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**Assessment of the 2012 national reform programme and convergence programme for  
BULGARIA**

*Accompanying the document*

**Recommendation for a**

**COUNCIL RECOMMENDATION**

**on Bulgaria's 2012 national reform programme and delivering a Council opinion on  
Bulgaria's convergence programme for 2012-2015**

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## **EXECUTIVE SUMMARY**

Real GDP growth in Bulgaria is expected to remain rather low in the first half of 2012, but to accelerate gradually thereafter to reach an annual growth of 0.5% in 2012 and 1.9% in 2013. Unemployment is expected to increase in 2012 to 12.0% of the labour force.

Bulgaria managed to reduce the fiscal deficit as required under the Excessive Deficit Procedure and it is implementing a major reform that aims at raising the statutory retirement age for men and women.

Despite the progress the government has made in implementing its reform agenda, the main policy challenges for the country have remained broadly unchanged. A persistent increase in unemployment calls for a stronger re-orientation of active labour market policy to improve employability. The low educational achievements signal the existence of considerable structural obstacles to ensuring quality education. The sustainability and adequacy of the pensions system is not fully ensured yet. The quality of public spending, the efficiency of the tax system and the business climate are suboptimal. Bulgaria is largely dependent on imported energy and its domestic energy market is not fully operational.

## 1. INTRODUCTION

In June 2011, the Commission proposed seven country specific recommendations<sup>1</sup> (CSRs) for economic and structural reform policies for Bulgaria. In July 2011 the Council of the European Union adopted these recommendations, which concerned public finances, the pension system, education, the labour market, administrative capacity including in the procurement area, energy and deregulation.

In November 2011, the Commission published its Annual Growth Survey for 2012<sup>2</sup> (AGS 2012) in which it set out its proposals for building the necessary common understanding of the priorities for action at national and EU level in 2012. It focused on five priorities — growth-friendly fiscal consolidation, restoring normal lending to the economy, promoting growth and competitiveness, tackling unemployment and the social consequences of the crisis, and modernising public administration. Member States were encouraged to address these priorities in the context of the 2012 European Semester.

Against this background, Bulgaria presented updates of its national reform programme and convergence programme in April 2012. These programmes give details of the progress made since July 2011 and plans going forward. This Staff Working Document assesses the state of implementation of the 2011 recommendations as well as the AGS 2012 in Bulgaria, identifies current policy challenges and, in this light, examines the country's latest policy plans.

### *Overall assessment*

Overall, Bulgaria has partially implemented the 2011 Council recommendations. On the positive side, economic growth accelerated in 2011 and the government managed to reduce the fiscal deficit as required under the Excessive Deficit Procedure (EDP). As regards the pension system, the government is implementing a major reform that aims at raising the statutory retirement age for men and women. Notwithstanding this important development, reform efforts were limited, in particular regarding the labour market, education and energy sectors. Consequently, most of the challenges identified in July 2011 and reiterated in the AGS 2012 remain.

Bulgaria's most pressing challenges are in the labour market, education, innovation, the business environment, energy and resource efficiency. Lower potential growth poses a number of challenges for the labour market and highlights the importance of increasing investment and efficiency through structural reforms. Growth would be helped by reducing administrative burdens and by creating a more favourable business climate (including for foreign investors and service providers). Reducing poverty and social exclusion, especially for the most vulnerable groups facing multiple barriers, remains a big challenge. The policy plans submitted by Bulgaria are relevant. Bulgaria confirms its existing strategies and plans, with the focus on fiscal consolidation, increasing investment and absorption of EU funds across sectors, improving business environment and public administration. However, reforms in some areas, in particular the labour market, education and the energy sector, lack the ambition needed to address the challenges in a comprehensive way.

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<sup>1</sup> SEC(2011) 806 final of 7 June 2011

<sup>2</sup> COM(2011) 815 final of 23 November 2011

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

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

The revival of the Bulgarian economy was muted in 2010-11, with real GDP in the fourth quarter of 2011 still being about 3% below its peak value recorded in 2008. Annual GDP growth reached 1.7% in 2011, slowing down as the year went on. As in other EU Member States that are catching up, the growth pattern in the initial recovery was largely driven by strong exports of both goods and services, while domestic demand remained stagnant, reflecting a rapid adjustment and an unwinding of imbalances in the private sector.

The recovery is being undermined by structural weaknesses in the labour market and the continued deleveraging of the corporate sector. Additionally, given the regional economic uncertainties, capital inflows and FDI have stabilised at lower levels and have not significantly boosted growth, unlike in the past decade. Real GDP growth is expected to remain rather low in the first half of 2012, but to accelerate gradually thereafter in line with economic activity picking up in the EU as a whole. Annual growth is expected to reach 0.5% in 2012 and 1.9% in 2013.

Exports are set to contribute only moderately to growth in the first half of 2012, given the overall weak external economic environment. Leading export indicators (monthly industrial production and industry confidence readings) also point to lower export growth in the short term. In line with the expected recovery in the EU, prospects for the exporting sectors would also improve from the second half of 2012. The deceleration in exports is not expected to significantly widen the trade balance until 2013, as both private consumption and investment are still weak and depress imports.

Given the ongoing deleveraging of corporate balance sheets, adjustments in the real-estate market and the weak economic environment, investment is expected to contract further in 2012 before stabilising in 2013. The recovery in employment is countered by skill mismatches and, over the longer term, a continuous decline in the working-age population. This has negative implications for the growth potential of the economy in the longer term. HICP inflation slowed considerably over the course of 2011 and amounted to 3.4% in 2011 on average. Inflation is expected to fall slightly, to 2.6% on average in 2012, supporting growth in consumers' real purchasing power.

### **2.2. Challenges**

Although economic growth resumed in Bulgaria in 2011, structural bottlenecks in several areas continue to hamper the prospects for long-term sustainable growth. Despite the progress the government has made in implementing its reform agenda, the main policy challenges for the country have remained broadly unchanged.

While the correction of the excessive deficit in 2011 is likely to help restore confidence and strengthen the credibility of government policies, the current fiscal consolidation faces major risks. First, budget revenues are likely to be structurally lower than in the pre-crisis boom years. Second, inefficiencies in public spending and risks to the long-term sustainability of public finances, *inter alia* in the fields of pensions and healthcare, pose challenges to fiscal stability and predictability. Healthcare reforms in particular have largely stalled, leading to repeated hospital arrears. Addressing the inadequacy of pension provision remains a key challenge in the medium term.

The crisis has had a particularly strong incidence on low-skilled workers (who account for almost 70% of the unemployed) and has raised youth unemployment. Bulgaria has the highest share of young people who are neither in education nor in employment:

21.8 % in 2010, as against the EU average of 12.8 %. Almost 5 % of the active population is long-term unemployed. Since 2009, the increase in long-term unemployment has been significantly faster than in the rest of EU. Public employment services on activation, job search, matching and retraining are still of relatively low quality and staff training should be intensified, in particular "Roma mediators". To enable and encourage people to work longer, reforms in the pension system need to be underpinned by policies ensuring the effective integration of older workers in the labour market. Against this backdrop, various surveys highlight difficulties in matching jobs with the necessary skills, particularly in relation to new technologies. While wage setting mechanisms are overall flexible in Bulgaria, sectoral minimum thresholds for calculating social security contributions might price out low-skilled workers. Job transition is hindered by the lack of, or low take-up of, flexible work organisation arrangements and by regulatory disincentives for job creation and self-employment. Together, these factors maintain the share of undeclared work. Bulgarians are also at greater risk of poverty or social exclusion than citizens of other EU countries (EU SILC 2010). The risk in Bulgaria is 41.6 % — almost twice the EU average (23.4 %). Elderly, children and Roma are the groups most affected. Bulgaria is currently among the Member States where social transfers do the least to reduce poverty: in 2010, 27.1 % of the population was at risk of poverty before receiving transfers, and 20.7 % of the population was at risk of poverty after receiving transfers.

The proportion of students leaving the education system early has stabilised and Bulgaria performs above the EU average as regards secondary educational attainment in 2010. However, the very high rate of low achievers suggests that there are considerable structural obstacles in the way of ensuring quality education. The low educational achievements are linked to education provision that is still poor, lack of incentives for better performance of teachers, curricula in need of modernisation, a poor national assessment system and insufficient accountability. Moreover, university education provides limited research and innovation opportunities even though it aspires to provide higher quality courses that are more relevant to the labour market, with the help of more economically sound financing mechanisms.

The low efficiency and quality of public services is a key bottleneck to growth, while ineffective oversight by the regulatory and supervisory authorities could result in failure to tackle non-competitive behaviour. New legislation introduced in 2011 aims to ensure that the authorities are better able to monitor public procurement processes and address irregularities, but strong doubts remain as to whether the authorities' resources are sufficient to make this legislation effective in practice. There has been limited progress in strengthening the administrative capacity of local authorities in general and of the road, rail, water, health care and R&D sectors in particular. A thorough overhaul of these sectors is needed if they are to function in an efficient way and thus be able to absorb sufficient EU funds and deliver high-quality projects.

Bulgaria is also missing out on the potential for economic growth stemming from innovation activities. There is no multi-annual funding framework for Research and Innovation, the two national funding instruments (the Innovation and the Science Fund) work poorly, while only a small part of the funding is competitive and allocated transparently on merit. Moreover, access to finance for innovative start-ups and SMEs is severely limited, as is the level of collaboration between research centres, universities and innovative businesses.

Competition is also potentially hampered by the lack of legal certainty, notably in the services area and the limited functioning of the Point of Single Contact for service providers.

The business environment and competitiveness suffer as well from the poor state of public transport and the deficient environmental and broadband internet infrastructure, as well as from high energy intensity (the highest in the EU) and low energy efficiency. There is also room for improvement and growth in Bulgaria's waste management and recycling sectors. High dependency on imported energy, poor interconnections with neighbouring countries and an inadequately functioning energy market expose Bulgaria to significant supply shock risks.

**Box 1: Summary of the in-depth review under the macroeconomic imbalances procedure**

The in-depth review has taken a broad view of the Bulgarian economy in order to identify actual or potential imbalances and the possible macroeconomic risks which they may entail. Bulgaria experienced a period of economic boom from 2006-2008. Exceptionally strong capital inflows drove high credit growth and were mirrored in a substantial current account deficit. An overheated labour market led to rapid growth in wages and unit labour costs (ULC). Also private consumption, inflation, real estate prices and construction soared. The necessary adjustment is taking place, but the burden on the labour market is unnecessarily high. Furthermore, more needs to be done to ensure the sustainability of the adjustment once the economy recovers to its growth trend. The main observations are:

- The labour market has been hit hard by the crisis and the reintegration of low-skilled workers has proven difficult. A persistent increase in unemployment, pronounced skills and geographical mismatches and a high concentration of job cuts in the low-skilled segment suggest major inefficiencies of the adjustment process. In the absence of reforms, a large part of the current unemployment could become structural in nature.
- Despite a pronounced deceleration, unit labour cost (ULC) growth remains one of the fastest in the EU. However, the loss in external competitiveness might be less severe than implied by aggregate ULCs. Nevertheless, in the absence of reforms, wage and ULC growth may become excessive again when the economy picks up and the labour market tightens.
- The current account adjustment is largely structural and is driven by sizable export market share gains, but major vulnerabilities remain. A return to the excessive current account deficits when economic conditions and capital flows normalise seems unlikely. However, the saving-investment gap could open up again if the increase in the aggregate saving rate turns out to be partly cyclical. The current account is also strongly influenced by foreign investment in real estate, which has been volatile.
- Deleveraging of the corporate sector is ongoing, but the still high level of indebtedness will lengthen the adjustment process and keep the corporate sector vulnerable to changes in market sentiment. Moreover, the deleveraging process combined with global financial market stress will continue to dampen investment, and productivity growth. Labour market and wage setting institutions should therefore provide the necessary flexibility to keep wage growth in line with productivity growth.

