 2013. These CSRs related to public finances, the fiscal framework, the labour market, social inclusion and education issues, resource efficiency and cross-border energy connections, 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 2014<sup>1</sup> and the third annual Alert Mechanism Report,<sup>2</sup> which were published in November 2013. The Annual Growth Survey sets out the Commission's proposals for building the necessary common understanding about the priorities for action at national and EU level in 2014. It identifies five priorities to guide Member States to renewed growth: pursuing differentiated, growth-friendly fiscal consolidation; restoring 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 Alert Mechanism Report serves as an initial screening device to determine whether macroeconomic imbalances exist or risk emerging in Member States. The Alert Mechanism Report found positive signs that macroeconomic imbalances in Europe are being corrected. To ensure that a complete and sustainable rebalancing is achieved, 16 Member States were selected for a review of developments in the accumulation and unwinding of imbalances. These in-depth reviews were published on 5 March 2014 along with a Commission Communication.<sup>3</sup> Estonia was not among the Member States selected.

On the basis of the 2013 Council Recommendation, the Annual Growth Survey and the Alert Mechanism Report, Estonia presented its stability programme and its national reform programme (NRP) on 29 April 2014. The former had been approved earlier in the day, while the latter was adopted by the government later on 8 May. These programmes provide detailed information on progress made since July 2013 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 a limited consultation process involving the national parliament and stakeholders. As regards the consultation with stakeholders, the draft NRP was sent for written consultation to social partners on 17 April, but there has been no discussion or any dedicated event. The draft NRP was presented to the EU-Affairs Committee of the parliament on 21 April.

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<sup>1</sup> COM(2013) 800 final.

<sup>2</sup> COM(2013) 900 final.

<sup>3</sup> Besides the 16 Member States identified in the Alert Mechanism Report, Ireland was also covered by an in-depth review, following the conclusion by the Council that it should be fully integrated into the normal surveillance framework after the successful completion of its financial assistance programme.

## **2. Economic situation and outlook**

### **Economic situation**

Economic growth in Estonia slowed to 0.8 % year-on-year in 2013 from 3.9 % in 2012, as it was severely affected by the phasing-out of some large public investment projects and the relative weakness and lower demand from Estonia's main trading partners. This resulted in a slowdown in construction work and reduced exports in some traded services (in particular in the construction and transport sectors). Private consumption maintained its position as the main driver of growth, as household income rose due to strong real wage growth (4.2 %). Unemployment fell from 10.0 % in 2012 to 8.6 % in 2013, a result of both the stronger growth seen in 2012 and the shrinking population. The 2013 budget outcome was a small deficit of 0.2 % of GDP.

### **Economic outlook**

According to the Commission's 2014 spring forecast, GDP growth in Estonia is likely to regain some momentum and is forecast to reach 1.9 % in 2014 and 3.0 % in 2015 due to a recovery in exports, but also to increased private and public investment: with capacity utilisation now close to its long-term average, an increase in production capacity can be expected from 2014; furthermore, public investment is expected to recover in 2015 as the EU funds for 2014-20 will be gradually released allowing investment programmes to be implemented. In 2014 and 2015, Estonia's budget deficit is projected to widen to respectively 0.5 and 0.6 % of GDP.

Continued capital accumulation and an increase in productivity will be needed to offset rapid wage rises. The possibility of Estonia's economy suffering a loss in competitiveness cannot be excluded, as evidenced by losses in export market share (3.3 % year-on-year) and a rather large increase in nominal unit labour costs (4.3 % year-on-year) in 2012. Rapid wage increases in recent quarters have resulted from persistent skill mismatches and the consequent increase in vacancies, successive increases in the minimum wage and recent pay agreements for healthcare workers and teachers. Also, employees in the traded services sectors are in a strong position to negotiate and obtain higher wages.

A number of factors could, in combination, lead to a risk of inflationary pressures re-emerging once domestic demand has fully recovered. The purchasing power of the average wage is now back to pre-crisis levels while the Beveridge curve<sup>4</sup> shows that current labour market conditions are now similar to those seen at the start of the last bubble (2005). In view of this, and despite the fact that banks have remained cautious so far, attention will need to be given to the private sector debt stock. This has once again started to grow, moreover, from the relatively high level that has been maintained over recent years. At the same time, relatively loose monetary conditions have contributed to increased housing affordability and not inconsiderable increases in nominal house prices.

The potential fallout from the Russian-Ukrainian crisis is expected to weaken Estonia's growth, due to a direct negative impact on exports and a smaller impact on imports. Foreign direct investment could also be affected. The crisis highlights the need for Estonia to diversify its energy sources and possibly ensure almost total energy independence.

The macroeconomic outlooks presented in the SCP and NRP are relatively close to the Commission's economic forecasts of spring 2014 for most of the main macroeconomic

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<sup>4</sup> The Beveridge curve is the graphical representation of the relationship between unemployment and the job vacancy rate.

indicators, i.e. in terms of growth expectations for GDP, consumer prices, employment and wages. However, the latest developments point to a downward risk as regards the 2014 growth outlook. The SCP and NRP do not include the estimated macroeconomic impact of the considered structural reforms. The latter are therefore not quantified and no indication about the methodology used is available.

### 3. Challenges and assessment of policy agenda

#### 3.1 Fiscal policy and taxation

**The new rule on the structural budget balance to comply with the Treaty on Stability, Coordination and Governance would be more effective were additional binding expenditure targets introduced, especially multiannual expenditure targets.** Given the need to maintain a stable fiscal position in the face of increasing expenditure pressures, the efficiency of public spending could also be improved, in particular by better targeting public spending on social security.

In 2013, Estonia received a recommendation on fiscal policy, the expenditure rule and the efficiency of public spending. The analysis in this staff working document leads to the conclusion that Estonia has made some progress in addressing this recommendation (for the full CSR assessment, see the overview table in section 4). Measures appear relevant and credible.

#### *Budgetary developments and debt dynamics*

**The main goal of the Estonian budgetary strategy, as expressed in the 2014 stability programme, is to be at its medium-term objective (MTO) and to build sufficient fiscal buffers for difficult economic times.** The MTO, unchanged compared with the previous programme, is a structural surplus.<sup>5</sup> 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 increasing flexibility of the budget to change the structure of revenue and expenditure and reducing the tax burden to the pre-crisis level by lowering labour taxes. During the budget year the government intends to avoid adopting expenditure-increasing supplementary budgets, using windfall revenue to accumulate reserves.

**Estonia achieved a headline budget deficit of 0.2% of GDP in 2013**, which was somewhat better than expected in the Draft Budgetary Plan and in the Commission 2013 autumn forecast (0.6% and 0.4% of GDP respectively). Overall, disappointing economic growth did not have a significant negative impact on tax revenue as lower real GDP growth was compensated by higher deflators. Moreover, the lower deficit outcome was driven by better-than-expected tax revenue collection. In particular, the corporate income tax revenue was exceptionally high due to dividend distributions in the private sector. In parallel, social expenditure and investment were lower than projected.

**The structural fiscal position worsened by 0.4% of GDP in 2013** from a balanced position in 2012, thereby deviating from the MTO of a structural surplus. The worsening of the structural balance was mainly caused by the postponement of the dividend distribution from state-owned companies from 2013 to 2014 and 2015 which was announced in the Draft Budgetary Plan for 2014. The growth rate of government expenditure, net of discretionary revenue measures, exceeded by 2.1 pp. the reference medium-term rate of potential GDP growth of 2.3% in 2013, thereby contributing to a deterioration of the structural balance by

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<sup>5</sup> For the assessment purposes it has been assumed that the MTO is a balanced structural position (0.0% of GDP).



more than 0.5% of GDP, which suggests a significant deviation from the expenditure benchmark. Two-year averages show only limited deviation from the expenditure benchmark. Expenditure benchmark calculations for 2013 were negatively affected by the abovementioned discretionary cut in property income from state-owned companies in the amount of 0.4% of GDP during the 2013 budget year with a positive effect in 2014 and 2015. Following an overall assessment, with the structural balance as a reference, including an analysis of the expenditure net of discretionary revenue measures, the deviation from the MTO in 2013 is not significant.

**The 2014 stability programme forecasts a headline deficit of 0.7% of GDP in 2014**, which is larger than projected in the 2013 programme (0%) and in the 2014 Budget (0.4%). The Commission 2014 spring forecast foresees a deficit of 0.5% of GDP for this year. Although the 2014 Budget was adopted as planned, the growth outlook has worsened since autumn and could deteriorate further as external uncertainties are building up. Moreover, implementation risks have materialised for VAT-enhancing measures that were initially planned to take effect in mid-2014 and which will be postponed to 2015 according to the programme. The positive effect of these VAT-enhancing measures in the amount of 0.2% of GDP is still included in the Commission forecast for 2014.



**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 (0.11% of GDP)</li> <li>Restoration of second pillar pension contributions (-0.4% of GDP)</li> </ul>   | <ul style="list-style-type: none"> <li>n.a.</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 1500 m<sup>2</sup> in densely populated areas and up to 2 ha in rural areas (-0.1% of GDP)</li> <li>Rescheduling dividends from state-owned companies from 2013 to 2014 and 2015 (-0.4% 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 excise duties on tobacco and alcohol (0.1% of GDP)</li> <li>Compensation of second pillar pension contributions (-0.3% of GDP annually during 2014-17)</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 tax burden on labour and capital: cutting the income tax rate from 21% to 20%; Raising basic allowance from personal income tax by 7% to EUR 154 per month; lowering unemployment insurance contribution rate from 3% to 2.4% (-0.6 of GDP)</li> <li>Introduction of VAT INF, digital invoice collection (0.1% of GDP)</li> <li>Limiting VAT deductibility for company passenger cars used for private purposes to 50% (0.2% of GDP)</li> <li>Increasing excise duties on alcohol (0.1% of GDP)</li> </ul> | <ul style="list-style-type: none"> <li>Raising child benefits (0.4% of GDP)</li> </ul> |
| <p><u>Note:</u> The budgetary impact in the table is the impact reported in the programme, i.e. by the national authorities. A positive sign implies that revenue / expenditure increases as a consequence of this measure.</p>  |  |

**The programme targets a nominal deficit of 0.5% of GDP for 2015**, down from a surplus of 0.2% set in the previous programme. Next year's fiscal target includes a number of new measures reflecting priorities of the new coalition before the March 2015 general elections. While the overall budgetary impact of the new measures is broadly neutral, the worsened fiscal target mostly reflects a negative base effect from 2014. On the expenditure side, new measures among others aim at reducing child poverty, increasing salaries for targeted groups and increasing the flexibility and efficiency of government expenditure. On the revenue side the main focus is on reducing the tax burden on labour, while increases are planned for consumption taxes, including for the excise duty rates of alcohol, tobacco and for fuels used for special purposes.

For 2016-18, the programme targets a gradual improvement in the fiscal position and reaching a nominal balance in 2017 and a surplus of 0.5% of GDP in 2018. Revenue as a share of GDP is set to decline by 1.8 pps. of GDP between 2013-2018 as a result of the phasing-out of EU structural funds and reductions in income taxes, which would be partially offset by increases in consumption taxes. The improvement in the government balance is mainly caused by the downward trend in government consumption and public investments as a share of GDP. While fiscal risks are neutralised by the national structural budget balance rule, the government's commitment to further lowering the tax burden could create pressure on the budgetary position as this would need to be offset by expenditure growth lower than potential GDP growth or by other revenue measures.

**Estonia's (recalculated) structural balance<sup>6</sup> is expected to worsen to -0.5% of GDP in 2014**, leading to a 0.3 pp. gap compared to the required adjustment toward the MTO and pointing to a risk of significant deviation when assessed over two years.<sup>7</sup> According to the programme the (recalculated) structural balance is expected to improve by 0.4% of GDP in 2015 and to remain close to balance in 2016-2017. The improvement in the structural balance in 2015 is not confirmed by the Commission forecast, where on a no-policy-change basis the structural deficit is projected to deteriorate by another 0.2 pp of GDP, pointing to a risk of significant deviation from the required adjustment toward the MTO. The difference to the (recalculated) structural balance is mostly caused by a positive net effect of the measures announced in the programme (+0.2% of GDP) and by the one-off measures (-0.3% of GDP),<sup>8</sup> which are not classified as one-offs according to the methodology used by the Commission.<sup>8</sup> After introducing the announced measures to the Commission forecast, the structural deficit in 2015 would stay at 0.5% of GDP, unchanged compared to 2014, which still points to a significant deviation from the required adjustment toward the MTO. According to the information provided in the programme, the growth rate of government expenditure, net of discretionary revenue measures, in 2014 is expected to contribute to worsening the structural deficit. The conclusion is different under the Commission forecast scenario, because of a higher impact from discretionary revenue measures in the Commission forecast, but also reflecting the volatility of public investment. In 2015, the growth rate of the government

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<sup>6</sup> The 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.

<sup>7</sup> However, the programme foresees that despite some worsening in the position, the structural position will remain, at face value, at a surplus of 0.2% of GDP, in line with the MTO. The discrepancy is mainly due to a difference in the assessment of the cyclical position of the economy between the common methodology and the approach taken in the programme. At face value, the programme foresees a gradual closure of a negative output gap by 2016, while according to the (recalculated) output gap estimations using the common methodology Estonia's GDP is already above potential in 2014-15. The latter is also supported by wage growth exceeding productivity growth and increasing labour market tensions, suggesting that the unemployment rate is already below NAWRU rates.

<sup>8</sup> This namely concerns a temporary increase in the second-pillar pension contributions in 2014-17 and extra dividends from state-owned companies in 2014.

expenditure, net of discretionary revenue measures, is not expected to contribute to the improvement in the structural balance nor to the adjustment towards the MTO. The breach of the expenditure benchmark is therefore significant according to the programme and the Commission forecast. This is because the growth rate of this expenditure is above 0.9%, the lower rate under the expenditure benchmark. This conclusion is also confirmed by the calculation of two-year average changes in the government expenditure.

Following an overall assessment of Estonia's budgetary plans, with the structural balance as a reference, including an analysis of the expenditure net of discretionary revenue measures, **a deviation from the adjustment path towards the MTO is to be expected in 2014 and 2015 which could be assessed to be significant.**

### **Box 2: Estonia's status vis-à-vis the Stability and Growth Pact**

Estonia is subject to the preventive arm of the Pact and was at its Medium Term Objective in 2012 with a deviation from it in 2013-2015. Therefore, the country should ensure sufficient progress towards correcting its deviation from the Medium Term Objective.

According to the programme, the **general government debt-to-GDP ratio** is projected to decrease from 10% in 2013 to close to 8% in 2017-18; these projections are in line with the Commission 2014 spring forecast. The central government is using its previously accumulated financial assets for financing its deficits. The deficit of the local governments and an additional contribution to the EFSF are the main reason behind the small increase in nominal debt in 2014-15, while the nominal GDP growth is expected to exceed the nominal debt growth and contribute to the decreasing debt-to-GDP ratio.

#### ***Fiscal framework***

**Estonia's fiscal framework has been further strengthened** in order to comply with the Treaty on Stability, Coordination and Governance and with the 2011 package of legislation introducing additional coordination and surveillance of budgetary processes for euro area Member States. The new State Budget Act entered into force on 23 March 2014. It sets out general requirements for the structural fiscal balance of the government as a whole and establishes an independent fiscal council attached to the Bank of Estonia. The fiscal council will assume the function of an independent fiscal supervisory body and will be responsible for monitoring compliance with national fiscal rules and for endorsing the Ministry of Finance's economic forecasts. The Act stipulates that annual state budgets must be compiled in such a way that the government's structural budgetary position is at least in balance. The government can only deviate from the budget rule if a correction mechanism has been triggered or in exceptional circumstances beyond government control, as referred to in the Stability and Growth Pact (e.g. during an economic recession, or if economic growth remains below potential GDP growth over a long period). Although the annual state budget is the main tool for ensuring compliance with the structural balanced budget rule, specific regulations for central government entities and other general government subsectors, already in place or set in the Act, also contribute to maintaining the fiscal balance. These restrictions include rules on debt levels and rules requiring a balanced current budget.<sup>9</sup>

<sup>9</sup> Central government entity's net debt may not exceed 40 % of annual revenue from main activities and the difference between revenue and expenditure from the main activities must be in balance or in surplus. A deficit of up to 30 % of annual revenue from main activities is allowed only if it is covered by surpluses from previous periods. The central government entity's balance requirement will not be applied if it is caused by the creation, restructuring or liquidation of the entity. No changes are planned to the net debt ceiling on borrowing by local governments and dependent units, which currently stands at 60 % of revenue from main activities in the current fiscal year.

