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**COMMISSION STAFF WORKING DOCUMENT**

**Country Report Bulgaria 2015  
Including an In-Depth Review on the prevention and correction of macroeconomic  
imbalances**

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## EXECUTIVE SUMMARY

**Bulgaria's economic performance has remained subdued during the post-crisis period.** After a decline in economic activity in 2009, growth has been fluctuating around 1% per year, and is forecast to remain so in the short term. Prices stagnated, followed by deflation in the middle of 2013, which is expected to extend through most of 2015. Political instability and banking sector turbulence had a negative impact on confidence in the second half of 2014. Government finances also deteriorated considerably in 2014.

This Country Report assesses Bulgaria's economy against the background of the Commission's Annual Growth Survey which recommends three main pillars for the EU's economic and social policy in 2015: investment, structural reforms, and fiscal responsibility. In line with the Investment Plan for Europe, it also explores ways to maximise the impact of public resources and unlock private investment. Finally, it assesses Bulgaria in the light of the findings of the 2015 Alert Mechanism Report, in which the Commission found it useful to further examine the persistence of imbalances or their unwinding.

The main findings of the in-depth review contained in this Country Report are:

- **Banking sector turmoil in the summer of 2014 revealed institutional and supervisory weaknesses.** The supervisory body's failure to detect significant problems in the fourth largest bank in the country, Corporate Commercial Bank (KTB), points to shortcomings in financial sector supervisory practices and in oversight of concentration risk. This has undermined the credibility of banking supervision, in turn also raising doubts concerning the health of other parts of the financial sector.
- **Concerns have emerged regarding the reliability of reported financial sector data reports.** The liquidity crisis over the summer of 2014 revealed a capital shortfall and led to the revocation of Corporate Commercial Bank's banking licence. The guaranteed deposits held therein, amounting to some 5% of GDP, were paid out after a significant delay. Prior to these developments, the bank's reported asset quality was remarkably high,

which the subsequent investigation showed to have been grossly misreported. In addition, shortcomings were discovered with the bank's collateralisation practices and with its capital adequacy. KTB was an extreme case, but reported figures suggest that there could be shortcomings in other banks as well. Weaknesses may also extend to the non-banking financial sector, particularly in connection to concentration risk and related-party exposures in pension schemes.

- **Deleveraging pressures on non-financial corporations, amplified by deflation, could dampen investment and growth in the short and medium term.** A large proportion of corporate liabilities, also seen as part of the negative net international investment position, are in the form of cross-border intra-company loans. Nevertheless, deflationary pressures could limit companies' debt servicing capacity. Furthermore, parts of the economy may face credit constraints during banking sector restructuring after the collapse of KTB. Corporate liabilities in the non-financial sector — including arrears and liabilities towards the government — may also be affected, creating a negative feedback loop for the entire economy.
- **As economic growth is still insufficient to support sustainable recovery in employment, the labour market continues to be an area of serious concern.** The crisis' negative effect on employment has not been confined to traditionally vulnerable labour market groups. Unemployment is mostly long-term, underlining its largely structural nature, in the absence of well-targeted and sufficient activation policies for the most vulnerable. School-to-job transition is still problematic. The low quality of education and training systems and their limited relevance to the labour market hampers the supply of a suitably-skilled labour force to the economy. Poverty and social exclusion remain a particular concern for Bulgaria, underpinned by high levels of income inequality.

The country report also analyses other macroeconomic issues and the main findings are:



- **Amid weak economic growth and protracted deflation, social pressures and contingent liabilities generated by unreformed sectors pose a threat to fiscal sustainability.** Without structural reforms in pensions and healthcare, fiscal sustainability in the medium and long term cannot be ensured. The financial situation of some large state-owned enterprises in the energy and transport sectors remains fragile and may lead to the accumulation of significant contingent liabilities for the government. Tax collection remains inefficient.
- **Bulgaria is lagging behind in terms of the quality of several key growth enablers.** The country's growth potential is estimated to be low. Productivity growth is hindered by a number of intertwined weaknesses, ranging from complex regulation and weak administrative capacity, over high compliance costs for businesses, to high energy intensity coupled with low energy efficiency and the poor quality of rail and road transport infrastructure.
- **The structural impediments to growth are compounded by a judicial system that lacks effectiveness.** A key building block for an investor-friendly business environment is an independent, high-quality and efficient judicial system. As shown by the latest report under the Cooperation and Verification Mechanism, in recent years Bulgaria has made only limited progress in reforming its judiciary and fighting corruption, which is found to be very high in a cross-country perspective.

**Overall, Bulgaria has made limited progress in addressing the 2014 country-specific recommendations.** During the past year, Bulgaria made some progress on reducing the administrative burden and reforming higher education. However, insufficient action was taken on increasing tax compliance and improving the quality of public sector administration, improving competition and efficiency in the energy sector and enhancing the quality and independence of the judiciary. There was limited progress on extending the coverage and effectiveness of active labour market policies and reaching out to inactive young people. No action was taken on fighting corruption, reforming the pension system or the

general education system, or on alleviating poverty and combating social exclusion, including for marginalised populations such as the Roma.

The Country Report reveals a number of policy challenges stemming from the analysis of macroeconomic imbalances, namely:

- **Without an in-depth, third-party investigation, the soundness of the financial sector cannot be ensured.** Banking sector turmoil during 2014 dented confidence in the financial sector. There are doubts over the reported quality of assets in the system, in particular those in the banking sector. A strong, credible and transparent supervisor is required to reduce the risk of imbalances and correct those that have already accumulated.
- **Weak labour market policies and administratively-set wage floors may still price workers out of the labour market, even as conditions for recovery in employment improve.** In particular, the lack of targeted education and training practices and active labour market policies may hinder labour market participation and employability of the workforce. The lack of sound mechanisms to set wage floors in line with economic fundamentals may impact employment, especially of unskilled and low-skilled workers.
- **A sound and predictable business climate will be important for attracting much needed investment.** Red tape in public administration, the low quality of infrastructure, and lack of competition and efficiency in energy diminish the growth potential of the Bulgarian economy. An effective judiciary would also provide a critical degree of predictability in economic relationships, ensuring that citizens, businesses and public officials are all equally accountable under the law.

Other challenges are the concerns over fiscal sustainability, also raised by the incomplete fiscal framework, poor tax compliance and a lack of reforms in key sectors, including pensions, healthcare, energy and transport.

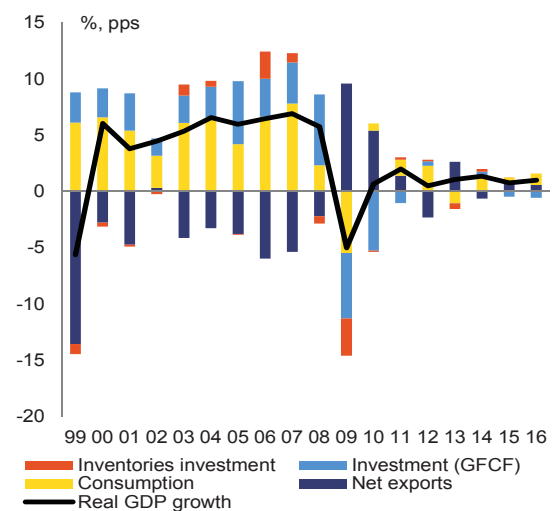
# 1. SCENE SETTER: ECONOMIC SITUATION AND OUTLOOK

## Growth drivers and outlook

**Growth is projected to remain low due to subdued domestic demand.** Real GDP growth averaged some 5 % per year over 2003-08 but has stalled at around 1 % per year after the contraction of output in 2009 (see Graph 1.1). Weak domestic demand is expected to continue to weigh on growth in 2015-16. Private sector consumption stabilised in 2014 and is expected to be supported by low interest rates and declining oil prices in 2015. However, adverse demographic developments and planned fiscal consolidation are likely to limit the increase in disposable income. Investment in the economy remains low and gross fixed capital formation has stayed broadly flat in real terms since 2009. Private sector investment has been declining since 2008 and is only expected to stabilise in 2016, when uncertainty is expected to decrease, both domestically and abroad. Government investment has been the main driver of gross capital formation post-crisis, mostly linked to the absorption of EU Structural Funds. However, this is expected to slightly lower growth in 2015, as the government phases out an investment programme that was implemented in 2014. A further decline is expected in 2016 as the previous programming period for EU structural funds comes to an end, while the new one will not yet have gathered speed. The inadequate capital stock remains a key impediment to growth.

**Potential growth estimates indicate limited convergence towards EU average productivity and income levels in the short term.** Potential growth is currently estimated at below 2 % per year (see Graph 1.2). Ageing, emigration and inactivity are becoming a long-term drag on employment and growth. Continued uncertainty, caused by domestic and external factors, is likely to cause companies to focus on productivity gains rather than job creation in 2015-16, in line with the situation in place since 2008. On the domestic side, political instability — resulting in five governments changing office between January 2013 and November 2014 — has weighed on confidence. Financial sector turbulence in 2014 is expected to weigh on credit conditions and company investment plans for several more quarters.

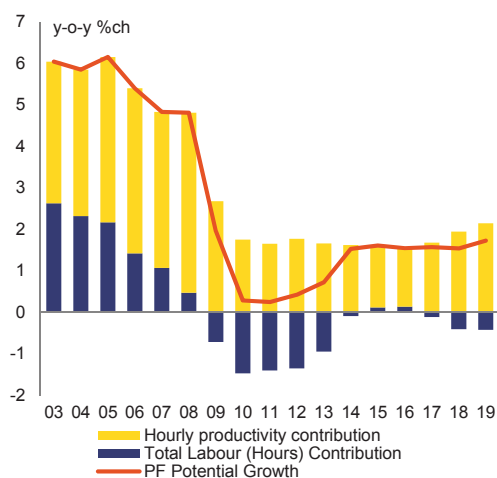
Graph 1.1: Real GDP growth by demand components



Source: European Commission

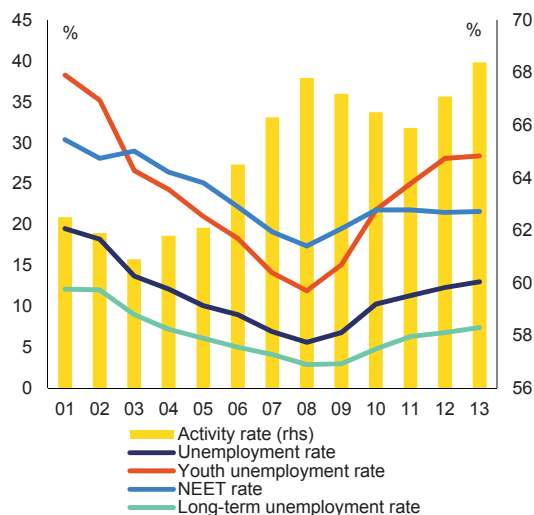
Employment remains a key issue, as those affected by the crisis continue to struggle in finding jobs (see Graph 1.3). The weak labour market and the social implications of joblessness are discussed in more detail in section 2.3. Other impediments to growth — including structural issues relating to unreformed sectors, the business environment, education and training — are discussed in section 3.

Graph 1.2: Components of potential growth



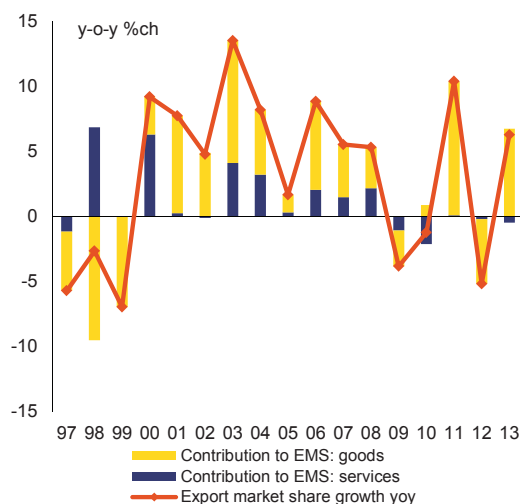
Source: European Commission

Graph 1.3: Key labour market data



Source: European Commission

Graph 1.4: Export market share



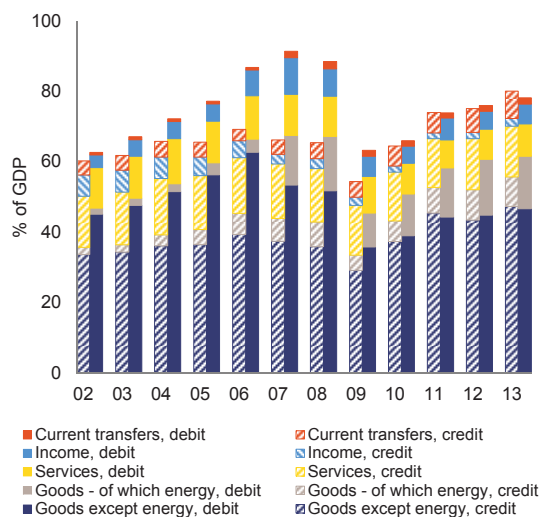
Source: European Commission

## External environment

**Export-oriented sectors of the economy have recovered faster from the crisis.** Bulgaria's gains in world market shares was sustained in 2013 (see Graph 1.4) and are projected to continue through 2016. Companies seem to have restructured their businesses, optimising costs and increasing productivity. To a certain extent, this has been achieved through labour shedding, as employment in manufacturing has declined each year since 2008.

**The current and capital account surplus contribute to improving Bulgaria's external position.** The current-account balance, having corrected swiftly from the very large pre-crisis deficits, is likely to remain positive, at around 1.5 % to 2 % of GDP in 2015-16. Net exports are projected to contribute to growth. The trade balance in non-energy goods turned positive in 2013 thanks to a strong export sector performance (see Graph 1.5). The trade balance in energy remains negative, which is to be expected given the country's significant dependence on imports for oil and gas (for more details see Box 1.1). The energy-trade deficit has been reduced by more than half since 2008 due to stagnating domestic demand.

Graph 1.5: Current account gross components



Source: European Commission

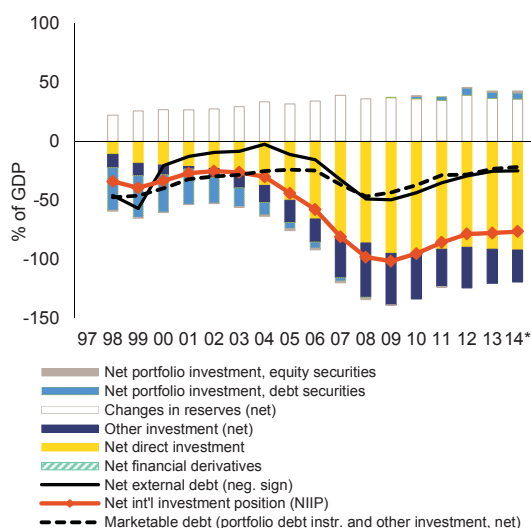
**While Bulgaria's external position has improved markedly in recent years, the stock of liabilities remains high.** The net international investment position has improved by some 25pps. between 2009 and 2014 and stood at around 76 % of GDP at the end of the period (see Graph 1.6). A large proportion of this derives from cross-border intra-company financing. Nevertheless, the stock of liabilities could pose a risk for financing future investments and growth. The deflationary

environment and growing government finance needs (both described later in this section) also have a negative impact on the outlook for the external position. Indebtedness and deleveraging are examined in more detail in section 2.2.

### Inflation at a historic low

**A deflationary trend has prevailed since the middle of 2013 and provides an additional risk for growth and debt stocks.** Although consumption may benefit from increased real incomes, its contribution to growth is likely to be offset by the negative impact on businesses. Debt servicing is likely to become more difficult, while profitability could suffer from declining prices, especially if wage growth is not aligned with productivity developments. Since 2009, companies have adjusted to a stagnating economy by reducing costs (including through labour shedding) and limiting new investment. There may, therefore, be limited scope for further cost cutting, leading to an increased risk of delaying repayments and, ultimately, bankruptcies.

Graph 1.6: **Decomposition of NIIP**

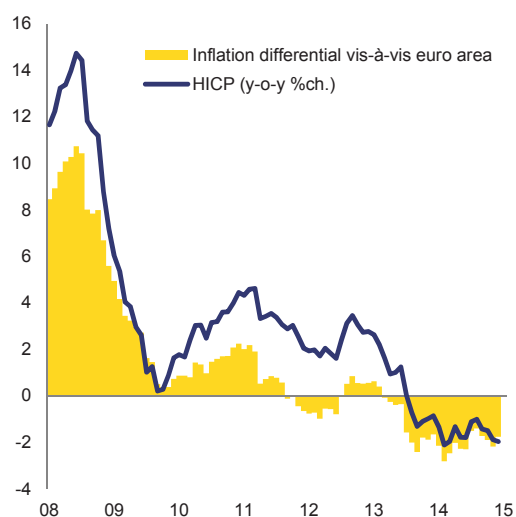


Source: European Commission

**In 2014, Bulgaria recorded the strongest average annual deflation in the EU.** Bulgaria has the lowest price level in the EU, in absolute terms, and in the past decade has typically recorded inflation rates above the EU average. However, the harmonised index of consumer prices (HICP)

decreased sharply over 2013 and fell to -1.6 % in 2014 (see Graph 1.7).

Graph 1.7: **HICP inflation and differential vis à vis euro area**



Source: European Commission

**The strength of deflation is explained by some country-specific price factors in certain product or service categories, most notably regarding healthcare-, telecommunication-, transport- and some specific food-price categories.** (1) The price changes in these categories are not directly linked with EU-wide price trends or Bulgarian domestic-demand conditions. In the aggregate, they are estimated to explain almost 1 pp. of difference with the 2014 EU average HICP (see Table 1.1).

**However, even when taking account of the country-specific factors in the HICP, it is evident that deflation has been significantly stronger in Bulgaria in 2014 than in the EU on average.** Some of these country-specific factors are temporary and their effect on the overall price level will fade in 2015. In addition, in 2015, some country-specific factors will lead to price increases, including the 10 % increase in electricity prices as of October 2014. Nevertheless, HICP inflation is not projected to turn positive before the end of 2015, as a result of lower fuel costs and their knock-on effects on other prices. In 2016,

(1) For example: in 2014, electricity and healthcare prices in Bulgaria were driven by administrative price changes, motor car prices were affected by statistical effects, and the prices of some food categories were affected by one-off effects.



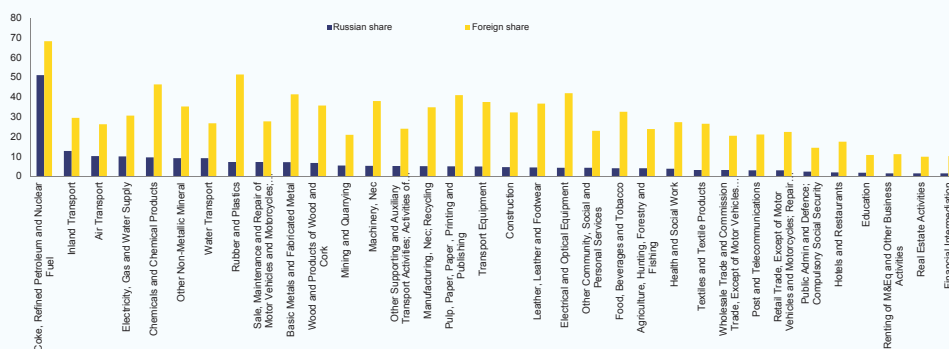
**Box: 1.1: Bulgaria depends on Russian energy imports, services exports to Russia are significant, and trade in non-energy goods is negligible**

This box sets out three aspects of the Bulgarian economy’s exposure to the Russian economy, namely through trade with Russia, energy dependence and foreign direct investment.

- **Russia accounts for a significant part of Bulgaria’s imports of goods and services, but almost all of this is accounted for by energy products.** In 2013, about 20 % of Bulgarian imports of goods came from Russia, with about 95 % of these being energy products.
- **Russia is a relatively small export destination for Bulgaria.** Only about 4 % of Bulgarian exports of goods and services go to Russia. The proportion of goods exports to Russia is particularly small, (2.5 % of total goods exports), while Russia is a larger market for Bulgarian services exports (9 % of total services exports). The main categories for goods exported to Russia are ‘chemicals’ and ‘machinery’ and the main service categories are ‘travel’ and ‘transportation’.
- **Bulgaria has a relatively high dependency on energy imports from Russia, concentrated in two energy sources: crude oil and gas.** Russia provides 100 % of Bulgarian imports of gas and about 80 % of crude oil imports. Bulgaria imports more crude oil than it needs for its own domestic consumption, since a significant proportion of this is processed and re-exported. The largest oil refinery in the Balkan region is located in Bulgaria, owned by a Russian company (Lukoil), and it specialises in refining Russian crude oil.