Apparent inefficiencies of the labour market call for policy action. The main challenges relate to skills mismatches in some sectors and regions. To achieve lasting improvement in this area, a comprehensive package of active labour market, education and regional policy measures is needed. Moreover sectoral and occupational minimum thresholds for social security contributions need to be reviewed. Some of these thresholds are set very close to the average wages prevalent in the sectors and occupations concerned, imposing a higher effective social tax rate for those employees whose actual wage is below the taxable minimum. Consequently, this system, which was designed to combat undeclared work, might in effect price out workers in some low-skilled segments and regions of the labour market. Also, emphasis on boosting total factor productivity remains crucial given that the deleveraging of the corporate sector will likely dampen investment. Macroeconomic policies and banking regulation in Bulgaria should focus on reducing the risks of repeating boom-cycles and on strengthening the risk absorption capacity of economic agents.

### 3. ASSESSMENT OF POLICY AGENDA

#### 3.1. Fiscal policy and taxation

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

Bulgaria managed to correct its excessive deficit in 2011, as recommended by the Council under the Excessive Deficit Procedure (EDP). The main goal of the 2012 convergence programme's medium-term budgetary strategy is to achieve a close-to-balanced budget position, both in terms of the structural and headline budget balances, by the end of the programme period. The medium-term objective (MTO), defined in structural terms, has been marginally revised to a deficit of 0.5% of GDP compared with a deficit of 0.6% of GDP in the 2011 convergence programme. The new MTO is slightly higher than the previous one and adequately reflects the requirements of the Stability and Growth Pact. The programme envisages the MTO to be achieved within the programme period.

Strict budgetary discipline led to overachievement of the budgetary target and a further strengthening of the fiscal position in 2011. The budget deficit narrowed from 3.1% of GDP in 2010 to 2.1% in 2011, below the target of 2.5% of GDP set in the previous programme. The better-than-expected outcome was mainly due to lower-than-projected capital spending, freezing compensation of employees and pensions for a second year in a row as well as cuts in other discretionary spending, particularly subsidies. For 2012 the convergence programme projects the deficit to improve to 1.6% of GDP. Compared with the previous year's programme, the target has been revised slightly downwards from 1.5% of GDP, on account of a downward revision in real GDP growth from 4.1% to 1.4% in the current programme. The planned narrowing of the deficit in 2012 will continue to be mainly expenditure driven, as a result of maintaining the policy of freezing the spending limits on wages and the indexation of general pensions. On the revenue side, excise tax rates on some energy goods will be increased to the EU minimum levels and efforts to fight tax evasion and improve revenue collection will be stepped up. The Commission services' spring 2012 forecast also projects the deficit to continue to decline, although at a slower pace, and to reach 1.9% of GDP, 0.3 pp. higher than the programme's target. The small difference is largely explained by the more pessimistic underlying growth scenario and less tax-rich growth structure in the Commission services' forecast.

The convergence programme confirms the authorities' strong commitment to continue with the fiscal consolidation over the medium term. The headline deficit is expected to fall to 1.3% of GDP in 2013 and, thereafter, to be brought to balance by 2015. The envisaged consolidation is somewhat back-loaded with an annual average reduction in the headline deficit by 0.4% of GDP in 2012-13 and by 0.7% of GDP in 2014-15. The adjustment in the primary balance is slightly higher on average for the programme period, whereby the primary deficit turns into a surplus from 2014 onwards. Compared with the previous programme, the headline balance targets for 2012-13 are marginally worse, by 0.2 pp of GDP on average, while the targets for 2014-15 have been kept unchanged. The main reason for the weakening of the short-term targets is the downward revision of the underlying macroeconomic scenario.

When looking at the entire programme period, the programme's revenue and expenditure projections point to a consolidation adjustment which is entirely expenditure-based. The revenue-to-GDP ratio is expected to remain unchanged between 2011 and 2015, whereas the expenditure ratio is projected to drop by slightly over 2% of GDP. The planned expenditure restraint mainly falls in the areas of compensation of employees and social



transfers, while the planned increase in capital spending and subsidies is broadly offset by a decline in intermediate consumption and 'other' expenditure. However, the expected consolidation is supported by measures only for 2012. For 2013, the programme indicates an additional consolidation effort on the expenditure side of the national budget of 1% of GDP (not specified) which, however, will be largely offset by a worsening in the balance of the EU-related funds as a result of a projected increase in their absorption. For the period 2013-15, the budgetary adjustment represents projections under a no-policy change assumption and the programme does not provide details and/or quantification of specific measures to achieve the fiscal targets (see Box 2). The programme confirms the continuation of the policy on freezing the nominal wage bill until 2014 and, thereafter, it envisages indexation of the annual payroll expenditures with the projected nominal GDP growth. There are no one-off or other temporary measures planned in the programme.

Assessed against the deficit projections in the Commission services' spring 2012 forecast, it appears that the deficit outcomes for 2012-13 could be worse than targeted. In particular, revenue could be lower than planned given that economic growth could turn out lower or less tax-rich than foreseen in the programme. Absence of sufficient information about the consolidation measures for the remaining period could also jeopardise the achievement of the respective budgetary targets. Furthermore, the unreformed healthcare sector, which has led to recurrent expenditure overruns in the past, could continue to put pressure on expenditure. Finally, notwithstanding the strong commitment to continue with the policy of freezing the budgetary wage bill, there is a risk of slippages in this area as well as with respect to the adjustment of pensions in view of the upcoming parliamentary elections in 2013. Nevertheless, the authorities have a proven track record of meeting and even over-performing their targets in the past which would partially offset the above risks.

In terms of the structural balance<sup>3</sup>, the programme foresees the (recalculated) structural deficit to improve from 1% of GDP in 2011 to 0.6% of GDP in 2012, to remain unchanged in 2013, and to drop further to 0.3% of GDP in 2015. This implies a cumulative structural fiscal effort of 0.6 pp. over the entire programme period. Thanks to frontloading the budgetary adjustment in 2010 and 2011, which implies a cumulative structural effort of 2.1 pp, Bulgaria is expected to broadly achieve its slightly strengthened MTO already in 2012. The Commission services' spring 2012 forecast projects the structural deficit to be roughly the same in 2012 and 0.2% of GDP higher than the programme target in 2013, under a no-policy-change assumption. According to the information provided in the programme as well as according to the Commission services' forecast, the growth rate of government expenditure, net of discretionary revenue measures, over 2012-2013 would not exceed the relevant reference medium-term rate of potential GDP growth, as defined in Article 5 of Regulation (EC) No 1466/97 (1.15% in 2012 and 2.57% in 2013).<sup>4</sup> Taking the programme targets at face value but also taking into account the risks to the macroeconomic outlook and assuming a same reference rate, the growth rate of government expenditure net of discretionary revenue measures would not exceed the reference rate in 2014. In 2015 it would exceed the reference rate, pointing to a deviation of 0.8% of GDP between the planned

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<sup>3</sup> Cyclically adjusted balance net of one-off and temporary measures, recalculated by the Commission services on the basis of the information provided in the programme, using the commonly agreed methodology.

<sup>4</sup> OJ L 209, 2.8.1997, p. 1.

expenditure and the reference rate.

**Box 2. Main measures**

The box provides an overview of all discretionary measures with a significant budgetary impact as well as macro-structural measures mentioned in the Convergence Programme/National Reform Programme. The main budgetary measures for 2012 include: on the revenue side (i) increasing the tax rates on some energy products and (ii) raising in some sectors the minimum mandatory social security income thresholds; and on the expenditure side (iii) freezing the nominal spending limits on budget sector wages, (iv) freezing the adjustment of general pensions and increasing the retirement age by 4 months, and (v) decreasing the annual limit on commitment payments to suppliers. For 2013-15 the programme does not provide details and/or quantification of specific measures to achieve the fiscal targets. At the same time a set of measures is planned to step up efforts to fight tax evasion and improve revenue collection.

**Main budgetary measures**

Revenue	Expenditure
<b>2012</b>	
<ul style="list-style-type: none"> <li>• Increase of excise tax rates on some energy goods in line with EU harmonization requirements and introduction of excise tax on natural gas from 1 June 2012 (0.1% of GDP)</li> <li>• Increase of the mandatory minimum social security income thresholds by 6.9% for activities/occupations agreed by the social partners and by 4.5% administratively imposed for the rest of the activities/occupations (0.1% of GDP)</li> </ul>	<ul style="list-style-type: none"> <li>• Freezing the nominal spending limits on budget sector wages at their 2010 level</li> <li>• Increasing the minimum pension from 136 leva to 145 leva while freezing the indexation of general pensions (-0.1% of GDP)</li> <li>• Decreasing the annual spending limit on commitment payments to suppliers (0.2% of GDP)</li> <li>• Increasing the retirement age by 4 months (0.1% 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. The degree of detail reflects the type of information made available in the stability or convergence programme and, where available, of a multiannual budget.</p>	

The CP/NRP describe a number of macro-structural reform measures and their medium-term funding in the areas of public administration, health, employment, education, energy, and research and development with the overall objective of raising employment and boosting potential growth. However, the programmes do not provide a quantitative estimation of their annual budgetary impact. The larger part of the reform funding is accounted for by the EU funds.

The government debt-to-GDP ratio has been on a declining path during the period 2006-10, averaging 16.7% of GDP. In 2011, Bulgaria had the second-lowest debt ratio among all EU Member States with debt at 16.3% of GDP, well below the 60% Treaty reference value. The programme projects the government debt to peak at close to 20% of GDP in 2012 and then to gradually fall to around 16.5% of GDP by the end of 2015. The underlying debt dynamics reflect the positive impact of a gradual improvement in the primary balance, increasing nominal GDP growth, and deficit-reducing stock-flow adjustments (except for 2012 when the programme envisages a new debt issuance to pre-fund the repayment of euro-denominated bonds of around 2% of GDP in January 2013).

The projections of the debt-to-GDP ratio in the programme appear plausible taking into account the Commission services' spring 2012 forecast and the latest available information. Since the debt-to-GDP ratio is below the reference rate, the debt reduction benchmark is not applicable.

### ***Long-term sustainability***

With regard to the sustainability of public finances, the long-term change in age-related expenditure is close to the EU average. The initial budgetary position compounds the long-term costs. Under a no-policy change assumption, debt would increase to 20.7% of GDP by 2020. The country has some time to adjust policies that affect age-related spending. The full implementation of the programme would lead to a smaller debt ratio by 2020. Ensuring sufficient primary surpluses over the medium-term, as planned in the programme update, would further improve the sustainability of public finances.

### ***Fiscal framework***

The Bulgarian fiscal framework performed relatively well in the favourable economic environment prior to the crisis. Fiscal targets were consistently met and sizeable fiscal buffers were accumulated. In response to the crisis, the authorities introduced several reforms of budgetary procedures and implementation including a legislative package, amending the Organic Budget Law. Under the Financial Stability Pact, the government has to keep its general government budget deficit below 2% of GDP and the general government expenditure below 40% of GDP. These reforms represent major steps in improving the institutional fiscal framework and are geared towards maintaining fiscal discipline and increasing the predictability of fiscal policy, as addressed by the 2011 recommendations. In addition, the Financial Stability Pact strengthens the binding character of the budgetary framework. The fiscal rules are defined on a nominal basis, which provides greater transparency and facilitates timely monitoring. The budget balance rule provides a clear numerical target that is more stringent than the SGP reference value and would ensure compliance with it.

After taking major steps to improve its institutional fiscal framework through fiscal governance reforms, Bulgaria needs to re-focus on fine-tuning the new framework. It could gear its efforts towards improving the contents of the medium-term budgetary framework and the quality of the reporting system. In this context, the authorities should provide further details on: (i) the calculations underpinning the fiscal consolidation path and the fiscal measures taken; (ii) off-budget items which represent a potentially important contingent liability for the budget, such as losses and arrears of state-owned enterprises; or (iii) projections for the total revenue of the budgets adding up to the general consolidated budget.

### ***Tax system***

The tax system in Bulgaria is characterised by significant tax evasion and relatively low administrative efficiency. Tax compliance needs to be considerably improved, since the shadow economy is estimated to account for as much as one third of GDP — the highest in the EU and more than twice the EU average. Undeclared work in Bulgaria (estimated at 20 to 30% of employment) is also far above the EU average. Administrative costs per collected revenue are high as are the time costs of paying taxes for businesses. To improve efficiency in tax collection and reduce tax evasion, Bulgaria has to encourage voluntary compliance, further develop tax e-services and assign sufficient human and information resources to these tasks. This would in turn enable Bulgaria to increase its growth enhancing expenditures.