**The binding nature of expenditure ceilings in the medium-term budgetary framework has not been strengthened and no expenditure rules have been introduced.** In general, expenditure rules show an appropriate balance between budgetary discipline and macroeconomic stabilisation, allowing automatic stabilisers to operate in difficult economic times and helping dampen spending pressures in prosperous times. Although the new State Budget Act stipulates that expenditure ceilings will be put in place in the medium-term state budget strategy for the next four years, it contains no provisions for making them binding. Expenditure ceilings set in the budget strategy are the starting point for the following year's state budget, but these can be revised during the state budget preparation process. Moreover, the expenditure limits are also prone for revision in the following year's update on the budget strategy.

### *Long-term sustainability*

**Estonia does not appear to be facing medium- and long-term sustainability challenges.** Government debt (at 10% of GDP in 2013) is significantly below the Treaty<sup>10</sup> threshold of 60% of GDP. Estonia's very low level of government debt is projected to rise by 2030 although to remain below the reference rate, 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 pensions have further reduced sustainability risks. As a result, however, the projected decline in pension benefits as a proportion of salary could pose a risk to the adequacy of pension entitlements.<sup>11</sup>

### *Tax system*

**To solve environmental problems Latvia received a recommendation to strengthen environmental incentives concerning vehicles and waste last year, but Estonia has chosen not to use tax measures to implement the part of the recommendation related to vehicles** (for more details on environment, see section 3.4). The tax system as such does not entail major challenges for the Estonian economy. In 2012, the tax-to-GDP ratio of 32.5% in Estonia was below the average of 39.4% in the EU. The tax mix by economic function is considered favourable to growth. However, taxes that are the least detrimental to growth, such as recurrent property taxes, some consumption tax categories and environmental taxes, are not intensively used.

**Estonia is continuing its efforts to reduce the tax burden to pre-crisis levels and to shift the tax burden away from labour and capital.** In 2013, Estonia reduced the unemployment insurance contribution rate from 4.2% to 3% and the personal and corporate income tax rate will be further lowered from its current level of 21% to 20% in 2015. In addition, the 2014 Stability Programme and the NRP include a further reduction in the unemployment insurance contribution rate by 0.6pp to 2.4% and gradual annual increases in the basic personal income tax allowance, which will bring it to EUR 184 per month in 2018 from the current level of EUR 144. These revenue losses will be partially offset by increases in indirect taxes and by abolishing unjustified tax exemptions. The government has increased excises on tobacco and alcohol in 2014 and has a medium-term plan to further increase them over the period 2015-18. In 2015, the natural gas excise will be increased by 20% and the reduced excise duty rates on special purpose diesel fuel will be replaced with more targeted subsidies.

**The Estonian VAT system is already relatively efficient:** actual VAT revenue in 2011 was equal to 68.6% of the theoretical revenue at standard rates, placing Estonia third in the ranking of EU countries. The VAT compliance gap in Estonia was in line with the EU

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10 Treaty on the Functioning of the European Union (TFEU)

11 I.e. whether they will, firstly, fulfil individuals' basic needs and, secondly, allow individuals to replicate the standards of living they had while in working life.

weighted average (18 %).<sup>12</sup> The VAT regime for company cars is planned to be changed in 2015 with a view to limiting the favourable tax treatment of company passenger cars used for private purposes. To **further improve tax compliance**, the government is planning to introduce digital invoice collection in 2015. This is intended to improve VAT collection and to limit the scope for VAT fraud. As of 1 July 2014 a database starts to operate where companies are obliged to register employees in advance of their official start date, as a way of tackling undeclared employment.<sup>13</sup>

### 3.2 Financial sector

**In 2013, Estonia did not receive a recommendation on financial sector policies, as Estonia's banking sector remains stable, implying that the likelihood of banks not being able to meet their obligations is very small.** Estonia is one of the best performers in the EU in terms of financial soundness, and has one of the highest capital adequacy ratios and a high return on equity. Estonia has also made substantial progress in resolving the stock of non-performing loans that peaked following the 2008-09 economic crisis. Estonia's capital adequacy ratio was 24.3 % in autumn 2013 and its ratio of non-performing loans to total loans reached 1.9 % at the end of 2013. The average loan-to-deposit ratio in the banking sector fell to 104 % by the end of 2013, as deposits were still growing faster than was the value of loans issued.

**Nevertheless, there are still risks to financial stability in the medium term.** Private sector indebtedness remains relatively high (129 % of GDP in 2012 for both households and businesses) and may soon start to rise again if credit growth accelerates. The reserve requirement for banks is low, there is still no rule setting a maximum loan-to-value ratio for mortgages, and real wage growth is becoming increasingly positive. Additional incentives to borrow also still exist, including the partial deductibility of mortgage interest payments from income tax and loan guarantees. As a result, the risk to the medium-term macro-financial stability remains. The turnover of housing loans was almost one fifth higher in 2013 than the previous year and as of May 2013, the value of new loans has been higher than the amount repaid from existing loans. The median price of apartments in late 2013 was 20 % higher than a year earlier, while the number of transactions rose by 18 %. Median apartment prices are still below the peak reached during the 2005-07 real estate boom, but they are more than 70 % higher than the lowest point reached in mid-2009 during the crisis. The housing affordability index remains high and, in 2013, a growing number of people (11 %) intended to buy a property in the next 2-3 years, signalling the possibility of a new property boom.<sup>14</sup> Overall, saving should continue to be encouraged as the loan-to-deposit ratio still exceeds 100 %.

Estonia has strengthened its macro-prudential framework through amendments to the Bank of Estonia Act and to the Credit Institutions Act in spring this year. In particular, the adopted amendments provide the bank with the necessary means and authority to set limits on e.g. loan-to-value and debt-service-to-income ratios (rather than guidelines, as is currently the case).<sup>15</sup> Real estate taxation remains almost inexistent, but the new coalition government

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<sup>12</sup> The VAT gap is defined as the difference between the theoretical VAT liability and the VAT collected. Source: European Commission (2013), Study to quantify and analyse the VAT Gap in the EU-27 Member States, Final Report, TAXUD/2010/CC/104, Warsaw, July 2013.

<sup>13</sup> The purpose of registering all employees is to prevent tax violations and evasion of social security payments and to make it easier to check employment conditions.

<sup>14</sup> Study commissioned by the Estonian Association of Real Estate Companies.

<sup>15</sup> The Estonian authorities are also implementing the Capital Requirement Directive, part of the Capital Requirement Directive IV package which transposes the Basel III standards in the EU.



intends to proceed with a revaluation of the theoretical land prices, which date back to 2001 and which are used as a basis for the existing land tax.

### *Access to finance*

**Corporate demand for credit has remained low to date, but may soon rise.** Capacity utilisation is relatively high and business confidence is increasing, meaning that corporate investment is likely to increase as a proportion of GDP in the coming years. At present however, the business sector as a whole is able to be financed by cash flows, as profitability is high and investment low. As a result, total corporate debt liabilities in the first three quarters of 2013 remained at around the same level as at the end of 2012. Foreign debt as a proportion of the corporate sector's total liabilities has grown rapidly in recent years (from 21.6 % at the end of 2008 to 36.5 % in the third quarter of 2013). This is true of each of the types of lending included in foreign debt: intercompany lending, other foreign loans and foreign debt securities. Equity growth has allowed leverage to fall to its lowest level in ten years. This means that companies should be better protected against possible risks. Estonian companies have a relatively low level of leverage and liquidity is high in comparison with other euro area countries. In manufacturing, the level of leverage has fallen even further from the already low levels seen before the 2005-07 boom.

**Access to finance for small and medium-sized enterprises (SMEs) has improved recently.** Estonia has made some progress in improving SME access to finance and steps are being taken for increased reliance on financial instruments instead on grants. Banks are more willing to provide loans, albeit not to high-risk projects. There is good access to public financial support, including to the loan financing, guarantees and lines of credit provided by KredEx, and to EU funds that can be used for credit enhancement. The Baltic Innovation Fund<sup>16</sup> is encouraging the much-needed cross-border investment and with the multiplier effect contributes to better coverage of private equity and support to riskier projects including for start-ups. In addition, the activities of private bodies such as Finance Estonia Cluster and the Estonian Private Equity and Venture Capital Association are contributing to the development of capital markets in Estonia. While these measures are expected to be effective, their results in terms of actual investments by companies will only be seen in the medium- to long-term.

### **3.3 Labour market<sup>17</sup>, education and social policies**

**Labour supply shortages continue to be seen in certain sectors, and long-term unemployment remains relatively high among notably the lower-skilled and in regions outside Tallinn and Tartu.** Concerns relating to the labour market are heightened by the ageing population, emigration and the growing number of people leaving the workforce on health grounds. The continued shortage of childcare in certain municipalities and of long-term care services and the long parental leave system make the (re-)entry and positioning of women more difficult in the labour market.<sup>18</sup> Also, the gender pay gap and segmentation might prevent higher qualified women from fully contributing to efficient labour market outcomes. Regional differences are widening<sup>19</sup> and inefficiencies in the fragmented system of

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<sup>16</sup> A Baltic initiative financed by the European Investment Fund and the governments of Estonia, Latvia and Lithuania and based on fund-to-fund investments.

<sup>17</sup> For further details, see the 2014 Joint Employment Report, COM(2013)801, which includes a scoreboard of key employment and social indicators.

<sup>18</sup> With respect to income maintenance benefits in the event of childbirth, EE ranks among the highest at 1.3% of GDP vs 0.2% for the EU on average.

<sup>19</sup> The proportion of GDP created in Tallinn and the Harju County continues to grow (accounting for 61 % of the total in 2009), with entrepreneurial activity increasing in the regions where it is already higher than elsewhere. Added to this, structural economic changes are reducing the demand for labour in the agricultural

local government are preventing Estonia from achieving its potential in terms of economic development (see also subsection 3.5). In addition, Estonia still faces some poverty-related challenges.<sup>20</sup>

**The high proportion of the population not holding professional qualifications combined with the high structural unemployment rate, has resulted in shortages of qualified labour,** which have started exerting an upward pressure on wages. The number of people without any professional qualification is rising even among the 25-35 age group. According to the findings of the Commission, the country is currently seeing a particular shortage of graduates in science, technology, engineering, mathematics and In particular in the ICT sector, where productivity is one of the highest (2.5 times higher than in other sectors).

### ***Labour market and social policies***

In 2013, Estonia received a recommendation on incentives to work, the delivery of social services, the reintegration into the labour market of unemployed people and people with disabilities and on regions affected by high unemployment. The analysis in this staff working document leads to the conclusion that Estonia has made some progress in addressing this recommendation. Measures appear relevant, ambitious and credible.

**In response to this recommendation, Estonia amended the Parental Benefit Act** so as to increase the incentive for parents to take up work. The new coalition plans to raise child benefits to 45 euros for the first and second children and to 100 euros as of the third child. In parallel, Estonia is continuing its efforts to shift the tax burden away from labour (see under subsection 3.1 "Tax system") through a further reduction in the contribution rate to the social security system in 2014 and through the already agreed reduction in the income tax rate in 2015. The gradual increase in the basic personal income tax allowance by approximately 7% annually over the 2015-18 period is only aimed to compensate for the expected average wage increases over the period. All in all, these changes are likely to reduce the tax wedge by approximately 1 pp.<sup>21</sup> while structural unemployment in Estonia is estimated to be high at around 10% of the total labour force and the sensitivity of structural unemployment to the tax wedge is found to be large.<sup>22-23</sup> Higher increases in the basic allowance could prove several

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sector, leading to higher unemployment in rural areas where there are no opportunities for alternative employment.

<sup>20</sup> The country has a relatively high rate of severe material deprivation (9.4% of the total population in 2012), and a high proportion of the population is at risk of poverty or exclusion (23.4% in 2012).

<sup>21</sup> Estimates from the Ministry of Finance.

<sup>22</sup> The employment rate amongst low-skilled people remains below the EU average (49.6% compared to an EU average of 52.1% for the 20-64 age group in 2012), while the proportion of total income paid as tax by low wage earners in Estonia (those earning 50% or less of the average wage) remains above the EU average (37.9% compared with an EU average of 34.7%) and far higher than in OECD countries. See F. Wöhlbier et al. (2014): 'Consolidation on the revenue side and growth-friendly tax structures: an indicator based approach', European Economy, Economic Papers 513, February 2014. Also, inactivity and unemployment traps remain for certain categories of low-income earners, i.e. among those earning less than 50% of the average wage.

<sup>23</sup> The IMF considers the labour tax wedge in the three Baltic States as a major driver of structural unemployment. Also, reductions in the tax wedge seem to explain about 30% of the variation in structural unemployment, implying that a reduction in the tax wedge by 10pps would lead to a reduction in structural unemployment by 2 to 4 pps, all else equal. See IMF (2014): '*Baltic Cluster Report – Selected Issues: Unemployment in the Baltics*', pp. 69-90, Washington, April 2014. See also: Orlandi F. (2012), *NAWRU and its determinants: estimating the long-run relationship – Updated results for countries with data limitations*, Technical note for the EPC WG on output gaps, European Commission, Directorate General for Economic and Financial Affairs, Brussels, August 2012. See also OECD (2014), *OECD Economic Outlook - Estonia – Economic forecast summary*, May 2014. See also Rutkowski J. (2007), *Fiscal Policy and Economic Growth - Lessons for Eastern Europe and Central Asia - Taxation of Labor*, The International Bank for Reconstruction and Development/The World Bank Washington. See also Flèche S. et al. (2012), *Reducing poverty in*



times more cost-effective in this respect than the across-the-board measures foreseen by the government.<sup>24</sup> The successive increases by about 10% annually in the minimum wage over the 2013-15 period will also strengthen work incentives for low-wage earners. However, they will also contribute to raising labour costs, accelerate an already strong wage growth and could affect labour demand. In 2013, the reservation wage of the low-skilled increased by 11% up to 60% of the average wage, making it harder for companies to recruit employees who will work for low wages.<sup>25-26</sup>

**The ongoing reform of policies on working capacity<sup>27</sup> aims to facilitate the return to work of people receiving disability benefits or incapacity pensions.** However, the reform package is yet to be discussed by the government. If adopted and implemented without delay, it will increase labour supply and contribute to the sustainability of the pension system.<sup>28</sup> Since the reform is not expected to enter into force before July 2015, progress so far is considered to be limited in this area.

**As per the recommendation issued in 2013, the lack of consistency between social benefit systems is being addressed, and some progress has been made.** The exchange of data between the benefit system for social services and benefits provided by municipalities on the one hand and the unemployment insurance fund's service system on the other is expected to be operational as of June 2014. There are also short-term plans to improve the user-friendliness of the former system and to develop interoperability with the health insurance information system. The database managed by the social insurance board for benefits paid by central government is being modernised and is expected to be operational as of 2015. The Ministry of Social Affairs is planning to set up a 'data warehouse' for social welfare measures that will provide a full overview of benefits received from both municipalities and state institutions. This is expected to be in operation by 2015-16 and could be used for statistical analysis.

**Limited progress has been seen to date in addressing the recommendation to improve the delivery of social services, including childcare, and to improve the efficiency and cost-effectiveness of family policy.** The quality and accessibility of social services continues to be hindered by the lack of enforceable minimum standards and the limited economies of scale in especially small municipalities (see also subsection 3.5). A number of new places have been created in childcare facilities but internal migration has caused continued shortages in some municipalities and particularly for children below the age of three. The draft Pre-School Act, creating greater flexibility in the provision of childcare services for the 1.5-3 years age group was approved by the government in April and will soon be discussed in Parliament.<sup>29</sup> In October 2013, with the objective to develop and implement a **gender equality policy** in Estonia and thereby address the high gender pay gap,<sup>30</sup> a Gender Equality Council, an advisory body within the Ministry of Social Affairs, was set up. The green paper

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*Estonia through Activation and Better Targeting*, Economic Department Working Papers, n°1008, OECD, Paris, December 2012, p. 35.

<sup>24</sup> See K. Staehr (2008), *Estimates of Employment and Welfare Effects of Personal Labour Income Taxation in a Flat-Tax Country: The Case of Estonia*, Working Paper Series, 2/2008, Bank of Estonia, Tallinn, 2008.