In Bulgaria, the foreign value added content of gross exports is about 35% out of which the Russian share is relatively high at almost 10 pps. This is due to the energy sector (accounted for by the oil refinery) and the transportation services which are also needed to deliver the energy from Russia to Bulgaria. However, Russian value added content shares of Bulgarian manufacturing and knowledge-intensive services exports are small.

Graph 1: Imports content share of value added of Bulgarian gross exports in 2011, by sectors



Source: World Input-Output Database, <http://www.wiod.org>

inflation is projected to turn positive, once the effects of the current oil-price decline disappear. But inflation will remain low compared to past levels, at about 1%. Overall, the Bulgarian economy may need to operate in a deflationary environment for an extended period of time.

**In spite of strong deflation in consumer prices, the GDP deflator, which is a broader economy-wide price measure, is expected to have remained positive in 2014 and to stay positive in 2015.** This primarily reflects lower import prices' positive effect on the GDP deflator. Methodological differences in data collection on different statistical indicators also seem to be significant in Bulgaria. As a result, the decrease in consumer prices has a smaller effect on nominal GDP growth and on the debt stock expressed as a proportion of nominal GDP.

Table 1.1: **HICP items with the largest difference between BG and EU, 2014**

Detailed price category	EU inflation rate	BG inflation rate	Contribution to HICP, BG difference from EU average	Reason for deviation from EU average
Electricity	1.6	-5.0	-0.3	administrative prices
Motor cars	0.6	-7.3	-0.2	statistical effects
Alcoholic beverages, tobacco	3.4	1.3	-0.1	
Sugar, confectionery	-0.4	-9.4	-0.1	one-off
Pharmaceuticals	1.1	-1.7	-0.1	administrative prices
Meat	0.3	-1.7	-0.1	
Oils and fats	-1.2	-8.9	-0.1	one-off
Passenger transport by air	0.4	-5.4	-0.1	one-off
Consumer electronics	-5.4	-9.8	-0.1	
Passenger transport by road	1.9	-0.5	-0.1	
Furniture	0.4	-2.7	-0.1	
Miscellaneous goods and services	0.7	-0.6	-0.1	
Bread and cereals	-0.2	-1.7	-0.1	
Dental services	1.0	-20.2	-0.1	administrative prices
Telephone equipment and services	-2.4	-3.4	-0.1	

Data for 12 month cumulative average, latest data reading November 2014.

**Source:** European Commission

**In an unexpectedly strong deflationary environment, companies have a weaker ability to service their debt and arrears.** The current period of deflation is limiting liquidity in the economy and has contributed to tax revenue shortfalls in the 2014 budget, compared to the government's projections at the beginning of the year. Arrears in the non-financial corporate sector were already high (see section 2.2. as well as previous in-depth reviews) and stagnating price levels might reduce some companies' ability to maintain healthy cash flows.

### Government finances deteriorate

**Fiscal deterioration in 2014 and financing requirements for banking sector measures has resulted in a sharp rise in general government**

**debt, albeit from relatively low levels.** The general government deficit deteriorated from 1.2% of GDP in 2013 to 3.4% in 2014 and is projected to be about 3% of GDP in 2015 and 2016. In addition to deficit financing requirements, the debt level has been pushed higher by the additional government debt issued for banking sector measures. As a result, the general government gross debt is expected to increase rapidly from 18.3% of GDP in 2013 to about 27% in 2014, and is expected to exceed 30% of GDP by 2016.

**Expenditure on interest servicing government debt is increasing quickly, diminishing the scope to cater for other expenditure needs.**

Despite the prevailing low interest rate environment, annual expenditure on interest is expected to nearly double in nominal terms between 2014 and 2016. This translates into an increase in expenditure of some 0.5 pp. of GDP, limiting the space for structural expenditure measures. The rising debt burden also implies increased debt servicing costs, once interest rates in the EU and/or in Bulgaria begin to increase.

**Further financial sector support measures as well as contingent liabilities coming from state-owned enterprises could add to the rapid increase in government debt.** The absence of a lender of last resort under Bulgaria's currency-board arrangement implies that all potential costs for liquidity and capital provisions to the banking sector have to be borne by the government. So far, the government has been able to successfully issue additional debt in both domestic and international markets to cover the unexpected financing requirements. Given that the domestic saving stock is limited, the increase in general government debt cannot entirely be covered by domestic savings, which implies an increase in foreign funding needs (see section 2.1. for a detailed assessment of the financial sector risks, and section 2.2. for the implications for Bulgaria's external position). Contingent liabilities, which have been building up in state owned enterprises in sectors like energy and transportation could also be a source of risk for government finances. See section 3. for details.

**The banking crisis has also entailed liquidity management challenges for government finances, as the financing requirements related to banking sector measures were unexpected and urgent.** Most of the additional funds

borrowed for those measures took the form of short-term government bonds and T-bills. The Bulgarian authorities intend to refinance these in 2015 with longer-term government bonds.

### Financial sector turbulence in 2014

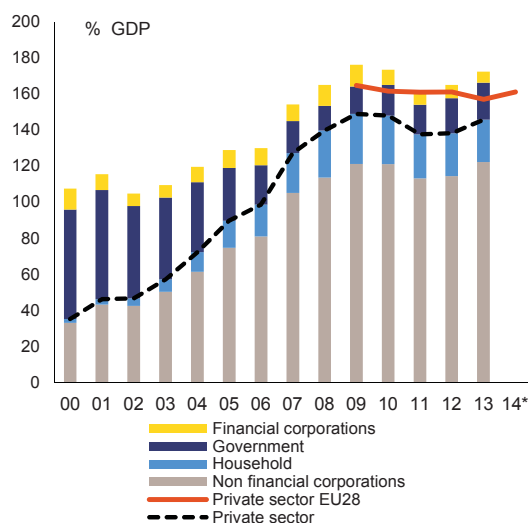
**The banking sector turbulence observed in 2014 revealed significant macroeconomic risks coming from the financial sector.** Liquidity pressures in the third and fourth largest banks in the country <sup>(2)</sup> during summer 2014 have led the government to extend liquidity support to the third largest bank and the central bank to place the fourth largest bank under special supervision. The subsequent audit of Corporate Commercial Bank (KTB)'s asset portfolio revealed numerous irregularities in its banking practices. Those had not been detected by auditors or the supervisor up to that point, raising doubts about the quality of reported data in the sector as a whole. Those events also created doubts over whether other banks in the sector could have followed business models similar to that of KTB. Section 2.1. provides a more detailed examination of developments in the financial sector.

### Private sector indebtedness remains high

**The main risks stemming from private sector debt relate to corporate liabilities.** Non-financial corporate debt increased rapidly in the years leading up to the global crisis. The deleveraging observed thereafter came to a stop in 2013, with corporate debt increasing by some 8 pps. to reach 122% of GDP. In the absence of robust economic growth, this reversal could be a sign of increasing deleveraging pressures and could signal debt servicing difficulties in the future. Household debt is relatively low as a proportion of GDP, at 23.5%, and has decreased by over 4 pps. since the peak in 2009 (see Graph 1.8).

<sup>(2)</sup> First Investment Bank (FIB) and Corporate Commercial Bank (KTB)

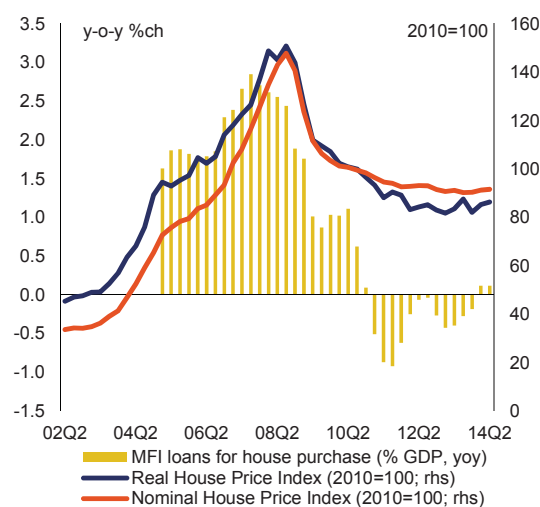
Graph 1.8: **Decomposition of debt by sector (non-consolidated)**



Source: European Commission

**House prices appear to have stabilised.** After a fall of some 40% since their peak in 2008, house prices have remained broadly flat since mid-2013 (see Graph 1.9). Demand for housing loans has also remained flat, indicating risk aversion on the side of households. Going forward, a boost to demand for housing and prices could come in case people start looking for investment alternatives to bank deposits.

Graph 1.9: **Evolution of House Price Index and MFI Loans for House Purchase**



Source: European Commission





#### **Box 1.2: Economic surveillance process**

The Commission's Annual Growth Survey, adopted in November 2014, started the 2015 European Semester, proposing that the EU pursue an integrated approach to economic policy built around three main pillars: boosting investment, accelerating structural reforms and pursuing responsible growth-friendly fiscal consolidation. The Annual Growth Survey also presented the process of streamlining the European Semester to increase the effectiveness of economic policy coordination at the EU level through greater accountability and by encouraging greater ownership by all actors.

In line with streamlining efforts this Country Report includes an In-Depth Review — as per Article 5 of Regulation no. 1176/2011 — to determine whether macroeconomic imbalances still exist, as announced in the Commission's Alert Mechanism Report published on November 2014.

Based on the 2014 IDR for Bulgaria published in March 2014, the Commission concluded that Bulgaria was experiencing macroeconomic imbalances, which require monitoring and policy action. In particular, the protracted adjustment of the labour market warranted policy actions, while the correction of the external position and corporate deleveraging were progressing well.

This Country Report includes an assessment of progress towards the implementation of the 2014 Country-Specific Recommendations adopted by the Council in July 2014. The Country-Specific Recommendations for Bulgaria concerned public finances, the pension system, labour market, education, business environment and the energy sector.

Table 1.2: Key economic, financial and social indicators

	2008	2009	2010	2011	2012	2013	Forecast		
							2014	2015	2016
Real GDP (y-o-y)	5.8	-5.0	0.7	2.0	0.5	1.1	1.4	0.8	1.0
Private consumption (y-o-y)	3.7	-6.4	0.5	1.8	3.9	-2.3	1.4	0.8	1.4
Public consumption (y-o-y)	-1.1	-7.6	2.0	1.8	-1.0	2.8	2.1	0.2	1.0
Gross fixed capital formation (y-o-y)	22.0	-17.4	-18.3	-4.6	2.0	-0.1	2.3	-2.3	-2.8
Exports of goods and services (y-o-y)	2.5	-11.7	17.2	11.5	0.8	9.2	0.3	3.0	3.7
Imports of goods and services (y-o-y)	4.9	-21.5	4.1	8.5	4.5	4.9	1.2	2.0	2.9
Output gap	4.4	-2.5	-2.0	-0.3	-0.1	0.3	0.0	-0.9	-1.5
Contribution to GDP growth:									
Domestic demand (y-o-y)	8.6	-11.3	-4.6	0.4	2.7	-1.1	1.7	0.1	0.4
Inventories (y-o-y)	-0.7	-3.3	-0.1	0.2	0.1	-0.5	0.3	0.0	0.0
Net exports (y-o-y)	-2.2	9.6	5.4	1.4	-2.3	2.6	-0.6	0.7	0.6
Current account balance (% of GDP), balance of payments	-23.10*	-8.92*	-1.48*	.09*	-.84*	3.0	.	.	.
Trade balance (% of GDP), balance of payments	-20.57*	-8.23*	-2.48*	.42*	-2.70*	-0.4	.	.	.
Terms of trade of goods and services (y-o-y)	1.1	2.3	1.1	3.9	-2.2	-0.5	0.9	0.2	-0.6
Net international investment position (% of GDP)	-98.4*	-101.8*	-95.4*	-85.9*	-78.7*	-77.9	.	.	.
Net external debt (% of GDP)	48.9*	49.6*	43.6*	35.2*	29.4*	25.5*	.	.	.
Gross external debt (% of GDP)	105.1*	108.3*	102.7*	94.3*	95.0*	93.0	.	.	.
Export performance vs advanced countries (% change over 5 years)	50.5*	29.2*	25.5*	27.7*	15.7*	13.2*	.	.	.
Export market share, goods and services (%)	0.2*	0.1*	0.1*	0.2*	0.2*	0.2	.	.	.
Savings rate of households (net saving as percentage of net disposable income)	-9.6	-4.4	-5.5	-4.3	-7.0	.	.	.	.
Private credit flow, consolidated, (% of GDP)	33.9	4.9	3.9	1.4	3.1	6.4	.	.	.
Private sector debt, consolidated (% of GDP)	134.2	138.4	137.8	127.9	128.1	134.7	.	.	.
Deflated house price index (y-o-y)	.	-21.6	-12.3	-9.7	-6.9	-0.3	.	.	.
Residential investment (% of GDP)	6.1*	5.3*	2.8*	2.4*	.	.	.	.	.
Total financial sector liabilities, non-consolidated (y-o-y)	-1.4	1.1	-8.9	4.6	11.4	3.2	.	.	.
Tier 1 ratio <sup>1</sup>	.	.	.	.	.	.	.	.	.
Overall solvency ratio <sup>2</sup>	.	.	.	.	.	.	.	.	.
Gross total doubtful and non-performing loans (% of total debt instruments and total loans and advances) <sup>2</sup>	.	.	.	.	.	.	.	.	.
Change in employment (number of people, y-o-y)	2.4	-1.7	-3.9	-2.2	-2.5	-0.4	0.0	0.0	0.3
Unemployment rate	5.6	6.8	10.3	11.3	12.3	13.0	11.7	10.9	10.4
Long-term unemployment rate (% of active population)	2.9	3.0	4.8	6.3	6.8	7.4	.	.	.
Youth unemployment rate (% of active population in the same age group)	11.9	15.1	21.8	25.0	28.1	28.4	23.6	.	.
Activity rate (15-64 year-olds)	67.8	67.2	66.5	65.9	67.1	68.4	.	.	.
Young people not in employment, education or training (%)	17.4	19.5	21.8	21.8	21.5	21.6	.	.	.
People at risk of poverty or social exclusion (% of total population)	44.8	46.2	49.2	49.1	49.3	48.0	.	.	.
At-risk-of-poverty rate (% of total population)	21.4	21.8	20.7	22.2	21.2	21.0	.	.	.
Severe material deprivation rate (% of total population)	41.2	41.9	45.7	43.6	44.1	43.0	33.1	.	.
Number of people living in households with very low work-intensity (% of total population aged below 60)	8.1	6.9	8.0	11.0	12.5	13.0	.	.	.
GDP deflator (y-o-y)	8.1	4.2	1.2	7.0	1.6	-0.8	0.6	0.3	0.6
Harmonised index of consumer prices (HICP) (y-o-y)	12.0	2.5	3.0	3.4	2.4	0.4	-1.6	-0.5	1.0
Nominal compensation per employee (y-o-y)	16.8	8.1	9.9	6.8	7.7	8.8	2.3	2.0	2.4
Labour productivity (real, person employed, y-o-y)	3.3	-3.4	4.7	4.3	3.1	1.5	.	.	.
Unit labour costs (ULC) (whole economy, y-o-y)	13.0	11.8	5.0	2.4	4.5	7.2	1.0	1.2	1.7
Real unit labour costs (y-o-y)	4.6	7.3	3.7	-4.3	2.9	8.0	0.3	1.0	1.1
REER <sup>3</sup> (ULC, y-o-y)	9.5	9.5	2.6	3.8	1.2	8.2	0.6	-1.6	0.3
REER <sup>3</sup> (HICP, y-o-y)	7.8	3.1	-2.6	1.2	-2.1	0.2	-0.6	-1.5	-1.1
General government balance (% of GDP)	1.6	-4.2	-3.2	-2.0	-0.5	-1.2	-3.4	-3.0	-2.9
Structural budget balance (% of GDP)	.	.	-2.5	-1.9	-0.5	-1.3	-3.2	-2.7	-2.5
General government gross debt (% of GDP)	13.3	14.2	15.9	15.7	18.0	18.3	27.0	27.8	30.3

(1) Domestic banking groups and stand-alone banks

(2) Domestic banking groups and stand-alone banks, foreign (EU and non-EU) controlled subsidiaries and foreign (EU and non-EU) controlled branches

\* Indicates BPM5 and/or ESA95

Source: ECB, European Commission

Table 1.3: MIP scoreboard indicators

			Thresholds	2008	2009	2010	2011	2012	2013
External imbalances and competitiveness	Current Account Balance (% of GDP)	3 year average	-4%/6%	-22.0	-19.1	-11.2	-3.4	-0.7	0.4
		p.m.: level year	-	-23.1	-8.9	-1.5	0.1	-0.8	2.6
	Net international investment position (% of GDP)		-35%	-98.4	-101.8	-95.4	-85.9	-78.2	-76.2
	Real effective exchange rate (REER) (42 industrial countries - HICP deflator)	% change (3 years)	±5% & ±11%	18.5	18.3	9.7	1.9	-4.0	-1.0
		p.m.: % y-o-y change	-	8.7	4.0	-2.9	1.0	-2.0	0.1
	Export Market shares	% change (5 years)	-6%	33.1	18.3	14.9	16.6	4.7	5.7
		p.m.: % y-o-y change	-	5.3	-3.8	-1.2	10.4	-5.2	6.3
	Nominal unit labour costs (ULC)	% change (3 years)	9% & 12%	26.9	37.5	32.7	20.2	12.4p	14.8p
		p.m.: % y-o-y change	-	13.0	11.8	5.0	2.4	4.5p	7.2p
	Internal imbalances	Deflated House Prices (% y-o-y change)		6%	17.7e	-21.1e	-12.2	-9.6	-5.3
Private Sector Credit Flow as % of GDP, consolidated		14%	33.9	4.8	2.6	1.0	2.0	6.7	
Private Sector Debt as % of GDP, consolidated		133%	134.2	138.4	137.8	127.9	128.1	134.8	
General Government Sector Debt as % of GDP		60%	13.3	14.2	15.9	15.7	18.0	18.3	
Unemployment Rate		3-year average	10%	7.2	6.4	7.6i	9.5i	11.3i	12.2
		p.m.: level year	-	5.6	6.8	10.3i	11.3	12.3	13.0
Total Financial Sector Liabilities (% y-o-y change)		16.5%	-0.8	1.3	-5.4	5.4	10.2	3.3	

Flags: e: estimated, p: provisional.

Note: Figures highlighted are the ones falling outside the threshold established by EC Alert Mechanism Report. For REER and ULC, the second threshold concerns non-Euro Area Member States. (1) Figures in italic are according to the old standards (ESA95/BPM5). (2) Export market shares data: the total world export is based on the 5th edition of the Balance of Payments Manual (BPM5). (3) House price indicator: e = NSI estimates. (4) Unemployment rate: i=Eurostat back calculation to include Population Census 2011 results.

Source: European Commission

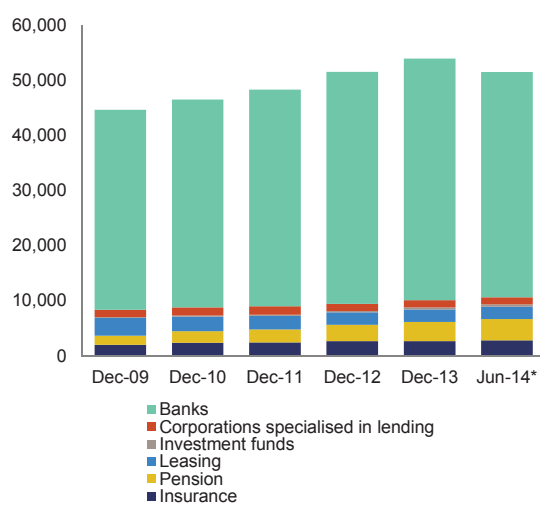


## 2. IMBALANCES, RISKS, AND ADJUSTMENT

## 2.1. FINANCIAL SECTOR

**The degree of financial intermediation in Bulgaria is relatively low compared to the EU average, but is in line with that of peer new EU Member States.** The total assets of all segments of the financial system add up to around EUR 51.5bn (130 % of GDP), remaining relatively stable over the past several years (see Graph 2.1.1). The system is dominated by the banking sector, which accounts for some 80 % of total assets. This section of the report focuses mainly on the banking and pension sectors, which are likely to be the fastest growing segments of the financial system in the coming years. Both are dominated by large subsidiaries of established international institutions, but there is a non-negligible portion of majority-domestically-owned institutions, which account for about a quarter of the total assets.