Labour taxation remains low and is not the key issue when it comes to reducing the high rate of unemployment and raising employment. The tax wedge on low-income earners equals the one on average wages, due to the flat personal income tax rate with no tax-free allowance. Although Bulgaria could improve the incentives to work, especially for the low skilled, taxation is not the major tool for enhancing labour market performance.

The composition of tax revenue is favourable, as most of the revenues are raised from indirect taxes (accounting for 54.5 % of overall tax revenues in 2011), which have a less distorting effect than direct taxation. However, there is some scope for increasing the taxation or limiting the tax exemptions on immovable property in Bulgaria, as it does not constitute an important source of tax revenue. There might also be some scope for increasing environmental taxation, since both non-fuel transport tax revenue and tax revenue per unit of energy used are low in Bulgaria. In addition, the country could use energy taxation as an instrument for improving energy efficiency.

### **3.2. Financial sector**

Although the financial sector remained relatively stable and profitable during the crisis, credit growth declined sharply to reach single-digit figures from the end of 2009. As a consequence, the credit-to-GDP ratio has stabilised at slightly above 70 % for the last two years. The bank credit deceleration is largely attributable to lack of demand (rather than liquidity issues) resulting from a massive drop in investment. The relatively high private external debt is not seen as a problem, since most of it is equity-related and represents inter-company lending. Bank funding has increasingly become domestic instead of relying on liquidity from parent banks. The ratio of non-performing loans<sup>5</sup> jumped from 2.5 % at the end of 2008 to about 15 % in December 2011. Despite the continued deterioration in the quality of banks' assets, overall the banking system remains profitable. The capital adequacy of banks has actually increased since 2009, with the regulatory ratio for the system as a whole reaching 17.7 % (Tier I capital 15.7 %) at the end of 2011 and the liquidity ratio above 30 %.

Against the background of increased risks to solvency and liquidity, the conservative behaviour of Bulgarian banks helped maintain financial stability. No bank has suffered capital insufficiency, thereby avoiding recourse to public money or state guarantees. Policy action by the authorities focused on ensuring the continuing funding of foreign-owned banks by their parent institutions and on stepping up supervision, while maintaining high regulatory standards. Negative spillovers from the situation in Greece on the economy and the banking system as a whole have so far been contained. None of the four Greek subsidiaries<sup>6</sup> in Bulgaria holds Greek government bonds and there have not been substantial deposit withdrawals. The subsidiaries have started to adjust their balance sheets, as a result of which the aggregate loan-to-deposit ratio declined from about 130 % in 2008 to 108 % at the end of 2011.

Overall, in the context of the currency board arrangement, the authorities should continue with their prudent and pre-emptive regulatory policy, including regular stress-testing to identify early warning indicators, and should react swiftly in case of intensified capital outflows.

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<sup>5</sup> Loans overdue by more than 90 days over total loans in the banking sector.

<sup>6</sup> This also holds true for the one branch of a Greek bank. Greek banks represent around 29 % of the market share in Bulgaria.

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

While the labour market was performing remarkably well before the crisis, many of the jobs created were in relatively low-skilled segments. Employment fell by almost 8% in 2008-10, which is a much larger decline than in the EU on average. Employment dropped by a further 4% in 2011 and growth is likely to be delayed beyond 2012.

The government has acknowledged challenges in these areas, which were identified in last year's CSRs and also highlighted in the AGS 2012. The national reform programme set the employment target for 2020 at above 75%, which is ambitious, and it set additional EU 2020 sub-targets for youth (jobs or training for 27% of young unemployed people by 2015) and older workers (35% of unemployed older workers to receive jobs or training). Given the overall worsened labour market outlook for 2012, the challenges identified as part of the Commission analysis underpinning the 2011 CSR – related to the labour market, education reform, poverty and social inclusion – remain valid. Given the key measures planned for 2011-12, the steps taken to address the 2011 CSRs were overall relevant, but in many instances there have been long delays in implementing key planned reforms (education) or policy measures (public employment services, youth policies) and in adopting legislation on school and higher education.

The implementation of labour market programmes and measures in 2011 has not prevented a further significant reduction in employment. A large part of the increase in unemployment is structural in nature, principally reflecting an increase in skills and geographical mismatches, as most of the jobs lost were low-skilled. Measures taken by the government to freeze the public sector wage bill in 2010-12 have been a relevant and effective response, helping bring wage and labour costs closer to productivity. However, the bargaining process needs to include mechanisms which will ensure a stronger link between wages and labour productivity. The lower band of the wage range seems to be pushed up by hikes in the minimum thresholds for social security contributions, while rises in the nationwide minimum wage have had a limited impact on average wages.

Given the limits to the overall budget, it is increasingly important for the government to prioritise its action, spend efficiently and use additional resources such as the European Social Fund (ESF). In the recent years the implementation of ESF is making steady progress as regards the rate of contracting (74%), but the payments to beneficiaries are still slow, leading to a level of EC interim payments of only 11.69%. Further planned measures, or measures carried over from previous years, are sufficiently linked to overall AGS priorities. They are also sufficiently geared to achieving EU 2020 targets and EPP commitments outside the CSRs. However, the government needs to show a stronger commitment to implementing these measures in full and on time (particularly in view of the noticeable delays that have already built up).

Although the duration of unemployment benefit has been significantly curtailed in recent years, the unemployment trap<sup>7</sup> has widened since 2008 and remained above the average for the EU. This indicates the presence of disincentives to take up work, particularly in low-wage jobs. The coverage and quality of activation measures remain limited. Policy plans to reform and improve the performance of the Employment Agency have been

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<sup>7</sup> The breakdown of the unemployment trap shows that labour taxation (income tax and social contributions) accounts for only 20% of the indicator, while the rest is accounted for by unemployment benefits. The unemployment trap is defined as the difference between gross earnings and the increase in net income when moving from unemployment to employment, expressed as a percentage of the gross earnings. The indicator used here refers to a single person without children earning 67% of the average economy-wide wage.

discussed publicly, but currently there is no strategy for retaining staff (for example, adequate pay) or for providing the necessary infrastructure and equipment and introducing performance standards. In its 2012 National Action Plan on Employment, the government announced measures to train its staff and to facilitate job matching by improving the provision of electronic information on job vacancies. The government also said it would do further work on setting up a skills-needs forecasting task force. However, some of these commitments have already been delayed for several years and were not sufficiently ambitious in view of the worsening labour market situation.

At the current juncture, job creation does not appear to be sufficiently high on the government's agenda. The crisis has significantly reduced access to funding for small businesses (SMEs), and EU-funded financial engineering operations for SMEs are being hampered by red tape and delays. Specific training in entrepreneurial skills is not included in primary or secondary education. Training in business and management and other related subjects is part of tertiary education, but it does not always give students and entrepreneurs the skills they need to succeed in a highly competitive market. Nevertheless, the ESF is currently funding an ongoing scheme to promote self-employment among unemployed persons by training them in business and management skills, and helping them obtain financing. Labour law amendments, transposing Directive 2008/104/EC on Temporary Work Agencies into national law, have been tabled in Parliament but not yet adopted. This limits the possibility to increase the amount of part-time and temporary work in Bulgaria<sup>8</sup>.

On pension reform, the government has considerably advanced some of the measures previously agreed with social partners. From 2012, the statutory retirement age (currently 63 for men and 60 for women) is being gradually increased with a view to reach 65 for men and 63 for women by 2017 and 2020 respectively. The planned reforms are a step in the right direction, but the changes are insufficiently ambitious, as they fall short in reducing early retirement. The requirement for length of service for the police and army personnel was increased by 2 years but their retirement age remains unaffected. Nor are there any plans to equalise the statutory retirement age for men and women with a full career contribution. A key challenge remains the inclusion of persons not paying social contributions within the social security scheme, as well as tightening controls and criteria for allocating invalidity pensions, which in the past have led to a flood of abuses.

A draft national strategy for active ageing is currently being drawn up. In addition to pension reforms that discourage early retirement, active ageing could be supported more vigorously by focusing on extending the working lives of employees rather than setting up schemes that primarily address unemployed older workers. Except for ongoing ESF training programmes, encouraging older workers to stay longer in employment is still not being managed through an integrated approach that combines elements of the reforms in the healthcare system, lifelong learning, labour safety and the pension system.

Despite progress, Bulgaria is still achieving very low scores on all current pension adequacy indicators. The employment rate for older workers, the effective retirement age and the average duration of working life are also below the EU averages. It is therefore essential to create better conditions for ensuring adequate benefits by combatting contribution evasion, limiting access to early exit pathways including invalidity, equalising the pensionable age for men and women and stepping up efforts in work places and labour markets to increase the employment rate for older workers.

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<sup>8</sup> In 2010, a mere 2.4% of jobs were part-time and only 4.5% were temporary.

In view of rising youth unemployment, the government is currently deploying ESF-supported measures to promote youth internships and apprenticeships, and to develop career advice centres at education institutions and employment offices. These measures are relevant and ambitious but there have been considerable delays in implementing them. Nor do they sufficiently differentiate among the needs of people with different levels of education, socio-economic characteristics, etc. A national youth initiative has been launched, following on from the EU Youth on the Move initiative. The government aims to set up an inter-institutional task force to coordinate employment, education and other measures targeting youth, and this is a welcome integrated approach. Secondary legislation is currently being drafted with a view to formally launching the initiative and making it politically feasible. Access to employment for young persons could be facilitated by encouraging employers to provide internship contracts or probationary periods as a stepping stone to taking on young persons on a permanent contract. The government is also taking steps to set up the internship contract as a legal form in its own right in the Labour Code.

Bulgaria has the highest rate of people at risk of severe material deprivation in the EU (35 % in 2010, as against the EU average of 8 %). Bulgaria has set a common national target for reducing the number of people at risk of poverty by 260 000 by 2020. It has also formulated four sub-targets, namely for children, the elderly, unemployed and employed persons. Comprehensive measures are needed to fight poverty and social exclusion. Social transfers have, so far, had little effect and priority should be given to making them more effective. Bulgaria is also developing a national strategy for combating poverty and social exclusion. The strategy has to address, in particular, the high rates of material deprivation of elderly and children, through targeted measures in the areas of access to services and income support.

According to estimates, about 23 % of people entering the labour market are Roma.<sup>9</sup> At the same time, data from the 2011 national population census show that only half of the economically active Roma are employed. The census also confirms that many young Roma are still not receiving appropriate education: they are dropping out of school at an early stage, or not enrolling in school at all. The recently adopted National Strategy for Roma Integration aims to overcome the many barriers to the social inclusion of Roma, by outlining key interventions in the areas of employment, education, health and housing. However, in order to be operational, the strategy needs to be underpinned by a detailed action plan for the period 2015-2020 which includes clear targets, indicative allocation of financial resources (both national and EU Structural Funds), baseline data and monitoring and evaluation tools.

Bulgaria's performance in international education surveys (PISA) is quite poor.<sup>10</sup> Education reform has been losing credibility since its first stage in 2008 and legislative proposals have been continuously blocked in Parliament. A strong new impetus is required. The government is currently discussing a new School Education Act which is due to be adopted by the end of 2012. The measure is intended to underpin a comprehensive education strategy and, if implemented, will help improve the quality of education provision for young people, raising performance levels and further adapting the education and training systems. In the meantime, Bulgaria has already undertaken

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<sup>9</sup> World Bank, Roma Inclusion: An economic opportunity for Bulgaria, the Czech Republic, Romania and Serbia, September 2010.

<sup>10</sup> According to PISA 2009 results, Bulgaria has the highest share of low achievers in reading (41 %) and in mathematics and science (47.1 %) in the EU.

some important steps. These include broadening access to schools (equity), mandatory kindergarten for five-year-olds, extending the full-day school to an annual basis, and doing more to prevent early school leaving. Several ESF-supported measures to modernise Vocational Education and Training (VET) curricula and teaching methods are also ongoing.

In higher education, progress also remains limited. The government plans to enact new measures by further amending the existing Law on Higher education, instead of adopting a new Law, as originally planned. Some promising efforts have been made, including increased access to universities, student loans, links to businesses, more transparency (ranking system), incentives for performance and more powers for institutions to recognise diplomas. While these show that Bulgaria is addressing some of its challenges, the policy response and implementation record of past announcements suggest that implementation will continue to face constraints, both institutional and political. Moreover, if Bulgaria is to match its quantitative targets with the necessary quality of higher education provision, it will need to focus not only on the scale but increasingly also on the scope of higher education. The reform of higher education therefore needs to be implemented as a top priority for growth, and must be accompanied by effective governance, sufficient investment and the necessary political will.