<sup>25</sup> See Bank of Estonia (2014), *Labour Market Review*, 1/2014 pp. 23-24.

<sup>26</sup> The higher the reservation wage, the lower the probability of finding a job. See M. Room (2003), *Reservation Wages in Estonia*, Bank of Estonia, Tallinn, January 2003.

<sup>27</sup> In 2013, the new scheme relating to working capacity covered an additional 14 766 people.

<sup>28</sup> It is expected that 50 % of people with partial work capacity could join the labour market and 10-15% of benefit recipients could leave the scheme by 2021.

<sup>29</sup> The Ministry of Social Affairs states that EUR 1.2 million will be allocated for this purpose and that, with EU funding for 2014-20, there will be EUR 46 million available in total for these measures.

<sup>30</sup> 30% in 2012 vs. 27% in 2011, one of the highest in the EU. The gender pay gap reflects the high sectorial and occupational segregation that is partly due to high care responsibilities mainly held by women.

assessing family benefits and services is expected to be submitted to the government in spring 2014. The means-tested family benefit is in force since July 2013. The relatively low coverage and inadequacy of social benefits might make it more difficult for Estonia to ensure a more inclusive growth,<sup>31</sup> as might the limited awareness of social rights among economic actors. No statistically significant effect of unemployment benefit and social assistance on the reservation wage has been found in Estonia. Nevertheless, it has been found that the eligibility for unemployment benefit/social assistance can increase the duration of the unemployment period.<sup>32</sup>

**Substantial progress has been made in addressing the recommendation to facilitate the return of the long-term unemployed to the labour market.** Increased use of active labour market policies has contributed to a reduction of 30 % year-on-year in the number of long-term unemployed, to 3.8 % in 2013 as a result of which long-term unemployment as a proportion of total unemployment has fallen to below 50%.<sup>33</sup> Reintegrating the long-term unemployed into the workforce was one of the main focuses of the 2012-13 employment programme and it will be a focus once again in the 2014-15 programme. The state contribution to costs incurred by employers in adapting work premises to the needs of people with disabilities has been increased. In addition, the public employment services, in cooperation with other bodies and local governments, have extended their services to people with multiple problems. To date, local governments have not had the capacity to provide the services needed in this area, and further improvements are essential. In the healthcare sector, the combined effect of reduced morale, retirement and emigration has contributed to the shrinking labour force and the challenges this poses. No direct measures are planned to reverse this phenomenon.<sup>34</sup>

**Co-ordinated measures are being implemented in response to the recommendation to promote development in regions affected by high unemployment. These measures aim to counter the widening differential in regional development** and the increasing flow of people away from the least developed peripheral local areas.<sup>35</sup> In the Ida-Viru region alone, there are plans to build six industrial parks, covering a total of 23 hectares. These are to be financed by investment agreements and by offering loan guarantees to enterprises. Given, however, that no immediate impact on job creation can be identified at this stage, limited progress has been made in addressing the recommendation.

**Some progress has been made also in addressing the recommendation on youth unemployment.** Youth unemployment continued to fall, from 20.9 % in 2012 to 18.7 % in 2013, due in part to the economic recovery and also to ‘activation measures’ (measures obliging people receiving unemployment benefit to accept an offer of employment or training in order to continue receiving their benefits). In 2013, the public employment services

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<sup>31</sup> The non-coverage rate of jobless poor (child benefits excluded) was 30.4 % in 2011, making Estonia the 8th worst performer in the EU (EU statistics on income and living conditions 2011). At the end of 2013 about 45 % of people registered as unemployed received no unemployment benefits. The net income of people on social assistance relative to median income was 32.3 % in 2011, the 5th lowest in the EU (EU statistics on income and living conditions 2011). In 2014, both the unemployment assistance benefit (EUR 112) and the subsistence benefit (EUR 90) were below the estimated subsistence level (EUR 196 in 2012), but close to the estimated food basket (EUR 89 in 2012).

<sup>32</sup> See M. Room (2003), Reservation Wages in Estonia, Bank of Estonia, Tallinn, January 2003.

<sup>33</sup> The proportion of very long-term unemployed people fell from a third to a quarter of the total number of people unemployed between 2012 and 2013.

<sup>34</sup> There was net emigration of 6 629 people in 2012 (10 873 emigrated and 4 244 immigrated), rising from 2 500 people in 2010 and 700 per year over 2008-09. Statistics Estonia.

<sup>35</sup> According to the forecast by Geomeia (2012), by 2030 the number of people living in peripheral local administrative areas will fall by 38 % and the number of elderly people in these areas will rise from 22 % to 30 %.

developed their mobile counselling services, which specifically target young people not registered as unemployed. The Youth Development Strategy adopted by the government in late 2013 seeks to address two major obstacles preventing young people from finding employment: a low level of education and lack of relevant work experience. As part of this strategy, an action plan for implementing the Youth Guarantee scheme 2014-17 at national level was submitted to Parliament in April 2014.

### ***Education policies***

In 2013, Estonia received a recommendation on the labour market relevance of the education and training systems, measures to tackle youth unemployment and participation of the low-skilled in lifelong learning. The analysis in this staff working document leads to the conclusion that Estonia has made some progress in addressing this recommendation. Measures appear relevant, ambitious and credible.

**The new Vocational Education and Training Institutions Act (VET Act) was adopted in 2013, to help to better align vocational education with the requirements of the labour market.**<sup>36</sup> Overall, the country has therefore achieved some progress in the VET area, but considerable challenges remain as confirmed by the NRP: there is a clear need to increase participation rates in vocational education and training (the current objective having been set at 40 % for secondary level),<sup>37</sup> and to provide more opportunities for work-based learning and apprenticeships. In this respect, with support from EU funds of the 2014-20 financial framework, Estonia envisages an increase in the number of students in vocational education and training participating in work-based apprenticeships from the current level of around 2 % to 10 % by 2020. This would indicate progress in this area, since the developments expected can be considered as ambitious: this would contribute to reducing the share of persons without professional qualifications (as much as 30.3% of the 24-64 age group in 2012, according to the NRP). In addition, employers are consulted on the content of the VET curricula and participate in the framework of the VET quality assurance in Estonia. However, at present, there is no genuine well-functioning national VET governance structure involving all social partners through which to develop cooperation with employers particularly in the area of apprenticeships.

**Changes to the Basic School and Upper Secondary School Act took effect in September 2013.** These aim to improve the quality and cost-efficiency of general education and to better align educational provision with the needs of the labour market. The legislative changes are expected to contribute to an increased participation in vocational education and to a reduction in pupils leaving school early.

**The Higher Education Act, which came into force in September 2013, has changed the financing model of universities,** with the aim of providing financial incentives for attracting more students to science, technology, engineering and mathematics.<sup>38</sup> The measures taken seem appropriate and could prove effective. The Ministry of Education and Research will be

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<sup>36</sup> Employment in jobs requiring lower-level qualifications is projected to rise by 17.8% by 2020, while demand for high-level qualifications is expected to increase by only 6.5% over the same period, according to Cedefop.

<sup>37</sup> The performance indicators in the draft Partnership Agreement prepared in accordance with the 2014-20 European Structural and Investment Funds programming period is not very ambitious, since, in 2011, 34.4% of students were already in vocational education or training at secondary level, compared with an EU average of 50.3% and higher in some countries, e.g. around 70% in Finland. See also [www.hm.ee/index.php?popup=download&id=10227](http://www.hm.ee/index.php?popup=download&id=10227).

<sup>38</sup> Estonia had only 11.9 tertiary graduates in science and technology per 1 000 inhabitants aged 20-29 years in 2011 in a very technologically intensive country, compared with an EU average of 16.8 and higher in some countries, e.g. 21.2 in Finland.

in a position to define the number of state-commissioned study places per field at each higher education institution. A system of needs-based study allowances was introduced in the 2013-14 academic year with the aim of allowing students from financially disadvantaged backgrounds to take up places in higher education and complete studies of a specified duration. Attracting international students and highly qualified specialists from countries outside the EU to Estonia has been facilitated by amendments to the Aliens Act adopted in autumn 2013. According to the NRP, although the goal to admit 2,000 foreign students by 2015 has been achieved, measures that support internationalisation will be continued.

**Estonia has continued to make progress in promoting entrepreneurship.** Training in the various aspects of entrepreneurial activities is available at all levels of education and is being promoted alongside initiatives to increase the popularity of sciences. Some private entities have been running successful accelerated programmes and the University of Tartu opened an Entrepreneurship Centre teaching science, technology, engineering and mathematics and also collaborating with entrepreneurs in various fields. If these measures continue to be implemented systematically and continue to receive sufficient funding, they have the potential to increase the number of successful entrepreneurs and transform Estonia into a ‘start-up hub’. In February 2014, the government approved an ambitious but as yet untested coordination system for forecasting the skills needed by the labour market (by qualification area) and for identifying how to meet these needs in the context of the training and education system.

**Some progress has been made in addressing the recommendation on participation rates of low-skilled workers in lifelong learning.** In February 2014, the government adopted the national Lifelong Learning Strategy for 2014-20, with the clear objective of, *inter alia*, increasing the relevance of education for the present and future labour market, especially in respect of older and low-skilled workers. The action plan for training and re-training is yet to be launched however and progress in this area therefore remains limited. The draft Adult Training Act is not expected to be submitted to the Parliament before 2015. Finally, according to the NRP, the participation in lifelong learning has remained stable at 12.5% in 2013, in comparison with 12.9% in 2012.

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

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

**Estonia’s energy and resource intensity remains one of the highest in the EU.** Significant investment has been made in public buildings, but considerable amounts of money could still be invested to improve energy efficiency of local public buildings and of residential and industrial buildings. In the transport sector, investment has been made into the electromobility programme and in the public transport fleet renewal, but a large part of the rail infrastructure is not yet running on electric lines. The transport sector remains relatively energy-intensive (using twice as much transport fuel per unit of GDP than the average EU Member State).<sup>39</sup> Motorisation levels are increasing, while new passenger cars are among the most polluting in the EU (150.1 g of CO<sub>2</sub>/km compared with the EU average of 132.2 g/km). Some progress has been made in the area of energy interconnections notably with Finland, however, Estonia’s energy security, diversity of energy supply and price competition continues to be limited by the country’s small size and relative isolation, a consequence of its insufficient cross-border connections especially with the Baltic states.

In 2013, Estonia received a recommendation on the improvement of energy efficiency and waste management and the development of cross-border energy connections to diversify

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<sup>39</sup> Report on Sustainable Development, <http://www.seit.ee/failid/782.pdf>.



energy sources and promote competition in the energy market. The analysis in this staff working document leads to the conclusion that while progress in addressing energy intensity has been limited, Estonia has made substantial progress in addressing the challenges in the area of waste and some progress in the area of cross-border energy connections (for the full CSR assessment see the overview table in section 4). Measures appear relevant and credible.

**Some progress has been made in energy efficiency in buildings:** substantial progress has been made in insulating public buildings, but energy efficiency in residential and industrial buildings remains problematic. Further progress in the sector is however dependent on the allocation of EU funds for the period 2014-20. Funding of EUR 102 million is expected to be received in the budget period 2014-20 for renovation of apartment buildings already planned. Estonia has also introduced a number of measures to improve energy efficiency in power generation and in centralised district heating systems, and has taken measures to promote high-efficiency cogeneration.

According to analysis from the European Environment Agency, **Estonia is on track to meet its 2020 target on reducing emissions in sectors not covered by the emissions trading scheme.** However, the emissions from the transport sector (representing around one third of these emissions) are projected to increase,<sup>40</sup> especially when economic growth will regain momentum, so limited progress has been made on this part of the recommendation.

**In 2012-13, Estonia introduced a number of measures to address the energy intensity:** energy efficiency criteria for public procurement, upgrading public transport vehicles, improving the railway network and introducing the electromobility programme. Importantly, the usage of urban public transport, which has significantly dropped since 2002, shows the first signs of recovery: new passenger trains (both electric and diesel) were recently put in service and the first months of 2014 have already brought along an increase in passenger train usage. While overall Estonia has already met its Europe 2020 renewable energy target, the use of renewable energy in transport at 0.3 % in 2012 remains far below the 2020 target of 10 %, but the government intends to introduce a 5-7 % biofuel mixing obligation for motor fuel and to provide financial support for the production and utilisation of biomethane in transport.

**Additional structural measures to reduce transport intensity and emissions are outlined in the Transport Development Plan for 2014-20 recently adopted by the government.** In the transport sector, more ambitious (preferably consumption based) environmental measures and incentives, including taxation measures, could be deployed to limit CO<sub>2</sub> emissions and support energy savings and resource-efficient mobility.<sup>41</sup> There is almost no passenger car taxation and the currently applicable excise duty rates on diesel and unleaded petrol, although above the required EU minimum rates, are below the EU average (6 % and 20 % below EU average rates, respectively). In the face of pressing environmental goals, in view of sizeable welfare losses due to the misallocation of resources and with a view to reducing other externalities such as road fatalities, leaving a sizeable share of the transport sector almost untaxed is counterproductive and leaves unused the possibility of further shifting the tax burden away from labour to environmental taxes.<sup>42</sup> The tax system should however ensure

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<sup>40</sup> According to EEA data, Estonia's total greenhouse gas emissions from the transport sector are expected to increase about 12% by 2020 compared to 2010 (using existing measures), while transport emissions are expected to remain stable on average within the EU.

<sup>41</sup> The implicit tax rate on energy is relatively low (148.5 % in 2012), compared with the EU average (222.8 %). The revenue from environmental tax was slightly above the EU average (2.8 % compared with 2.4 % of GDP), due for the most part to Estonia's high energy consumption. The revenue earned from taxation on transport (excluding fuel taxes) was the second lowest in the EU, at 0.1 % of GDP.

<sup>42</sup> See Lamine & Lohmuste (2014), Do the Baltic States need to tax passenger cars more?, Country Focus, Volume 11, Issue 7 (forthcoming), ECFIN, European Commission, Brussels, May 2014.

that such measures do not act to deter new car purchases, which would slow the general process of upgrading private cars.

**Some progress has been made in improving the overall effectiveness of the transport system and infrastructure of most modes of transport.** However, it remains the case that regional public transport networks, including the bus and rail transport networks, do not function in a complementary way. Also, while the downward trend in utilisation of urban public transport has stopped, regional bus services are fragmented and, in some regions, have entered a vicious circle of decreasing numbers of passengers and, as a result, of being in need of increased subsidies. Estonia intends to create regional transport centres for bus services, with support from EU funds for 2014-20. The planned extension of the Tallinn airport runway would create a basis for better transport connections by air. Rail Baltica, the high-priority project launched as part of the Trans-European Transport Networks policy, is intended to connect the Baltic states to the trans-European rail network. The project offers an opportunity to reduce greenhouse gas emissions by encouraging greater use of rail for freight and passenger transport. The project is scheduled to be completed by 2023, but a political commitment from all the Baltic states is a precondition for its success. While the potential for international transit has been recognised as important for the Estonian economy, progress to date has been limited, and, according to the World Bank logistic performance index 2014, Estonia ranks only 20th out of the EU Member States.<sup>43</sup> Improvements in the logistics and customs services are a precondition for the full utilisation of the potential of infrastructure investments and for the development of high value-added international freight services. There is also a need for increased deployment of intermodal connections (in particular in ports) and for smarter transport systems.

**Substantial progress has been made in waste management, in particular through the introduction of a progressive increase in the oil-shale waste tax and in reducing the volume of municipal waste sent to landfill sites.** Nevertheless, the absence of a credible strategy and of further targeted economic instruments may make recycling relatively uncompetitive, increasing the risk that the 2020 targets will be missed. Estonia has made substantial progress by introducing a strong waste management policy aimed at avoiding waste being sent to landfill sites. Increases in the landfill tax have led to a further decrease in landfilled municipal waste (from 60 % in 2011 to 35 % in 2012). The law on environmental taxation provides, among other things, for 2014 and 2015 a 5% increase in the taxes imposed on the mining of natural resources and on the water used in the process, and a 20 % increase in the tax imposed on oil-shale waste disposal.<sup>44</sup> Additional efforts will however be needed to increase recycling if the 50 % recycling target is to be reached by 2020. Due to the excess capacity of mechanical biological treatment and incineration facilities, there is a risk that these will absorb all municipal waste and make genuine recycling economically less viable. The draft of the new waste management plan has been submitted to Parliament on 20 April.