Graph 2.1.1: **Financial sector assets, EUR million**



\* excludes the KTB group

Source: BNB, FSC, banks' annual reports

### Banking system

**The banking system follows a traditional business model and is dominated by foreign institutions, but the composition has changed due to faster growth by Bulgarian-owned banks in recent years.** Since the banking crisis of 1996-97, and the setting-up of a currency board arrangement in Bulgaria, the banking sector has been dominated by foreign-owned institutions. The Bulgarian banks are rather conservative, with limited reliance on wholesale funding (less than 5 % of all liabilities for most banks), small inter-bank exposures and an asset side that consists

primarily of loans. The 2008 global financial crisis and the subsequent need for parent companies to strengthen their balance sheets, including through deleveraging abroad, decreased the appetite for expansion in the Bulgarian market. Bulgarian-owned banks saw this as an opportunity to gain market shares through quick credit expansion. These new credits were directed primarily to the domestic companies, while funding was ensured through attracting domestic deposits.

Table 2.1.1: **Banking system indicators, Sep 2014**

	Domestically-owned banks	Banking system
1. Total assets, EUR mn	12,613	45,302
growth since Dec-09, %	113.3	24.9
2. Net loans and receivables, EUR mn	8,797	34,572
growth since Dec-09, %	102.7	16.8
3. Household deposits, EUR mn	10,382	38,005
growth since Dec-09, %	101.6	22.2
% of total assets	82.3	83.9
4. Tier I Capital adequacy (% end-2013)	12.5	16.0

For the purposes of this document, the domestically-owned banks include: Investbank, Municipal bank, First Investment Bank, Bulgarian-American Credit Bank, Corporate Commercial Bank, D Commerce Bank, International Asset Bank, Texim bank and Central Cooperative Bank.

Source: BNB, European Commission Calculation

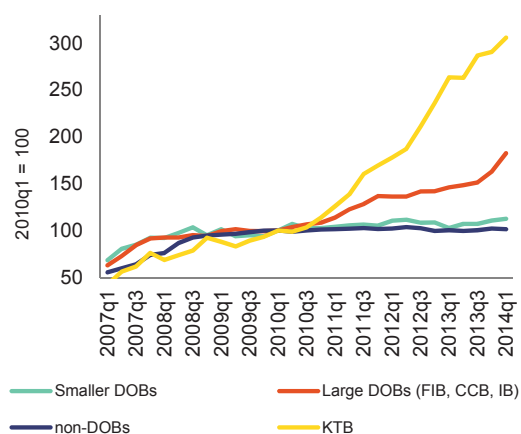
**While overall credit growth after the 2009 economic downturn has been muted, the domestically-owned segment expanded at very high rates.** The average annual growth rate of total loans and advances extended by the Bulgarian banking system between the first quarter of 2010 and the first quarter of 2014 stood at around 3.5 % (see Graph 2.1.2). This modest growth rate, however, masks significant differences between groups of banks. The majority-Greek-owned subsidiaries<sup>(3)</sup> decreased their loan stock by 0.9 % during this period, while the subsidiaries owned by other EU banks<sup>(4)</sup> increased it by 3.7 %. In this context, the average annual expansion of the majority-domestically-owned banks (DOBs) of 17.6 % clearly stands out. This aggressive growth was underpinned by the three biggest DOBs, whose credit portfolios grew by 22.5 % (see Graph 2.1.2). As a result, the DOBs' share in total

<sup>(3)</sup> United Bulgarian Bank (NBG, market share of 7.6 % in March 2014), Piraeus Bank (3.8 %) and Eurobank Bulgaria (6.7 %)

<sup>(4)</sup> This is the biggest segment of the Bulgarian banking sector and includes Unicredit Bulbank (14.7 %), Raiffeisenbank Bulgaria (6.9 %), Société Générale Expressbank (4.3 %) and a number of smaller banks. Its total market share in terms of total banking sector assets was 32.5 % in March 2014.

loans and advances grew from 14.9 % in March 2010 to 24.8 % in March 2014 (16.8 % in the beginning of 2008). Overall, Corporate Commercial Bank (KTB) exhibited the most buoyant growth rate, at 32.3 % per year. Four DOBs grew by an annual rate in excess of 10 %, while no foreign-owned subsidiary reached this growth rate. DOBs were responsible for over 90 % of the aggregate credit by the banks since 2010.

Graph 2.1.2: Evolution of loans and advances



Source: BNB, European Commission Calculation

**Credit expansion took place in the context of low economic growth.** Since 2009, nominal GDP grew by 3.3 % per year on average. This is a rather low rate in a catching-up economy like Bulgaria, particularly in comparison with the pre-crisis average of 15 % in 2005-8. This rate of economic growth was far outpaced by the credit growth in DOBs, raising questions about the allocative efficiency of financial intermediation institutions and the quality of the investments they made over this period.

#### Developments over the summer of 2014

**Confidence in Bulgaria's banking system was seriously dented during the summer of 2014.** The banking sector and domestically-owned banks in particular, came under liquidity pressure in late-June 2014. KTB, the fourth-largest bank overall and the second-largest DOB, was placed under special supervision,<sup>(5)</sup> alongside its recently

acquired subsidiary Corporate Bank Victoria, after facing a bank run and liquidity pressures. Legal and institutional hurdles prevented the triggering of the deposit insurance scheme within the deadlines required by EU law and depositors were unable to access their funds for more than five months, until 4 December. The central bank eventually revoked KTB's banking licence in early November after the bank was found to be in a position of deep negative equity (see subsection *Audits in KTB* for more details), but the insolvency procedure has not yet begun due to legal hurdles. The week after KTB was placed into administration, the largest majority-domestically-owned bank and the third largest bank in the sector, First Investment Bank (FIB), faced a bank run and requested liquidity assistance from the authorities. A credit line of EUR 1.65 billion, approved under State aid rules by the Commission, was made available to all Bulgarian banks. The authorities used it to deposit EUR 0.6 billion into FIB with an initial duration of five months. On 25 November, the European Commission approved the State aid and the restructuring plan for the bank, extending the term of the originally-provided liquidity support by a further 18 months. Retail deposits in five other banks, in addition to KTB and FIB, all of which were DOBs, declined by at least five per cent over the second quarter of 2014. Deposits were generally redistributed within the system and aggregate retail deposits in the system fell by less than 2 % during this period.

**After the initial panic, the situation appears to have calmed.** The liquidity position of the banking system gradually improved as deposit outflows stopped and inflows eventually resumed. Private sector deposits increased by about EUR 1 billion in July-September and at end-September were 1.2 % higher than at end-May. These deposits, however, mostly went to large foreign-owned banks' subsidiaries, and some DOBs continued to lose funds during the third quarter of 2014. The liquidity of the system currently seems to be adequate, as evidenced by the declining interest rates for deposits and the low rates on the inter-bank market. The currently stable liquidity position is further supported by the distribution of the guaranteed deposits in KTB, the overwhelming

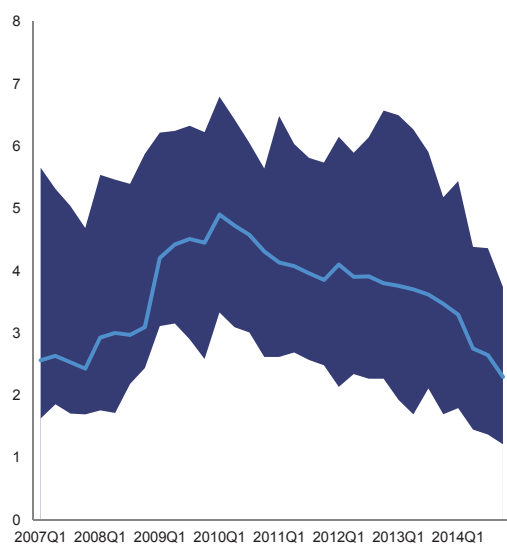
(5) A special arrangement under the Law on Credit Institutions, which gives the BNB the power to intervene

directly in the management of an institution under risk of insolvency with the purpose of rehabilitating it



majority of which have remained in the banking system. At the same time, however, some credit institutions — in particular some DOBs — still appear to be under close market scrutiny, as shown by the higher-than-average deposit rates they are paying (see Graph 2.1.3).

Graph 2.1.3: **Average cost of household deposits and range of values, %**



The sample excludes the branches of foreign banks  
**Source:** BNB, European Commission Calculation

Box 2.1.1), which confirmed that the reported asset quality and financial results did not accurately reflect the true quality of the loan book. Problems identified in credit-risk management included highly centralised credit management, limited numbers of staff allocated to risk analysis, inadequate control systems given the complexity of the bank’s loan portfolio, and the absence of a specialised unit to deal with non-performing loans . In many cases the credit files did not include a detailed analysis of the financial situation of borrowers, which made valuing the loan portfolios difficult during the ten-day review. The hazards created by these risky lending practices started to materialise around the time of the bank run. At end-May, only 1.6 % of loans were classified outside the category of performing ones, while by end-June 2014 the ratio had increased to 9 %. Moreover, the watch, non-performing and loss exposures amounted to 96 % of the bank’s capital base by end-June 2014.

### *Audits in KTB*

**KTB underwent two third-party audits in the summer of 2014.** The audits were requested by the Bulgarian National Bank (BNB) and carried out by Deloitte Bulgaria, Ernst & Young Audit and the domestic company AFA to establish the real situation in the bank as concerns that reported figures may be misleading had emerged. The first audit took ten days in late June and early July, while the second one was much more comprehensive and was carried out between 5 August and 20 October.

**The KTB audits raised concerns regarding the asset quality in the sector and the reliability of financial sector data reports.** Results of the initial ten-day audit increased doubts about KTB’s banking and reporting practices, and about the adequacy of supervision over the bank as missing documentation did not allow for the proper valuation of over 80% of the loan portfolio. This led the BNB to request a comprehensive audit, (see

**Connected and related-party lending represent a significant risk.**<sup>(7)</sup> The comprehensive audit identified significant supervisory shortcomings in the detection of related-party risk. At end-June 2014, KTB's related-party exposure amounted to 33.5 % of its capital base, a significant increase

**Box 2.1.1: Overview of the comprehensive KTB audit**

**Results of the administrators' data collection exercise further increased doubts about lending practices at KTB.** The table below summarises the data collection exercise. For reference, at end-June 2014, KTB's capital amounted to EUR 266.4 million. In addition, 157 of the 166 clients to be audited were asked to submit up-to-date related-party declarations.

**Table 1: Selected findings from the comprehensive KTB audit**

	No of clients		Amount borrowed (EUR mn)	
	No.	Share	Amount	Share
	137		2,702	
Sent full documentation	28	20%	914	17%
Sent partial documentation	80	59%	3,388	64%
Sent no documentation	29	21%	984	19%

**Source:** BNB

**Preliminary results from the administrators' legal review of the available collateral provide evidence of malpractice in KTB's operations.** Based on the analysis of 69 borrowers (around 50% of those reviewed by the auditors), the following problems were identified: (i) unpledged collateral, involving assets that are included in the lending contract but have not been legally pledged; (ii) special claims, which are not legally binding, and (iii) second-lien claims, including 74 claims by KTB and 14 second-lien mortgages.

**The administrators' report on the full audit confirmed the need for significant impairments, placing KTB in a position of negative equity.** The auditors completed the valuation of KTB's assets on 20 October 2014. The information confirmed doubts expressed in previous reports, revealing imprudent lending practices and mismanagement of credit files. The audit also revealed fraudulent practices to misrepresent the actual quality of the loan book, as 42% of the loan servicing payments were found to originate from new loans from the bank itself, wired through a number of accounts in order to disguise the source of the funding. The misconduct in managing lending at KTB revealed in the reports also suggests significant problems in the BNB's supervision of the bank and raises questions over the quality of bank supervision, as problems with the loan portfolio had not been detected during either on- or off-site inspections. The most recent on-site inspection of KTB took place in mid-2013. The BNB claimed it was misled by the figures reported by KTB, which in turn raises doubts over the quality of audited figures for the rest of the banking system.

**Irregularities extend also to KTB's capital adequacy.** The comprehensive audit revealed that a significant portion of the capital increase between October 2011 and March 2014 was financed through loans originating from KTB itself. The BNB pointed out that while the national regulation in force until end-2013 did not forbid this practice, it was deemed imprudent. EU Regulation 575/2013, in force as of the beginning of 2014, however explicitly forbids this practice.

**KTB's losses amount to some two thirds of total assets.** According to the final report, the need for further impairments amounts to EUR 2.1bn, <sup>(6)</sup> a significant proportion of KTB's total assets of EUR 3.3bn. Most additional impairment costs arise from loans to newly-created holding companies. Exposure to these companies was not properly documented or followed up upon, clients refused or were unable to provide the necessary financial information to the auditors to properly evaluate them, some of them have been renegotiated/restructured a number of times and the initially-reported collateral was largely unrealisable. Moreover, these exposures were not properly reported by the bank in its annual audited reports.

<sup>(6)</sup> The valuation methodology was based on IFRS and ECB best practices and thus differs somewhat from the methodology set by the BNB for the system. Applying the latter would result in loan-loss impairments of EUR 2.4bn. The figures were presented as of 30 September 2014 and did not specify what additional impairments would be required by a worsening of the bank's asset quality after it was placed under special supervision.

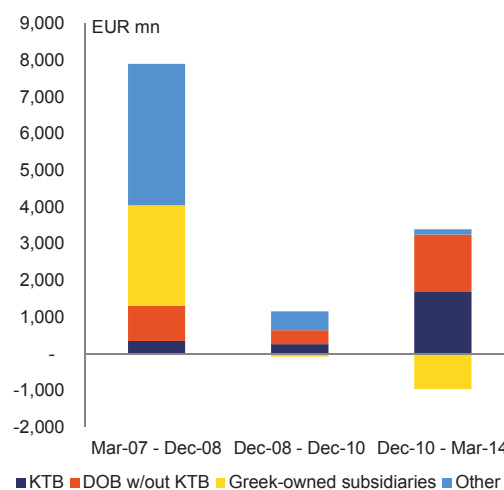
from the 3.9 % figure reported at end-2013.<sup>(8)</sup> This increase reflected the auditors' reclassification of a significant exposure to the main shareholder. In addition, the ten-day audit indicated that a large portion of the portfolio is accounted for by exposures to companies connected to the main shareholder. These findings point to significant concentration risk on the books of the bank. The failure of the national banking supervisor (part of the BNB) to detect these irregularities raises doubts over the situation in the rest of the banking system.

#### *Asset quality and supervision concerns*

**The pricing of loans indicates a higher risk appetite in the DOBs relative to the rest of the system.** As Graph 2.1.5 shows, the DOBs have charged, on average, higher interest on the corporate loans they were granting. This profile indicates differences with the rest of the banking system in the average credit quality of borrowers, management standards, credit underwriting practices, the type of collateral and the underlying risk of the portfolio. During the boom years before the 2009 recession, this behaviour could have been justified by the very strong competition for lower-risk clients from the foreign-owned banks, which also accounted for the majority of lending during that period (see Graph 2.1.4). However, this trend continued in the period after 2010 when competition for clients from the other segments of the banking system was much weaker.

<sup>(8)</sup> Under the Capital Requirements Regulation, a bank's exposure to a counterparty or a group of connected counterparties cannot exceed 25 % of own funds, whilst all large exposures taken together cannot exceed eight times the own funds.

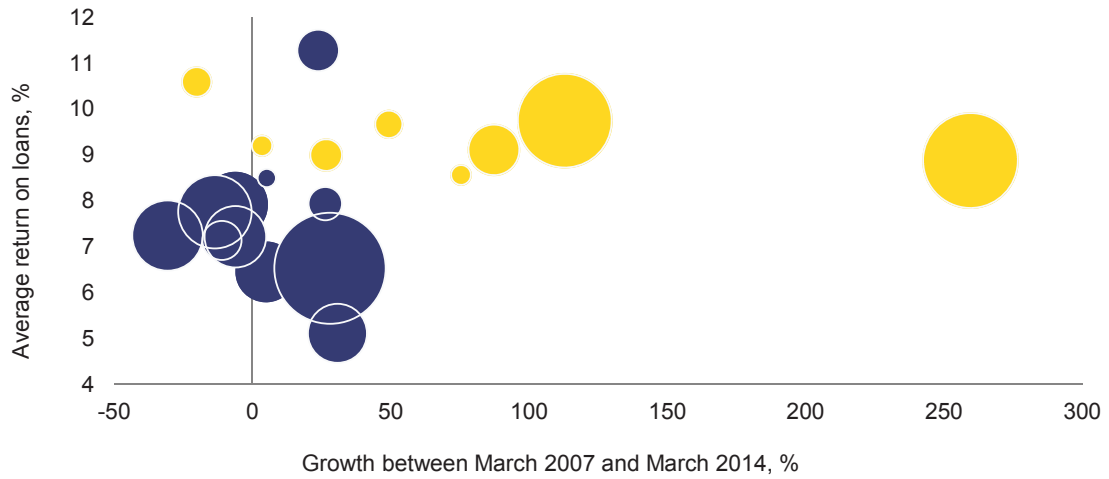
Graph 2.1.4: **Breakdown of growth in corporate loans by bank segment**



Source: BNB, European Commission Calculation

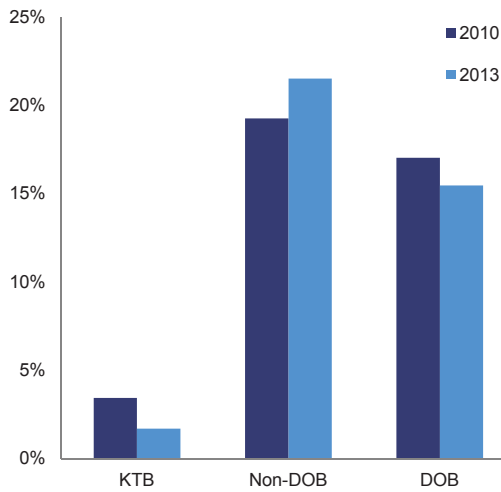
**However, the DOBs report better asset quality than the average for the sector.** The non-performing loan ratio reported by DOBs is, in aggregate, lower than the sector average (see Graph 2.1.6). This is mainly due to the three largest DOBs, which report relatively low ratios of non-performing loans. At the same time, some smaller DOBs report significantly higher ratios, exceeding 50 % in one case, mainly on account of the negative impact of the bursting real estate bubble after 2008 and overexposure to the property sector. The DOBs accounted for the entire increase in performing loans since end-2010 (see Graph 2.1.7). They also accounted for about 40 % of the increase in bad loans (watch, non-performing and loss categories) and less than 10 % of the increase in loan-loss impairments. These figures show a striking difference in the reported evolution of the assets quality in the two groups of banks. To some extent this can be attributed to different management approaches — while the foreign-owned banks looked to improve their risk profile and clean their balance sheets from incurred losses, also in light of the comprehensive assessment of the European Central Bank in 2014, to which the DOBs were not subjected, the DOBs were still in an expansionary phase. The high proportion of performing loans at the DOBs could also reflect the relatively young age of their portfolios.

Graph 2.1.5: Average credit growth and return on loans to the corporate sector



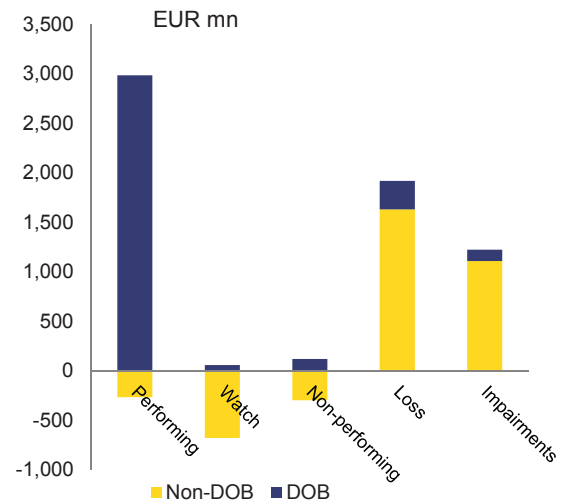
The size of the bubble represents the relative size of the loan portfolios. Yellow bubbles represent DOBs  
**Source:** BNB, European Commission Calculation

Graph 2.1.6: Ratio of watch, non-performing and loss loans to gross loans



**Source:** BNB, Banks' annual reports, European Commission Calculation

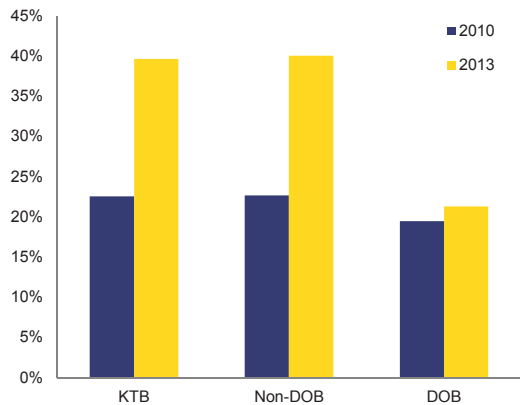
Graph 2.1.7: Change in asset quality categories and impairments, 2010-13\*



\* excluding foreign branches

**Source:** BNB, Banks' annual reports, European Commission Calculation

Graph 2.1.8: **Ratio of total impairments to watch, non-performing and loss loans**



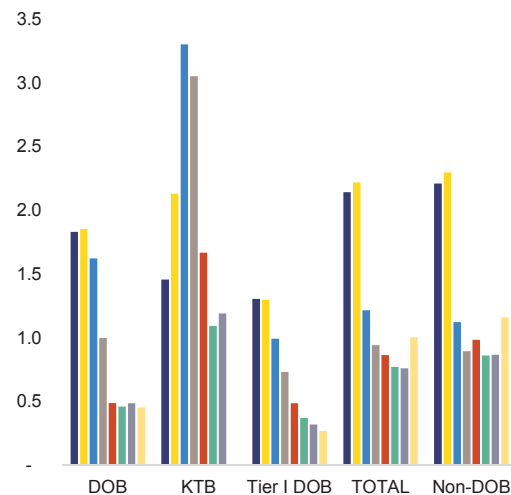
Source: BNB, Banks' annual reports, European Commission Calculation

**The DOBs' business model could make them more vulnerable in a more subdued macroeconomic environment.** The DOBs' practice of granting loans at higher interest rates than the average for the sector is also a function of the higher cost of funding of these banks. Indeed, interest rates on household deposits held at DOBs have, on average, been more than 1pp higher than the average for the sector as a whole (see Graph 2.1.11). The difference is even more striking when considering the average cost of the total funds attracted. This is due to the unavailability of cheaper intra-group funding in DOBs. The challenging macroeconomic and deflationary environment in Bulgaria, as described in section 1, could make it increasingly difficult for clients to service loans contracted at high interest rates. In turn, this may result in rising non-performing loans and, consequently, increased impairment costs for DOBs.