Given the level of ambition and the effectiveness of all the measures taken so far, Bulgaria has only partially addressed the country-specific recommendation relating to the labour market. Consequently, it is more difficult for Bulgaria to reach the Europe 2020 employment target. So far, the government has not adopted an integrated approach to youth policies. Major long-term investment in young people is needed, both in education and labour market services, and young people must be given appropriate help in making the transition from education to employment. With education reform stalled and key legislation failing so far in Parliament, it is more effective if Bulgaria front-loads measures targeting quality, performance levels and equity.

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

The recovery in Bulgaria has been rather slow and it is lagging behind the rebound in most EU emerging economies. However, after a severe slump in 2009 the export sector has revived, with pharmaceuticals, electrical machinery and vehicles sectors taking the lead. To enhance its growth potential, Bulgaria still needs to tackle the challenges identified in the European Semester 2011 and the AGS 2012. The country has to speed up its modernisation, focusing on improving the business environment and infrastructure, strengthening innovation and reducing energy dependency.

Businesses find the regulatory environment unstable and unpredictable, as laws change frequently. Harmonising the national laws with EU legislation is complex and leads to contradictions. Both at local and national level, the regulatory regimes and permission procedures (e.g. in the construction, chemistry and pharmaceuticals sectors) need to be lightened. Steps must be taken to eliminate illegal practices, to simplify and decrease administration fees, to develop more e-government, to ensure a well-functioning Point of Single Contact and to put in place across the board the practice of tacit consent.

Regulated professions such as architects, lawyers and others are subject to regulations on legal forms, shareholding and prices which hamper competition. Competition and growth in the services sector is also hampered by the absence of a clear distinction between rules on setting up a service provider in Bulgaria and rules on the cross-border provision of services by a provider based in another Member State.



Despite steady progress in the last two years, Bulgaria is still not making much use of EU Structural Funds. The administrative procedures are complicated and, at the same time, businesses are not finding the co-financing they need for their projects. For SMEs the procedures are quite cumbersome and could last for more than a year. According to data from the Bulgarian Ministry of Economic Affairs, 15.5 % of the firms selected for a grant within the Operational Programme on Competitiveness, and which had signed a contract with the managing authority, abandoned their contract in the early days as they were unable to secure co-financing, usually via a bank loan. Over the period 2007-2013, around EUR 900 million is being made available to SMEs by the EU Structural Funds, the EIB and the Competitiveness and Innovation Programme. Insufficient absorption of EU funds also leads to missed opportunities to invest in environmental projects.

According to the latest EC-ECB surveys, SMEs encounter difficulties in financing innovative projects due to high interest rates and credit tightening, and start-ups do not find sufficient funding.<sup>11</sup> In 2011, only one in ten SMEs had enough resources to finance its innovation activities.<sup>12</sup> Public financial instruments and guarantees for young and innovative enterprises are not effective enough to help SMEs match EU Structural Funds and secure the required co-financing via bank loans. The relatively low level of financial development shows that there is plenty of scope for growth in this sector, including the growth of capital markets which could become crucial in helping Bulgaria catch up.

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

A major weakness of the Bulgarian economy is the low level of research and innovation (R&I). Both are underfunded, underperforming and in need of a thorough overhaul. Although R&I expenditure in Bulgaria is increasing, investment in this field should be raised dramatically if Bulgaria wants to reach its 2020 target. In 2011 the government adopted the National Strategy for Scientific Research to 2020, which incorporates important elements of innovation policy. Furthermore, the Ministry of Economic Affairs, Energy and Tourism has pledged to introduce a new Law on Innovation in 2012 to create an effective and up-to-date innovation framework in Bulgaria. However, public policy tends to be unpredictable and there is often a lack of consistency between multi-annual strategy documents.

Innovation is increasingly emerging from collaboration between enterprises, research establishments and higher education institutions, and human capital has become a key differentiating factor for innovation.<sup>13</sup> However, Bulgaria has no effective strategy for innovation. R&I administration in Bulgaria is fragmented, and the two national instruments in Bulgaria — the Innovation Fund and the Science Fund — do not work well together. Nor are there any frameworks for supporting collaboration between universities and private sector that are trying to innovate. Public policies should help set up long-term sustainable partnerships between innovators, address human capital strategically and use the wide network of universities and industrial parks for fostering regional innovation. Investment in education and training as a percentage of GDP increased only slightly over the period 2000-10, but it is still below the EU average with few signs pointing to a significant improvement.

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<sup>11</sup> In 2009 and 2010, Bulgaria's share of investment in seed capital and start-ups was significantly lower than the EU average (source ECVA).

<sup>12</sup> A 2011 report from the Bulgarian Small and Medium Enterprises Promotion Agency showed that the extent to which businesses innovate directly correlates to their access to financing.

<sup>13</sup> See OECD Innovation strategy, 2010 and COM(2010) 546: Innovation Union.

When allocating funds to specific fields of research, Bulgaria needs to prioritise more effectively, increase the share of funding that is allocated competitively (now around 10%) and make this allocation transparent. A step in this direction was made with the ongoing establishment of a ranking of universities (launched in 2010). This is already providing the government with a tool for allocating funding according to universities' achievements. Further measures are needed to facilitate the structural change towards more advanced and knowledge-intensive industries and sectors. The government has also signalled its intention to capitalise on the growth in private R&D spending by encouraging further investment in the ICT and pharmaceuticals sectors,<sup>14</sup> which it sees as the main sources of jobs and economic growth. These two main areas align well with the priorities of the National Research Strategy and with the focus of the Ministry of Economic Affairs. The establishment of the first science and technology park in Sofia, co-financed by the ERDF for around EUR 50 million, deserves government support.

### ***Energy, transport, broadband infrastructure and environment***

Despite the reforms it has initiated, Bulgaria still restricts companies from entering network sectors such as rail transport, telecommunications (e.g. internet) and energy. Although the Bulgarian energy sector has in principle been liberalised, in practice there are still problems with the way the market functions, at both wholesale and retail levels. Concentration in gas supply is particularly high: the market share of the largest company bringing gas into the country was 97.1% in 2010. Substantial efforts are required to ensure Bulgaria's full participation in the EU internal market for energy, including the full and correct transposition of the Third Energy Package. Until now, Bulgaria has had a rather poor record in implementing and applying EU energy legislation. There are five ongoing infringement procedures against Bulgaria (four on the internal energy market and one on renewable energy sources). Moreover, Bulgaria should engage proactively in the development of target models for electricity and gas.

Areas of particular concern for improving the functioning of the energy markets include: the lack of electricity and gas exchanges and of a functioning balancing market, the separation of sales for local demand and exports, the export fees and licensing requirements, as well as regulated prices for final consumers. Furthermore, Bulgaria should ensure regulatory independence for the Transmission System Operators, based on the Third Energy Package, and should implement and enforce internal market legislation in the field of consumer protection. A legal framework should be put in place to guarantee the independence of the energy regulator and give it the necessary resources to carry out its tasks as defined in the Third Energy Package. The 2012 NRP announces an amendment to the law on energy and includes concrete measures in these areas, but without further details, questions relating to efficiency and implementation remain open.

High dependency on a single energy route and a single energy supplier as well as an inadequately functioning domestic energy market expose Bulgaria to the risks of significant supply shocks. Bulgaria should therefore cooperate more actively in creating a transparent and integrated regional market for gas and electricity. To further improve security of supply and the flexibility of its gas system, Bulgaria needs to comply with the EU security of supply standard, as defined by the disruption of the single largest gas infrastructure (N-1). For that purpose, Bulgaria needs to complete without further delay

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<sup>14</sup> Private R&I activity essentially takes place in information and communication technology, pharmaceuticals, electronic equipment and machine building.

the ongoing investment projects on gas interconnectors (in particular with Romania, Serbia and Greece) and make physical and contractual reverse-flow possible on the interconnector with Turkey. It is also necessary to prepare cost effective analysis for the upgrade of gas transmission system and for the prospects of high value added services such as flexible gas storage capacities. Bulgaria needs to play a more proactive part in opening up the Southern Gas Corridor, which has the potential to diversify supply sources and routes and to strengthen competition. The Nabucco project could become a priority, given its transparent and pro-competitive structure. Existing measures to tackle energy dependence are inadequate. So far the construction of new gas infrastructure has been slow. The 2012 NRP announces an ambitious target for the interconnector between Romania and Bulgaria (beginning of 2013), but no date is provided for the link with Serbia. Although some desirable reforms have been formally adopted, their implementation remains unsatisfactory because of procurement, the capture of public policies by private interests and the poor management of state-owned energy companies. Investment is being hindered by inappropriate regulation.

To improve its energy efficiency, Bulgaria adopted the 2011 National Energy Efficiency Action Plan (NEEAP). According to this plan, measures in the fields of transport and industry will generate about two thirds of the energy savings. For public buildings and industrial sites, the NEEAP provides for a combination of energy saving obligations, mandatory audits and energy management. One of the key measures will be the imposition of individual energy saving targets on owners of such dwellings. The EU Structural Funds are expected to co-finance national energy efficiency projects. Although these measures are important, the NEEAP is rather unambitious: many of the planned measures are not due to start until after 2012. Low administered prices for electricity reduce incentives to use energy efficiently. To ensure that the planned measures are implemented properly and on time, the government should allocate sufficient human resources to the responsible bodies mentioned in the NEEAP. As regards the energy efficiency of buildings, the authorities have decided to improve the procedures and rules for allocating, controlling and metering the consumption of energy for heating in multi-family residential buildings. This is in response to a relatively high number of complaints from citizens about the rules for allocating the costs of heating these buildings. Although this is a positive move, it remains questionable whether it guarantees clear and understandable billing for individual heat consumption.

Efficient and well-maintained transport infrastructure networks help ensure improved access to the EU single market. They enhance growth and competitiveness and attract foreign investment. Currently, administrative capacity is insufficient to properly manage and maintain the road, rail and water infrastructure. National and trans-European network (TEN) transport infrastructure is still characterised by bad connections and insufficient rehabilitation and maintenance. This is especially serious in the case of the railways, which in the last two decades have seen their performance decline and have lost market share for both freight and passenger transport. The high infrastructure charges and the need to pay access charges exclude freight traffic from using rail. On inland waterways, bottlenecks on the Danube hamper the flow of traffic, especially when the water level is low. This could be addressed by improved maintenance and by upgrading a number of sections. The national and cross-border motorway network also needs to be completed. Intermodality for passenger and freight should also be enhanced by investing in dedicated terminals. Public administrative capacity in key transport sectors and regulatory authorities needs to be strengthened to make public services more effective. Although some first steps have been taken, the necessary changes are not yet in place. The government should make optimal use of EU Funds to co-finance the construction of

transport and waterway projects, and to provide technical assistance to support reforms.

While EU Member States differ in their ability to control State Aid enforcement from an institutional (coordination functions) and performance (quality of notifications, administrative capacity, length of delays etc.) perspective and as regards compliance with State aid rules, Bulgaria is among the better performers with the EU and should remain committed to maintaining and improving its performance.

Despite acknowledging the high energy intensity especially of the transport sector in Bulgaria, the government has not put forward specific measures addressing this problem in the 2012 NRP. In addition, no specific efforts are reported to translate climate and energy policies into sustained economic development, job creation and social inclusion. It has to be noted nonetheless that Bulgaria is planning to adopt a Climate Change Law that should address all sectors with significant emissions and create a link between economic and climate-compatible development, highlighting the cross benefits.

The deployment of broadband in Bulgaria is one of the lowest in the EU at 15.6%.<sup>15</sup> Although broadband speeds in cities (a quarter of lines have 30 Mbps or more) are among the highest in the EU, the rural broadband coverage is the lowest in the EU and there are no plans for publicly-funded projects to address this situation. Although the government has adopted an ambitious national strategy for broadband access (2010-2013), none of the EU funds allocated to broadband had been used by the end of 2010. Bulgaria also needs to incentivise private investment in broadband networks by reducing civil engineering costs, easing infrastructure sharing arrangements, coordinating public works and facilitating the acquisition of rights of way. The release of the 800 MHz band for wireless broadband is planned only after 2017 (instead of end 2012). An earlier release of the 800 MHz band for wireless broadband would help reducing the digital divide, introduce more choice in the provision of broadband and enable innovation in other sectors.