**Some progress has been made in addressing the recommendation to continue the development of cross-border energy connections.** The integration of the Estonian electricity market with Finland and the other Nordic countries has improved as a result of the Estlink2<sup>45</sup> cable becoming operational in March 2014 and trading via Nord Pool Spot<sup>46</sup> since 2010. The

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<sup>43</sup> [http://siteresources.worldbank.org/TRADE/Resources/239070-1336654966193/LPI\\_2012\\_final.pdf](http://siteresources.worldbank.org/TRADE/Resources/239070-1336654966193/LPI_2012_final.pdf)

<sup>44</sup> The price for landfill has risen from EUR 8 per tonne in 2001 to EUR 25 per tonne today and, with the tax increase, the landfill price is expected to increase to EUR 30 per tonne by 2015.

<sup>45</sup> Second submarine cable between Estonia and Finland.

<sup>46</sup> Nord Pool Spot runs the largest market for electrical energy in the world, measured in volume traded (TWh) and in market share. It operates in Norway, Denmark, Sweden, Finland, Estonia, Latvia and Lithuania. More than 70% of the total consumption of electrical energy in the Nordic market is traded through Nord Pool

electricity interconnector linking Latvia and Estonia is regularly congested, suggesting that improved connections are needed. A step has recently been made towards ending Estonia's isolation from the EU gas market and to diversify supply sources. Memorandums of Understanding were signed on 28 February 2014 to build two liquefied natural gas terminals, one in Finland and one in Estonia. The Baltic connector — a gas supply pipeline between Finland and Estonia — is expected to be completed in 2015.

### *Research and innovation*

**Estonia's labour productivity remains relatively low and would benefit from a further increase in capital stock per worker** (79 % of the EU-15<sup>47</sup> average in 2012) **and greater investment into technological development** (stock estimated at 63 % of the EU-15 average in 2012). Although Estonia made a large leap forward in innovation in 2012, the country's performance is still below average in this area and ranks only 22nd on the new EU indicator of innovation output. The number of companies undertaking development and innovation activities is still low. Cooperation between business and the academic world is improving, but only slowly. Fragmented R&D measures have had a less pronounced impact than expected in terms of encouraging companies to use universities' research facilities and some measures have reportedly increased the administrative burden on companies. Both the inadequate legal framework for protecting intellectual property and the university financing system discourage universities from becoming more active in R&D and from increasing the number of contracts entered into with companies.

In 2013, Estonia received a recommendation on research and innovation systems and cooperation between businesses and the academic world. The analysis in this staff working document leads to the conclusion that Estonia has made some progress in addressing the recommendation (for the full CSR assessment see the overview table in section 4). Measures appear relevant and credible.

**Estonia has made some progress in addressing the recommendation to identify potential measures to prioritise and internationalise research and innovation systems and improve cooperation between businesses, higher education and research institutions.**

Estonia has identified the knowledge-intensive sectors that could move the country's economy up the value chain and thus allow it to become competitive at global level. The Smart Specialisation Framework comprises the Entrepreneurship and Growth Strategy adopted by the government in November 2013 and the Research, Development and Innovation Strategy adopted in January 2014. Synergy in the implementation of these strategies remains critical for stimulating private RDI investment in Estonia. The innovation vouchers programme – a first step towards fully-fledged R&D activities – has proved successful in increasing the number of contracts between research providers and companies.

### *Business environment*

**Estonia's highly developed e-government<sup>48</sup> forms an essential part of the SME-friendly business environment, which has been particularly conducive to supporting fast-growing innovative firms.** The number of SMEs accessing e-commerce and foreign markets is not however rising fast. Among the measures taken, the most appropriate and effective are those supporting internationalisation and offering advice on the export market, and those supporting

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Spot. It was the world's first multinational exchange for trading electric power. Nord Pool Spot offers both day-ahead and intraday markets.

<sup>47</sup> The EU-15 Member States are those that were already part of the European Union in May 2004, when 10 others joined.

<sup>48</sup> E-government relates to how the government itself operates via the internet (e.g. allowing companies to submit documentation or register).



start-ups at all stages in creating a company, from the concept phase to finding the appropriate financing on capital markets. The Enterprise Development Programme is an initiative that has the potential to be highly effective: it is designed to provide tailor-made support, based on diagnosed needs, thus targeting the development projects that could allow companies to grow rapidly. Nevertheless, the regional development centres, officially responsible for providing state support to businesses, sometimes lack ambition and fail to address the real needs of businesses in rural areas. With respect to Estonia's **rental market** for housing, the existing legislation dates back to the privatisation process of the early 90-s when houses were given back to their initial owners after the collapse of the Soviet regime and tenants needed a special protection of their rights. Today these provisions are no longer necessary and could hamper the development of a well-functioning rental market, possibly affecting the mobility of workers.

**Competition in the energy sector had long been perceived as a major problem by Estonia's civil society, as well as, to a lesser extent, in medicines, transportation, communications and financial services** (see also Box 3 below).<sup>49</sup> Therefore, in early 2013, Estonia completed the full liberalisation of its retail electricity sector. Sectors identified as problematic are generally capital-intensive and related to the provision of utility services (gas, heat, water, telecoms). Such utility services generally have high entry and exit barriers, i.e. low competition results from high capital/knowledge intensity requirements and from weak infrastructure. In the oil-shale sector where four major mining companies currently dominate the market, the Estonian Competition Authority supports the release of new extracting permits to enhance competition. In parallel, prices in some specific (especially food) sectors likely suffer from oligopolistic market conditions, partly a result of the small-sized market, from an environment of accelerated regional convergence of prices, the extensive use of domestic inputs as well as from high demand from neighbouring countries (large exports to Russia). Estonia, as the other Baltic States, is also more sensitive to changes in global commodity prices than more developed EU economies. This notably reflects a consumption basket rich in food and energy imports (heating gas), the prevalence of short-term contracts for food exports as well as the price-taker nature of its economy.

**Box 3: Potential impact of structural reforms on growth – a benchmarking exercise**

Structural reforms are crucial for boosting growth. It is therefore important to know the potential benefits of these reforms. Benefits of structural reforms can be assessed with the help of economic models. The Commission uses its QUEST model to determine how structural reforms in a given Member State would affect growth if the Member State narrowed its gap vis-à-vis the average of the three best EU performers on key indicators such as the degree of competition in the economy or labour market participation. Improvements on these indicators could raise Estonia's GDP by about 5.2 % in a 10-year period. Some reforms could have an effect even within a relatively short time horizon. The model simulations corroborate the analysis of Sections 3.3 and 3.4, according to which the largest gains would likely stem from reducing mark-ups on final goods as well as from increasing participation rates among women and the elderly. In addition, the simulations support the priority placed by the authorities on increasing and improving active labour market policies, including training possibilities.

<sup>49</sup> See Lindpere *et al.* (2011), How does the Estonian Food Market Serve Market Participants?, Estonian Economy and Monetary Policy, 1/2011, Bank of Estonia, Tallinn, July 2011.

**Table 1: Structural indicators, targets, and potential GDP effects<sup>50</sup>**

| Reform areas             |   | EE   | Average 3 best EU performers | GDP % relative to baseline |          |
|--------------------------|---|------|------------------------------|----------------------------|----------|
|                          |   |      |                              | 5 years                    | 10 years |
| Market competition       | Final goods sector markups (price-cost margin)    | 0.22 | 0.13                         | 2.4                        | 3.1      |
| Market regulation        | Entry costs                                       | 1.80 | 0.13                         | 0.0                        | 0.0      |
| Tax reform               | Implicit consumption tax rate                     | 26.1 | 28.6                         | 0.1                        | 0.1      |
| Skill enhancing reforms* | Share of high-skilled                             | 11.3 | 10.7                         | 0.0                        | 0.0      |
|                          | Share of low-skilled                              | 10.2 | 7.5                          | 0.0                        | 0.0      |
| Labour market reforms    | Female non-participation rate (25-54ys):          |      |                              | 0.6                        | 1.1      |
|                          | - low-skilled                                     | 35.8 | 26.4                         |                            |          |
|                          | - medium-skilled                                  | 17.4 | 10.5                         |                            |          |
|                          | - high-skilled                                    | 12.9 | 4.3                          |                            |          |
|                          | Low-skilled male non-participation rate (25-54ys) | 20.1 | 7.7                          | 0.0                        | 0.1      |
|                          | Elderly non-participation rate (55-64ys):         |      |                              | 0.2                        | 0.5      |
|                          | - low-skilled                                     | 15.8 | 13.4                         |                            |          |
|                          | - medium-skilled                                  | 8.5  | 4.8                          |                            |          |
| - high-skilled           | 5.0   | 3.3  |                              |                            |          |
|                          | ALMP (% of GDP over unemployment share)           | 2.3  | 37.4                         | 0.3                        | 0.3      |
|                          | Benefit replacement rate**                        | 43.0 | 52.6                         | 0.0                        | 0.0      |
| Total                    |   |      |                              | 3.7                        | 5.2      |

Source: Commission services. Note: Simulations assume that all Member States undertake reforms which close their structural gaps by half. The table shows the contribution of each reform to total GDP after five and ten years. If the country is above the benchmark for a given indicator, we do not simulate the impact of reform measures in that area; however, the Member State in question can still benefit from measures taken by other Member States.<sup>51</sup> \*The long-run effect of increasing the share of high-skilled labour in the population could be 0.5% of GDP and of decreasing the share of low-skilled labour could be 0.8% of GDP. \*\*EU average is set as the benchmark.

### 3.5 Modernisation of public administration

**Local governments are small, fragmented and the population density uneven across the country.** Their fiscal capacity does not match devolved responsibilities. The efficient provision of quality services at local level, such as transport, enabling and activation services, early childhood education and -care and long-term care services, remains a challenge. The availability of appropriate support services at local level is conducive to ALMPs and/or education being effective and therefore to a good labour market performance.

**The financing of municipalities does not ensure economies of scale, such as would be possible through joint provision of services.** Moreover, the funding principles of the Equalisation Fund<sup>52</sup> create disincentives for municipalities to attract enterprises or support job creation, thereby limiting the possibilities for a better matching of revenue to the devolved responsibilities. As a consequence, funding from the EU has become the main source of

<sup>50</sup> Final goods sector mark-ups is the difference between the selling price of a good/service and its cost. Entry cost refers to the cost of starting a business in the intermediate sector. The implicit consumption tax rate is a proxy for shifting taxation away from labour to indirect taxes. The benefit replacement rate is the % of a worker's pre-unemployment income that is paid out by the unemployment scheme. For a detailed explanation of indicators see Annex.

<sup>51</sup> For a detailed explanation of the transmission mechanisms of the reform scenarios see: European Commission (2013), "The growth impact of structural reforms", Chapter 2 in QREANo. 4. December 2013. Brussels; [http://ec.europa.eu/economy\\_finance/publications/qr\\_euro\\_area/2013/pdf/qrea4\\_section\\_2\\_en.pdf](http://ec.europa.eu/economy_finance/publications/qr_euro_area/2013/pdf/qrea4_section_2_en.pdf)

<sup>52</sup> The Equalisation Fund is an equalisation mechanism for the transfers from the state budget. It is applied if expenditures exceed revenues and it covers 90% of the missing resources gap. The decision on the amount of money available for the Equalisation Fund is negotiated annually between the central and local government representatives, and it is linked to the overall situation of the central government budget.

investment at local level.<sup>53</sup> In this respect, Estonia will need to deploy efforts to increase the administrative capacity of municipalities and ensure effective systems of service delivery before allocating resources from the 2014-20 European Structural and Investment Funds to local authorities.

In 2013, Estonia received a recommendation on the efficiency of local government and effective provision of services at local level. The analysis in this staff working document leads to the conclusion that Estonia has made limited progress in addressing this recommendation (for the full CSR assessment see the overview table in section 4). Nevertheless, the measures already taken appear relevant and credible.

The National Audit Office of Estonia suggested in its 2012 audit<sup>54</sup> that the state should establish service standards that must be guaranteed by local authorities<sup>55</sup>, in order to improve the quality of services offered. **According to the NRP, legislative changes are being considered to ensure the efficiency and quality of the provision of local public services**, in particular changes to the legislation necessary to ensure minimum standards in social services. However, the necessary draft adjustments to the Social Act are unlikely to be adopted by the government before June. The Regional Development Strategy for 2014-20 was endorsed by the government in March 2014 paving the way for the creation of functional centres for the delivery of quality services. The updated OECD Action Plan to improve public governance will soon enter into inter-ministerial consultation, with adoption by the government expected later this year.

#### 4. CONCLUSIONS

**As a small and open economy, Estonia is particularly vulnerable to external shocks and relies to a large extent on its export markets.** Adverse developments in the international economic environment and in the country's competitiveness can thus have a relatively large impact on Estonia's economy and public finances. In addition, the country continues to be dependent on a single external supplier for its gas imports and consumption, further increasing its vulnerability. In view of this, the government must pay particular attention to the adequacy of labour supply and to developments in real wages. Furthermore, the government needs to ensure that its education and training sectors are able to meet the needs of the labour market and that its research, development and innovation systems are conducive to growth. Finally, the government must ensure that sufficient investment is made in energy efficiency in buildings and transport and in energy networks in order to reduce the country's energy bill and improve competitiveness. These issues were all addressed in the 2013 country-specific recommendations.

**The analysis in this staff working document leads to the conclusion that, overall, Estonia has made some progress in addressing the country-specific recommendations issued in 2013.**

Estonia has made some progress in addressing country-specific recommendation on fiscal policy. The recent adoption of the State Budget Law, which includes a structural budget balance rule, broadly meets the commitments made under the Treaty on Stability,

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<sup>53</sup> The National Audit Office carried out a follow-up audit of local government investment, which covered 13 of the 30 local authorities that were audited in 2007. Planning and implementation of investment by municipalities, towns and cities from 2010-12 were also reviewed. In comparison with 2007 when ca 70% of investment at local level were made with own funds, in 2012 the level was only 36% in 2013.

<sup>54</sup> Assumptions for provision of public services in small and remote local authorities. National Audit Office, 2012.

<sup>55</sup> Availability of state services in regions. National Audit Office, 2010.

Coordination and Governance. The 4-year expenditure ceiling is not binding within the medium-term budgetary framework however and no progress has been made on introducing a multiannual expenditure rule.

Estonia has made substantial progress in addressing country-specific recommendation on long-term unemployment and improving incentives to work. Progress in improving the provision of childcare and encouraging economic development in regions has been limited. A credible and comprehensive reform of policies on working capacity has been prepared with the aim of helping more people with disabilities and people with lower working capacity to return to the labour market, but it has yet to be adopted and implemented.

Some progress has also been made in addressing the education-related country-specific recommendation and substantially in addressing youth unemployment. Also, Estonia has adopted comprehensive, appropriate and adequate reforms in a number of areas of education, aimed *inter alia* at aligning education to the needs of the labour market. However, the results of these measures are yet to be seen. The lifelong learning strategy will need to be effectively implemented if its aim of improving workers' skills and re-training them in new fields is to be achieved, but participation of the low-skilled in lifelong learning has much improved. Research internationalisation and innovative activities remain limited, which is hampering competitiveness.

Limited progress has been made on measures to restrict carbon dioxide emissions in sectors not covered by the emissions trading scheme, especially the transport and the building sector (country-specific recommendation 4). Substantial progress has been made on waste management and some progress has been made in developing cross-border energy connections.

Limited progress has been made in addressing country-specific recommendation 5, relating to matching local revenues and responsibilities and ensuring efficient provision of good quality and affordable services at local level. Measures already introduced or currently under consideration do not appear sufficiently advanced or comprehensive at this stage.

The NRP submitted by Estonia is ambitious and the policy plans described in the programme address most of the challenges identified in the staff working document. However, the document remains relatively generic and lacks the necessary elements to assess the quantitative impact expected from the reforms considered. Systematic information would be welcome on precise achievements, ongoing legislative procedures and sometimes even on precise targets (e.g. on apprenticeships). The attached Estonia 2020 action plan provides a list of relatively detailed measures, although again not quantified, that nevertheless offer a more precise picture of the measures that are considered.