**Reduced reported profitability is an additional concern.** While banks operating in Bulgaria have, on the whole, managed to remain profitable throughout the crisis, their profitability was significantly reduced (see Graph 2.1.9). The decline in profitability was bigger in DOBs, mainly owing to a narrowing interest margin (Graph 2.1.10). Unlike the foreign-owned subsidiaries, the profitability of many DOBs declined despite relatively low impairment costs. This suggests that these banks may not be able to generate sufficient profits to absorb losses if asset quality deteriorates. Consequently, even bringing

provisioning costs up to the sector average could make them loss-making and start eroding their capital (see Graph 2.1.12). Loan-loss impairments in DOBs represented 2.2 % of total assets (2.8 % when excluding KTB) at end-2013, while the system average stood at 5.9 %.

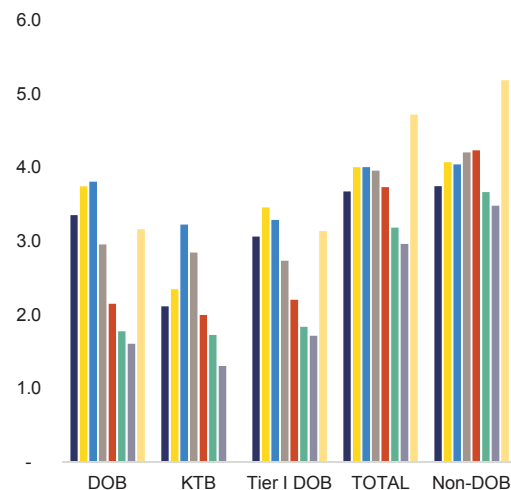
Graph 2.1.9: **Pre-tax profit, % of total assets, 2007-14**



2014 figures exclude KTB and reflect the acquisition of MKB Unionbank by FIB

Source: BNB, European Commission Calculation

Graph 2.1.10: **Net interest income, % of total assets**



2014 figures exclude KTB and reflect the acquisition of MKB Unionbank by FIB

Source: BNB, European Commission Calculation

**Banks' assets appear well collateralised, but the quality and value of the collateral needs to be**

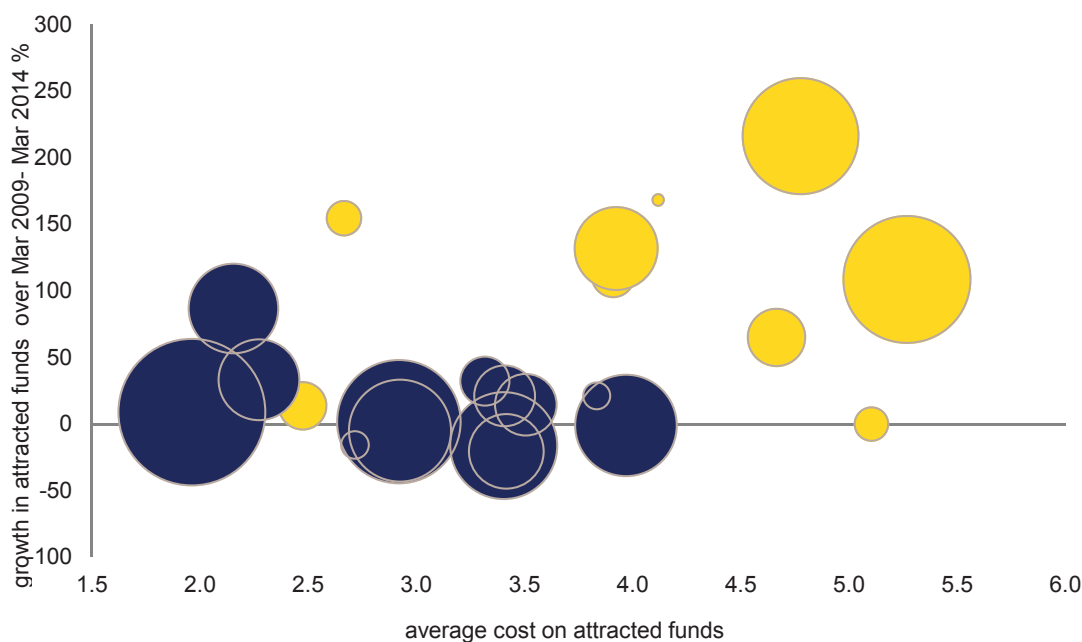
**re-examined.** The audited annual reports of the DOBs indicate high levels of collateral, whose reported value in some cases significantly exceeds that of the assets which they secure. Hence, reported collateral values may not be consistent with accurate and up-to-date market valuations and the enforceability of pledges in some cases is uncertain — KTB’s audit showed that acceptable collateral amounted to only 13 % of the total loans, whereas the audited report for 2013 stated a collateral value of some 170 % of the gross loan book. The collateral in DOBs consists mainly of liquid assets, real estate and ‘other’ collateral, which is a category that includes equity or future receivables from companies. The composition of collateral varies across banks, but in many DOBs ‘other’ collateral represents a significant proportion of the total collateral they hold. In light of this and given the bursting of the real estate bubble after 2009, where housing prices dropped by 40 %, the valuation of collateral is an obvious concern. Accurate collateral valuation is crucial for adequate loan-loss provisioning of banks’ delinquent exposures.

**Recovery and Resolution Directive in order to have a resolution framework that is fully compliant with the EU resolution rules.** Legal provisions have been implemented that allow for burden-sharing with subordinated creditors and shareholders in failed banks. Recent amendments to the Law on Credit Institutions stipulate that bail-in measures should be taken prior to a decision by a competent authority on spending government funds, in compliance with State aid rules. Primary legislation provides that the BNB will issue ordinances on mandatory capital buffers to be held by banks, the terms and conditions for their formation and updating, and ‘conditions for mandatory loss absorption by the shareholders and holders of own funds instruments of the bank before covering losses through other sources’. Full transposition of the Bank Recovery and Resolution Directive is still in progress — the authorities have until end-2015 to implement provisions enabling burden-sharing with senior unsecured creditors and unprotected depositors. This will provide additional protection to taxpayers if cases involving failing banks arise. Other important aspects of the Directive, such as the requirement for banks to develop and regularly update resolution plans in case of failure, have already been transposed, while the BNB also possesses

*Resolution framework and deposit insurance*

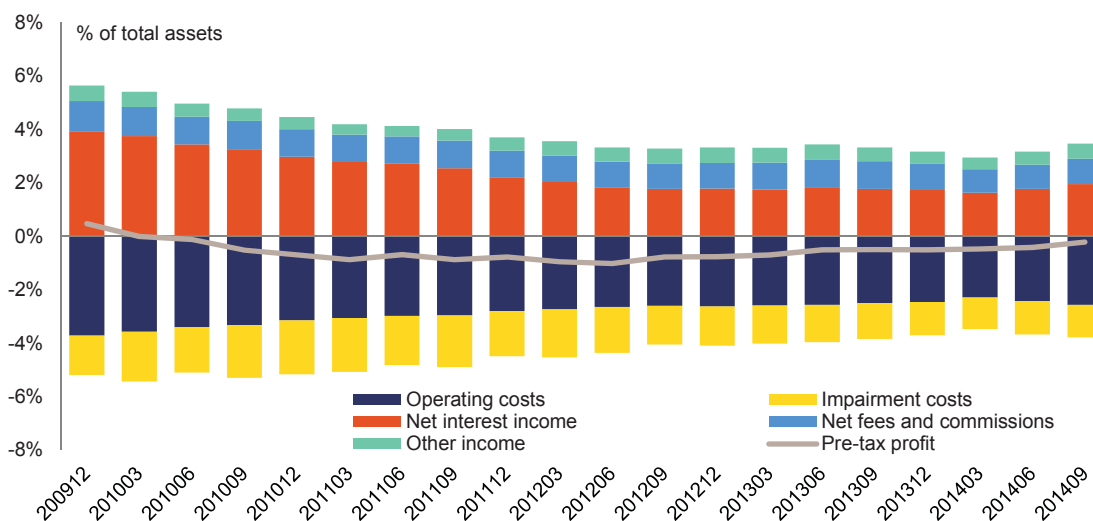
**Bulgaria still needs to transpose the Bank**

Graph 2.1.11: Cost of funding and growth for Bulgarian banks



Note: The size of the bubble represents the relative size of the portfolios. Yellow bubbles represent DOBs  
**Source:** BNB, European Commission Calculation

Graph 2.1.12: Profit and Loss account, DOBs, scenario if the impairments-to-assets ratio was the same as the sector average, everything else kept unchanged, 4-quarter moving sums



Source: BNB, European Commission Calculation

early intervention powers.

**Despite this seemingly sound resolution framework, the KTB case highlighted shortcomings and inconsistencies with other domestic legislation.**

The KTB case was not resolved in a quick manner, thus casting doubts over the authorities' ability to react efficiently in urgent situations. A particular shortcoming in the legal framework that was revealed is that the BNB has the right to put a bank under special supervision, effectively closing it for all operations and freezing its payment obligations, while not revoking its licence, for up to six months. However, the Bulgarian Law on Bank Deposit Insurance uses the withdrawal of a bank's licence as the only trigger for pay-out of guaranteed deposits. Both the European Commission <sup>(9)</sup> and the European Banking Authority <sup>(10)</sup> have identified this as a breach of the EU Deposit Guarantee Scheme Directive (DGSD). This means that providing deposit insurance compensation in Bulgaria is not a straightforward process, as the KTB case has shown. This, combined with the failure of the central bank to take alternative action citing perceived legal risks (e.g. no legal certainty on prescribed procedures for undertaking a partial

pay-out from the available resources of a bank in administration), further complicated the situation and resulted in blocked access to guaranteed deposits for a time period significantly lower than the 20-day period envisaged in the Deposit Guarantee Scheme Directive. This had both negative economic effects and a potential destabilising effect on the entire banking sector. The authorities have submitted a new law on deposit insurance that would address the identified shortcomings to parliament.

#### Actions by the BNB

**After the summer crisis, the authorities announced a number of measures to restore credibility.** In the first half of 2014, the BNB initiated macro-prudential measures to conserve the capital buffers accumulated in the system (see Box 2.1.2). Developments over the summer of 2014 revealed supervisory shortcomings, addressing which is crucial for the future stability of the banking system. In particular, weaknesses were noted in the quality, scope and frequency of on-site inspections, particularly for systemic institutions, the supervision of concentration risk, related-party lending and of banks' collateralisation practices. The authorities announced their intention to enter into close cooperation with the Single Supervisory Mechanism at the European Central Bank,

<sup>(9)</sup> [http://europa.eu/rapid/press-release\\_IP-14-1041\\_en.htm](http://europa.eu/rapid/press-release_IP-14-1041_en.htm)

<sup>(10)</sup> <https://www.eba.europa.eu/-/eba-notifies-breach-of-eu-law-to-bulgarian-authorities>

granting the European Central Bank authority over the BNB in a number of areas.<sup>(11)</sup> However, no formal steps to achieve this have yet been taken. Moreover, the BNB invited the European Banking Authority to conduct a peer review of its supervisory practices and requested a review by the International Monetary Fund and the World Bank under the Financial Sector Assessment Programme. As a first step towards these reviews, the BNB has launched a process of self-assessment. In addition, the BNB has taken steps to increase the number of on-site inspections and broaden their scope. Finally, a draft law to fully transpose the Bank Recovery and Resolution Directive is expected to be presented to parliament in the second quarter of 2015.

**The BNB announced plans for a comprehensive asset-quality review with third-party involvement.** Such a review would be a prerequisite for entering into close cooperation with the Single Supervisory Mechanism. The asset-quality review is planned to cover the entire banking sector, following the methodology applied by the European Central Bank in its comprehensive assessment. Transparency, close cooperation with the international institutions during the entire process and full coverage of the sector, including the foreign branches of Bulgarian banks, will be instrumental in ensuring the credibility of the exercise. The asset-quality review is planned to start in the last quarter of 2015 or the first quarter of 2016.

#### Box 2.1.2: Macro-prudential actions

**The BNB activated capital buffers during 2014 to address systemic risks stemming from the loosening of prudential requirements on Bulgarian banks as a result of the application of the Capital Requirements Directive (CRD IV).** A systemic risk buffer, set at 3% of domestic risk exposures — i.e. for debtors located in Bulgaria, with foreign debtors outside the scope of the measure — was introduced in October with an initial reporting date on 31 December 2014. It applies to all credit institutions authorised in Bulgaria on individual, consolidated or sub-consolidated levels. In accordance with Article 160(6) CRD, the BNB also activated a 2.5% capital conservation buffer, applicable to all credit institutions authorised in Bulgaria as of May 2014. This was earlier than required, as the activation of this buffer was only compulsory from 1 January 2016. Analysis presented by the BNB to the European Systemic Risk Board indicates that the introduction of the CRD IV and the Capital Requirements Regulation package resulted in the weakening of minimum regulatory-capital requirements for Bulgarian banks, as a result of the less conservative requirements in the EU regulatory framework.<sup>(12)</sup> Thus, the BNB's macro-prudential measures have been implemented to prevent the erosion of capital already accumulated in banks and to preserve financial stability in the absence of active monetary policy under a currency-board arrangement, amid deteriorating credit quality and weak profitability in many institutions.

**However, vigilance on the part of prudential authorities is needed to avoid capital depletion in some banks, given the current calibration of the measures.** The main risk stems from the coverage of the systemic risk buffer which targets only domestic exposures, while some institutions have sizeable foreign exposures, including to their parent banks located outside Bulgaria. While the bulk of domestic banks' credit portfolios is to Bulgarian debtors (about 97%), hence within the scope of the systemic risk buffer, exposures to non-resident credit institutions amount to around EUR 5.23 billion, or 15.6% of total loans and advances for the system as at the end of Q3-2014. It is therefore possible that some foreign-owned banking groups reduce capital in their Bulgarian subsidiaries, while retaining unchanged intra-group exposures (with excess liquidity often posted on deposit with parent banks, also to meet prudential liquidity requirements). While capital levels in the system remain high, weak internal capital generation and deteriorating credit quality in some institutions could result in a gradual capital depletion and erosion of available buffers. In addition, while in aggregate they do not present a material risk, exposures to non-resident credit institutions could need to be brought within the scope of the systemic risk buffer.<sup>(13)</sup>

<sup>(12)</sup> BNB analysis indicates that the introduction of the new EU regulatory framework leads to an improvement in the average capital adequacy ratio of the Bulgarian banking system from 16.9% to 21.7%, with the Tier I capital ratio increasing from 16% to over 19%. Such high capital ratios mitigate somehow the asset quality and collateralisation risks underlined before.

<sup>(13)</sup> All other Member States which have implemented the SRB (CZ, DK, EE, HR, NL and SE) have done so covering all exposures, both domestic and non-resident.

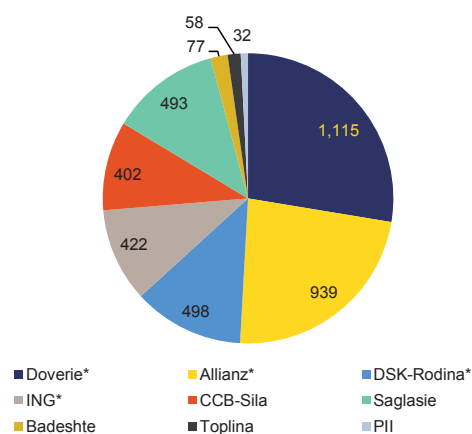


## Pension schemes

**The private-pension-fund system has gradually become the largest part of the non-banking financial sector in Bulgaria.** As of September 2014, there are nine pension insurance companies operating in Bulgaria. Since 2009, the annual growth rates of the net assets of the pension funds have been 15-17 % for the two market leaders, 22-30 % for the four mid-sized funds and about 25 % for the small funds. According to the Financial Supervision Commission (FSC), the pace of increase in the pension funds' assets is likely to pick up in the coming years and these are expected to exceed BGN 20 billion (i.e. over a quarter of the size of the Bulgarian economy) by the beginning of the next decade. This would mean a substantial increase in the pension schemes' importance for the development of capital markets, for financial intermediation and for macroeconomic and financial stability over the coming years. As of October 2014, the largest pension fund is Doverie (subsidiary of the Austrian company Vienna Insurance Group) with net assets exceeding BGN 2 billion (27.6 % market share). The pension insurance market is much more concentrated than the banking or general and life insurance markets. The two market leaders, Doverie and Allianz Bulgaria, account for more than half of the total assets of the sector (Graph 2.1.13).

**Private pension funds have developed into an important source of liquidity for Bulgaria's financial system.** They hold about 11 % of the general government debt as of October 2014. While this makes the pension funds an important source of funding for the government, the proportion of funding that they provide is still significantly smaller than that provided by the domestic banking system, which holds nearly 70 % of the issued government debt. Moreover, the market value on the funds' balance sheets of the shares issued by Bulgarian companies represents about 15 % of the market capitalisation of the Bulgarian Stock Exchange.

Graph 2.1.13: Net assets of pension funds, EUR mn Sep-14



\* denotes majority-foreign-owned funds  
**Source:** Financial Supervision Commission

**Direct links between pension funds and the banking system can be significant.** Pension funds can invest in bank deposits only in banks that have a credit rating higher than 'BB' (according to the scale of Fitch and S&P) or 'Ba2' (Moody's), which significantly restricts the number of banks that funds can deposit in. No DOB meets this criterion. Equity investments in banks are also minor. The most significant exposure between pension funds and the banking system is through the custodian banks that each pension fund is obliged to have (the list of banks that can be custodians is prepared and published by the BNB). Custodian banks hold the pension funds' cash assets, which in the past have represented up to 20 % of the net assets of individual funds.

**Despite being subject to strict supervision, there are vulnerabilities in the sector.** The FSC is the authority in charge of supervising pension funds, and the entire non-banking financial sector. The FSC also has some bank supervision responsibilities, but only over the custodian banks of the pension funds. The FSC is headed by a five-person management board that is appointed by parliament for six-year terms and is functionally separate from the BNB. Supervision of the pension funds consists of on-site inspections, review of daily, monthly and quarterly figures for each pension fund and potentially each individual investment they make can be scrutinised. In 2013, the FSC carried out 17 on-site inspections, including cooperating with the BNB on two of the 20 on-site inspections of banks carried out in the

same year. The Social Insurance Code limits the instruments that pension funds can invest in (see Table 2.1.2) and sets restrictions on the shareholders (an investor can hold shares in only one pension insurance company) further detailed in a different piece of legislation<sup>(14)</sup> to ensure a competitive and transparent ownership structure. Despite this legislative framework, the ownership structure of the pension insurance companies is not always transparent, which can distort the circle of related parties. This makes identifying related-party exposure to the economic owner of the pension funds and of connected exposures challenging. According to the Social Insurance Code, a pension fund is not allowed to invest in any securities issued by the owner of the pension insurance company that manages it or by companies related to the owner.