Bulgaria is ranked at the bottom in the EU for waste management. It generates more total waste per capita than any other EU country, and it landfills almost all its municipal waste. There are persistent severe problems with landfilling capacity (e.g. in Sofia), while more resource efficient options for waste treatment are not developed. Bulgaria has not met the deadline to transpose the EU's Waste Framework Directive into national law and has planned the adoption of a new Law on Waste Management in 2012. Its recycling targets are unlikely to be met without significant efforts to increase recycling capacities and considerably reduce landfilling over the next few years. The potential of economic instruments such as disposal taxes, pay-as-you-throw schemes, and producer pays principles can be further explored. Full implementation of the existing EU legislation could create more than 14000 jobs and increase the annual turnover of the waste sector by more than EUR 1.5 billion.<sup>16</sup> Moving towards eliminating landfill and limiting energy recovery to recyclable waste (milestones in the roadmap for a resource-efficient Europe could further increase these benefits.

Taking into account all the measures taken and launched so far, the country-specific recommendations on the business environment and energy have been partially implemented. The share of renewable energy has increased, but the related regulatory framework needs further improvement. Limited progress has been made on innovation

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<sup>15</sup> Take-up is on the increase, but not quickly enough to catch up with the rest of Europe (27.2%).

<sup>16</sup> According to the EC study 'Implementing EU waste legislation for green growth'.

and infrastructure. Although various action plans to improve the business environment are ongoing, companies and citizens do not yet see any improvement in public services.

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

Administrative reform has focused mainly on reducing public sector staff, with limited attempts to remove other sources of inefficiency. The government undertook a systemic review of the functions in the central administration and its de-concentrated bodies. The series of measures removing overlapping functions and streamlining business processes are expected to have a positive effect on government efficiency. Action at local level has so far focused on budget cuts, which together with the lack of effective fiscal decentralisation, make it more difficult for local authorities to carry out their increasing responsibilities. Municipalities have had no serious planning role in the current structural and cohesion funds system and their capacity as beneficiaries remains insufficient. The EU Funds implementation system continues to struggle with unnecessary bureaucracy and poor understanding of sound financial management, which keeps overall absorption still below 20%.

According to the national reform programme, the government implemented 91 measures (70%) from its plan for reducing the administrative burden. Also, a methodology for the cost-based calculation of fees for administrative services has been developed and will come into operation in 2013. According to the government, this methodology is expected to save businesses and citizens between EUR 26 and 102 million. However, for this reform to succeed, the government needs to provide detailed supporting guidelines and extensive staff training, and closely monitor the implementation. In addition, the regulatory impact of this reform on business and, in particular, on SMEs is unclear and unpredictable. The mandatory *ex-ante* impact assessment of regulatory acts will not be implemented until 2014.

Well-functioning one-stop shops could significantly facilitate administrative procedures for businesses. The Bulgarian Point of Single Contact mainly acts as a signpost. It does not give access to electronic services, but provides information on how to complete the necessary administrative procedures. A few of these procedures can be completed online, via the websites of the responsible authorities, but steps should be taken to make the information clearer and online completion easier for foreign users.

The implementation of e-government has been delayed many times, but it has been a key priority for the government since 2011. Several measures from the national e-government strategy are currently implemented, however it is too early to assess their impact. At present, the number of electronic services is limited and they are not sufficiently user-friendly according to citizens and business. The use of electronic procurement is also limited, and it is unavailable at the bid submission phase.

In 2011 all preparatory measures were put in place to launch the system of performance-based remuneration for civil servants. Key to its success will be how well the government implements the framework for assessing staff performance. Training on this topic was organised for management at different levels. It is still too early to assess the effects of this reform and whether the new remuneration system removes the serious gaps in pay among similar types of administration.

In 2011, Bulgaria adopted two important pieces of legislation to help the authorities monitor public procurement practice and thus prevent and sanction irregularities. One new law extends the scope of *ex ante* control by the Public Procurement Agency (PPA) to more procedures, and increases the agency's staffing level. A second law, updating

previous legislation on State Financial Inspection, gives the State Financial Inspection Agency (SFIA) greater responsibility for post-award verification by providing for systematic ex post control based on risk assessment. The changes introduced by the new legislation are a first important step towards better procurement practice. To be fruitful, however, these efforts need to be complemented on two fronts: (i) the sanctions provided for need to be effectively applied if they are to have a tangible dissuasive effect, and (ii) both agencies should be entrusted with *ex officio* powers.

As regards the administration of justice, under the Cooperation and Verification Mechanism<sup>17</sup> the Commission reports every six months on Bulgaria's progress with judicial reform, the fight against corruption and the fight against organised crime.

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<sup>17</sup> C (2006) 6570 final:

[http://ec.europa.eu/enlargement/pdf/bulgaria/bg\\_accompanying\\_measures\\_1206\\_fr.pdf](http://ec.europa.eu/enlargement/pdf/bulgaria/bg_accompanying_measures_1206_fr.pdf)

#### 4. OVERVIEW TABLE

2011 commitments	Summary assessment
Country-specific recommendations (CSRs)	
<p><b>CSR 1:</b> Proceed with effective budget implementation so as to correct the excessive deficit in 2011, in line with the Council Recommendation of 13 July 2010 under the EDP. Specify the measures underpinning the budgetary strategy for 2012-2014. Take advantage of the economic recovery to ensure adequate progress towards the medium-term objective, primarily by keeping tight control over expenditure growth, while prioritising growth-enhancing expenditure.</p>	<p>Bulgaria has implemented the CSR. Bulgaria has managed to correct its excessive deficit in 2011, with the fiscal outcome declining to 2.1% of GDP. The 2011 budget execution shows tight government control over expenditure in capital, compensation of employees and subsidies. The budget law for 2012 sets a budget deficit target of 1.5% of GDP for 2012. According to the Commission services' spring forecast, Bulgaria is expected to further reduce the general budget deficit in 2012 and 2013.</p>
<p><b>CSR 2:</b> Take further steps to improve the predictability of budgetary planning and the implementation control, including on an accruals basis, in particular by strengthening fiscal governance. To this end, design and put in place binding fiscal rules and a well-defined medium-term budgetary framework that ensures transparency at all government levels.</p>	<p>Bulgaria has partially implemented the CSR. A requirement to keep the budget deficit below 2% and limiting government expenditure to 40% of GDP were adopted as an amendment to the Organic Budget Law, thus strengthening the binding nature of the fiscal framework. Going forward, efforts could be geared towards further improving the content of the medium-term budgetary framework, including by strengthening the budgetary process and the quality of reporting.</p>
<p><b>CSR 3:</b> Implement the agreed steps with social partners under the current pension reform, advance some of its key measures that would help to increase the effective retirement age and reduce early exit, such as through the gradual increase of the social insurance length of service, and strengthen policies to help older workers to stay longer in employment.</p>	<p>Bulgaria has partially implemented the CSR. The government has considerably accelerated some of the pension reform measures, including those on the pensionable age for both men and women and on the length of service for army and police employees. A further review of special pension regimes and the current rules for determining invalidity pensions will be needed, to raise the effective retirement age and reduce early retirement.</p>
<p><b>CSR 4:</b> Promote, in consultation with the social partners and in accordance with national practices, policies to ensure that wage growth better reflects developments in productivity and sustain competitiveness while paying attention to on-going convergence.</p>	<p>Bulgaria has partially implemented the CSR. Wage growth slowed down after the crisis in Bulgaria, bringing it broadly into line with productivity growth. Measures undertaken by the government to freeze public sector wage bill in 2010, 2011 and 2012 have been a relevant and adequate response, also contributing to bringing wage and labour costs closer to productivity. However, the main factor behind the increase in productivity is the sharp decline in employment.</p>
<p><b>CSR 5:</b> Take steps to address the challenge of combating poverty and promoting social inclusion, especially for vulnerable groups facing multiple barriers. Take measures for modernising public employment services to enhance their capacity to match skills profiles with labour market demand; and focusing support on young people with low skills. Advance the educational reform by adopting a Law on Pre-School and School Education and a new Higher Education Act by mid-2012.</p>	<p>Bulgaria has partially implemented the CSR. Implementation of labour market programmes and measures in 2011 is positive but insufficient. On public employment services, progress is unconvincing since there have been no major improvements in their institutional capacity. Education reform should focus in particular on quality aspects, by urgently adopting the laws on school and high-school education and by introducing accompanying measures to modernise</p>

<p><b>CSR 6:</b> Step up efforts to enhance administrative capacity in key government functions and regulatory authorities, in order to make public services more effective in responding to the needs of citizens and businesses; introduce and implement effectively measures to check public procurement on the basis of risk assessments, strengthen the capacity of the authorities to prevent and sanction irregularities, in order to improve quality and value-for-money in the use of public funds.</p>	<p>teaching curricula and to improve higher education governance.</p> <p>Bulgaria has partially implemented the CSR. Some progress has been made on a new remuneration system for civil servants and on implementing the Action Plan for optimising the state administration, but it is too early to make an assessment. The Structural and Cohesion Funds implementation system continues to struggle with unnecessary bureaucracy and poor understanding of sound financial management. Bulgaria adopted two important pieces of legislation to help the authorities monitor public procurement practice and prevent and sanction irregularities. However, the adopted legislation is only the first step in ensuring sound and efficient procurement practice.</p>
<p><b>CSR 7:</b> Abolish barriers to entry, guaranteed profits arrangements and price controls and ensure full independence of the Bulgarian Energy Regulator, in order to open up the electricity and gas markets to greater competition. Introduce incentives to upgrade the energy efficiency of buildings.</p>	<p>Bulgaria has partially implemented the CSR. One positive development is that the authorities have decided to improve the procedures and rules for allocating, controlling and metering heat consumption in multi-family residential buildings. However, substantial efforts are required from Bulgaria to ensure its full participation in creating a functioning internal market for energy. Topics of particular concern are the lack of electricity and gas exchanges and of a functioning balancing market, and regulated prices for final consumers.</p>
<p><b>Euro Plus Pact (national commitments and progress)</b></p>	
<p>Commitments to further improve public finance sustainability include recent pension reform measures, tightening the eligibility requirements for receiving early retirement pension, postponing the indexation of pensions until 2013 and adopting a Financial Stability Pact with binding fiscal numerical rules.</p>	<p>The public finance commitments have been partially implemented.</p> <p>A requirement to keep the consolidated budget deficit below 2% and to limit government expenditure to 40% of GDP had already been adopted by amending the Organic Budget Law. As of 1 January 2012, the length of service for workers in the third labour category increased by 4 months every calendar year until it reaches 37 years for women and 40 years for men in 2020. The 2012 budget provides for no indexation of pensions.</p>
<p>Commitments to foster employment focus on reducing the share of undeclared employment, integrating disadvantaged groups in the labour market, activation of unemployed and economically inactive individuals of working age, enhancing the efficiency of the employment services, developing a Plan in pursuance of the National Lifelong Learning Strategy 2012–2013 and preserving the low tax burden.</p>	<p>The commitments have been partly implemented.</p> <p>The government adopted a National Strategy for Roma Integration which plans concrete measures to give Roma people better access to education and employment. A number of programmes are under way, most importantly ESF-funded schemes for bringing unemployed people into the labour market. They include several traineeship and apprenticeship programmes for young persons entering the labour market. A model for mid-term skills forecasting is being developed, complemented by a shorter-term ‘barometer’ model. The new remuneration model has been</p>



Commitments to foster competitiveness in the public sector (introducing performance-based pay); business environment (establishing Single Contact Points in line with the Services Directive; reducing the administrative burden; enhancing e-governance); and education and science sector (providing student scholarships; setting up career development centres; compulsory pre-school education; setting up a ranking system for universities; adopting a Law on Innovation; setting up entrepreneurship centres at high schools; developing a roadmap for research infrastructure).	finalised. The commitments on competitiveness have been partly implemented. The Roadmap for Research Infrastructure has been adopted; it outlines the priority areas and structures. The Point of Single Contact mainly acts as a signpost but allows some procedures to be completed online. Its development should be supported. The implementation of e-governance has experienced significant delays so far.
Measures to reinforce financial stability, aimed at stabilising the financial and, in particular, the banking sector, fully corresponding to the EU requirements and legal framework. Regularly carry out stress tests.	The commitments have been fully implemented. The average capital adequacy ratio has been stable over the last two years and currently stands at a comfortable level. Banks benefit from good liquidity conditions, thanks to a noticeable increase in domestic deposits and to broadly stable foreign liabilities.
<b>Europe 2020 (national targets and progress)</b>	
Employment rate target (in %) as set in the 2011 NRP: 76 %	Employment rate (%) 2010: 65.4 %. No progress has been made towards achieving the target.
R&D target (in %) as set in the 2011 NRP: 1.5 % GDP	Gross domestic expenditure on R&D (in % of GDP) 2010: 0.6 % No progress has been made towards achieving the target.
Greenhouse gas (GHG) emissions target: +20 % (compared to 2005 emissions, ETS emissions are not covered by this national target)	Change in greenhouse gas emissions between 2005 and 2010: -9 % (this data corresponds to the current ETS scope)
Renewable energy target as set in the 2011 NREAP: 16 %	2009: 11.6% <sup>18</sup> ; 2010: 12.6% <sup>19</sup> Progress has been made towards achieving the 2020 target. As of 2009, Bulgaria had already achieved its 2011/2012 interim target.
Energy efficiency: reduction in primary energy consumption by 2020 <sup>20</sup> 3.2 MToe	n.a. The energy efficiency objectives are set according to national circumstances and national formulations. The Commission is not yet able to present an overview, as the methodology for expressing the 2020 energy consumption impact in the same format was agreed only recently.
Early school leaving target (in %): 11 %	Early leavers from education and training (percentage of the population aged 18-24 with at most lower secondary education and not in further education or training) 2010: 13.9%. In 2010 the percentage of early school leavers was slightly below the EU average. Bulgaria has made some progress towards reducing the rate of early school leavers in the period 2007-10.