## OVERVIEW TABLE

| 2013 commitments  | Summary assessment <sup>56</sup>  |
|---|---|
| <b>Country-specific recommendations (CSRs)</b>  |   |
| <p><b>CSR 1:</b> Pursue a growth-friendly fiscal policy and preserve a sound fiscal position as envisaged, ensuring compliance with the medium-term budgetary objective over the programme horizon. Complement the planned budget rule with more binding multiannual expenditure rules within the medium-term budgetary framework and continue enhancing the efficiency of public spending.</p>   | <p>Estonia has made some progress in implementing the budgetary plans mentioned in the CSR and on the fiscal framework issue.</p> <ul style="list-style-type: none"> <li>• The draft 2014 Budget was adopted as planned, however, the deterioration of the growth outlook and the lowered fiscal targets compared with the previous programme could pose a risk of a significant deviation from the Medium Term Objective in 2014 and 2015.</li> <li>• The State Budget Act entered into force on 23 April 2014, hence the commitments made under the Treaty on Stability, Coordination and Governance have broadly been met. The new law includes a 4-year expenditure ceiling but this is not binding within the medium-term budgetary framework. No progress on introducing a multiannual expenditure rule.</li> </ul>   |
| <p><b>CSR 2:</b> Improve incentives to work by making the various existing social-benefit systems more consistent and by increasing the flexibility and targeting of benefit allocation. Improve the delivery of social services, including childcare, while increasing the efficiency and cost-effectiveness of family policy. Strengthen activation measures to facilitate the return to the labour market of the long-term unemployed and people receiving disability benefits and incapacity for work benefits. Establish coordinated measures for fostering economic development in regions affected by high unemployment.</p> | <p>Estonia has made some progress in implementing the CSR.</p> <ul style="list-style-type: none"> <li>• Some progress in improving incentives to work: parents' return to the labour market is more flexible, needs-based family benefits are in place with rates to be increased twofold and the inter-operability of the benefit system is being improved.</li> <li>• Limited progress in delivering childcare for children 1.5-3 years of age but the government approved the draft new Pre-School Act on 10 April and the Parliament is reading it.</li> <li>• Substantial progress in addressing long-term unemployment by means of 'activation' measures.</li> <li>• Limited progress so far on the major reform on working capacity: adoption of the necessary legislation foreseen for 2014 and entry into force as of mid-2015.</li> <li>• Limited progress in promoting economic development in regions; projects, including industrial parks, to be financed from 2014 onwards, with impact on job creation yet to be</li> </ul> |

<sup>56</sup> The following categories are used to assess progress in implementing the 2013: **No progress:** The Member State has neither announced nor adopted any measures to address the CSR. This category also applies if a Member State has commissioned a study group to evaluate possible measures. **Limited progress:** The Member State has announced some measures to address the CSR, but these measures appear insufficient and/or their adoption/implementation is at risk. **Some progress:** The Member State has announced or adopted measures to address the CSR. These measures are promising, but not all of them have been implemented yet and implementation is not certain in all cases. **Substantial progress:** The Member State has adopted measures, most of which have been implemented. These measures go a long way in addressing the CSR. **Fully addressed:** The Member State has adopted and implemented measures that address the CSR appropriately.



|   |   |
|---|---|
| <p><b>CSR 3:</b> Continue efforts to improve the labour-market relevance of education and training systems, including by further involving social partners and implementing targeted measures to address youth unemployment. Significantly increase the participation of the low skilled in lifelong learning. Intensify efforts to prioritise and internationalise the research and innovation systems and enhance cooperation between businesses, higher education and research institutions.</p> | <p>expected.</p> <p>Estonia has made substantial progress in implementing the CSR.</p> <ul style="list-style-type: none"> <li>• Substantial progress in addressing youth unemployment by means of ‘activation’ measures and thanks to the favourable economic environment.</li> <li>• Substantial progress in reforming general upper secondary school, vocational education and training and higher education, where all reforms are in the implementation phase. Delays in adjustments to the Adult Training Act.</li> <li>• Some progress in improving the relevance of education for the labour market: the national strategy on lifelong learning was adopted in February 2014. Creating closer links between the education sector and labour market needs remains an open issue however, particularly in respect of vocational education and training and apprenticeships. Moreover, the number of graduates in science, technology, engineering and mathematics is still relatively low compared with the EU average and other countries in the region.</li> <li>• Some progress has been made in adopting the new strategy on research, development and innovation for 2014-20, ‘Knowledge-based Estonia’, and the strategy on entrepreneurship for 2014–20, which highlight the importance of improving cooperation between businesses, higher education and research institutions.</li> </ul> |
| <p><b>CSR 4:</b> Improve energy efficiency, in particular in buildings and transport, and strengthen environmental incentives concerning vehicles and waste. Step up the development of cross-border energy connections to diversify energy sources and promote competition in the energy market.</p>   | <p>Estonia has made some progress in implementing the CSR.</p> <ul style="list-style-type: none"> <li>• Limited progress in energy efficiency in buildings: energy efficiency in buildings is being addressed via EU Structural Funds. Further progress in the building sector is dependent on funding from the EU funds for 2014-20. The Estonian government tightened energy efficiency requirements for public buildings in January 2013, bringing legislation into line with the EU Energy Efficiency Directive, and extended the support scheme for renovations of apartments in August 2013. Planning and preparation of measures relating to residential and industrial buildings are in their initial stages.</li> <li>• Limited progress in energy efficiency in transport: the measures undertaken so far include establishing energy efficiency criteria for public procurement, developing a more energy-efficient public transport fleet, pursuing the ongoing electromobility programme 2012-14 and extending the quick-charging infrastructure for electric cars across the country. No new environmental incentives relating to vehicles have been adopted recently. Estonia still has the second most energy-intensive car fleet in the</li> </ul>   |

|  |  |
|--|--|
|  | <p>EU. The new government foresees the partial removal of preferential VAT treatment for corporate cars. There are signs of an increased use of urban public transport and passenger rail.</p> <ul style="list-style-type: none"> <li>• Substantial progress in the area of waste: economic instruments (e.g. a progressive increase of the landfill tax, the application of extended producer responsibility and deposit-refund schemes) and the entry into operation of new mechanical biological treatment facilities have led to a reduction in the proportion of waste being sent to landfill sites. Environmental taxation provides for a 20% progressive increase in the tax imposed on oil-shale waste starting from 1 April 2013. The National Waste Management Plan was submitted to Parliament on 20 April. Additional efforts to increase recycling will however be needed if the 50% recycling target is to be reached by 2020.</li> <li>• Some progress in cross-border energy connections: trading via Nord Pool Spot and the Estlink 2 cable (connecting Estonia with Finland) operational. Agreements reached on 28 February to build regional liquefied natural gas terminals both in Estonia and in Finland and a gas supply pipeline (Baltic connector) connecting the two countries.</li> </ul> |
| <p><b>CSR 5:</b> Better balance local government revenue against devolved responsibilities. Improve the efficiency of local governments and ensure quality provision of local public services.</p> | <p>Estonia has made limited progress in implementing the CSR.</p> <ul style="list-style-type: none"> <li>• Limited progress so far on the local government revenue incentives: lack of financial incentives encouraging local initiatives to increase local revenue. The Equalisation Fund still creates disincentives for municipalities to attract enterprises or support job creation.</li> <li>• Limited progress in the provision of good quality and affordable local services: legislative changes to ensure the applicability of minimum standards in social services to all municipalities have been announced, but are not expected to be adopted by the government before summer. The government adopted a new Regional Strategy for 2014-20 on 20 March. The draft new Local Government Act is unlikely to proceed. The coalition agreement of the new government has committed to preparing a government reform programme by 2015.</li> </ul>   |
| <p><b>Europe 2020 (national targets and progress)</b></p>  |  |
| <p><b>Policy field target</b></p>  | <p><b>Progress achieved</b></p>  |
| <p>Employment rate target set in the 2012 NRP:<br/>76 %</p>  | <p>Estonia has already reached its intermediate target for 2015 of 72%. In absolute terms, around 43 000 people must find jobs if the target employment rate is 76% by 2020. Estonia's employment rate is continuing to rise as more long-term unemployed, young unemployed and previously inactive people find jobs.</p>  |



|   |   |
|---|---|
|   | <p>Employment rate (%):<br/> 2011: 70.4 %<br/> 2012: 71.7 %<br/> 2013: 73.3%</p>  |
| <p>R&amp;D target set in the 2012 NRP:<br/> 3 % by 2020</p>   | <p>Estonia had an R&amp;D intensity of 2.18 % in 2012, slightly above EU average. Despite a slight decrease from 2.36 % in 2011, the country seems well on track to reach its 3 % R&amp;D intensity target for 2020. R&amp;D intensity in business (businesses' expenditure on R&amp;D) was at 1.25 % of GDP in 2012, only slightly below EU average, with an overall annual growth rate of 19.7 % between 2007 and 2012. Public expenditure on R&amp;D reached 0.91 % of GDP in 2012, above EU average, with an overall annual growth rate of 10.7 % between 2007 and 2012. The growth of investment in research, development and innovation has been impressive, but questions remain as to whether the current rate of growth is sustainable in view of the role played by one sector (shale oil) in the increase of business R&amp;D expenditure, and of the role played by the European Structural Funds in increasing public R&amp;D expenditure.</p> |
| <p>Greenhouse gas emissions target: limit the increase in emissions from sectors not covered by the emissions trading scheme (ETS) to no more than +11 % compared with 2005</p>   | <p>Change in non-ETS greenhouse gas emissions between 2005 and 2012: 0 %.</p> <p>According to the latest national projections and taking into account existing measures, the target is expected to be achieved: an increase of 6 % from the 2005 level is expected for 2020 (with a margin of 5 percentage points).</p>   |
| <p>Renewable energy target: 25 % by 2020<br/> Proportion of renewable energy in all modes of transport:<br/> 10 %</p>   | <p>The proportion of the gross final energy consumption produced from renewable energy sources in 2011 was 26 %.</p> <p>The proportion of energy produced from renewable sources in transport is 0.4 %.</p> <p>Estonia should make greater efforts to increase the proportion of renewable energy in transport.</p>   |
| <p>Indicative national energy efficiency target for 2020: stabilisation of final energy consumption in 2020 at the 2010 level. Estonia has set an indicative national energy efficiency target of 13 % (0.430 million tonnes of oil equivalent - Mtoe).</p> <p>This equates to a 2020 level of 6.5 Mtoe primary consumption and 2.84 Mtoe final energy consumption.</p> | <p>Estonia notified the Commission of the policy measures it plans to adopt to achieve these energy savings.</p>  |
| <p>Early school-leaving target: 9.5 %</p>   | <p>Estonia performs better than the EU average for the early school leaving rate (9.7% vs 11.9% in 2013). It is below the EU headline target for 2020 (10%) and is very close to its national target (9.5%). It is also worth noting that the early school-leaving rate for males has fallen significantly in recent years, but it still remains more than twice as high as the rate for females. As regards the period 2012-13, the ESL rate has all in all decreased by 0.8pp.</p> <p>Early leavers from education and training:</p>  |

|  |  |
|--|--|
|  | <p>2011: 10.9 %<br/> 2012: 10.5 %<br/> 2013: 9.7%</p>  |
| <p>Tertiary education target: 40 %</p>   | <p>Estonia's tertiary education attainment rate is far better than the EU-28 average (43.7% compared with 36.8 % in 2013). It already exceeds both its national target and the EU target for 2020. A strong increase in tertiary attainment of females was noted for Estonia. In the period 2012-13 the tertiary attainment rate changed 4.6pps:<br/> Tertiary education attainment rate:<br/> 2011: 40.3 %<br/> 2012: 39.1 %<br/> 2013: 43.7%</p> |
| <p>Target for the reduction of population at risk of poverty: 15 % in 2020</p> | <p>A reduction in the at-risk-of-poverty rate from 17.5 % in 2010 (income year) to 15 % in 2020 (income year) would equate to a fall in the number of people at risk of poverty of 36 248 in absolute terms.<br/> The increase in the number of people at risk of poverty in 2011 stabilised alongside the general improvement in employment and the rise in incomes.<br/> At-risk-of-poverty rate:<br/> 2011: 17.5 %<br/> 2012: 17.5 %</p>        |

**ANNEX**

**Standard Tables**

**Table I. Macro-economic indicators**

|  | 1996-2000     | 2001-2005     | 2006-2010     | 2011          | 2012          | 2013        | 2014        | 2015        |
|--|---------------|---------------|---------------|---------------|---------------|-------------|-------------|-------------|
| <b>Core indicators</b>   |               |               |               |               |               |             |             |             |
| GDP growth rate  | 6.8           | 7.2           | 0.4           | 9.6           | 3.9           | 0.8         | 1.9         | 3.0         |
| Output gap <sup>1</sup>  | -3.1          | 3.2           | 2.1           | 0.3           | 2.6           | 1.3         | 0.7         | 0.8         |
| HICP (annual % change)   | 9.0           | 3.5           | 4.9           | 5.1           | 4.2           | 3.2         | 1.5         | 3.0         |
| Domestic demand (annual % change) <sup>2</sup>   | 7.4           | 9.6           | -1.1          | 13.1          | 5.5           | 1.5         | 2.7         | 3.2         |
| Unemployment rate (% of labour force) <sup>3</sup>   | 10.7          | 10.1          | 9.2           | 12.3          | 10.0          | 8.6         | 8.1         | 7.5         |
| Gross fixed capital formation (% of GDP)   | 27.0          | 30.1          | 28.4          | 23.6          | 25.2          | 25.3        | 25.3        | 25.3        |
| Gross national saving (% of GDP)   | 21.3          | 22.4          | 22.7          | 26.8          | 26.6          | 25.8        | 24.7        | 24.6        |
| <b>General Government (% of GDP)</b>   |               |               |               |               |               |             |             |             |
| <b>Net lending (+) or net borrowing (-)</b>  | <b>-0.5</b>   | <b>1.0</b>    | <b>0.0</b>    | <b>1.1</b>    | <b>-0.2</b>   | <b>-0.2</b> | <b>-0.5</b> | <b>-0.6</b> |
| <b>Gross debt</b>  | <b>6.4</b>    | <b>5.1</b>    | <b>5.3</b>    | <b>6.1</b>    | <b>9.8</b>    | <b>10.0</b> | <b>9.8</b>  | <b>9.6</b>  |
| <b>Net financial assets</b>  | <b>32.5</b>   | <b>30.0</b>   | <b>30.1</b>   | <b>34.5</b>   | <b>32.9</b>   | <b>n.a</b>  | <b>n.a</b>  | <b>n.a</b>  |
| Total revenue  | 38.0          | 35.6          | 38.5          | 38.7          | 39.2          | 38.1        | 38.0        | 37.5        |
| Total expenditure  | 38.5          | 34.6          | 38.5          | 37.6          | 39.5          | 38.3        | 38.5        | 38.2        |
| <i>of which: Interest</i>  | 0.3           | 0.2           | 0.2           | 0.1           | 0.2           | 0.1         | 0.1         | 0.1         |
| <b>Corporations (% of GDP)</b>   |               |               |               |               |               |             |             |             |
| <b>Net lending (+) or net borrowing (-)</b>  | <b>-5.0</b>   | <b>-5.1</b>   | <b>-0.7</b>   | <b>1.1</b>    | <b>4.1</b>    | <b>3.5</b>  | <b>2.7</b>  | <b>2.7</b>  |
| <b>Net financial assets; non-financial corporations</b>  | <b>-109.3</b> | <b>-130.8</b> | <b>-168.6</b> | <b>-130.7</b> | <b>-126.8</b> | <b>n.a</b>  | <b>n.a</b>  | <b>n.a</b>  |
| <b>Net financial assets; financial corporations</b>  | <b>-10.3</b>  | <b>-16.8</b>  | <b>2.4</b>    | <b>4.1</b>    | <b>2.3</b>    | <b>n.a</b>  | <b>n.a</b>  | <b>n.a</b>  |
| Gross capital formation  | 20.9          | 22.9          | 18.2          | 18.2          | 18.3          | 17.8        | 17.7        | 17.7        |
| Gross operating surplus  | 25.1          | 31.4          | 28.9          | 31.7          | 30.9          | 30.2        | 29.4        | 29.1        |
| <b>Households and NPISH (% of GDP)</b>   |               |               |               |               |               |             |             |             |
| <b>Net lending (+) or net borrowing (-)</b>  | <b>-1.5</b>   | <b>-4.9</b>   | <b>-3.5</b>   | <b>1.9</b>    | <b>-1.9</b>   | <b>-1.3</b> | <b>-1.7</b> | <b>-1.8</b> |
| <b>Net financial assets</b>  | <b>50.2</b>   | <b>49.7</b>   | <b>60.6</b>   | <b>34.8</b>   | <b>36.3</b>   | <b>n.a</b>  | <b>n.a</b>  | <b>n.a</b>  |
| Gross wages and salaries   | 36.3          | 34.3          | 37.4          | 35.6          | 35.8          | 36.8        | 37.3        | 37.4        |
| Net property income  | 1.2           | 2.2           | 1.9           | 4.0           | 1.1           | 2.4         | 2.0         | 1.8         |
| Current transfers received   | 16.3          | 15.2          | 14.7          | 16.4          | 15.9          | 15.2        | 15.3        | 15.0        |
| Gross saving   | 1.7           | -0.7          | 1.8           | 6.3           | 2.4           | 3.4         | 3.4         | 3.3         |
| <b>Rest of the world (% of GDP)</b>  |               |               |               |               |               |             |             |             |
| <b>Net lending (+) or net borrowing (-)</b>  | <b>-7.8</b>   | <b>-9.1</b>   | <b>-4.2</b>   | <b>4.4</b>    | <b>0.7</b>    | <b>1.1</b>  | <b>-0.3</b> | <b>-0.4</b> |
| <b>Net financial assets</b>  | <b>37.0</b>   | <b>67.9</b>   | <b>75.7</b>   | <b>57.7</b>   | <b>55.8</b>   | <b>n.a</b>  | <b>n.a</b>  | <b>n.a</b>  |
| Net exports of goods and services  | -8.1          | -6.2          | -2.2          | 3.7           | 0.2           | 0.8         | 0.2         | 0.1         |
| Net primary income from the rest of the world  | -1.6          | -4.4          | -5.1          | -5.3          | -4.8          | -3.3        | -3.5        | -3.3        |
| Net capital transactions   | 0.5           | 0.5           | 2.3           | 4.1           | 3.5           | 2.9         | 2.5         | 2.3         |
| Tradable sector  | 49.7          | 49.2          | 45.0          | 46.2          | 45.5          | 45.3        | n.a         | n.a         |
| Non tradable sector  | 39.0          | 39.7          | 42.7          | 41.2          | 41.6          | 42.3        | n.a         | n.a         |
| <i>of which: Building and construction sector</i>  | 5.5           | 6.1           | 7.6           | 6.1           | 6.8           | 6.6         | n.a         | n.a         |
| Real effective exchange rate (index, 2000=100)   | 82.1          | 92.5          | 125.5         | 122.6         | 122.3         | 131.2       | 137.2       | 140.6       |
| Terms of trade goods and services (index, 2000=100)  | 88.2          | 96.6          | 104.0         | 102.3         | 101.4         | 102.7       | 103.0       | 103.1       |
| Market performance of exports (index, 2000=100)  | 77.8          | 90.8          | 92.9          | 111.1         | 116.3         | 118.2       | 117.6       | 117.2       |
| <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. |               |               |               |               |               |             |             |             |
| <b>Source:</b>   |               |               |               |               |               |             |             |             |
| Commission 2014 spring forecast (COM); Stability programme (SP).   |               |               |               |               |               |             |             |             |