Table 2.1.2: **Investment restrictions for universal pension funds**

Type of instrument	Limit, % of assets
Government or government-guaranteed bonds	None
Corporate bonds	25
Corporate bonds for project financing	10
Mortgage bonds	30
Municipal bonds	15
Equity holdings outside CIS and SIPC	20
Equity holdings in SIPC	5
Equity holdings in CIS	15*
Bank deposits	25*
Real estate	5

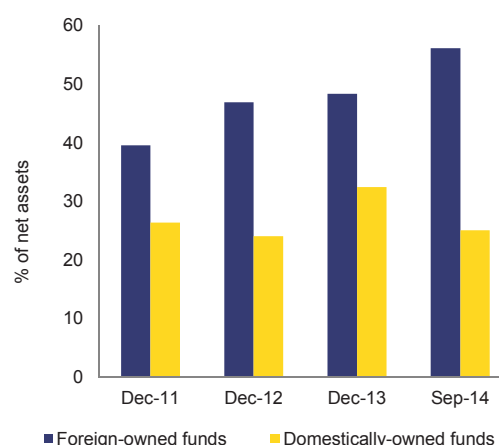
\* no more than 5 % in a single entity

Source: Social Insurance Code

**Reviewing and, where necessary, strengthening the supervisory capacity of the FSC is key.** The domestically-owned funds are much more focused on the domestic market than their majority-foreign-owned counterparts (see Graph 2.1.14). For some funds, the proportion of investments in foreign instruments is lower than 5 %. The current legislation, while generally sound, has shortcomings in the area of related-party and connected exposures, which involve a significant risk for the profitability of the funds, their clients' future pensions, and, more broadly, the efficient allocation of resources in the economy. The KTB case showed that related-party exposures can be a significant issue, and uncovering these can be challenging and may necessitate in-depth investigation. The management of credit risk could to some extent be impaired by the fact that current

legislation does not foresee a role for external asset valuation, apart from real estate properties. Pension funds value their own assets, according to the methodologies prescribed by the FSC in Ordinance 9.

Graph 2.1.14: **Instruments traded on regulated foreign markets**



Source: Financial Supervision Commission

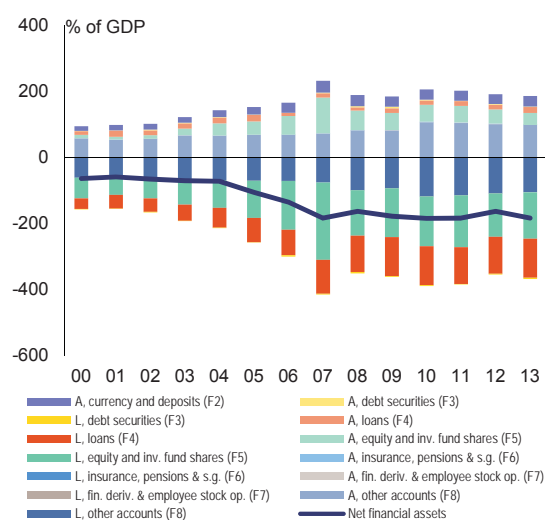
<sup>(14)</sup> A law regulating state economic and financial relations with companies registered in jurisdictions with preferential tax treatment was passed in December 2013.

## 2.2. INDEBTEDNESS AND DELEVERAGING

### Private sector deleveraging

**Non-financial corporations (NFC) accumulated significant liabilities in the pre-crisis years.** While net financial liabilities of NFCs were around 75 % of GDP in 2004, they increased by over 100 percentage points, by 2007. Although this balance sheet expansion led to increased economic output, it also left companies with considerable debt stocks when the crisis hit. Loans are roughly equally distributed between intra-company lending from abroad and domestic bank loans. The share of debt securities is negligible. Since 2008, company liabilities have stabilised. Some variation between the years is visible, mostly due to equity-valuation effects (see Graph 2.2.1).

Graph 2.2.1: Balance sheet, non-financial corporations

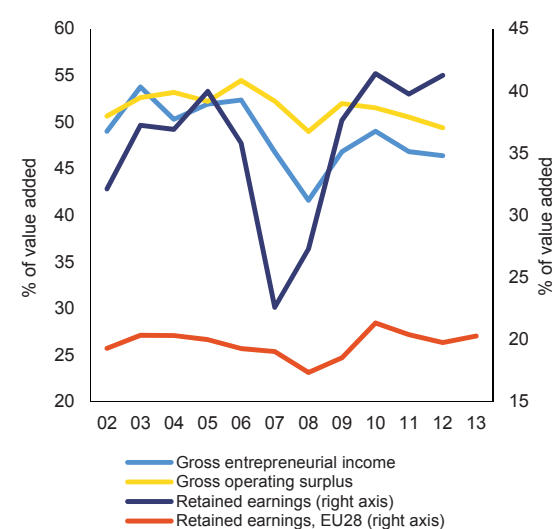


Source: European Commission

**The high level of corporate indebtedness implies considerable deleveraging needs in the sector.** Potential deleveraging needs in the private sector (including households) have been estimated at over 30 % of GDP, most of which is expected to come from the non-financial corporate sector. Balance sheet adjustment could therefore negatively impact investment and growth in the short to medium term. Corporate debt workout could also impact banking sector profitability, especially for credit institutions, which have assumed a higher risk in expanding their credit portfolios in recent years. For more details, see section 2.1.

**The prevailing deflationary environment further increases the pressure on corporate balance sheets.** In the absence of traditional monetary policy tools under the currency-board arrangement, the performance of companies in Bulgaria depends strongly on external factors, including import and export prices and currency movements of the euro. The deflation observed in the country since mid-2013 has a negative impact on cash flows and profitability, which has been declining since 2009.

Graph 2.2.2: Profit margins, non-financial corporations



Source: European Commission

**Firm-level data confirms macroeconomic and financial risks related to the high corporate debt.** Looking at firms' debt leverage and profitability indicates that a significant proportion of companies operate with high debt to capital ratio and low profitability, measured by EBITDA (see Table 2.2.1).<sup>(15)</sup> This suggests that debt

<sup>(15)</sup> The results on the distribution of corporate debt are based on a firm-level dataset from the Bureau Van Dijk's Orbis database. The data refer to the fiscal year 2013, which on the date of the download (December 2014) were available in Orbis for a large majority of firms, but not for all. Subsidiaries of resident companies with consolidated financials were excluded to avoid double-counting. Firms operating in finance and insurance, public administration, health and social services, and education, were excluded. Debt is defined as the sum of loans and non-current liabilities. Capital employed is the sum of debt and equity. Earnings before interest, taxes, depreciation and amortization (EBITDA) are directly taken from the database. The thresholds for debt/capital employed (70 % and 90 %) and the debt/EBITDA (6x and 12x) are approximately equal to the 75th and 90th percentile across

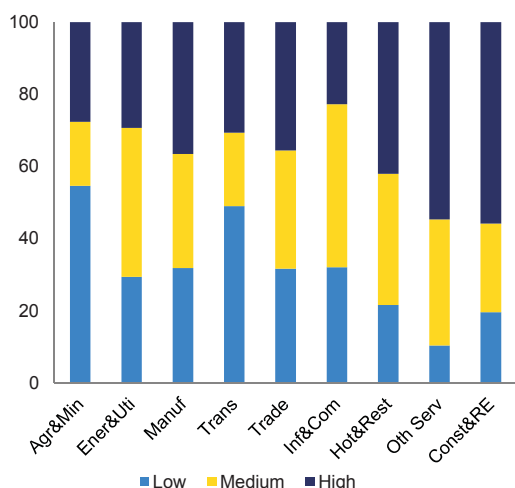
financing is not employed productively in those companies and that a significant portion of debt financing is concentrated in the least profitable companies. Such businesses are more susceptible to economic shocks, increasing the risk of them going into bankruptcy. Companies in the hotels and restaurants, construction, real estate and other services sectors face the highest risk in this regard (see Graph 2.2.3). In turn, if those risks materialise, they could increase loan losses and could impact the health of the banking sector. As already noted in section 2.1., KTB's losses were largely concentrated in loans to companies with high leverage and low or negative profitability.

Table 2.2.1: Corporate debt ratios

Debt/EBITDA	>12	11.5	5.6	23.9
	6x to 12x	8.0	3.1	6.3
	< 6x	31.1	8.5	1.8
		<0.7	0.7 to 0.9	> 0.9
		Debt/Capital employed		

Source: ORBIS database, European Commission Calculation

Graph 2.2.3: Sustainability risks by sector



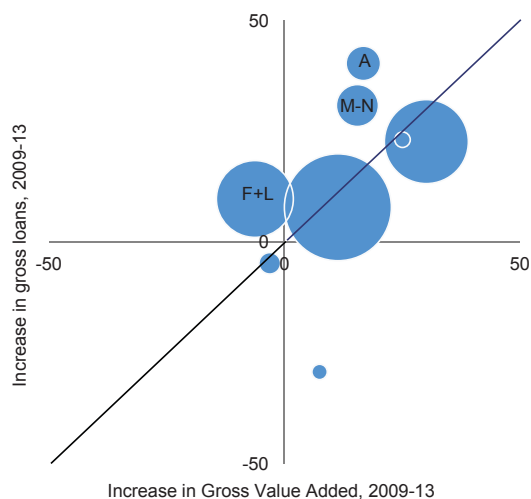
Source: ORBIS database, European Commission Calculation

the pooled sample of firms from fifteen EU countries (which include vulnerable and core countries). Reported figures represent the share of debt held by firms in a given solvency bucket, as a percentage of the total amount of debt.

**Deleveraging pressures are more pronounced on the credit demand side.**

Despite decreasing interest rates, there has been little demand for credit in the post-crisis period. The slow economic recovery, weak domestic demand and the accumulated high debt stocks contribute to this development. Looking at individual sectors, debt stocks in construction and the hotel and restaurant industry have declined since 2009, while export-oriented sectors, including manufacturing and professional services (including an expanding business process outsourcing sector) have maintained their credit demand and have taken on more debt. In some sectors, however, credit developments have been notably more dynamic than the change in gross value added, including in some sectors that face high financial sustainability risks (see Graph 2.2.4). On the credit supply side, the increasing share of non-performing loans and changing risk appetite for some parts of the banking sector, as discussed in section 2.1., may have led to tightening of the lending criteria (see Graph 2.2.5).

Graph 2.2.4: Sectoral growth of loans and gross value added



The size of the balloon indicates the share of the sector in total loans.

NACE 2 codes:

A – Agriculture, forestry and fishing.

F+L – Construction and real estate activities.

M-N – Professional, scientific and technical activities; administrative and support service activities.

Source: BNB, European Commission, European Commission Calculation

**Private investment has declined throughout the post-crisis period.** Investment net of depreciation

and amortisation has contracted sharply in the aftermath of the crisis in all sectors, most notably in construction and real estate. As foreign capital flows dried up, gross investment contracted and has not been sufficient to maintain the pre-crisis level of accumulated capital. Going forward, investment needs are likely to increase with economic recovery, highlighting the importance of improving the business environment, as discussed in section 3.

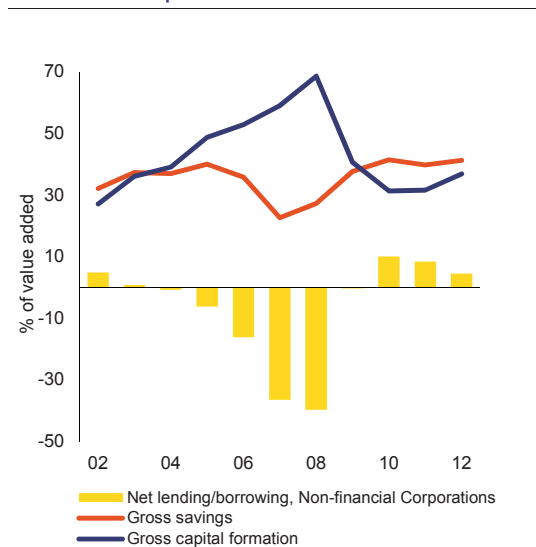
**An increase in corporate saving could be interpreted as a response to deleveraging pressures.** Companies have increased saving and contributed positively to the saving-investment balance of the total economy since 2010 (see Graphs 2.2.6 and 2.2.7). The balance was strongly negative in the pre-crisis years when the deficit was funded by foreign capital inflows. Increased financing needs of the public sector and private investment needs could open up the gap again and would need to be financed from abroad.

**Corporate deleveraging pressures could also have impacted the drop in employment.** The decrease in employment in the post-crisis period has been higher in Bulgaria than for other countries with a similar drop in output and could also be related to the on-going balance sheet repair.<sup>(16)</sup>

**Policy attention appears warranted, to ensure a smooth deleveraging process with minimum impact on economic growth.** Policy avenues to address the problem could include improvements to the insolvency framework (see section 3), coordination of debt workout where possible as well as measures related to the banking sector as discussed in section 2.1.

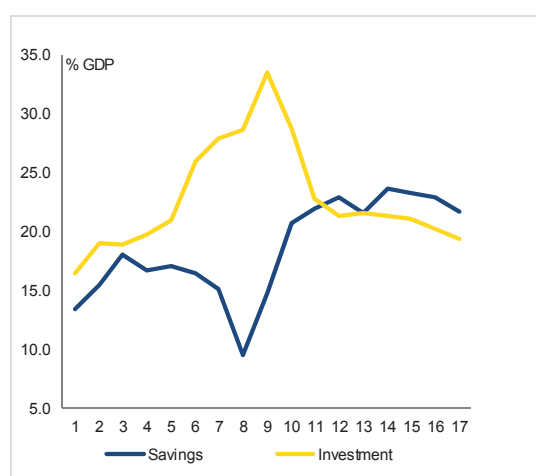
<sup>(16)</sup> Bakker and Zeng, 2013

Graph 2.2.6: **Savings and investment, non-financial corporations**



Source: European Commission

Graph 2.2.7: **Saving - investment balance**



Source: European Commission

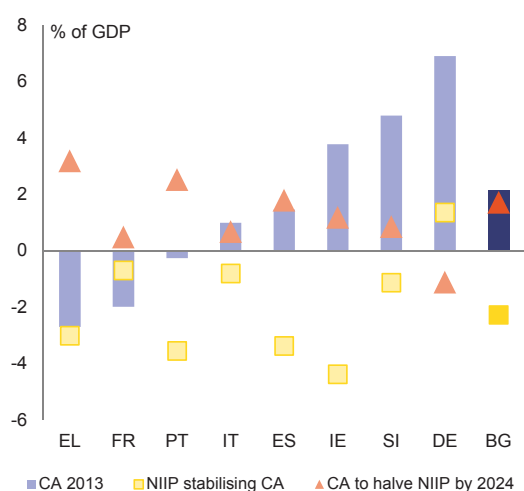
### Sustainability of the external position

**The net international investment position (NIIP) appears sustainable based on recent current account (CA) developments and future projections.** The external position remains highly negative – NIIP stood at around -76 % of GDP in 2014. An in-house model, used to forecast the development of the NIIP<sup>(17)</sup>, combined with the

<sup>(17)</sup> The model has been developed by the European Commission's Directorate General for Economic and Financial Affairs. The baseline scenario assumptions for

European Commission forecast indicate a likely continued improvement of the external position. Maintaining the same NIIP as a proportion of GDP over the next decade allows for annual average current-account deficits of 2.3 %. At the same time, reducing the NIIP to the scoreboard threshold of -35 % by 2024 would require current-account surpluses of 2.0 % per year. Given the current current-account composition, this would require an average primary current-account (trade balance + current transfers) surplus of 4.5 %. The NIIP improvement is therefore only expected to be gradual in the short term (see Graph 2.2.8).

Graph 2.2.8: NIIP-stabilising current account balances based on long-term projections



Current account as reported in national accounts.

Source: European Commission

**Sustainability will also depend on perceptions of risk going forward.** External liabilities are concentrated in the non-financial private sector (see Graph 2.2.9). Most of them consist of cross-border intra-company lending, as shown in the gross external debt breakdown (see Graph 2.2.10). This type of financing has a relatively low risk profile. Nevertheless, it is not risk-free and could create financing problems if foreign investors change their risk perception of Bulgaria. After a rapid expansion in liabilities, the financial sector repaid most of its foreign debt over the past two years. Government external liabilities have been

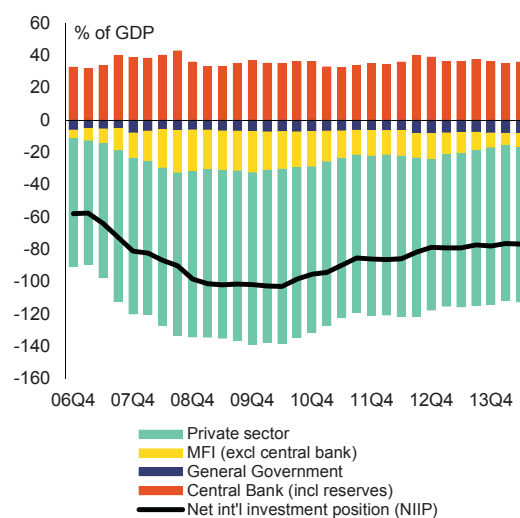
GDP growth, inflation and external yield are based on the Financial Sustainability Report 2012.

low, but the increased deficits seen in 2014 and planned for the coming years could increase the importance of government borrowing for the NIIP, as discussed in section 1.

**The maturity profile and currency composition of external debt do not suggest immediate risks.**

Short-term debt decreased to below 30 % of the total, after having peaked at over 35 % in 2008, and is roughly equally distributed between the financial and non-financial corporate sectors. The government's external debt was entirely long-term until the end of 2014, when it took out a short-term loan. Following the maturing and refinancing in euros of a US-dollar denominated bond in January 2015, over 90 % of Bulgaria's gross external debt is euro-denominated.

Graph 2.2.9: NIIP by sector



Source: European Commission

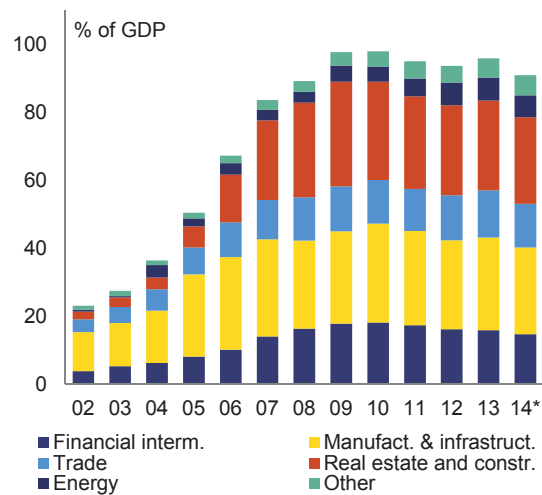
**Foreign direct investment (FDI) has been an important part of funding growth and shaping the NIIP.**

Domestic saving is insufficient to finance growth. FDI inflows have benefited the economy as a whole and, in particular, sectors like manufacturing, by raising productivity and improving the country's export performance. A large proportion of FDI in the pre-crisis period went also into construction and real estate investments (see Graph 2.2.11). Although they benefited the tourism industry, those investments also helped inflate the real estate bubble and contributed to the rapid expansion of the construction sector. As a consequence of the crisis,

housing prices have dropped by some 40 % and around 1/3 of construction sector workers have lost their jobs. This emphasises the importance of attracting FDI in sectors of production, to avoid creating imbalances in the economy.

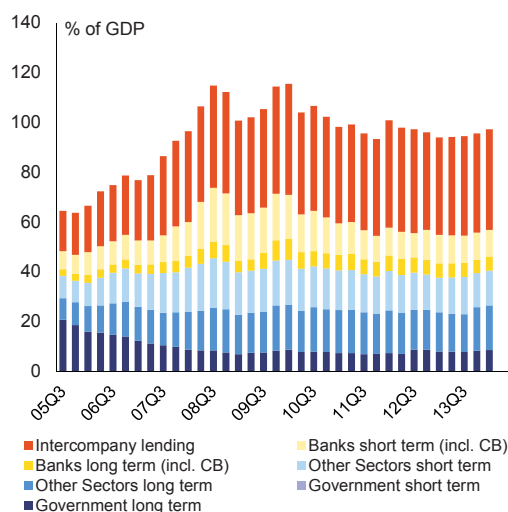
**The sectoral composition of FDI inflows has changed in the post-crisis period.** Recent FDI flows have been more balanced in their industry composition. Notably, the energy sector, including renewable energy sources, has particularly attracted the investor's attention (see Graph 2.2.12). However, recent problems with pricing the energy produced by those sources indicate potential issues with the profitability of those investments. The FDI stock in energy has doubled over 2010-13. Manufacturing has attracted 21 % of the investment flows, while investment in construction and real estate has slowed down considerably.