<sup>18</sup> Eurostat data.

<sup>19</sup> Estimated by the Member State progress report.

<sup>20</sup> As estimated by the European Commission.

Tertiary education target (in %): 36%	Tertiary educational attainment 2010: 27.7%. Tertiary attainment in Bulgaria is still below the EU average. A certain degree of progress has been made towards achieving the target in the period 2007-10.
Target on the reduction of population at risk of poverty in number of persons: Decrease by 260 000	1 632 000 (2008). Some progress has been made towards achieving the target; in 2010 the number of people at risk of poverty was reduced to 1 565 000.

## 5. ANNEX

**Table I. Macroeconomic indicators**

	1995-1999	2000-2004	2005-2008	2009	2010	2011	2012	2013
<b>Core indicators</b>								
GDP growth rate	-0.7	5.4	6.4	-5.5	0.4	1.7	0.5	1.9
Output gap <sup>1</sup>	-1.7	1.6	3.7	-3.4	-4.1	-3.1	-3.3	-2.5
HICP (annual % change)	10.6	6.4	8.2	2.5	3.0	3.4	2.6	2.7
Domestic demand (annual % change) <sup>2</sup>	1.2	7.6	8.9	-12.8	-4.8	-0.6	0.0	2.2
Unemployment rate (% of labour force) <sup>3</sup>	13.3	16.0	7.9	6.8	10.2	11.2	12.0	11.9
Gross fixed capital formation (% of GDP)	13.6	18.3	28.9	28.9	22.8	20.9	20.7	21.3
Gross national saving (% of GDP)	15.4	15.3	13.4	20.4	22.5	24.8	23.5	23.1
<b>General government (% of GDP)</b>								
<b>Net lending (+) or net borrowing (-)</b>	<b>-3.2</b>	<b>0.2</b>	<b>1.4</b>	<b>-4.3</b>	<b>-3.1</b>	<b>-2.1</b>	<b>-1.9</b>	<b>-1.7</b>
<b>Gross debt</b>	<b>87.4</b>	<b>54.4</b>	<b>20.0</b>	<b>14.6</b>	<b>16.3</b>	<b>16.3</b>	<b>17.6</b>	<b>18.5</b>
<b>Net financial assets</b>	<b>n.a</b>	<b>7.1</b>	<b>7.6</b>	<b>5.8</b>	<b>2.7</b>	<b>n.a</b>	<b>n.a</b>	<b>n.a</b>
Total revenue	37.2	40.0	38.9	36.3	34.3	33.1	33.3	33.6
Total expenditure	40.3	39.8	37.4	40.7	37.4	35.2	35.2	35.3
<i>of which: Interest</i>	9.7	3.0	1.2	0.8	0.6	0.6	0.8	1.0
<b>Corporations (% of GDP)</b>								
<b>Net lending (+) or net borrowing (-)</b>	<b>2.8</b>	<b>3.7</b>	<b>-7.5</b>	<b>1.6</b>	<b>7.8</b>	<b>n.a</b>	<b>n.a</b>	<b>n.a</b>
<b>Net financial assets, non-financial corporations</b>	<b>n.a</b>	<b>-69.0</b>	<b>153.4</b>	<b>192.7</b>	<b>192.5</b>	<b>n.a</b>	<b>n.a</b>	<b>n.a</b>
<b>Net financial assets, financial corporations</b>	<b>n.a</b>	<b>0.1</b>	<b>-23.5</b>	<b>11.3</b>	<b>14.8</b>	<b>n.a</b>	<b>n.a</b>	<b>n.a</b>
Gross capital formation	9.7	9.7	26.9	21.2	17.1	n.a	n.a	n.a
Gross operating surplus	23.3	18.0	30.3	30.5	32.2	n.a	n.a	n.a
<b>Households and NPISH (% of GDP)</b>								
<b>Net lending (+) or net borrowing (-)</b>	<b>-4.4</b>	<b>-7.3</b>	<b>-12.9</b>	<b>-5.3</b>	<b>-5.4</b>	<b>n.a</b>	<b>n.a</b>	<b>n.a</b>
<b>Net financial assets</b>	<b>n.a</b>	<b>49.6</b>	<b>62.4</b>	<b>60.9</b>	<b>65.8</b>	<b>n.a</b>	<b>n.a</b>	<b>n.a</b>
Gross wages and salaries	27.2	16.1	31.2	32.8	31.6	n.a	n.a	n.a
Net property income	6.5	0.2	0.4	0.0	0.1	n.a	n.a	n.a
Current transfers received	11.8	9.5	13.1	15.2	15.3	n.a	n.a	n.a
Gross saving	-2.4	-6.8	-11.2	-1.8	-2.2	n.a	n.a	n.a
<b>Rest of the world (% of GDP)</b>								
<b>Net lending (+) or net borrowing (-)</b>	<b>-0.7</b>	<b>-4.8</b>	<b>-19.3</b>	<b>-7.6</b>	<b>0.3</b>	<b>2.9</b>	<b>1.9</b>	<b>1.2</b>
<b>Net financial assets</b>	<b>n.a</b>	<b>14.7</b>	<b>109.2</b>	<b>119.4</b>	<b>115.0</b>	<b>n.a</b>	<b>n.a</b>	<b>n.a</b>
Net exports of goods and services	0.8	-8.9	-18.2	-8.8	-1.9	0.7	1.1	0.4
Net primary income from the rest of the world	-2.8	0.6	-3.6	-2.2	-2.0	-2.6	-5.0	-5.3
Net capital transactions	0.0	0.2	0.1	1.4	0.7	1.2	1.3	1.4
Tradable sector	56.4	51.6	47.5	45.3	46.4	47.9	n.a	n.a
Non-tradable sector	34.8	35.6	36.5	40.6	39.7	38.2	n.a	n.a
<i>of which: Building and construction sector</i>	4.4	4.4	6.4	7.9	6.2	5.6	n.a	n.a
Real effective exchange rate (index, 2000=100)	86.8	108.4	126.0	153.7	158.1	162.4	163.6	166.5
Terms of trade in goods and services (index, 2000=100)	90.9	100.4	104.9	107.3	109.9	110.4	110.3	109.6
Market performance of exports (index, 2000=100)	128.0	113.6	123.0	137.4	143.3	155.7	159.5	161.5
<b>Notes:</b>								
<sup>1</sup> The output gap constitutes the gap between actual and potential gross domestic product at 2000 market prices.								
<sup>2</sup> The indicator for 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.

Source:

*Commission spring 2012 forecast*

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

	2011		2012		2013		2014	2015
	CO M	CP	CO M	CP	CO M	CP	CP	CP
Real GDP (% change)	1.7	1.7	0.5	1.4	1.9	2.5	3.5	4.0
Private consumption (% change)	-0.6	-0.6	0.6	0.6	1.9	2.3	3.9	4.6
Gross fixed capital formation (% change)	-9.7	-9.7	-2.2	7.1	3.6	5.9	7.3	8.2
Exports of goods and services (% change)	12.8	12.8	3.3	3.7	5.2	4.2	4.4	4.4
Imports of goods and services (% change)	8.5	8.5	2.7	3.6	5.6	5.0	5.8	6.0
<i>Contributions to real GDP growth:</i>								
- Final domestic demand	-2.5	-2.5	0.0	2.0	2.1	2.9	4.4	5.2
- Change in inventories	1.8	1.8	0.0	-0.7	0.0	0.0	0.1	0.1
- Net exports	2.3	2.3	0.5	0.1	-0.2	-0.5	-1.0	-1.2
Output gap <sup>1</sup>	-3.1	-3.2	-3.3	-3.0	-2.5	-2.1	-0.7	1.0
Employment (% change)	-4.2	-4.2	-1.9	-0.2	-0.2	0.8	1.1	1.2
Unemployment rate (%)	11.2	11.2	12.0	11.3	11.9	10.9	10.4	9.8
Labour productivity (% change)	6.1	6.1	2.4	1.6	2.1	1.7	2.4	2.8
HICP inflation (%)	3.4	3.4	2.6	2.1	2.7	2.4	2.5	2.5
GDP deflator (% change)	5.0	5.0	3.3	2.9	2.9	2.9	2.8	2.7
Comp. of employees (per head, % change)	7.3	7.3	5.2	3.3	5.1	5.2	6.4	7.5
Net lending/borrowing vis-à-vis the rest of the world (% of GDP)	2.9	3.2	1.9	2.6	1.2	1.3	0.4	-0.1
<u>Note:</u>								
<sup>1</sup> In per cent of potential GDP, with potential GDP growth according to the programme as recalculated by the Commission.								
<u>Source:</u>								
Commission spring 2012 forecasts (COM); Convergence programme (CP).								