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

|   | 2013 |      | 2014 |      | 2015 |      | 2016 | 2017 | 2018 |
|---|------|------|------|------|------|------|------|------|------|
|   | COM  | SP   | COM  | SP   | COM  | SP   | SP   | SP   | SP   |
| Real GDP (% change)   | 0.8  | 0.8  | 1.9  | 2.0  | 3.0  | 3.5  | 3.6  | 3.4  | 3.2  |
| Private consumption (% change)  | 4.2  | 4.2  | 4.5  | 3.9  | 3.8  | 3.8  | 3.3  | 3.2  | 3.1  |
| Gross fixed capital formation (% change)  | 1.1  | 1.0  | 0.9  | 0.7  | 3.7  | 3.7  | 5.3  | 7.4  | 5.7  |
| Exports of goods and services (% change)  | 1.8  | 1.8  | 3.1  | 2.4  | 5.0  | 6.0  | 6.5  | 6.7  | 6.7  |
| Imports of goods and services (% change)  | 2.6  | 2.6  | 3.9  | 3.3  | 5.3  | 6.3  | 6.6  | 7.1  | 7.0  |
| <i>Contributions to real GDP growth:</i>  |      |      |      |      |      |      |      |      |      |
| - Final domestic demand   | 2.7  | 2.7  | 2.8  | 2.4  | 3.2  | 3.1  | 3.3  | 3.7  | 3.3  |
| - Change in inventories   | -1.2 | -1.2 | -0.1 | 0.3  | 0.0  | 0.5  | 0.3  | 0.0  | 0.1  |
| - Net exports   | -0.7 | -0.7 | -0.7 | -0.7 | -0.2 | -0.2 | -0.1 | -0.4 | -0.2 |
| Output gap <sup>1</sup>   | 1.3  | 1.2  | 0.7  | 0.3  | 0.8  | 0.4  | 0.7  | 0.9  | 0.6  |
| Employment (% change)   | 1.1  | 1.0  | 0.2  | 0.2  | 0.3  | 0.3  | -0.1 | -0.3 | -0.5 |
| Unemployment rate (%)   | 8.6  | 8.6  | 8.1  | 7.9  | 7.5  | 6.9  | 6.4  | 6.0  | 6.0  |
| Labour productivity (% change)  | -0.3 | 4.8  | 1.7  | 4.7  | 2.7  | 6.5  | 6.9  | 6.7  | 6.6  |
| HICP inflation (%)  | 3.2  | 3.2  | 1.5  | 1.7  | 3.0  | 2.9  | 3.0  | 3.0  | 3.0  |
| GDP deflator (% change)   | 5.0  | 5.0  | 2.8  | 2.8  | 3.5  | 3.2  | 3.0  | 2.8  | 2.7  |
| Comp. of employees (per head, % change)   | 7.4  | 7.8  | 6.0  | 6.2  | 6.7  | 6.3  | 6.4  | 6.5  | 6.6  |
| Net lending/borrowing vis-à-vis the rest of the world (% of GDP)  | 1.1  | 1.7  | -0.3 | 1.3  | -0.4 | 1.2  | 0.7  | 0.5  | 0.5  |
| <p>Note:</p> <p><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.</p> <p>Source:</p> <p>Commission 2014 spring forecast (COM); Stability programme (SP).</p> |      |      |      |      |      |      |      |      |      |



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

| (% of GDP)   | 2013        | 2014        |             | 2015             |             | 2016        | 2017        | 2018        | Change:<br>2013-2018 |
|--|-------------|-------------|-------------|------------------|-------------|-------------|-------------|-------------|----------------------|
|  | COM         | COM         | SP          | COM <sup>1</sup> | SP          | SP          | SP          | SP          | SP                   |
| <b>Revenue</b>   | <b>38.1</b> | <b>38.0</b> | <b>37.5</b> | <b>37.5</b>      | <b>37.8</b> | <b>36.5</b> | <b>36.6</b> | <b>36.3</b> | <b>-1.8</b>          |
| <i>of which:</i>   |             |             |             |                  |             |             |             |             |                      |
| - Taxes on production and imports  | 13.4        | 13.6        | 13.5        | 13.6             | 13.9        | 13.8        | 13.8        | 13.7        | 0.3                  |
| - Current taxes on income, wealth, etc.  | 7.4         | 7.1         | 7.5         | 6.8              | 7.0         | 7.0         | 7.0         | 7.0         | -0.4                 |
| - Social contributions   | 11.4        | 11.3        | 11.4        | 11.4             | 11.3        | 11.3        | 11.3        | 11.5        | 0.1                  |
| - Other (residual)   | 5.9         | 6.0         | 5.1         | 5.7              | 5.6         | 4.4         | 4.5         | 4.1         | -1.8                 |
| <b>Expenditure</b>   | <b>38.3</b> | <b>38.5</b> | <b>38.2</b> | <b>38.2</b>      | <b>38.4</b> | <b>36.8</b> | <b>36.6</b> | <b>35.8</b> | <b>-2.5</b>          |
| <i>of which:</i>   |             |             |             |                  |             |             |             |             |                      |
| - Primary expenditure  | 38.2        | 38.4        | 38.1        | 38.0             | 38.3        | 36.6        | 36.4        | 35.6        | -2.6                 |
| <i>of which:</i>   |             |             |             |                  |             |             |             |             |                      |
| Compensation of employees  | 10.7        | 10.5        | 10.7        | 10.5             | 10.5        | 10.2        | 9.9         | 9.7         | -1.0                 |
| Intermediate consumption   | 7.2         | 7.6         | 7.2         | 7.4              | 7.1         | 7.1         | 7.0         | 7.0         | -0.2                 |
| Social payments  | 12.7        | 12.9        | 12.7        | 12.8             | 12.9        | 12.8        | 12.7        | 12.8        | 0.1                  |
| Subsidies  | 1.0         | 1.1         | 1.0         | 1.1              | 1.0         | 1.0         | 1.0         | 1.0         | 0.0                  |
| Gross fixed capital formation  | 4.3         | 4.0         | 4.3         | 3.9              | 4.1         | 3.5         | 3.6         | 3.1         | -1.2                 |
| Other (residual)   | 2.3         | 2.4         | 2.2         | 2.4              | 2.6         | 2.1         | 2.1         | 2.0         | -0.3                 |
| - Interest expenditure   | 0.1         | 0.1         | 0.1         | 0.1              | 0.1         | 0.2         | 0.2         | 0.2         | 0.1                  |
| <b>General government balance (GGB)</b>  | <b>-0.2</b> | <b>-0.5</b> | <b>-0.7</b> | <b>-0.6</b>      | <b>-0.5</b> | <b>-0.4</b> | <b>0.1</b>  | <b>0.5</b>  | <b>0.7</b>           |
| <b>Primary balance</b>   | <b>0.0</b>  | <b>-0.4</b> | <b>-0.6</b> | <b>-0.5</b>      | <b>-0.4</b> | <b>-0.2</b> | <b>0.2</b>  | <b>0.8</b>  | <b>0.8</b>           |
| One-off and other temporary measures   | -0.2        | -0.3        | -0.3        | -0.2             | -0.5        | -0.4        | -0.3        | 0.0         | 0.2                  |
| <b>GGB excl. one-offs</b>  | <b>0.0</b>  | <b>-0.3</b> | <b>-0.4</b> | <b>-0.4</b>      | <b>0.0</b>  | <b>0.0</b>  | <b>0.4</b>  | <b>0.5</b>  | <b>0.5</b>           |
| Output gap <sup>2</sup>  | 1.3         | 0.7         | 0.3         | 0.8              | 0.4         | 0.7         | 0.9         | 0.6         | -0.7                 |
| Cyclically-adjusted balance <sup>2</sup>   | -0.6        | -0.7        | -0.8        | -0.9             | -0.6        | -0.6        | -0.2        | 0.3         | 0.9                  |
| <b>Structural balance (SB)<sup>3</sup></b>   | <b>-0.4</b> | <b>-0.5</b> | <b>-0.5</b> | <b>-0.7</b>      | <b>-0.1</b> | <b>-0.2</b> | <b>0.1</b>  | <b>0.3</b>  | <b>0.7</b>           |
| <i>Change in SB</i>  | -0.3        | -0.1        | -0.1        | -0.2             | 0.4         | -0.1        | 0.3         | 0.2         | -                    |
| <i>Two year average change in SB</i>   | 0.1         | -0.2        | -0.2        | -0.1             | 0.1         | 0.1         | 0.1         | 0.3         | -                    |
| Structural primary balance <sup>3</sup>  | -0.2        | -0.3        | -0.4        | -0.5             | 0.0         | 0.0         | 0.3         | 0.5         | 0.8                  |
| <i>Change in structural primary balance</i>  |             | -0.1        | -0.1        | -0.2             | 0.4         | 0.0         | 0.3         | 0.2         | -                    |
| <b>Expenditure benchmark</b>   |             |             |             |                  |             |             |             |             |                      |
| Applicable reference rate <sup>4</sup>   | 2.26        | 2.11        | 2.11        | 0.94             | 0.94        | n.a.        | n.a.        | n.a.        | -                    |
| Deviation <sup>5</sup> (% GDP)   | -0.7        | 0.1         | -0.4        | -0.7             | -0.7        | n.a.        | n.a.        | n.a.        | -                    |
| Two-year average deviation (% GDP)   | -0.1        | -0.3        | 0.1         | -0.3             | -0.6        | n.a.        | n.a.        | 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 negative sign implies that expenditure growth exceeds the applicable reference rate. |             |             |             |                  |             |             |             |             |                      |
| <b>Source:</b>   |             |             |             |                  |             |             |             |             |                      |
| Stability programme (SP); Commission 2014 spring forecast (COM); Commission calculations.  |             |             |             |                  |             |             |             |             |                      |

**Table IV. Debt dynamics**

| (% of GDP)   | Average<br>2008-<br>2012 | 2013        | 2014        |             | 2015        |             | 2016        | 2017        | 2018        |
|--|--------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|  |                          |             | COM         | SP          | COM         | SP          | SP          | SP          | SP          |
| <b>Gross debt ratio</b> <sup>1</sup>   | <b>6.8</b>               | <b>10.0</b> | <b>9.8</b>  | <b>9.8</b>  | <b>9.6</b>  | <b>9.3</b>  | <b>8.8</b>  | <b>8.5</b>  | <b>7.9</b>  |
| Change in the ratio  | 1.2                      | 0.2         | -0.2        | -0.2        | -0.3        | -0.5        | -0.5        | -0.3        | -0.6        |
| <i>Contributions</i> <sup>2</sup> :  |                          |             |             |             |             |             |             |             |             |
| <b>1. Primary balance</b>  | <b>0.6</b>               | <b>0.0</b>  | <b>0.4</b>  | <b>0.6</b>  | <b>0.5</b>  | <b>0.4</b>  | <b>0.2</b>  | <b>-0.2</b> | <b>-0.8</b> |
| <b>2. “Snow-ball” effect</b>   | <b>0.0</b>               | <b>-0.4</b> | <b>-0.3</b> | <b>-0.4</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                      | 0.1         | 0.1         | 0.1         | 0.1         | 0.1         | 0.2         | 0.1         | 0.3         |
| Growth effect  | 0.0                      | -0.1        | -0.2        | -0.2        | -0.3        | -0.3        | -0.3        | -0.3        | -0.3        |
| Inflation effect   | -0.1                     | -0.5        | -0.3        | -0.3        | -0.3        | -0.3        | -0.3        | -0.2        | -0.2        |
| <b>3. Stock-flow adjustment</b>  | <b>0.6</b>               | <b>0.5</b>  | <b>-0.3</b> | <b>-0.4</b> | <b>-0.3</b> | <b>-0.4</b> | <b>-0.3</b> | <b>0.3</b>  | <b>0.4</b>  |
| <i>Of which:</i>   |                          |             |             |             |             |             |             |             |             |
| Cash/accruals diff.  |                          |             |             |             |             |             |             |             |             |
| Acc. financial assets  |                          |             |             |             |             |             |             |             |             |
| Privatisation  |                          |             |             |             |             |             |             |             |             |
| Val. effect & residual   |                          |             |             |             |             |             |             |             |             |
|  |                          | <b>2013</b> | <b>2014</b> |             | <b>2015</b> |             | <b>2016</b> | <b>2017</b> | <b>2018</b> |
|  |                          |             | <b>COM</b>  | <b>SP</b>   | <b>COM</b>  | <b>SP</b>   | <b>SP</b>   | <b>SP</b>   | <b>SP</b>   |
| <b>Gap to the debt benchmark</b> <sup>3,4</sup>  |                          | n.a.        | n.a.        | n.a.        | n.a.        | n.a.        | n.a.        | n.a.        | n.a.        |
| <b>Structural adjustment</b> <sup>5</sup>  |                          | n.a.        | n.a.        | n.a.        | n.a.        | n.a.        | n.a.        | n.a.        | n.a.        |
| <i>To be compared to:</i>  |                          |             |             |             |             |             |             |             |             |
| Required adjustment <sup>6</sup>   |                          | n.a.        | n.a.        | n.a.        | n.a.        | n.a.        | n.a.        | n.a.        | n.a.        |
| <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 inflation on the debt ratio (through the denominator). The stock-flow adjustment includes differences in cash and accrual accounting, accumulation of financial assets and valuation and other residual effects. |                          |             |             |             |             |             |             |             |             |
| <sup>3</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 correction of the excessive deficit.  |                          |             |             |             |             |             |             |             |             |
| <sup>4</sup> Shows the difference between the debt-to-GDP ratio and the debt benchmark. If positive, projected gross debt-to-GDP ratio does not comply with the debt reduction benchmark.  |                          |             |             |             |             |             |             |             |             |
| <sup>5</sup> Applicable only during the transition period of three years from the correction of the excessive deficit for EDP that were ongoing in November 2011.  |                          |             |             |             |             |             |             |             |             |
| <sup>6</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/CP) budgetary projections for the previous years are achieved.   |                          |             |             |             |             |             |             |             |             |
| <b>Source :</b>  |                          |             |             |             |             |             |             |             |             |
| Stability programme (SP); Commission 2014 spring forecast (COM); Commission calculations.  |                          |             |             |             |             |             |             |             |             |