Graph 2.2.11: Inward FDI stock by economic activity



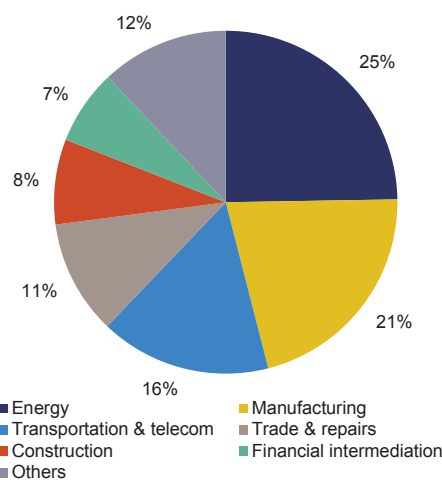
\* 2014 3rd quarter  
**Source:** Bulgarian national bank

Graph 2.2.10: Gross external debt structure



**Source:** European Commission

Graph 2.2.12: FDI inflows, 2010-2014



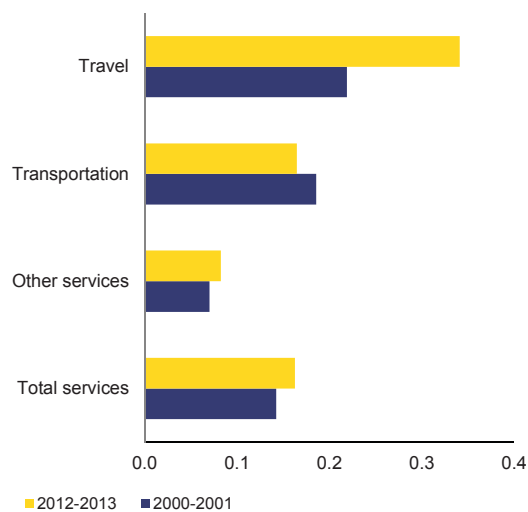
**Source:** Bulgarian national bank

**Overall, external indebtedness has been reduced post-crisis but risks remain. Those are mostly related to private sector debt servicing in a deflationary environment and the increasing financing needs of the public sector.**

### External performance and competitiveness

External indebtedness developments depend on current-account dynamics and thus are strongly linked to the country's export performance. The section below looks at Bulgaria's external performance and competitiveness.

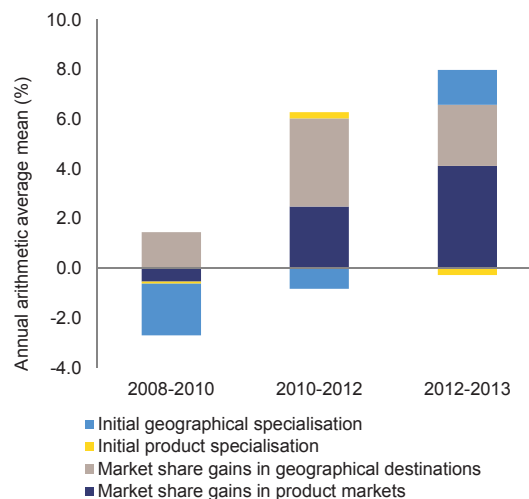
Graph 2.2.13: World market shares for services



Source: WTO, European Commission

**Bulgaria appears well-positioned to increase its exports.** A detailed look at the geographical and product specialisation of the country shows that for the 2008-13 period it has managed to expand its share both in the products it exports and in the share of imports of its trading partners. Moreover, the main trading partners exhibit positive market dynamism (their markets are growing faster than the world average) and Bulgaria is able to increase its share of this growing market (see Graphs 2.2.14 and 2.2.15).

Graph 2.2.14: Geographical and sectoral composition of nominal (USD) rate of change of goods exports



Decomposition of total (worldwide) nominal export growth (net of the global trade growth) into four components: i) growth due to the growth of destination markets, ii) growth due to the growth in product markets, iii) export growth to destination markets above their growth, iv) export growth in product markets above their growth.

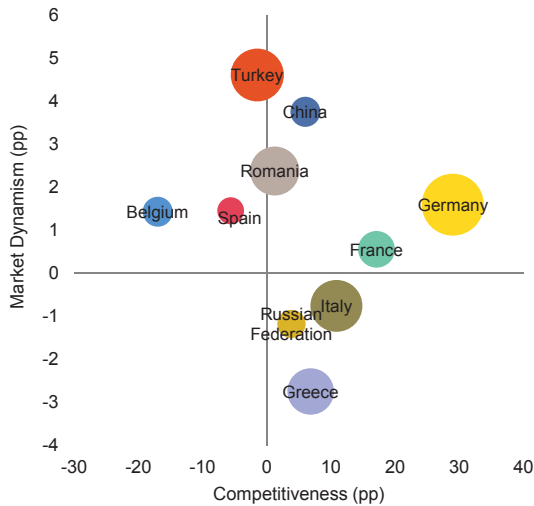
Source: COMTRADE data, European Commission Calculation

**Cost competitiveness in the industrial sector appears sound, while wage growth is higher than productivity gains in construction and services sectors.** Labour cost and unit labour cost (ULC) growth has slowed down and is expected to remain low in the coming years. Labour shedding in the industry sector has continued throughout the post-crisis period, leading to increased productivity. At the same time ULC growth in the sector has remained much lower compared to the rest of the economy (see Graph 2.2.16). Apart from cost competitiveness, non-cost factors have also contributed positively to the country's export performance. <sup>(18)</sup>

<sup>(18)</sup> See IDR 2013 as well as Benkovskis and Wörz, 2012 and Di Comite, 2012 for more details.



Graph 2.2.15: **Dynamism and competitiveness of goods exports (2012-2013)**

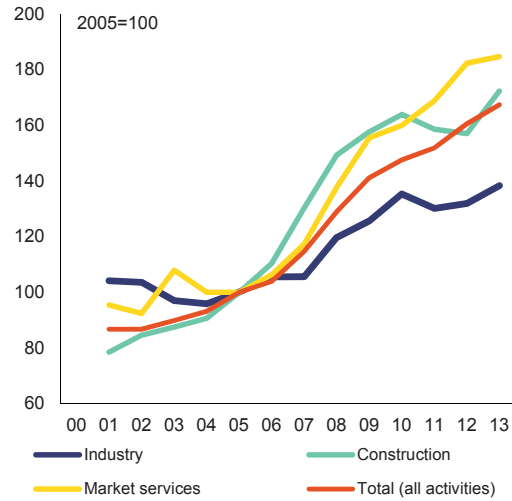


The size of the bubbles indicates the weight of this destination on total export of the country at the end of the period. Market dynamism stands for the difference between the annualized growth rates of world imports per market and global world imports. Competitiveness stands for the difference between the annualised growth rates of the selected country exports per market and world imports per market.

**Source:** ORBIS database, European Commission Calculation

**Following record-level deficits in the boom years, the current account (CA) balance underwent a mostly non-cyclical correction.** A combination of global economic growth, financial-markets deepening and positive confidence effects in the build-up to the country's EU accession resulted in cumulative CA deficits of over 75 % of GDP over 2005-08, or an annual average of around 19 %. FDI inflows financed the deficits, which were to a large extent, driven by the goods and services required by the foreign investments. Non-cyclical factors seem to explain most of the post-crisis correction. The output gap was positive between 2002 and 2008, peaking at 5 % of potential output in the last year and turned negative after that.

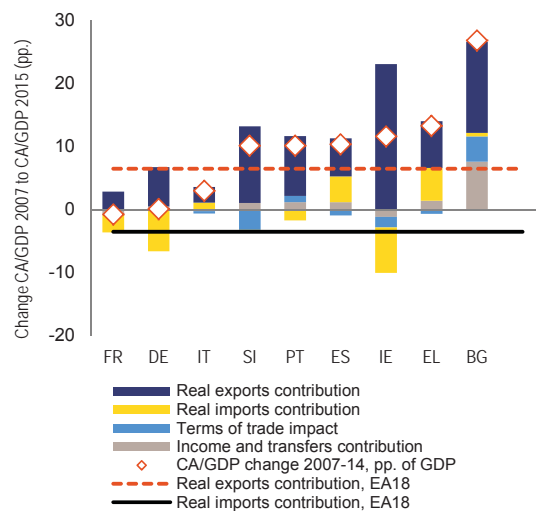
Graph 2.2.16: **Unit labour costs by sector**



**Source:** European Commission

While the rapid CA correction thereafter does suggest a cyclical element, the CA surpluses observed since 2011, indicate a structural change of the CA composition. The non-cyclical correction observation is also supported by the in-house model for adjusting the CA, taking into account the output gap and real effective exchange rate movements (see Graph 2.2.17).

Graph 2.2.17: **Component contributions to change in CA balance 2007-2015**



**Source:** European Commission

## 2.3. LABOUR MARKET AND SOCIAL SITUATION

### Overview

**The Bulgarian labour market is weak with low employment and high unemployment rates.** The number of people employed in 2014 was about 13 % lower than it was at its peak in 2008. Measured in terms of working-age population (people aged 20-65), the employment rate has fallen from over 70 % in 2008 to 63.5 % in 2013. Bulgaria has therefore fallen behind the EU average of 68.4 %. The working-age population itself has been on a declining path for a number of years. After a trough at below 6 % in 2008, the unemployment rate peaked at 13 % in 2013 and is estimated to have fallen back to 11.7 % in 2014. In spite of early signs of improvement in the labour market in 2014, a large proportion of the population still faces major challenges to participating in the labour market. This exposes them to the risk of poverty. In 2013 the activity rate for people aged 15-64 was 3.5 pps. lower than the EU average, while the rate for those aged 15-24 was 12.5 pps. below the EU average. The recovery in the labour market is forecast to remain modest in 2015-16.

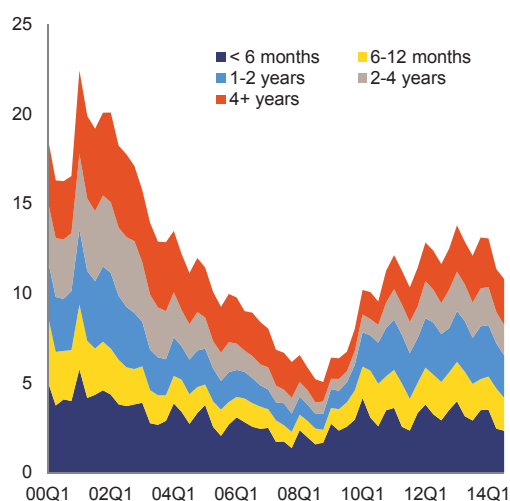
**Certain sectors and types of workers have been particularly affected by the crisis.** As recognised in previous studies,<sup>(19)</sup> unemployment in Bulgaria has increased the most during the economic crisis for unskilled and low-skilled workers, young people and Roma. Job losses have been largest in the construction and manufacturing sectors. The construction sector suffered the consequences of a bust in the real estate market. Job losses in manufacturing, a mostly export-oriented sector, indicate that companies may have primarily opted for labour shedding to reduce costs and increase competitiveness.

**Taking a broader view, the underlying problems in the composition of the labour force lead to low employment and limit the economy's adjustment capacity in the short term, while restricting growth potential in the medium and long term.** The low adaptability to labour market changes shows that the education and training systems (including skills anticipation) could make skills more responsive to labour market needs. The high rate of skills mismatches is made more acute by, on the one hand, the sharp and potentially permanent job destruction in

sectors that have been hard hit by the crisis, and, on the other hand, big misalignments between skills supply and demand in the labour market. This leads to structurally low employability for some disadvantaged groups. Moreover, the lack of skills is exacerbated by high levels of emigration. These factors come in addition to overall concerns of an ageing population and add to the challenges for the labour market.

**Long-term unemployment increased in the post-crisis period and risks becoming structural.** The average duration of unemployment increased between 2009 and 2014. In particular, the proportion of people out of job for more than four years increased from around 1 % of the labour force to over 2.5 % between 2008 and 2014, and currently represents over 20 % of unemployed people (see Graph2.3.2). As noted in the 2014 in-depth review, this increases the risk of unemployment becoming structural, as the skills of those who are unemployed are eroded or become irrelevant with the changing labour market demand. High structural unemployment would lower the economy's adjustment capacity.

Graph 2.3.2: Unemployment by duration



Source: European Commission

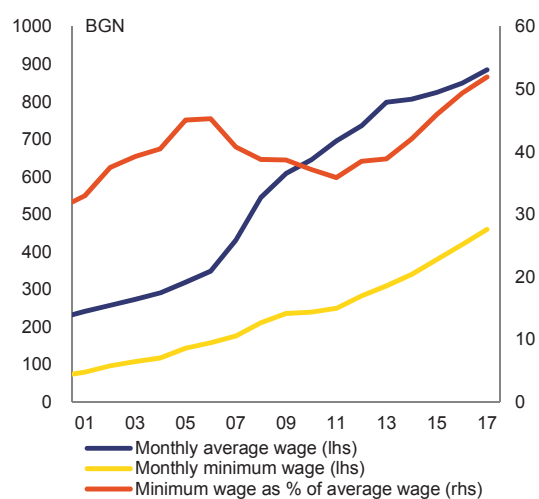
### Minimum-wage setting

**Bulgaria has a nation-wide statutory minimum wage set by the government. A freeze between 2009 and 2011 has been followed by marked increases and stronger-than-average wage**

<sup>(19)</sup> Maivali and Stierle, 2013; IDR 2012-2014

**growth.** Although in nominal terms the Bulgarian minimum wage is the lowest in the EU, its increases between late-2011 and mid-2015 amount to over 58 % cumulatively, including the already-legislated two-step increases for this year. The government's plans include further increases of some 18 % over 2016-17. As a result, the minimum-to-average-wage ratio has increased and could exceed 50 % by 2017 (see Graph 2.3.3). Going forward, such sharp discretionary shifts in the government's wage setting policy could be distortive for the labour market.

Graph 2.3.3: **Minimum and average wage (BGN)**



Source: European Commission

**Recent minimum wage increases have doubled its coverage and increased its importance for the employability of some workers.** According to a report by the Ministry of Finance <sup>(20)</sup> the proportion of workers receiving the minimum wage had decreased from 16 % in 2005 to 6 % in 2011. The increases until 2014 put the coverage at 12.4 % of the employed, <sup>(21)</sup> while no estimations have been made for the legislated increases in 2015 and beyond. According to a study commissioned by the Ministry of Labour, <sup>(22)</sup> the majority of surveyed employers (around 60 %) do not consider the minimum wage as a significant factor for their hiring and firing decisions. However, the general result does not hold for all

<sup>(20)</sup> See Nikolova, A., N. Panayotova, 2013, Labour market, competitiveness and impact of minimum social security thresholds, Ministry of Finance

<sup>(21)</sup> Based on tax administration data, Ministry of Finance

<sup>(22)</sup> Survey on minimum wage and MSST, Ministry of Labour

regions, economic sectors and employee skill levels. For example, over 50 % of the surveyed employers in sectors intensive in low-skilled labour, like extractive industries, hotels and restaurants and energy sectors as well as those in the north-west region of the country consider the minimum wage growth as a factor for decreasing employment.

**Minimum wage increases are decided without following a mechanism based on relevant macro-indicators.** There are no clear guidelines for minimum wage setting in Bulgaria and there is lack of transparency and effective consultation with social partners. Consequently, the system creates uncertainty as to whether the right balance will be struck between the objectives of supporting employment and competitiveness on the one hand, and safeguarding labour income on the other.

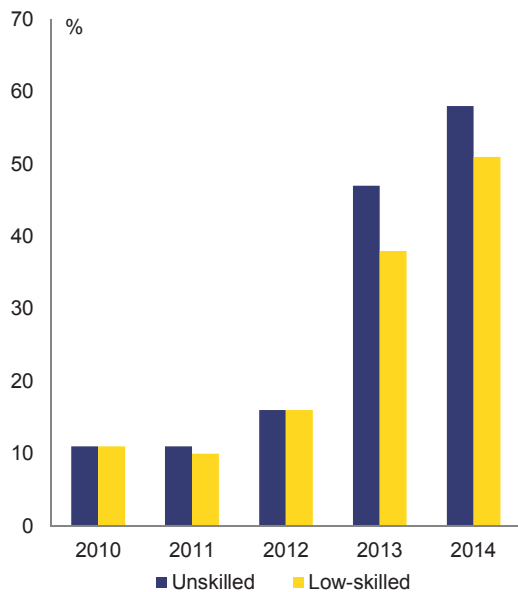
#### Minimum social security thresholds

**The system of minimum social security thresholds (MSST) and their increases in recent years may price the low-skilled out of the labour market and limit the options for labour market adjustment.** This system of MSST sets over 700 different minimum social security contribution levels, for about 85 economic sectors and 9 occupation types. Introduced in 2003, the system targeted combating the shadow economy and improving tax collection. MSST growth has broadly followed average wage growth. <sup>(23)</sup>

**MSST growth for the unskilled and low-skilled has been accelerated through administrative minimum-wage increases.** The rapid increases of the minimum wage have made it the MSST for the low-paid workers in most economic sectors (see Graph 2.3.4). Although thresholds are negotiated between social partners, the administrative increases of the minimum wage have replaced and actually invalidated this negotiation process for the lowest-paid workers, which were hardest hit by the rise in unemployment.

<sup>(23)</sup> One notable exception is 2009 when the average wage grew by around 10 %, while average MSST growth exceeded 25 %, as those were negotiated in late 2008 before the full effects of the crisis were realised. No adjustment to the MSST has been made since to correct for this misalignment.

Graph 2.3.4: **Number of sectors with minimum wage as the MSST**



Source: Ministry of labour, European Commission

**The current thresholds-setting process implies an element of regressive social taxation.** In the case of workers whose actual wages are below the relevant MSST, the burden of social security contributions is higher than the statutory rate for both the employee and the employer. This could *de facto* lead to a higher tax wedge for lower-paid labour. For instance, the minimum contributory income for agricultural producers was increased by 25% as of 1 January 2015, which will tend to increase the relative cost of social security contributions for lower-paid labour in the agricultural sector.

**A study commissioned by the Bulgarian Ministry of Labour and Social Policy recommends that MSST should be kept unchanged in economic sectors with a high concentration of low-skilled employees.** The survey was carried out in 2014 in response to the country-specific recommendation to evaluate the influence of MSST on employment, in particular of low-skilled people. It recommends keeping the annual negotiations between social partners on MSST indexation for sectors with high value added but to keep MSST unchanged in those with low-paid labour, as employment would otherwise be negatively impacted. The authorities' study

itself highlights some 'grey' practices in applying MSSTs, including: reassigning employees from positions with a higher MSST to positions with a lower MSST; declaring employees on part-time contracts; employing people on fictitious contracts (e.g. on a lower salary, with undeclared top-ups in cash); and undeclared work from employees without a labour contract.

**The Ministry of Finance has completed one study of the MSST system and is working on another.** Early results indicate that these thresholds do seem to have an impact on micro firms in two of the sectors examined — retail trade and the hotel and restaurant sector — while no such impact is observed in the third sector examined — transportation.

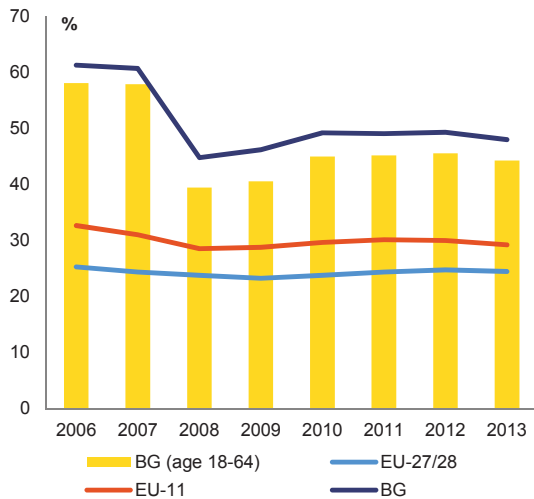
**Progress made in analysing the impact of MSST has not been translated into government policy.** Over the past two years, the government kept the unchanged the MSST for those cases when social partners did not reach an agreement. This policy was reversed in 2015, as the government applied administratively the average increase of 4.2 % to all sectors, where no agreement between the social partners could be reached.

### Social consequences of unemployment

**Joblessness has been identified as a major driver of poverty in Bulgaria** (see also the 2014 in-depth review). The proportion of the working-age population (people aged 18-64) at risk of poverty in Bulgaria is nearly twice the EU average (see Graph 2.3.5). However, the proportion of employed people who are at risk of poverty is below the EU average (see Graph 2.3.7), indicating that employment has a large impact on reducing relative poverty in Bulgaria. <sup>(24)</sup> Also, the risk of poverty for the unemployed people is considerably higher than for the retired and other economically inactive persons (see Graph 2.3.6). The creation of quality jobs is therefore of key importance to reduce poverty and social exclusion.

<sup>(24)</sup> The below-average in-work poverty results also from the very low median income, with 30% of the employed persons in Bulgaria still living in severe material deprivation, compared to 14% in EU-11.