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

(% of GDP)	2011	2012		2013		2014	2015	Change: 2011- 2015
	COM	COM	CP	COM	CP	CP	CP	CP
<b>Revenue</b>	<b>33.1</b>	<b>33.3</b>	<b>36.3</b>	<b>33.6</b>	<b>35.7</b>	<b>34.0</b>	<b>33.1</b>	<b>0.0</b>
<i>of which:</i>								
- Taxes on production and imports	14.6	14.6	15.0	14.7	15.1	15.1	15.1	0.5
- Current taxes on income, wealth, etc.	4.8	4.9	5.0	4.9	5.1	5.1	5.1	0.3
- Social contributions	7.3	7.3	7.1	7.3	7.0	6.8	6.7	-0.6
- Other (residual)	6.4	6.6	9.2	6.7	8.5	7.0	6.2	-0.2
<b>Expenditure</b>	<b>35.2</b>	<b>35.2</b>	<b>37.9</b>	<b>35.3</b>	<b>37.0</b>	<b>34.5</b>	<b>33.1</b>	<b>-2.1</b>
<i>of which:</i>								
- Primary expenditure	34.6	34.4	37.0	34.4	35.9	33.6	32.2	-2.4
<i>of which:</i>								
Compensation of employees	8.9	8.7	8.5	8.6	8.1	7.7	7.6	-1.3
Intermediate consumption	5.8	5.8	5.9	5.8	5.6	5.3	4.7	-1.1
Social payments	13.7	13.5	13.7	13.3	13.3	12.8	12.3	-1.4
Subsidies	0.9	1.0	1.1	1.0	1.4	1.3	1.4	0.5
Gross fixed capital formation	3.2	3.3	5.9	3.6	5.6	4.6	4.3	1.1
Other (residual)	2.1	2.1	2.0	2.1	1.9	1.8	1.8	-0.3
- Interest expenditure	0.6	0.8	0.9	1.0	1.1	0.9	0.9	0.3
<b>General government balance (GGB)</b>	<b>-2.1</b>	<b>-1.9</b>	<b>-1.6</b>	<b>-1.7</b>	<b>-1.3</b>	<b>-0.5</b>	<b>0.0</b>	<b>2.1</b>
<b>Primary balance</b>	<b>-1.5</b>	<b>-1.1</b>	<b>-0.7</b>	<b>-0.7</b>	<b>-0.2</b>	<b>0.3</b>	<b>0.9</b>	<b>2.4</b>
One-off and other temporary measures	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>GGB excl. one-offs</b>	<b>-2.1</b>	<b>-1.9</b>	<b>-1.6</b>	<b>-1.7</b>	<b>-1.3</b>	<b>-0.5</b>	<b>0.0</b>	<b>2.1</b>
Output gap <sup>2</sup>	-3.1	-3.3	-3.0	-2.5	-2.1	-0.7	1.0	4.0
Cyclically adjusted balance <sup>2</sup>	-1.0	-0.7	-0.6	-0.8	-0.6	-0.2	-0.3	0.7
<b>Structural balance<sup>3</sup></b>	<b>-1.0</b>	<b>-0.7</b>	<b>-0.6</b>	<b>-0.8</b>	<b>-0.6</b>	<b>-0.2</b>	<b>-0.3</b>	<b>0.6</b>
<i>Change in structural balance</i>		<i>0.3</i>	<i>0.4</i>	<i>-0.1</i>	<i>0.0</i>	<i>0.3</i>	<i>-0.1</i>	
<b>Structural primary balance<sup>3</sup></b>	<b>-0.3</b>	<b>0.1</b>	<b>0.3</b>	<b>0.2</b>	<b>0.5</b>	<b>0.7</b>	<b>0.6</b>	<b>0.9</b>
<i>Change in structural primary balance</i>		<i>0.5</i>	<i>0.6</i>	<i>0.0</i>	<i>0.2</i>	<i>0.1</i>	<i>-0.1</i>	
<b>Expenditure benchmark</b>								
Public expenditure growth <sup>4</sup> (real)		-1.74	-10.98	0.18	-2.03	-0.38	5.21	-
Reference rate <sup>5,6</sup>		2.57	2.57	2.57	2.57	2.57	2.57	-
Lower reference rate <sup>5,7</sup>		1.15	1.15	1.15	1.15	1.15	1.15	-
Deviation in % of GDP from applicable reference rate		-1.02	-4.45	-0.33	-1.46	-0.89	0.76	-
Two-year average deviation in % of GDP from applicable reference rate		n.a.	n.a.	-0.68	-2.96	-1.18	-0.06	-
<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 the Commission on the basis of the information in the programme.								
<sup>3</sup> Structural (primary) balance = cyclically adjusted (primary) balance excluding one-off and other temporary measures.								
<sup>4</sup> Modified expenditure aggregate used for the expenditure benchmark, growth rates net of non-discretionary changes in unemployment benefit and of discretionary measures.								
<sup>5</sup> The reference rates applicable to 2014 onwards will be available from mid-2012. For illustrative purposes, the current reference rates have also been applied to the years 2014 onwards.								
<sup>6</sup> The (standard) reference rate applies starting in the year following the one in which the country reaches its MTO.								
<sup>7</sup> The lower reference rate applies as long as the country is adjusting towards its MTO, including the year in which it reaches the MTO.								
<i>Source: Convergence programme (CP); Commission spring 2012 forecasts (COM); Commission calculations.</i>								

**Table IV. Debt dynamics**

(% of GDP)	average 2006-10	2011	2012		2013		2014	2015
			COM	CP	COM	CP	CP	CP
<b>Gross debt ratio</b> <sup>1</sup>	16.7	16.3	17.6	19.8	18.5	18.4	18	16.4
Change in the ratio	-2.2	0.1	1.3	3.4	0.9	-1.4	-0.4	-1.6
<i>Contributions</i> <sup>2</sup> :								
<b>1. Primary balance</b>	<b>-0.4</b>	<b>1.5</b>	<b>1.1</b>	<b>0.7</b>	<b>0.7</b>	<b>0.2</b>	<b>-0.3</b>	<b>-0.9</b>
<b>2. "Snow-ball" effect</b>	<b>-0.8</b>	<b>-0.4</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.1</b>	<b>-0.3</b>	<b>-0.2</b>
<i>Of which:</i>								
Interest expenditure	1	0.6	0.8	0.9	1	1.1	0.8	0.9
Growth effect	-0.6	-0.3	-0.1	-0.2	-0.3	-0.5	-0.6	-0.7
Inflation effect	-1.1	-0.8	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
<b>3. Stock-flow adjustment</b>	<b>-1</b>	<b>-1</b>	<b>0</b>	<b>2.5</b>	<b>0</b>	<b>-1.7</b>	<b>0.2</b>	<b>-0.5</b>
<i>Of which:</i>								
Cash/accruals diff.				0		0	0	0
Acc. financial assets				3		-2.5	-1.9	-3.5
<i>Privatisation</i>				0.2		0.2	0.2	0
Val. effect & residual				0.1		0.1	0.1	0.1
(% of GDP)		2011	2012		2013		2014	2015
			COM/SP <sup>3</sup>	SP <sup>4</sup>	COM/SP <sup>3</sup>	SP <sup>4</sup>	SP <sup>4</sup>	SP <sup>4</sup>
<b>Gap to the debt benchmark</b> <sup>5,6</sup>	-							
<b>Structural adjustment</b> <sup>7</sup>								
<i>To be compared to:</i>	-							
Required adjustment <sup>8</sup>	-							
<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								
<sup>3</sup> Assessment of the consolidation path set in the SP assuming growth follows the COM forecasts.								
<sup>4</sup> Assessment of the consolidation path set in the SP assuming growth follows the SP projections.								
<sup>5</sup> Not relevant during EDP that were ongoing in November 2011 and in the three years following the correction of the excessive deficit.								
<sup>6</sup> Shows the difference between the debt-to-GDP ratio and the debt benchmark. If positive, projected gross debt-to-GDP ratio does not comply with the debt reduction benchmark.								
<sup>7</sup> Applicable only during the transition period of three years from the correction of the excessive deficit for EDP that were ongoing in November 2011.								
<sup>8</sup> Defines the remaining annual structural adjustment over the transition period which ensures that - if followed - Member State will comply with the debt reduction benchmark at the end of the transition period, assuming that COM (SP) budgetary projections are achieved.								
<i>Source:</i>								
Stability programme (SP); Commission services' spring 2012 forecasts (COM); Commission services' calculations.								

**Table V. Long-term sustainability indicators**

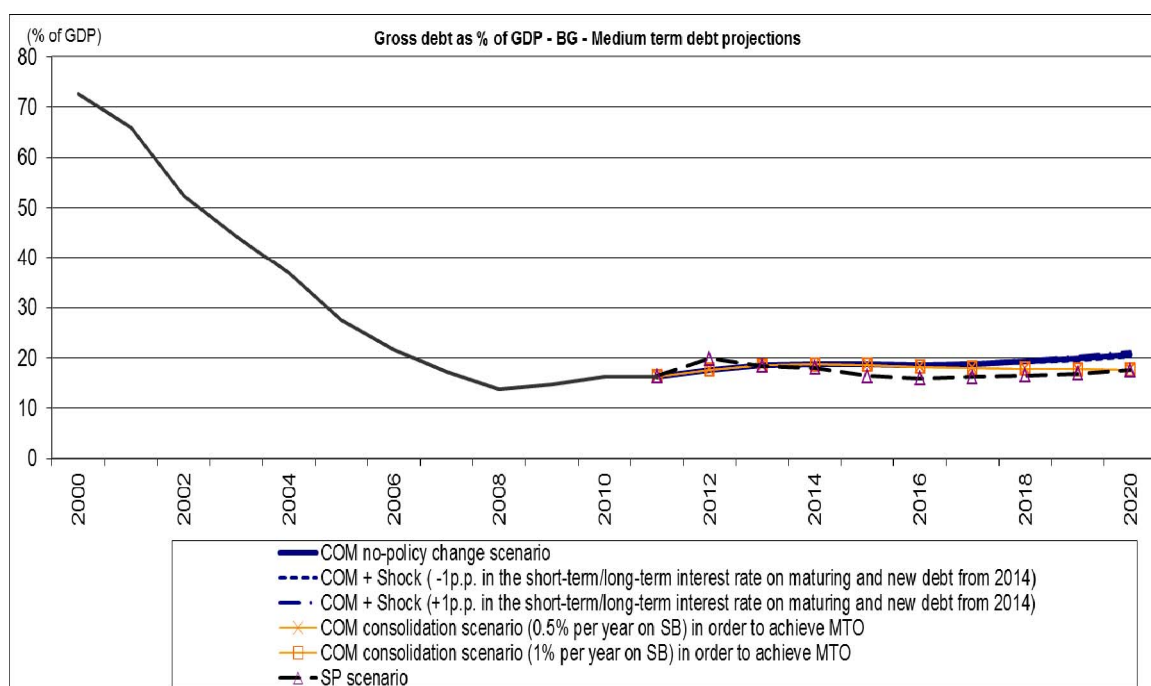
	BG		EU27	
	No-policy change scenario	Convergence programme scenario	No-policy change scenario	SCPs scenario
S2	2.6	2.3	2.9	0.7
<i>of which:</i>				
Initial budgetary position (IBP)	0.4	-0.1	0.7	-1.6
Long-term change in the primary balance (LTC)	2.2	2.5	2.3	2.4
<i>of which:</i>				
pensions	1.4	1.7	1.1	1.2
health care and long-term care	0.6	0.6	1.5	1.5
other	0.2	0.2	-0.3	-0.3
S1 (required adjustment)*	-1.7	-2.3	2.2	-0.1
Debt, % of GDP (2011)	16.3		82.8	
Age-related expenditure, % of GDP (2011)	17.4		25.8	

**Source:** Commission, 2012 stability and convergence programmes.

**Note:** The 'no policy change' scenario depicts the sustainability gap under the assumption that the budgetary position evolves according to the spring 2012 forecast until 2013. The 'convergence programme' scenario depicts the sustainability gap under the assumption that the budgetary plans in the programme are fully implemented.

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

**Figure. Medium-term debt projection**





**Table VI. Taxation**

	2001	2005	2007	2008	2009	2010
<b>Total tax revenues</b> (incl. actual compulsory social contributions, % of GDP)	30.8	31.3	33.3	32.3	29.0	27.4
<b>Breakdown by economic function</b> (% of GDP) <sup>1</sup>						
Consumption	12.8	15.9	16.5	17.2	14.7	14.5
of which:						
- VAT	8.4	10.2	10.4	10.9	9.0	9.2
- excise duties on tobacco and alcohol	1.2	2.0	2.7	2.8	2.8	2.5
- energy	2.4	2.6	3.0	3.0	2.7	2.6
- other (residual)	0.8	1.1	0.4	0.4	0.3	0.2
Labour employed	12.4	11.5	10.3	9.7	9.7	8.9
Labour non-employed	0.0	0.0	0.0	0.1	0.1	0.1
Capital and business income	5.1	3.0	5.6	4.3	3.7	3.1
Stocks of capital/wealth	0.4	0.8	0.9	1.0	0.8	0.8
<i>p.m.</i> Environmental taxes <sup>2</sup>	2.5	3.0	3.4	3.4	3.0	2.9
<b>VAT efficiency</b> <sup>3</sup>						
Actual VAT revenues as % of theoretical revenues at standard rate	52.2	66.1	68.9	75.6	64.1	68.0
<b>Note:</b>						
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 (2012), 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. The VAT revenue ratio is defined as the ratio between the actual VAT revenue collected and the revenue that would theoretically be raised if VAT was applied at the standard rate to all final consumption. A low ratio can indicate a reduction of the tax base due to large exemptions or the application of reduced rates to a wide range of goods and services ('policy gap') or a failure to collect all tax due to e.g. fraud ('collection gap'). See European Commission (2011), Tax reforms in EU Member States, European Economy 5/2011, for a more detailed explanation.						
Source: Commission						