**Table V. Sustainability indicators**

|  | Estonia       |                           |                              | European Union |                           |                              |
|--|---------------|---------------------------|------------------------------|----------------|---------------------------|------------------------------|
|  | 2013 scenario | No-policy-change scenario | Stability programme scenario | 2013 scenario  | No-policy-change scenario | Stability programme scenario |
| S2*  | 1.4           | 1.9                       | 0.9                          | 2.4            | 2.4                       | 0.7                          |
| <i>of which:</i>                           |               |                           |                              |                |                           |                              |
| Initial budgetary position (IBP)           | 0.6           | 0.9                       | -0.1                         | 0.5            | 0.4                       | -1.3                         |
| Long-term cost of ageing (CoA)             | 0.8           | 1.0                       | 0.9                          | 1.9            | 2.0                       | 2.0                          |
| <i>of which:</i>                           |               |                           |                              |                |                           |                              |
| pensions                                   | -0.2          | 0.1                       | 0.2                          | 0.7            | 0.8                       | 0.9                          |
| healthcare                                 | 0.7           | 0.7                       | 0.7                          | 0.9            | 0.9                       | 0.8                          |
| long-term care                             | 0.2           | 0.2                       | 0.2                          | 0.6            | 0.6                       | 0.6                          |
| others                                     | 0.1           | 0.0                       | -0.1                         | -0.4           | -0.4                      | -0.3                         |
| S1**                                       | -3.1          | -2.8                      | -4.7                         | 1.5            | 1.7                       | -0.2                         |
| <i>of which:</i>                           |               |                           |                              |                |                           |                              |
| Initial budgetary position (IBP)           | -0.3          | 0.3                       | -0.6                         | -0.2           | -0.4                      | -2.0                         |
| Debt requirement (DR)                      | -3.2          | -3.5                      | -4.6                         | 1.5            | 1.8                       | 1.5                          |
| Long-term cost of ageing (CoA)             | 0.3           | 0.5                       | 0.5                          | 0.2            | 0.3                       | 0.3                          |
| S0 (risk for fiscal stress)***             | 0.31          | :                         | :                            | :              | :                         | :                            |
| Debt as % of GDP (2013)                    | 10.0          |                           |                              | 88.9           |                           |                              |
| Age-related expenditure as % of GDP (2013) | 19.2          |                           |                              | 25.8           |                           |                              |

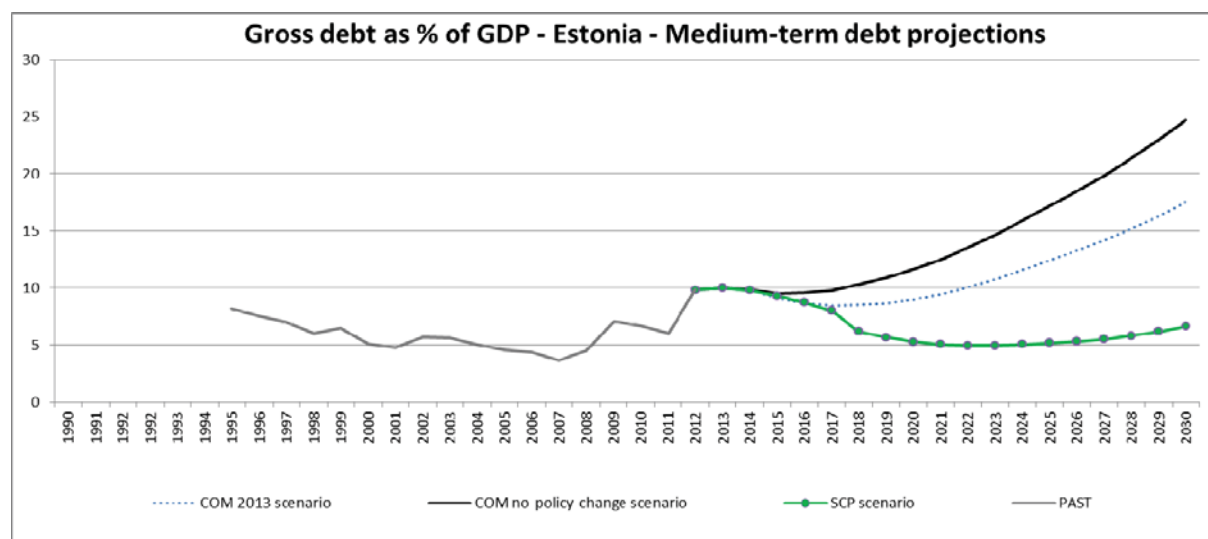
Source : Commission; 2014 stability programme.

Note : The 2013 scenario depicts the sustainability gap under the assumption that the budgetary position evolves until 2013 in line with the Commission's 2014 spring forecast. The 'no-policy-change' scenario depicts the sustainability gap under the assumption that the budgetary position evolves until 2015 in line with the Commission's 2014 spring forecast. The 'stability programme' scenario depicts the sustainability gap under the assumption that the budgetary plans in the programme are fully implemented. Age-related expenditure as given in the 2012 Ageing Report.

\* The long-term sustainability gap (S2) indicator shows the immediate and permanent adjustment required to satisfy an inter-temporal budgetary constraint, including the costs of ageing. The S2 indicator has two components: (i) the initial budgetary position (IBP), which gives the gap vis-à-vis the debt-stabilising primary balance and (ii) the additional adjustment required due to the costs of ageing. The main assumption used in the derivation of S2 is that, in an infinite horizon, the growth in the debt ratio is bound by the interest rate differential (i.e. the difference between the nominal interest and the real growth rates); thereby not necessarily implying that the debt ratio will fall below the EU Treaty 60% debt threshold. The following thresholds were used for the S2 indicator: (i) if the value of S2 is lower than 2, the country is classed as low risk; (ii) if it is between 2 and 6, it is classed as medium risk; and (iii) if it is greater than 6, it is classed as high risk.

\*\* The medium-term sustainability gap (S1) indicator shows the upfront adjustment effort required, in terms of a steady improvement in the structural primary balance in the period to 2020 and then sustained for a decade, to bring debt ratios back to 60% of GDP in 2030, including financing for any additional expenditure by the target date, arising from population ageing. The following thresholds were used to assess the scale of the sustainability challenge: (i) if the S1 value is less than zero, the country is classed as low risk; (ii) if a structural adjustment in the primary balance of up to 0.5 pp of GDP per year until 2020 after the last year covered by the 2014 spring forecast (2015) is required (indicating a cumulated adjustment of 2.5 pp), it is classed as medium risk; and (iii) if the S1 value is greater than 2.5 (i.e. a structural adjustment of more than 0.5 pp of GDP per year is necessary), it is classed as high risk.

\*\*\* The S0 indicator reflects up-to-date evidence on the role played by fiscal and financial competitiveness variables in creating potential fiscal risks. The methodology for the S0 indicator differs fundamentally from that for the S1 and S2 indicators. Unlike S1 and S2, S0 is not a quantification of the required fiscal adjustment effort, but a composite indicator which estimates the extent to which there might be a risk of fiscal stress in the short term. The critical threshold for the S0 indicator is 0.43.



**Table VI. Taxation indicators**

|  | 2002 | 2006 | 2008 | 2010 | 2011 | 2012 |
|--|------|------|------|------|------|------|
| <b>Total tax revenues</b> (incl. actual compulsory social contributions, % of GDP) | 31.0 | 30.7 | 31.9 | 34.0 | 32.3 | 32.5 |
| <b>Breakdown by economic function</b> (% of GDP) <sup>1</sup>                      |      |      |      |      |      |      |
| Consumption  | 11.9 | 13.0 | 11.7 | 13.5 | 13.3 | 13.6 |
| of which:  |      |      |      |      |      |      |
| - VAT  | 8.4  | 9.1  | 7.9  | 8.7  | 8.4  | 8.7  |
| - excise duties on tobacco and alcohol   | 1.6  | 1.6  | 1.3  | 1.7  | 2.0  | 2.1  |
| - energy   | 1.5  | 1.8  | 2.0  | 2.6  | 2.4  | 2.4  |
| - other (residual)   | 0.4  | 0.5  | 0.5  | 0.5  | 0.5  | 0.4  |
| Labour employed  | 16.7 | 14.9 | 17.1 | 17.7 | 16.5 | 16.2 |
| Labour non-employed  | 0.2  | 0.3  | 0.3  | 0.4  | 0.4  | 0.3  |
| Capital and business income  | 1.6  | 2.0  | 2.1  | 1.7  | 1.6  | 1.7  |
| 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  | 2.8  | 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 | 67.9 | 68.5 | 70.1 |

**Note:**

1. Tax revenues are broken down by economic function, i.e. according to whether taxes are raised on consumption, labour or capital. See European Commission (2014), Taxation trends in the European Union, for a more detailed explanation.

2. This category comprises taxes on energy, transport and pollution, and resources included in taxes on consumption and capital.

3. The VAT efficiency is measured via the VAT revenue ratio. It is defined as the ratio between the actual VAT revenue collected and the revenue that would be raised if VAT was applied at the standard rate to all final (domestic) consumption expenditures, which is an imperfect measure of the theoretical pure VAT base. 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'). It should be noted that the relative size of cross-border shopping compared to domestic consumption also influences the value of the ratio, notably for smaller economies. See European Commission (2012), Tax Reforms in EU Member States and OECD (2012), Consumption tax trends for a more detailed discussion.

Source: Commission

**Table VII. Financial market indicators**

|  | 2009  | 2010  | 2011  | 2012  | 2013  |
|--|-------|-------|-------|-------|-------|
| Total assets of the banking sector (% of GDP)  | 152.7 | 141.5 | 117.3 | 112.9 | 108.2 |
| Share of assets of the five largest banks (% of total assets)  | 93.4  | 92.3  | 90.6  | 89.6  | -     |
| Foreign ownership of banking system (% of total assets)  | 94.9  | 94.5  | 89.2  | 34.3  | -     |
| Financial soundness indicators:  |       |       |       |       |       |
| - non-performing loans (% of total loans) <sup>1)</sup>  | 5.2   | 5.4   | 4.0   | 2.6   | 1.5   |
| - capital adequacy ratio (%) <sup>1)</sup>   | 22.3  | 22.1  | 18.6  | 19.3  | 20.0  |
| - return on equity (%) <sup>1), 2)</sup>   | -24.6 | 2.1   | 33.3  | 14.2  | 18.6  |
| Bank loans to the private sector (year-on-year % change)   | -4.8  | -4.4  | -3.5  | -0.4  | 2.7   |
| Lending for house purchase (year-on-year % change)   | -1.8  | -2.1  | -1.5  | 0.2   | 1.2   |
| Loan to deposit ratio  | 183.9 | 162.8 | 144.5 | 134.4 | 128.3 |
| CB liquidity as % of liabilities   | 0.0   | 0.0   | 0.0   | 0.1   | 0.0   |
| Banks' exposure to countries receiving official financial assistance (% of GDP)  | -     | -     | -     | -     | -     |
| Private debt (% of GDP)  | 154.6 | 143.1 | 128.8 | 129.4 | -     |
| Gross external debt (% of GDP)   |       |       |       |       |       |
| - Public   | 6.0   | 5.2   | 3.3   | 7.2   | 7.8   |
| - Private  | 50.8  | 53.0  | 49.6  | 51.8  | 49.0  |
| Long term interest rates spread versus Bund (basis points)*  | -     | -     | -     | -     | -     |
| Credit default swap spreads for sovereign securities (5-year)*   | 373.9 | 107.4 | 102.4 | 101.3 | 58.6  |
| <b>Notes:</b>  |       |       |       |       |       |
| <sup>1)</sup> Latest data 2013Q4.  |       |       |       |       |       |
| <sup>2)</sup> Branches of foreign banks are excluded.  |       |       |       |       |       |
| * Measured in basis points.  |       |       |       |       |       |
| <b>Source :</b>  |       |       |       |       |       |
| <i>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).</i> |       |       |       |       |       |