Graph 2.3.5: **AROP**



AROP - People at risk of poverty or social exclusion  
**Source:** European Commission

**Since the crisis, labour market expenditure has mechanically shifted to passive measures as spending on unemployment benefits increased.**

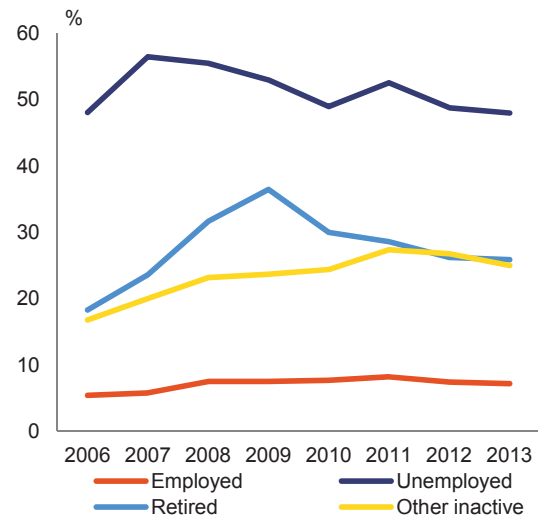
Expenditure on active measures was kept nominally flat, despite the increase in job losses and the duration of unemployment periods. In 2011, spending on active measures amounted to less than 0.2% of GDP. Expenditure on unemployment benefit increased since 2008 and this has acted as an automatic stabiliser following the deterioration of the labour market (see Graph 2.3.8).

**Improving the employability of young people not in employment, education or training (NEETs) remains a major challenge.**

In October 2014, a national agreement was signed between the authorities and relevant stakeholders to ensure the delivery of the Youth Guarantee implementation plan. The authorities are currently financing the recruitment of young NEETs at municipal level to help identify and reach out to non-registered inactive young people, to motivate and support them in finding a job or in taking part in training or education. The government has also recently selected non-profit organisations to set up youth centres providing information and advice. The Employment Agency has taken some steps to reach inactive NEETs: it organised job fairs and ensured the provision of targeted individual support services (e.g. psychological support). As

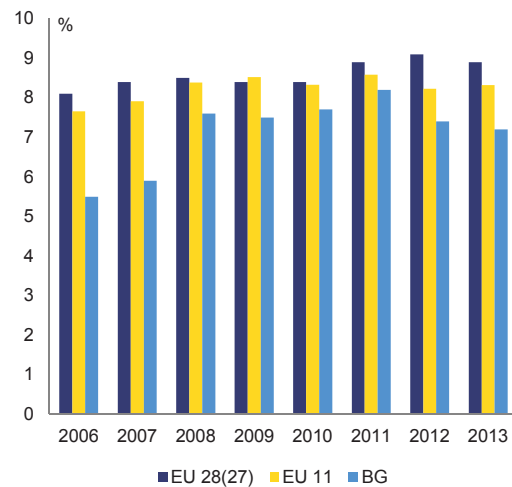
part of implementing the Youth Guarantee, the Employment Agency (EA) published a wide-ranging list of occupations and jobs offered by employers in response to the Youth Guarantee. Activation policies and other possible measures are discussed in more detail in section 3.2.

Graph 2.3.6: **AROP by employment status**



AROP - People at risk of poverty  
**Source:** European Commission

Graph 2.3.7: **In work AROP**

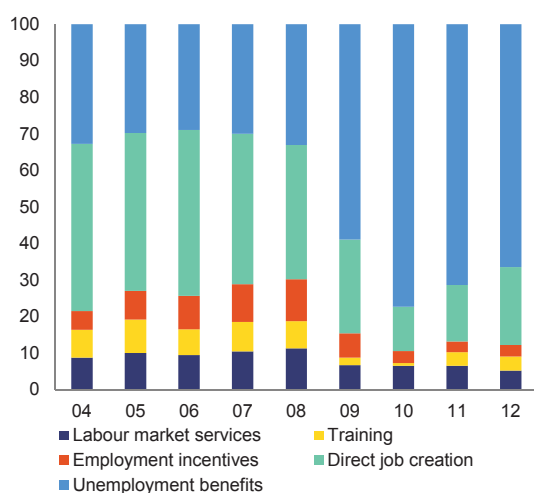


**Source:** European Commission

**Labour market policies supported by the European Social Fund have continued to play**

**an important role in Bulgaria.** Although absorption was low in the first years, reaching only 11 % in 2011, this has since increased, exceeding 75 % at the end of 2014. Labour market policies and the related issues of training and education are discussed further in section 3.

Graph 2.3.8: **Labour market policies ( % of total LMP expenditure)**



Source: European Commission

**Overall, the post-crisis labour-market adjustment is made even more difficult by the lack of adequate wage and social contribution setting systems, which continues to limit job creation and poverty resorption, and poses risks for the country's growth potential.**



### 3. OTHER STRUCTURAL ISSUES



## 3.1. TAXATION AND FISCAL FRAMEWORK

**Amid the deterioration in government finances in 2014, social pressures and contingent liabilities generated by unreformed sectors pose a threat to fiscal sustainability.** Structural reforms in key sectors, including pensions and healthcare, are necessary to ensure fiscal sustainability in the long term. In the medium term, several large state-owned enterprises in the energy and transport sectors appear to accumulate significant contingent liabilities for the government. In turn, poor tax compliance and significant tax evasion affect tax revenues. The 2014 country-specific recommendations for Bulgaria set out the need for measures to strengthen tax collection, reinforce the fiscal framework, ensure cost effective provision of healthcare services and implement a long-term strategy for the pension system.

### Fiscal sustainability

**Bulgaria's public finances do not appear to face major sustainability risks in the medium term.** Government debt (18.3 % of GDP in 2013, expected to rise to 30.3 % in 2016) is currently well below the 60 % of GDP Treaty reference value and is expected to remain below this, even if it continues to rise until 2030. However, based on current pension legislation and abstracting from likely changes due to low adequacy, the budgetary impact of population ageing may pose a challenge to long-term fiscal sustainability. The old-age-dependency ratio, measured as the proportion of people aged over 65 in the population aged 15-64 is expected to rise from 28.9 % in 2013 (EU-28: 27.8 %) to 58.4 % (EU-28: 50.1 %) by 2060<sup>(25)</sup>. It is therefore appropriate for Bulgaria to further contain growth in age-related expenditure to contribute to the long-term sustainability of public finances. Ageing costs comprise long-term projections of public age-related expenditure on pensions, health care, long-term care, education and unemployment benefits.

**Bulgaria has made no progress in the area of pension reform.** The new government has extended the freeze in the increase in the retirement age in 2015. There are still no plans to link the statutory retirement age to life expectancy in the long term and to equalise the retirement age

<sup>(25)</sup> See the 2015 Ageing Report 'Underlying assumptions and projection methodologies', European Economy No 8, 2014

for men and women. The phasing out of early retirement options has not begun. Similarly, no steps were taken towards tightening eligibility criteria and procedures to allocate invalidity pensions and in the first nine months of 2014, the number of people receiving invalidity pensions increased by 8.4 % compared to the same period in 2013.<sup>(26)</sup>

**The adequacy and sustainability of the pension system depend on reforms that incentivise and support longer and less interrupted working lives.** In 2013, the pensions provided to 1.2 million pensioners were found to be below the national poverty line.<sup>(27)</sup> The rate of people at risk of poverty or social exclusion among people aged over 65 is 57.6 %, the highest in the EU. The at-risk-of-poverty rate contributes significantly to this high level. The key drivers behind low pension entitlements are early retirement and short contributory periods. In 2013, the average age at which people received their pension for the first time was 56.2 years. Increasing the number of years spent in the labour market would help close the gender pension gap of 33 %<sup>(28)</sup> and reduce the high rate of people at risk of poverty and social exclusion among the over-65s. The rapid ageing of Bulgarian society is likely to aggravate the situation in the future.

### Health care systems

**The Bulgarian healthcare system faces several major challenges, including poor health outcomes, low funding and notable inefficiencies in the use of resources.** Life expectancy is considerably below the EU average and life expectancy at birth is among the lowest in the EU. The poor health situation highlights higher needs for healthcare and long-term care in the future. Bulgaria has the lowest public health expenditure per capita (2012, PPS) in the EU and a high share of private in total health expenditure (46 %) with disproportionately high levels of private expenditure for outpatient medical goods. A mapping of infrastructure investments and a clear

<sup>(26)</sup> According to the Bulgarian authorities.

<sup>(27)</sup> BGN 241 in 2013 (2014: BGN 251). Pensioners below the poverty line are entitled to a number of other benefits, most importantly energy assistance and free health insurance coverage.

<sup>(28)</sup> ENEGE Report: 'The gender gap in pensions in the EU' (2013), p. 48.

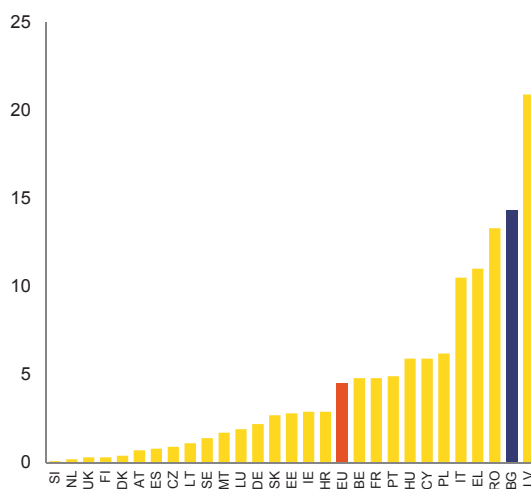
implementation plan for the National Health Strategy are still lacking and these have not progressed over the last year. According to estimates, between 10 to 20 % of the population are not covered by the National Health Insurance Fund, since they do not pay health-insurance contributions. <sup>(29)</sup> This is also linked to non-participation in the labour market (e.g. for Roma people, among others) and places a large burden on the system.

**The healthcare system fails to address the issues of equitable access.** Unmet medical needs for cost reasons for the lowest-income quintile of the population in Bulgaria are the second-highest among EU Member States (see Graph 3.1.1). In addition, the incidence of bribery and informal payments in Bulgaria are above the EU average. <sup>(30)</sup> Given that the private cost of healthcare is already a substantial barrier to equitable access, this particularly jeopardises access for the most disadvantaged population groups. Administrative capacity in the healthcare sector needs to be strengthened to enable appropriate strategies to be designed, programmes to be implemented and high-quality projects to be delivered, therefore improving Bulgaria's ability to obtain results from its investment in healthcare.

**The health-insurance fund is accumulating deficits due to non-payment of health contributions and administrative pricing practices in healthcare services.** The system continues to be based on an oversized hospital sector. Although funding of primary and outpatient care has slightly gained significance in nominal terms in recent years relative to the hospital sector, it is still quite limited (see Graph 3.1.2). Acute hospital capacity widely exceeds the EU average (In 2009, there were 5.2 acute-care beds per 1000 inhabitants compared to 3.7 in the EU). The annual budget of the healthcare fund was increased in July 2014 by EUR 130m. Similar ad hoc increases have also taken place in previous years, suggesting a systemic problem with growing deficits in the healthcare fund which risks becoming a structural feature. The healthcare fund is contractually obliged to reimburse hospitals for treatments at

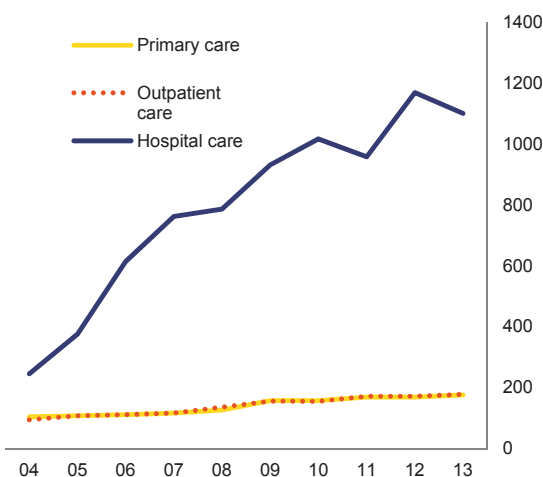
predefined prices, potentially incentivising hospitals to provide inadequately targeted or even unnecessary medical care (see Graph 3.1.3). In primary care, funding and referral systems may exacerbate noted informal payment practices.

Graph 3.1.1: Unmet medical needs "too expensive" (% of respondents)



Source: European Commission

Graph 3.1.2: Developments in health sector financing in Bulgaria (million BGN)

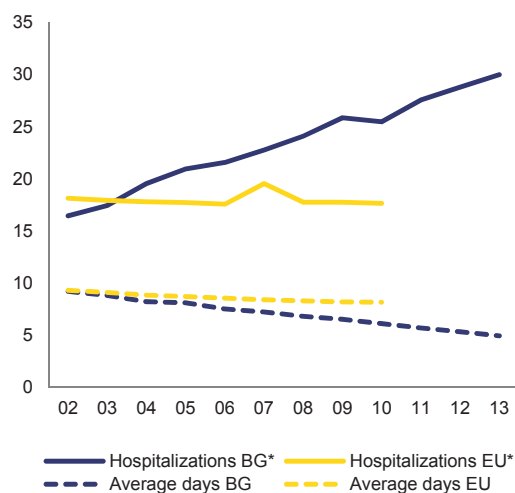


Source: Ministry of Finance

<sup>(29)</sup> World Bank (2013), 'Mitigating the economic impact of an aging population'.

<sup>(30)</sup> 'Study on corruption in the healthcare sector', HOME/2011/ISEC/PR/047-A2, October 2013.

Graph 3.1.3: **Structural indicators in the hospital sector**



\* per 100 of population

Source: European Commission

**Bulgaria has no integrated long-term care (LTC) system and is one of the EU Member States with the lowest long-term care expenditure as a share in GDP.** LTC services are dispersed among the health and social care systems, with different eligibility criteria. The availability of care services is inadequate, particularly for home-care services. As a consequence, care often has to be provided by family members (mainly women) with potentially negative effects on their labour market participation. In January 2014, the government adopted a national strategy for long-term care to expand such services, shifting from institutional to community-based care, strengthening coordination between health and social care and improving support measures for family carers.

## Taxation

**Improving tax collection continues to be a major challenge in Bulgaria.** The tax system as such does not entail major issues for the Bulgarian economy. The tax mix by economic function is rather favourable to growth, as the tax structure is skewed towards consumption, while receipts from labour and, in particular capital, are well below the EU average. Revenue from recurrent property taxes<sup>(31)</sup> and environmental taxes (other than on transport fuels), both of which are among the taxes

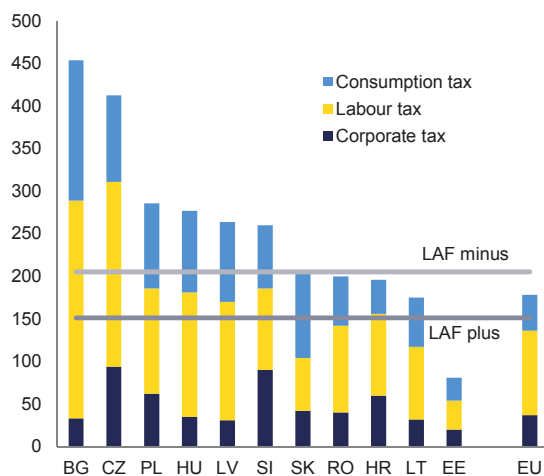
that are least detrimental to growth, are below the EU average. The overall tax burden is also below the EU average, but there is considerable scope for improving tax collection. Bulgaria faces the challenge of increasing revenues without impairing growth prospects, by improving tax compliance and further fine-tuning its tax revenue composition.

**High tax compliance costs are one of the main challenges for Bulgaria's business environment and improving the efficiency of tax administration is key.** Despite the relatively low tax burden, the tax collection system in Bulgaria creates one of the highest tax compliance burdens in the EU for small and medium-sized enterprises (SMEs). This is one of the key bottlenecks preventing more dynamic development of the business environment. The number of hours per year spent on tax compliance is very high in Bulgaria (454 hours/year vs. an EU average of about 189, see Graph 3.1.4), as is the number of tax payments required over a year from a standardised business.<sup>(32)</sup> Similarly, the administrative cost per net revenue collected is high in Bulgaria, in particular when compared with other EU Member States that have a flat-tax system (e.g. Estonia and Latvia). Taxpayers' use of systems to e-file tax returns for corporate income tax and personal income tax remains low, while prefilling services offered by the tax authorities are limited. Some improvements can be expected in 2015 with facilitated access to the electronic service being provided by the National Revenue Agency.

<sup>(32)</sup> PwC — Paying Taxes 2014: <http://www.pwc.com/gx/en/paying-taxes/assets/pwc-paying-taxes-2014.pdf>.

<sup>(31)</sup> See 'Taxation trends in the European Union', 2014 ed.

Graph 3.1.4: **Administrative burden of tax systems for a medium-sized company (2012)\***



**Source:** PricewaterhouseCoopers, the World Bank and the International Finance Corporation.

\* A country's performance is considered to differ significantly from the EU-28 average if it is further from the average than the 'LAF minus' point. The 'LAF minus' point is determined using the average and the standard deviation, so as to capture the dispersion of the distribution, and on the assumption of a normal distribution. The 'LAF minus' point is then set such that the countries below this point (or above, if high values of a particular variable indicate negative performance) are in the bottom third of the distribution, assuming a normal distribution. All averages are GDP-weighted unless otherwise indicated.

**Tax compliance continues to be an important issue in Bulgaria.** While it is difficult to obtain reliable estimates of tax evasion, the value of the non-observed economy, which is a rough proxy for the compliance gap, seems considerable in Bulgaria (13.4 % of GDP in 2011, according to the National Statistical Institute, 2011). The VAT gap as a share of the theoretical VAT liability has been estimated recently at 20 % (the 11th highest in the EU).<sup>(33)</sup> The discrepancy between the tax wedge on labour (calculated on the basis of the legal tax obligation) and the implicit tax rate on labour (calculated on the basis of actual tax receipts) also indicates a high level of concealed earnings. Efforts to reduce the shadow economy may involve addressing the tax burden for low-income earners, as shown by other Member States' experience.

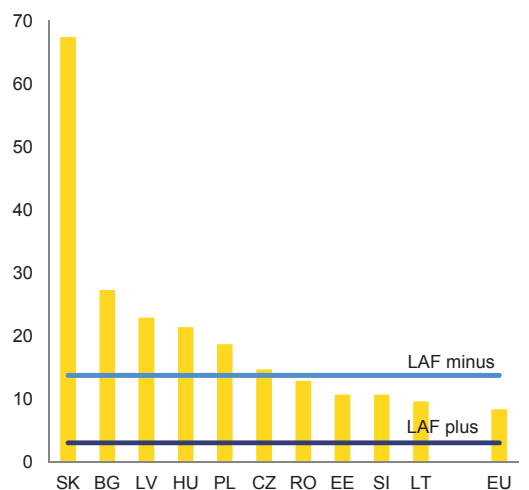
**Recovery of unpaid taxes poses a challenge for the administration.** In order to ensure that the tax

due is collected, it is essential to have an effective system in place for collecting tax debt. Based on the analysis by the OECD (2013), debt collection, as measured by the level of undisputed tax debt as a proportion of net revenue, seems to be a pressing issue in Bulgaria (see Graph 3.1.5). This may be due to the fact that Bulgaria has a low level of write-offs — at least for VAT arrears — indicating that the tax authorities risk wasting resources pursuing amounts which cannot be recovered at a reasonable cost.

**Bulgaria is lacking a comprehensive tax compliance strategy.** In 2014, Bulgaria introduced further legal amendments to improve tax compliance. It clarified the rules for collecting taxes levied on excise goods to close legal gaps, reduced unnecessary administrative burdens, and tackled cases of abuse and tax fraud, in particular relating to energy and tobacco products. Attempts made to date to improve tax compliance mainly translate into frequent legislative changes, which often contradict each other or require unplanned investment by businesses (e.g. the installation of additional control devices), and thus create uncertainty for businesses. In turn, the lack of improvement in revenue collection seems to indicate issues with enforcement of tax legislation. Current efforts appear scattered and links between tax assessment/filing, tax collection and, subsequently, risk assessment and tax audits have not been sufficiently explored. Strengthening the risk assessment, audit and IT capacity in the tax administration could help sustain improvements in the efficiency of tax collection. A comprehensive tax compliance strategy would imply a coordinated approach to risk management and cooperation between tax, customs and law enforcement authorities, including judicial follow-up.

<sup>(33)</sup> Tax reforms in the EU Member States: 2014 Report, European Commission.