**Table VII. Financial market indicators**

	2007	2008	2009	2010	2011
Total assets of the banking sector (% of GDP)	101.4	103.9	108.8	111.3	108.2
Share of assets of the five largest banks (% of total assets)	56.7	57.3	58.3	55.2	...
Foreign ownership of banking system (% of total assets)	81.6	83.4	83.7	...	...
Financial soundness indicators:					
- non-performing loans (% of total loans) <sup>1)</sup>	2.1	2.5	6.4	11.9	13.5
- capital adequacy ratio (%) <sup>2)</sup>	13.8	14.9	17.0	17.5	17.7
- return on equity (%) <sup>1), 3)</sup>	24.8	23.1	10.2	7.9	7.9
Bank loans to the private sector (year-on-year % change)	63.8	32.1	4.0	1.1	3.4
Lending for house purchase (year-on-year % change)	70.6	37.9	7.5	4.7	0.0
Loan to deposit ratio	105.6	128.1	126.7	117.3	107.9
CB liquidity as % of liabilities	0.0	0.0	0.0	0.0	0.0
Banks' exposure to countries receiving official financial assistance (% of GDP) <sup>4)</sup>	...	...	...	...	...
Private debt (% of GDP)	...	72.6	76.2	74.6	...
Gross external debt (% of GDP) <sup>4)</sup>					
- Public	10.2	7.5	7.8	7.8	6.6
- Private	66.4	76.1	74.3	74.6	67.1
Long term interest rates spread versus Bund (basis points)*	32.3	139.3	399.3	326.2	274.8
Credit default swap spreads for sovereign securities (5-year)*	...	498.6	353.1	259.0	276.0
<b>Notes:</b>					
<sup>1)</sup> 2008-2009 figures include foreign bank branches. Latest June 2011.					
<sup>2)</sup> The capital adequacy ratio is defined as total capital divided by risk weighted assets.					
<sup>3)</sup> Net income to equity ratio. After extraordinary items and taxes. Tier 1 capital. Latest June 2011.					
<sup>4)</sup> Latest data 2011Q3.					
* 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>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>
Employment rate (% of population aged 20-64)	65.1	68.4	70.7	68.8	65.4	63.9
Employment growth (% change from previous year)	4.3	4.6	3.3	-3.2	-6.2	-3.4
Employment rate of women (% of female population aged 20-64)	60.4	63.5	65.4	64.0	61.7	61.2
Employment rate of men (% of male population aged 20-64)	69.9	73.4	76.1	73.8	69.1	66.6
Employment rate of older workers (% of population aged 55-64)	39.6	42.6	46.0	46.1	43.5	43.9
Part-time employment (% of total employment)	1.9	1.7	2.4	2.4	2.4	2.4
Part-time employment of women (% of women employment)	2.4	2.1	2.8	2.7	2.6	2.6
Part-time employment of men (% of men employment)	1.4	1.3	2.0	2.1	2.2	2.2
Fixed term employment (% of employees with a fixed term contract)	6.2	5.2	5.0	4.7	4.5	4.1
Unemployment rate <sup>1</sup> (% of labour force)	9.0	6.9	5.6	6.8	10.2	11.2
Long-term unemployment <sup>2</sup> (% of labour force)	5.0	4.1	2.9	3.0	4.8	6.3
Youth unemployment rate (% of youth labour force aged 15-24)	19.5	15.1	12.7	16.2	23.2	26.6
Youth NEET <sup>3</sup> rate (% of population aged 15-24)	22.2	19.1	17.4	19.5	21.8	:
Early leavers from education and training (% of pop. 18-24 with at most lower sec. educ. and not in further education or training)	17.3	14.9	14.8	14.7	13.9	:
Tertiary educational attainment (% of population 30-34 having successfully completed tertiary education)	24.5	24.9	26.0	26.9	27.1	:
Labour productivity per person employed (annual % change)	3.1	3.2	3.5	-2.9	5.3	6.1
Hours worked per person employed (annual % change)	-0.3	0.0	0.1	-0.1	-0.1	1.0
Labour productivity per hour worked (annual % change; constant prices)	3.4	3.1	3.4	-2.9	5.4	5.1
Compensation per employee (annual % change; constant prices)	-0.5	3.2	7.3	4.9	8.2	2.2
Nominal unit labour cost growth (annual % change)	3.1	9.3	12.5	12.7	5.6	1.1
Real unit labour cost growth (annual % change)	-3.5	0.1	3.7	8.1	2.7	-3.7
<b>Notes:</b>						
<sup>1</sup> According to ILO definition, age group 15-74)						
<sup>2</sup> Share of persons in the labour force who have been unemployed for at least 12 months.						
<sup>3</sup> NEET are persons that are neither in employment nor in any education or training.						
<b>Sources:</b>						
Commission (EU Labour Force Survey and European National Accounts)						

<b>Expenditure on social protection benefits (% of GDP)</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>
Sickness/Health care	4.23	3.59	3.70	4.41	3.92
Invalidity	1.23	1.26	1.13	1.15	1.39
Old age and survivors	6.78	6.59	6.41	6.74	7.79
Family/Children	0.99	1.02	1.18	1.30	1.99
Unemployment	0.28	0.30	0.28	0.35	0.52
Housing and Social exclusion n.e.c.	0.00	0.00	0.00	0.00	0.01
<b>Total</b>	<b>15.1</b>	<b>14.2</b>	<b>14.1</b>	<b>15.5</b>	<b>17.2</b>
of which: Means tested benefits	1.01	0.84	0.67	0.71	0.74
<b>Social inclusion indicators</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
Risk-of-poverty or exclusion <sup>1</sup> (% of total population)	62.2	60.7	44.8	46.2	41.6
Risk-of-poverty or exclusion of children (% of people aged 0-17)	62.0	60.8	44.2	47.3	44.6
Risk-of-poverty or exclusion of elderly (% of people aged 65+)	73.9	71.1	65.5	66.0	55.9
At-risk-of-poverty rate <sup>2</sup> (% of total population)	18.4	22.0	21.4	21.8	20.7
Value of relative poverty threshold (single household per year) - in PPS	1920	1979	2859	3451	3528
Severe material deprivation <sup>3</sup> (% of total population)	57.7	57.6	41.2	41.9	35.0
Share of people living in low work intensity households <sup>4</sup> (% of people aged 0-59 not student)	15.1	15.9	8.1	6.9	7.9
In-work at-risk-of poverty rate (% of persons employed)	5.4	5.8	7.5	7.5	7.7
<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 households with zero or very low work intensity (LWI).					
<sup>2</sup> At-risk-of poverty rate: 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 work less than 20% of their total work-time potential during the previous 12 months.					
<b>Sources:</b>					
For expenditure on social protection benefits ESSPROS; for social inclusion EU-SILC.					

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

<b>Performance indicators</b>	<b>2002-2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>
Labour productivity <sup>1</sup> total economy (annual growth in %)	3.5	3.1	3.5	-2.9	6.4	2.4
Labour productivity <sup>1</sup> in manufacturing (annual growth in %)	5.6	13.2	2.7	2.5	10.0	n.a.
Labour productivity <sup>1</sup> in electricity, gas, water (annual growth in %)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Labour productivity <sup>1</sup> in the construction sector (annual growth in %)	-2.4	-3.0	-7.4	-3.0	24.0	n.a.
Patent intensity in manufacturing <sup>2</sup> (patents of the EPO divided by gross value added of the sector)	0.7	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Policy indicators</b>	<b>2002-2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>
Enforcing contracts <sup>3</sup> (days)	n.a.	564	564	564	564	564
Time to start a business <sup>3</sup> (days)	n.a.	32	49	18	18	18
R&D expenditure (% of GDP)	0.5	0.5	0.5	0.5	0.6	n.a.
Tertiary educational attainment (% of 30-34 years old population)	24.4	26.0	27.1	27.9	27.7	n.a.
Total public expenditure on education (% of GDP)	4.3	4.1	4.6	n.a.	n.a.	n.a.
	<b>2005</b>	<b>2006</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>
Product market regulation <sup>4</sup> , Overall (Index; 0=not regulated; 6=most regulated)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Product market regulation <sup>4</sup> , Retail (Index; 0=not regulated; 6=most regulated)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Product market regulation <sup>4</sup> , Network Industries <sup>5</sup> (Index; 0=not regulated; 6=most regulated)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Notes:</b>						
<sup>1</sup> Labour productivity is defined as gross value added (in constant prices) divided by the number of persons employed.						
<sup>2</sup> 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 for the product market regulation indicators are presented in detail on the website <a href="http://www.oecd.org/document/1/0,3746,en_2649_34323_2367297_1_1_1_1,00.html">http://www.oecd.org/document/1/0,3746,en_2649_34323_2367297_1_1_1_1,00.html</a> . The latest available product market regulation indicators refer to 2003 and 2008, except for Network Industries.						
<sup>5</sup> Aggregate ETCR.						
*figure for 2007.						
<b>Source:</b>						
Commission, World Bank - <i>Doing Business</i> (for enforcing contracts and time to start a business) and OECD (for the product market regulation indicators).						

**Table X. Indicators on green growth**

Bulgaria		2001-2005	2006	2007	2008	2009	2010
<b>Green Growth performance</b>							
<i>Macroeconomic</i>							
Energy intensity	kgoe / €	1.20	1.06	0.98	0.91	0.84	0.85
Carbon intensity	kg / €	4.10	3.50	3.45	3.13	2.85	n.a.
Resource intensity (reciprocal of resource productivity)	kg / €	7.17	7.07	6.87	7.01	5.84	n.a.
Waste intensity	kg / €	n.a.	13.11	13.06	13.00	n.a.	n.a.
Energy balance of trade	% GDP	0.6%	2.3%	-7.5%	-8.4%	-5.3%	-5.9%
Energy weight in HICP	%	15	15	13	14	13	14
Difference between change energy price and inflation	%	4.64	-2.9	-3.5	-1.3	3.2	-3.7
Environmental taxes over labour taxes	ratio	22.5%	28.2%	31.9%	34.9%	30.6%	n.a.
Environmental taxes over total taxes	ratio	9.1%	9.4%	10.1%	10.7%	10.5%	n.a.
<i>Sectoral</i>							
Industry energy intensity	kgoe / €	1.01	0.73	0.62	0.54	0.37	n.a.
Share of energy-intensive industries in the economy	% GDP	13.5	14.8	n.a.	n.a.	n.a.	n.a.
Electricity prices for medium-sized industrial users	€/ kWh	n.a.	0.05	0.05	0.06	0.06	0.06
Public R&D for energy	% GDP	n.a.	n.a.	0.01%	0.03%	0.01%	n.a.
Public R&D for the environment	% GDP	n.a.	n.a.	0.01%	0.00%	0.00%	n.a.
Recycling rate of municipal waste	ratio	0.0%	0.0%	0.0%	0.0%	0.0%	n.a.
Share of GHG emissions covered by ETS	%	n.a.		54.6%	55.5%	53.8%	n.a.
Transport energy intensity	kgoe / €	1.15	1.20	1.16	1.22	1.15	n.a.
Transport carbon intensity	kg / €	3.16	3.27	3.20	3.35	3.23	n.a.
Change in the ratio of passenger transport and GDP	%	-3.4%	-1.5%	-0.4%	-0.7%	n.a.	n.a.
<b>Security of energy supply</b>							
Energy import dependency	%	47.1%	46.3%	51.3%	52.1%	45.3%	n.a.
Diversification of oil import sources	HHI	n.a.	0.80	0.54	0.56	0.57	n.a.
Diversification of energy mix	HHI	0.27	0.26	0.27	0.27	0.26	n.a.
Share of renewable energy in energy mix	%	4.7%	5.5%	4.7%	4.8%	6.2%	n.a.
<b>Country-specific notes:</b>							
The year 2011 is not included in the table due to lack of data.							
<b>General explanation of the table items:</b>							
Source: Eurostat unless indicated otherwise; ECFIN explanations given 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 EUR)							
Share of energy-intensive industries in the economy: share of gross value added of the energy-intensive industries in GDP							
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 (in kgoe) divided by gross value added of industry (in EUR)							
Transport carbon intensity: greenhouse gas emissions in transport divided by gross value added of the transport sector							
Passenger transport growth: measured in %-change in passenger kilometres							
Energy import dependency: net energy imports divided by gross inland energy consumption incl. of 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 of renewable energy in energy mix: percentage-share in gross inland energy consumption, expressed in tonne oil equivalents							