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



| <b>Labour market indicators</b>  | <b>2008</b> | <b>2009</b> | <b>2010</b> | <b>2011</b> | <b>2012</b> | <b>2013</b> |
|--|-------------|-------------|-------------|-------------|-------------|-------------|
| Employment rate<br>(% of population aged 20-64)  | 77.0        | 69.9        | 66.7        | 70.4        | 72.1        | 73.3        |
| Employment growth<br>(% change from previous year)   | 0.2         | -9.9        | -4.8        | 7.0         | 2.1         | 1.9         |
| Employment rate of women<br>(% of female population aged 20-64)  | 72.8        | 68.8        | 65.7        | 67.6        | 69.3        | 70.1        |
| Employment rate of men<br>(% of male population aged 20-64)  | 81.7        | 71.0        | 67.7        | 73.5        | 75.2        | 76.7        |
| Employment rate of older workers<br>(% of population aged 55-64)   | 62.4        | 60.4        | 53.8        | 57.2        | 60.6        | 62.6        |
| Part-time employment (% of total employment,<br>15 years and more)   | 7.2         | 10.5        | 11.0        | 10.6        | 10.4        | 10.2        |
| Part-time employment of women (% of women employment, 15 years and<br>more)  | 10.4        | 13.8        | 14.5        | 15.4        | 14.9        | 14.2        |
| Part-time employment of men (% of men employment, 15 years and more)   | 4.1         | 7.0         | 7.1         | 5.6         | 5.8         | 6.2         |
| Fixed term employment (% of employees with a fixed term contract, 15<br>years and more)  | 2.4         | 2.5         | 3.7         | 4.5         | 3.7         | 3.5         |
| Transitions from temporary<br>to permanent employment  | 71.2        | 43.0        | 17.2        | 60.5        | 63.4        | :           |
| Unemployment rate <sup>1</sup> (% of labour force,<br>age group 15-74)   | 5.5         | 13.5        | 16.7        | 12.3        | 10.0        | 8.6         |
| Long-term unemployment rate <sup>2</sup> (% of labour force)   | 1.7         | 3.7         | 7.6         | 7.0         | 5.4         | 3.8         |
| Youth unemployment rate<br>(% of youth labour force aged 15-24)  | 12.0        | 27.4        | 32.9        | 22.4        | 20.9        | 18.7        |
| Youth NEET rate (% of population aged 15-24)   | 8.8         | 14.9        | 14.5        | 11.8        | 12.5        | 11.3        |
| Early leavers from education and training (% of pop. 18-24 with at most<br>lower sec. educ. and not in further education or training)  | 14.0        | 13.9        | 11.6        | 10.9        | 10.5        | 9.7         |
| Tertiary educational attainment (% of population 30-34 having successfully<br>completed tertiary education)  | 34.1        | 35.9        | 40.0        | 40.3        | 39.1        | 43.7        |
| Formal childcare (from 1 to 29 hours; % over the population less than 3<br>years)  | 1.0         | 4.0         | 2.0         | 4.0         | 4.0         | :           |
| Formal childcare (30 hours or over; % over the population less than 3 year)  | 16.0        | 21.0        | 19.0        | 15.0        | 14.0        | :           |
| Labour productivity per person employed (annual % change)  | -4.3        | -4.5        | 7.7         | 2.4         | 1.7         | -0.3        |
| Hours worked per person employed (annual % change)   | -1.5        | -6.9        | 2.6         | 2.3         | -1.8        | 0.1         |
| Labour productivity per hour worked (annual % change; constant prices)   | -2.8        | 2.5         | 5.0         | 0.1         | 3.5         | -0.4        |
| Compensation per employee (annual % change; constant prices)   | 4.0         | -3.3        | 2.0         | -2.4        | 2.5         | 2.3         |
| Nominal unit labour cost growth (annual % change)  | 14.6        | 1.5         | -5.0        | -1.8        | 4.2         | :           |
| Real unit labour cost growth (annual % change)   | 8.7         | 1.3         | -5.3        | -4.7        | 0.9         | :           |
| <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>2007</b> | <b>2008</b> | <b>2009</b> | <b>2010</b> | <b>2011</b> |
|--|-------------|-------------|-------------|-------------|-------------|
| Sickness/Health care   | 4.0         | 4.8         | 5.3         | 4.8         | 4.4         |
| Invalidity   | 1.1         | 1.5         | 1.9         | 1.9         | 1.8         |
| Old age and survivors  | 5.2         | 6.4         | 8.0         | 7.9         | 7.0         |
| Family/Children  | 1.4         | 1.8         | 2.2         | 2.3         | 2.0         |
| Unemployment   | 0.1         | 0.3         | 1.2         | 0.8         | 0.5         |
| Housing and Social exclusion n.e.c.  | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         |
| <b>Total</b>   | 12.0        | 14.8        | 18.8        | 17.8        | 15.9        |
| of which: means tested benefits  | 0.1         | 0.1         | 0.1         | 0.2         | 0.2         |
| <b>Social inclusion indicators</b>   | <b>2008</b> | <b>2009</b> | <b>2010</b> | <b>2011</b> | <b>2012</b> |
| At-risk-of-poverty or social exclusion <sup>1</sup><br>(% of total population)   | 21.8        | 23.4        | 21.7        | 23.1        | 23.4        |
| At-risk-of-poverty or social exclusion of children<br>(% of people aged 0-17)  | 19.4        | 24.5        | 24.0        | 24.8        | 22.4        |
| At-risk-of-poverty or social exclusion of elderly<br>(% of people aged 65+)  | 40.9        | 35.6        | 19.0        | 17.0        | 21.8        |
| At-Risk-of-Poverty rate <sup>2</sup> (% of total population)   | 19.5        | 19.7        | 15.8        | 17.5        | 17.5        |
| Severe Material Deprivation <sup>3</sup> (% of total population)   | 4.9         | 6.2         | 9.0         | 8.7         | 9.4         |
| Share of people living in low work intensity households <sup>4</sup> (% of people aged 0-59)   | 5.3         | 5.6         | 9.0         | 10.0        | 9.1         |
| In-work at-risk-of poverty rate (% of persons employed)  | 7.3         | 8.1         | 6.5         | 7.9         | 8.3         |
| Impact of social transfers (excluding pensions) on reducing poverty  | 21.1        | 23.9        | 36.5        | 29.7        | 29.4        |
| Poverty thresholds, expressed in national currency at constant prices <sup>5</sup>   | 3 118       | 3 155       | 2 905       | 2 764       | 2 812       |
| Gross disposable income (households)   | 8 828       | 8 315       | 8 338       | 9 120       | 9 115       |
| Relative median poverty risk gap (60% of median equivalised income, age: total)  | 20.3        | 17.0        | 23.2        | 26.0        | 23.8        |
| <b>Notes:</b>  |             |             |             |             |             |
| <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)  |             |             |             |             |             |
| <b>Sources:</b>  |             |             |             |             |             |
| For expenditure for social protection benefits ESSPROS; for social inclusion EU-SILC.  |             |             |             |             |             |

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

| Performance indicators   | 2004-2008 | 2009  | 2010 | 2011 | 2012 | 2013 |
|--|-----------|-------|------|------|------|------|
| Labour productivity <sup>1</sup> total economy (annual growth in %)  | 4.0       | -3.4  | 4.2  | 1.8  | -1.4 | -1.8 |
| Labour productivity <sup>1</sup> in manufacturing (annual growth in %)   | 11.8      | -7.3  | 15.9 | 5.8  | -0.9 | -1.4 |
| Labour productivity <sup>1</sup> in electricity, gas, water (annual growth in %)   | 8.8       | -10.9 | -7.1 | -7.2 | -9.5 | n.a. |
| Labour productivity <sup>1</sup> in the construction sector (annual growth in %)   | 0.3       | -4.8  | 6.4  | -2.9 | -5.0 | 0.9  |
| Patent intensity in manufacturing <sup>2</sup> (patents of the EPO divided by gross value added of the sector)   | 29.5      | 33.2  | 34.8 | 34.8 | n.a. | n.a. |
| Policy indicators  | 2004-2008 | 2009  | 2010 | 2011 | 2012 | 2013 |
| Enforcing contracts <sup>3</sup> (days)  | 655.0     | 611   | 611  | 611  | 611  | 611  |
| Time to start a business <sup>3</sup> (days)   | 28.2      | 20    | 20   | 20   | 20   | 20   |
| R&D expenditure (% of GDP)   | 1.3       | 1.4   | 1.4  | 1.6  | 1.9  | n.a. |
| Tertiary educational attainment (% of 30-34 years old population)  | 13.5      | 17.5  | 20.4 | 23.7 | 25.6 | 26.7 |
| Total public expenditure on education (% of GDP)   | 4.1       | 4.4   | 4.3  | 4.5  | n.a. | n.a. |
|  | 2008      | 2009  | 2010 | 2011 | 2012 | 2013 |
| Product market regulation <sup>4</sup> , Overall (Index; 0=not regulated; 6=most regulated)  | 1.5       | n.a   | n.a  | n.a  | n.a  | 1.4  |
| Product market regulation <sup>4</sup> , Retail (Index; 0=not regulated; 6=most regulated)   | 1.2       | n.a   | n.a  | n.a  | n.a  | 1.6  |
| 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  | 2.0  |
| <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> Patent data refer to applications to the European Patent Office (EPO). They are counted according to the year in which they were filed at the EPO. They are broken down according to the inventor's place of residence, using fractional counting if multiple inventors or IPC classes are provided to avoid double counting. |           |       |      |      |      |      |
| <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> .  |           |       |      |      |      |      |
| <sup>5</sup> Aggregate ETCR.   |           |       |      |      |      |      |
| <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**

|   |          | 2003-2007 | 2008  | 2009  | 2010  | 2011  | 2012  |
|---|----------|-----------|-------|-------|-------|-------|-------|
| <b>Green Growth performance</b>   |          |           |       |       |       |       |       |
| <i>Macroeconomic</i>  |          |           |       |       |       |       |       |
| Energy intensity  | kgoe / € | 0.65      | 0.60  | 0.63  | 0.71  | 0.65  | 0.62  |
| Carbon intensity  | kg / €   | 2.19      | 1.99  | 1.92  | 2.30  | 2.20  | n.a.  |
| Resource intensity (reciprocal of resource productivity)  | kg / €   | 3.58      | 3.42  | 3.58  | 3.37  | 3.03  | n.a.  |
| Waste intensity   | kg / €   | n.a.      | 1.98  | n.a.  | 2.18  | n.a.  | n.a.  |
| Energy balance of trade   | % GDP    | -2.8%     | -4.2% | -2.3% | -1.6% | -0.4% | 0%    |
| Energy weight in HICP   | %        | 13        | 12    | 13    | 13    | 14    | 15    |
| Difference between change energy price and inflation  | %        | 3.94      | 14.9  | 3.7   | 3.9   | 1.3   | 7.2   |
| Environmental taxes over labour taxes   | ratio    | 13.5%     | 13.4% | 16.1% | 16.3% | 16.5% | n.a.  |
| Environmental taxes over total taxes  | ratio    | 6.9%      | 7.3%  | 8.4%  | 8.7%  | 8.6%  | n.a.  |
| <i>Sectoral</i>   |          |           |       |       |       |       |       |
| Industry energy intensity   | kgoe / € | 0.33      | 0.32  | 0.29  | 0.26  | n.a.  | n.a.  |
| Share of energy-intensive industries in the economy   | % GDP    | 9.7       | 10.1  | 9.9   | n.a.  | n.a.  | n.a.  |
| Electricity prices for medium-sized industrial users**  | € / kWh  | n.a.      | 0.05  | 0.06  | 0.06  | 0.06  | 0.07  |
| Gas prices for medium-sized industrial users***   | € / kWh  | n.a.      | 0.03  | 0.02  | 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.      | 0.03% | 0.03% | 0.07% | 0.05% | 0.03% |
| Recycling rate of municipal waste   | ratio    | 20.6%     | 20.4% | 21.2% | 18.2% | 26.3% | 44.2% |
| Share of GHG emissions covered by ETS*  | %        | n.a.      | 69.3% | 64.1% | 73.0% | 72.3% | 70.6% |
| Transport energy intensity  | kgoe / € | 0.67      | 0.67  | 0.72  | n.a.  | n.a.  | n.a.  |
| Transport carbon intensity  | kg / €   | 1.93      | 1.91  | 2.07  | n.a.  | n.a.  | n.a.  |
| <b>Security of energy supply</b>  |          |           |       |       |       |       |       |
| Energy import dependency  | %        | 27.1%     | 24.8% | 22.0% | 13.7% | 12.1% | 17.2% |
| Diversification of oil import sources   | HHI      | n.a.      | 0.29  | 0.00  | 0.00  | 0.48  | n.a.  |
| Diversification of energy mix   | HHI      | 0.41      | 0.40  | 0.39  | 0.47  | 0.49  | 0.44  |
| Share renewable energy in energy mix  | %        | 10.2%     | 10.9% | 13.4% | 13.7% | 13.5% | 14.1% |
| <u>Country-specific notes:</u>  |          |           |       |       |       |       |       |
| The year 2012 is not included in the table due to lack of data.   |          |           |       |       |       |       |       |
| <u>General explanation of the table items:</u>  |          |           |       |       |       |       |       |
| Source: Eurostat unless indicated otherwise; ECFIN elaborations indicated below   |          |           |       |       |       |       |       |
| All macro intensity indicators are expressed as a ratio of a physical quantity to GDP (in 2000 prices)  |          |           |       |       |       |       |       |
| Energy intensity: gross inland energy consumption (in kgoe) divided by GDP (in EUR)   |          |           |       |       |       |       |       |
| Carbon intensity: Greenhouse gas emissions (in kg CO2 equivalents) divided by GDP (in EUR)  |          |           |       |       |       |       |       |
| Resource intensity: Domestic Material Consumption (in kg) divided by GDP (in EUR)   |          |           |       |       |       |       |       |
| Waste intensity: waste (in kg) divided by GDP (in EUR)  |          |           |       |       |       |       |       |
| Energy balance of trade: the balance of energy exports and imports, expressed as % of GDP   |          |           |       |       |       |       |       |
| Energy weight in HICP: the share of the "energy" items in the consumption basket used in the construction of the HICP                         |          |           |       |       |       |       |       |
| Difference between energy price change and inflation: energy component of HICP, and total HICP inflation (annual %-change)                    |          |           |       |       |       |       |       |
| Environmental taxes over labour or total taxes: from DG TAXUD's database "Taxation trends in the European Union"                              |          |           |       |       |       |       |       |
| Industry energy intensity: final energy consumption of industry (in kgoe) divided by gross value added of industry (in 2005 EUR)              |          |           |       |       |       |       |       |
| Share of energy-intensive industries in the economy: share of gross value added of the energy-intensive industries in GDP                     |          |           |       |       |       |       |       |
| Electricity and gas prices medium industrial users: consumption band 500 - 2000M Wh and 10000 - 100000 GJ; figures excl. VAT.                 |          |           |       |       |       |       |       |
| Recycling rate of municipal waste: ratio of municipal waste recycled over total municipal waste   |          |           |       |       |       |       |       |
| Public R&D for energy or for the environment: government spending on R&D (GBAORD) for these categories as % of GDP                            |          |           |       |       |       |       |       |
| Share of GHG emissions covered by ETS: based on greenhouse gas emissions as reported by Member States to EEA (excl LULUCF)                    |          |           |       |       |       |       |       |
| Transport energy intensity: final energy consumption of transport activity (kgoe) divided by transp industry gross value added (2005 EUR)     |          |           |       |       |       |       |       |
| Transport carbon intensity: greenhouse gas emissions in transport activity divided by gross value added of the transport sector               |          |           |       |       |       |       |       |
| Energy import dependency: net energy imports divided by gross inland energy consumption incl. energy consumption international bunkers        |          |           |       |       |       |       |       |
| Diversification of oil import sources: Herfindahl index (HHI), calculated as the sum of the squared market shares of countries of origin      |          |           |       |       |       |       |       |
| Diversification of the energy mix: Herfindahl Index over natural gas, total petrol products, nuclear heat, renewable energies and solid fuels |          |           |       |       |       |       |       |
| Share renewable energy in energy mix: %-share in gross inland energy consumption, expressed in tonne oil equivalents                          |          |           |       |       |       |       |       |
| * Commission and EEA.   |          |           |       |       |       |       |       |
| ** For 2007 average of S1 & S2 for DE, HR, LU, NL, FI, SE & UK. Other countries only have S2.   |          |           |       |       |       |       |       |
| *** For 2007 average of S1 & S2 for HR, IT, NL, FI, SE & UK. Other countries only have S2.  |          |           |       |       |       |       |       |

## List of indicators used in Box 3 on the potential impact on growth of structural reforms.

**Final goods sector mark-ups:** Price-cost margin, i.e. the difference between the selling price of a good or service and its cost. Final goods mark-ups are proxied by the mark-ups in selected services sectors (transport and storage, post and telecommunications, electricity, gas and water supply, hotels and restaurants and financial intermediation but excluding real estate and renting of machinery and equipment and other business activities<sup>57</sup>).

Source: Commission services estimation using the methodology of Roeger, W. (1995). "Can imperfect Competition explain the Difference between primal and dual Productivity?" *Journal of Political Economy* Vol. 103(2) pp. 316-30, based on EUKLEMS 1996-2007 data.

**Entry costs:** Cost of starting a business in the intermediate sector as a share of income per capita. The intermediate sector is proxied by the manufacturing sector in the model.

Source: World Bank, Doing Business Database. [www.doingbusiness.org](http://www.doingbusiness.org). 2012 data.

**Implicit consumption tax rate:** Defined as total taxes on consumption over the value of private consumption. In the simulations it is used as a proxy for shifting taxation away from labour to indirect taxes. The implicit consumption tax-rates are increased (halving the gap vis-à-vis the best performers) while labour tax-rates are reduced so that the combined impact is ex-ante budgetary neutral.

Source: European Commission, Taxation trends in the European Union, 2013 edition, Luxembourg, 2013. 2011 data.

**Shares of high-skilled and low-skilled:** The share of high skilled workers is increased, the share of low-skilled workers is reduced (halving the gap vis-à-vis the best performers). Low-skilled correspond to ISCED 0-2 categories; high-skilled correspond to scientists (in mathematics and computing, engineering, manufacturing and construction). The remainder is medium-skilled.

Source: EUROSTAT. 2012 data or latest available.

**Female non-participation rate:** Share of women of working age not in paid work and not looking for paid work in total female working-age population

Source: EUROSTAT. 2012 data or latest available.

**Low-skilled male non-participation rates:** Share of low-skilled men of working age not in paid work and not looking for paid work in total male working-age population

Source: EUROSTAT. 2012 data or latest available.

**Elderly non-participation rates (55-64 years):** Share of the population aged 55-64 years not in paid work and not looking for paid work in total population aged 55-64 years.

Source: EUROSTAT. 2012 data or latest available.

**ALMP:** Active Labour Market Policy expenditures as a share of GDP over the share of unemployed in the population.

Source: EUROSTAT. 2011 data or latest available.

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<sup>57</sup> The real estate sector is excluded because of statistical difficulties of estimating a mark-up in this sector. The sector renting of machinery and equipment and other business activities is conceptually part of intermediate goods sector.

**Benefit replacement rate:** Share of a worker's pre-unemployment income that is paid out by the unemployment insurance scheme. Average of net replacement rates over 60 months of unemployment.

Source: OECD, Benefits and Wages Statistics.

[www.oecd.org/els/benefitsandwagesstatistics.htm](http://www.oecd.org/els/benefitsandwagesstatistics.htm). 2012 data.