Graph 3.1.5: **Undisputed tax debt as a percentage of net revenue (2011)**



\* RO 2009  
Source: OECD

#### **Reliance on recurrent property tax is limited.**

Receipts from property taxes, which offer a stable tax yield and are considered to have little distortionary impact on growth, currently amount to only 0.3 % of GDP in Bulgaria (compared to an EU average of 1.5 %). Given the low levels of recurrent taxation of immovable property, an increase in the revenues from recurrent housing taxes could create room to shift taxation away from more distortionary taxes.

**Environmental tax rates are low.** Relatively high environmental tax revenues (2.8 % of GDP compared with an EU average of 2.4 % in 2012) are due to the high energy intensity of the economy and energy taxation rather than the environmental targeting of the tax system (the share of revenues from pollution taxes are below the EU average). However, the implicit tax rate on energy — measuring energy taxation per unit of energy — is low in Bulgaria, reflecting low energy efficiency against relatively low tax rates for energy sources. Taxation rates for some of the main energy products, in particular motor fuels, are below the average in the EU.<sup>(34)</sup> Simultaneously, weak indicators relating to air quality and waste management suggest that the current levels of taxation may not be an adequate

<sup>(34)</sup> Bulgaria applies the lowest excise duty rates in the EU to unleaded petrol and gas oil used as propellants, the rate for the latter being at the EU minimum level.

incentive to cut air pollution or to reduce landfill and increase recycling. Proper implementation of existing environmental taxes based on the ‘polluter pays’ principle, including on air pollution, landfilling and energy sources could help change taxpayer behaviour and contribute to achieving environmental goals. Offsetting, at least partially, the increase in energy taxation with resource efficiency measures could keep the overall costs for energy consumers down and reduce high energy bills for end users. Fiscal framework

#### **The reinforcement of the Bulgarian fiscal framework stalled during 2013-14.**

The currently incomplete fiscal framework was not effective in avoiding fiscal slippages in 2014. While a new public finance law came into force in January 2014 as planned, some related secondary legislation was delayed during 2013-14, in particular on the ‘fiscal council’ and the ‘correction mechanism’. The Public Finance Act required the government to submit a proposal on setting up an independent body, the ‘fiscal council’, to parliament by mid-2013. The fiscal council’s mandate would include monitoring national numerical fiscal rules. The legislative process was delayed in 2014 due to the change of government and extraordinary parliamentary elections. The new government has restarted the legal process setting up the fiscal council and defining the ‘correction mechanism’ for the structural balanced-budget rule. Parliament is scheduled to debate the relevant legal act in 2015, well after the deadline for transposing Council Directive 2011/85 on requirements for budgetary frameworks and the Fiscal Compact to which Bulgaria is bound. It remains to be seen the extent to which the new institution will, in practice, be given functional autonomy and adequate resources to effectively carry out its mandate.

#### **Analysis in this section suggests that the policy challenges identified in last year’s staff working document remain broadly valid.**

In particular, the incomplete fiscal framework, the unreformed healthcare sector, the lack of adequacy in the pension system, poor tax compliance and significant tax evasion raise concerns over fiscal sustainability.

## 3.2. LABOUR MARKET MEASURES, EDUCATION AND SOCIAL PROTECTION

**As economic growth is still insufficient to support substantial job recovery in Bulgaria, the labour market continues to be an area of serious concern.** The negative effect of the crisis on employment has not been confined to traditionally vulnerable labour market groups. Most of the country's unemployment is long-term, underlining that unemployment in Bulgaria is more structural than cyclical. With 57 % of the unemployed in long-term unemployment, there is a risk that their employability will be reduced. As a result, adaptation to and reintegration into the labour market will require more resources and support. <sup>(35)</sup> School-to-job transition is still slow. The insufficient quality of education and training systems and their limited relevance to the labour market hampers the supply of a suitably-skilled labour force to the economy. Increased emigration by highly qualified professionals adds to existing labour market challenges in the medium and long term, particularly considering Bulgaria's demographic situation. <sup>(36)</sup> Integration of Roma people into the labour market, and their social inclusion in general, remains limited. This becomes a growing concern going forward as demographic trends point to a quickly growing share of Roma in total population. In view of the projected rise in the population share of Roma <sup>(37)</sup>, better integration policies will become increasingly important also from an overall employment and growth perspective.

### Active Labour Market Policies (ALMP)

**Bulgaria is facing a rate of young people who are not in employment, education or training (NEETs) that is well above the EU average:** 21.6 %, compared to an EU average of 13 % in 2013. A significant proportion of this group has been long-term unemployed (43 %). In addition, Bulgaria has the highest proportion of young NEETs who are not in touch with the employment services and thus are outside the scope of standard labour market activation measures. This can, at least partially, be attributed to the strict eligibility

criteria for unemployment benefits and social assistance for people without employment experience. At 14.3 %, the proportion of inactive NEETs is more than twice the EU-28 average (6.1 %). The proportion of NEETs among Roma is extremely high, at 61 %, calling for targeted efforts under the Youth Guarantee scheme. <sup>(38)</sup> More than 60 % of people aged under 29 who have registered as unemployed do not have any professional specialty or any professional qualifications. As a result, their labour opportunities are limited to low-qualified jobs unless they take part in relevant education or training.

**Active labour market policies remain insufficiently developed both in terms of coverage and targeting** those most in need, including Roma. As a proportion of GDP, ALMP spending in Bulgaria is considerably lower than in the pre-crisis years, while it has increased in peer EU-10 countries (see Graph 3.2.1). In addition, the links between the Public Employment Service (PES) and employers are deficient. According to the recently-announced results of the net-impact evaluation of the ALMP programmes and measures (September 2014), the most successful programmes and measures are those aimed at young people with secondary or higher education. However, the activation of registered unemployed people was one of the lowest in the EU, at 6.5 % in 2012. Key factors include an effective performance monitoring system and a fine-tuned targeting of the most vulnerable people, such as low-skilled and elderly workers, people with disabilities, the long-term unemployed and Roma people are important challenges.

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<sup>(38)</sup> FRA Roma Survey, 2014.

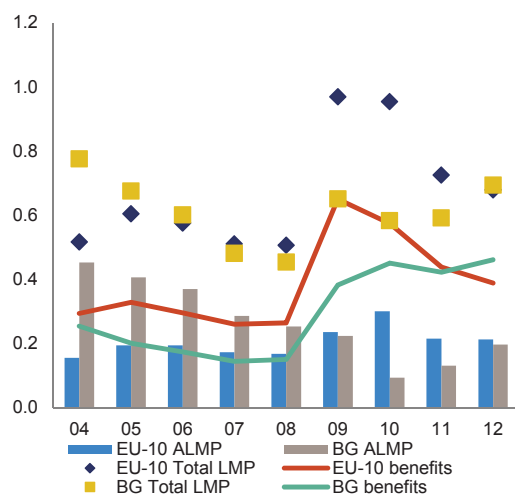
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<sup>(35)</sup> 'The new EU economic governance and its impact on the national collective bargaining systems', *Fundación 1º de Mayo* 2014.

<sup>(36)</sup> See *Gesellschaft für Versicherungswissenschaft und -gestaltung e.V.* 'Social Impact of Emigration and Rural-Urban Migration in Central and Eastern Europe', 2012.

<sup>(37)</sup> World Bank: "Roma Inclusion: An Economic Opportunity for Bulgaria, Czech Republic, Romania and Serbia. Policy Note", 2010.

Graph 3.2.1: Labour market policies



Source: European Commission

**Financing remains heavily dependent upon the European Social Fund.** Capacity for implementing activation policies has been considerably affected by the substantial cuts in staff in recent years, despite the large increase in long-term unemployment. A large, and increasing, caseload hampers provision of high-quality support to jobseekers. The appropriate institutional coordination and integration between various employment offices is lacking. The coordination between the employment offices and the social assistance directorate is not geared towards an efficient and integrated delivery of measures towards the most vulnerable. The EA has limited engagement with the primary labour market, with jobseekers being more likely to be referred to subsidised employment and only limited access being provided to information on more sustainable jobs. However, the EA has pro-actively approached the PES network to seek advice and is now considering recommendations to improve its performance via performance monitoring and better service targeting.

**The fragmentation of agencies providing labour market integration and benefits and social assistance services to unemployed and inactive people persists.** There are at least five different agencies in charge of the needs of vulnerable people. This fragmentation represents a major challenge for delivering benefits and services to Bulgaria's unemployed and inactive people. In

addition, cooperation between employment offices, social assistance directorates and municipalities is focused on administrative functions and rule enforcement, rather than on improving labour market inclusion and promotion by focusing on the needs of specific target groups or difficult cases. A European Social Fund pilot project, at municipal level, aims to regroup labour and social services in order to provide a more integrated service.

**Rather strict eligibility criteria<sup>(39)</sup> contribute to the low coverage of unemployment benefits, with those not receiving any benefit being also not easily reached by activation measures.** Coverage of unemployment benefits is among the lowest in the EU, more than three times lower than the EU average (9.4 % vs. 30 % according to Labour Force Survey), while net replacement rates are very low after 12 months (13 % compared to an EU average of 38 %). As a result, the non-coverage rate of jobless poor is the third highest in the EU at 49 %. In comparison with other countries, Bulgaria has relatively strict entitlement conditions, though it is not one of the strictest with regard to requirements relating to previous employment, contribution periods or sanctions for voluntary unemployment.<sup>(40)</sup> The lack of access to unemployment insurance is also exacerbated by the large informal sector.<sup>(41)</sup>

**The low levels of unemployment benefit coverage can be partly attributed to changes in the composition of the unemployed population.** As the unemployment benefit system is mainly focused on unemployment periods of up to one year and full-time employees who were previously insured, certain groups of people, such as young people without an insurance history, long-term unemployed people and part-time or seasonal workers are not eligible for benefits. In turn, the lack of adequate income support for these groups

<sup>(39)</sup> The following conditions are required: registration at a local employment office; being insured with the State Social Security for at least 9 months in the previous 15 months; and willingness to accept a job or training offered. According to changes in the law in 2011, registration must be made within seven days. The aim of this activation measure was to shorten unemployment spells. However, given the large number of dismissals and high caseload of employment office staff, this formal administrative procedure has not had the expected results.

<sup>(40)</sup> Venn, 2012, OECD.

<sup>(41)</sup> Packard, Truman G., Johannes Koettl, Claudio Montenegro 'In from the Shadow: Integrating Europe's Informal Labour', World Bank, 2012.

exposes a large proportion of unemployed people to a high risk of poverty.

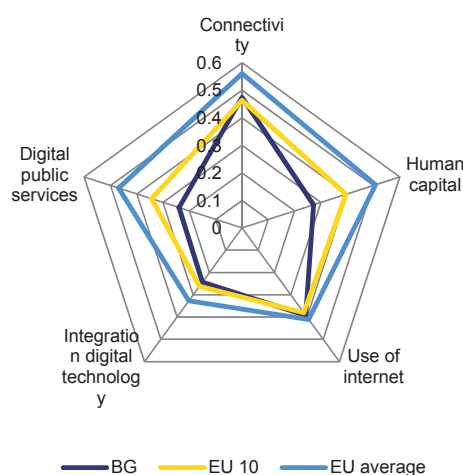
### Education and Skills

**Improving the overall quality of the education system remains a challenge.** Although the 2012 PISA results improved, Bulgaria was again the worst performer in reading and mathematics and the third-worst performer in science, with students from non-profiled general education and vocational education and training (VET) schools doing particularly poorly. This outcome should be seen against the backdrop of a very low level of annual expenditure per pupil, around 40 % of the EU average when measured in Purchasing Power Standards. The poor quality of the learning environment — in particular, the outdated infrastructure and limited work-based learning — results in a high proportion of early school leavers in VET schools. Challenges include allowing for flexible pathways between VET and general education and ensuring effective coordination mechanisms in implementing projects.

**Persistent skills mismatches in the labour market are linked to unresponsive education and training systems.** Although Bulgaria's tertiary education attainment improved to 29.4 % in 2013, higher education faces continuing challenges in responding better to labour market needs. A joint OECD/European Commission review in 2014 on the promotion of innovation and entrepreneurship in higher education identifies institutional reforms in the management of universities as key to a more innovative higher education in Bulgaria. Employment among young graduates was only 67.3 % in 2013 and data from the Bulgarian university ranking system reveal that approximately half of tertiary students are concentrated in 6 out of 52 professional fields,<sup>(42)</sup> while there is a shortage of specialists in key sectors. For instance, a 2013 survey by the Chamber of Commerce highlighted that, whereas almost 2/3 of employers demand engineering specialists, the actual output of certified engineers by higher education institutions results in a gap. Similarly, according to the 'e-Skills 2020 Europe' report for 2014, the demand for software

specialists is three times higher than the supply from educational institutions.<sup>(43)</sup> Despite the increase in importance of digital skills for the workforce and the society at large, digital skills in the overall population are particularly low. In Bulgaria, 66 % of the population have low or no digital skills. In the workforce, this is marginally better, but, at 61 %, is still much higher than the EU average. Bulgaria performs badly in the human capital dimension because of a lack of digital skills at all levels from basic users to ICT professionals (Graph 3.2.2). Skills mismatches eventually mean that graduates take jobs in which their educational qualifications and skills are under-used. The incidence of over-education increased in Bulgaria from 7.1 % in 2008 to 12.9 % in 2012; during the same period the incidence of under-education fell from 23.4 % to 15.3 %.<sup>(44)</sup>

Graph 3.2.2: Digital Economy and Society Index



Source: European Commission

**Adult participation in lifelong learning (LLL) in Bulgaria is the lowest in the EU (1.7 % compared to an EU average of 10.5 % in 2013).** Increasing the availability of traineeship and apprenticeship schemes, in particular for emerging business sectors identified with business partners, is also vital. This partnership with businesses would help to meet the immediate demand from the labour market for specialists in particular

<sup>(42)</sup> Economics; Administration and management; Law; Communication and Computer Technology; Pedagogy; Tourism.

<sup>(43)</sup> The authorities have adopted a strategy for the effective implementation of ICT in education (2014-20).

<sup>(44)</sup> For the ILO definition of 'over-education', see 'Skills mismatch in Europe', 2014.



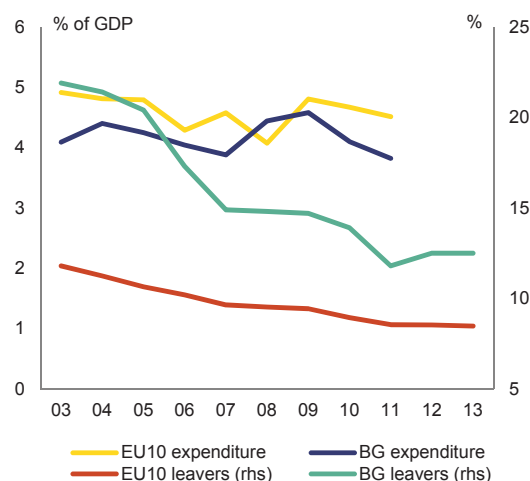
sectors with a lower level of professional qualifications. Following the adoption of the LLL strategy in 2014, the authorities are developing an action plan and a database with statistics on adult learning, a coordination system of lifelong learning stakeholders at national, regional and municipal level, and a system to identify and recognise non-formally acquired knowledge, skills and competences.

**Important challenges exist in regard to the provision of inclusive early childhood and school education for disadvantaged children, in particular Roma children.** The percentage of children aged 3-6 enrolled in kindergartens increased from 73 % in 2007 to 84 % in 2014, but participation in pre-school education is still below the EU average and is particularly low among socially disadvantaged groups. Survey and census data suggest that only about 42 % of Roma children aged 4-7 are enrolled in pre-school or kindergarten and 23.2 % of Roma children aged 7-15 are outside the educational system. The early school-leaving rate was 12.5 % in 2013, slightly above the EU-10 average (see Graph 3.2.3), with little progress towards meeting the national target of 11 % and 85 % of Roma students leaving school early. According to the European Union Agency for Fundamental Rights report on education<sup>(45)</sup>, the share of Roma children of compulsory school-age not attending school was 12 % in 2010/2011, and 9 % of Roma aged 16 and above have never been to school (against negligible levels in both cases for non-Roma). The report also indicates that many Roma attend *de facto* segregated school classes (more than 25 % in Bulgaria). According to the authorities, the monthly family allowance for children has been linked to regular school attendance (including compulsory pre-school education); <sup>(46)</sup> however, it is not yet clear that the measure has had a significant impact on school attendance among vulnerable children. In 2013/14 there was a decrease in enrolment in primary and lower-secondary education (National Statistical Institute data).

<sup>(45)</sup> FRA (2014), Education: The situation of Roma in 11 EU Member States..

<sup>(46)</sup> Following the amendment of the Law on Family Allowances in 2013.

Graph 3.2.3: Education spending and early school leavers



Source: European Commission

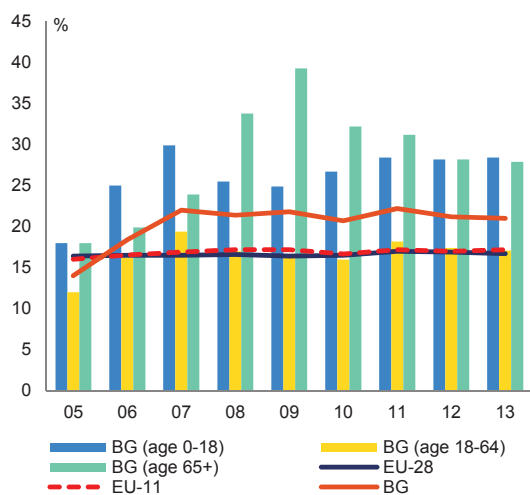
**Some steps are being taken to improve the labour market relevance and quality of education.** Amendments were made to vocational education and training (VET) legislation in July 2014 and to the VET strategy in October 2014. These aim to ensure the quality of VET, validate non-formal and informal learning and improve forms of work-based learning. Changes have been made to the legislation on the provision of internships and work is ongoing to adapt curricula to better meet labour market needs. A recently-adopted strategy on higher education (October 2014) includes measures to set up an agency to forecast labour market needs, an accreditation process in line with the rating of European universities and an improved government financing system for universities. Strategies on professional development for teachers and school leaders and on increasing literacy were adopted in 2014. However, Bulgaria has still not adopted the School Education Act after years of delays, and the implementation of the strategy on early school leaving — in particular the creation of an early-alert mechanism — is still at an early stage.

### Social Protection, Poverty and Social Exclusion

**Poverty and social exclusion remain a particular concern for Bulgaria, together with high levels of income inequality.** Bulgarian citizens still face the highest risk of poverty or social exclusion in the EU (48 % in 2013, almost

twice the EU average of 24.5 %).<sup>(47)</sup> Particularly worrying are the high at-risk-of-poverty rate among Roma (87 %) <sup>(48)</sup> and the high rates of poverty and social exclusion for children (51.5 % in 2013) and elderly over 65 (57.6 % in 2013) In addition to high levels of income poverty, severe material deprivation is a particularly important factor in Bulgaria, standing at 39.9 % in 2013 (EU average: 10 %, see Graph 3.2.4). Recent data also show an increase in income inequality (as measured by the S80/S20 indicator) by 0.5 pp. between 2012 and 2013. With the income share of the top 20 % being more than six times higher than that of the bottom 20 %, Bulgaria is among the EU Member States with the highest score on this measure. Energy poverty is a particular problem, with 67 % of the population limiting heat in the winter due to lack of money (the EU average is 8 %; EU-SILC data). However, only 13 % of households below the poverty line received assistance <sup>(49)</sup> in winter 2012/13, due to strict eligibility criteria.

Graph 3.2.4: Severe material deprivation



Source: European Commission

**An important reason for the high risk of poverty is the poor effectiveness of the social protection system** (see Graph 3.2.5). Total

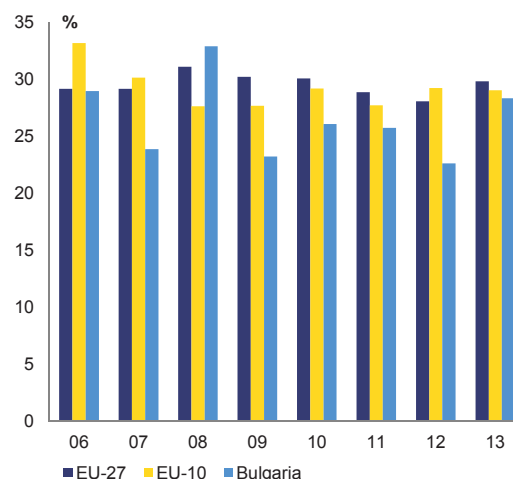
<sup>(47)</sup> The recent decrease in the number of people at risk of poverty (104 000 fewer in 2012 than in 2008) is almost exclusively due to a decrease in the population.

<sup>(48)</sup> European Union Agency for Fundamental Rights, Roma Survey, 2014.

<sup>(49)</sup> The government provides a heating allowance for the most vulnerable.

spending on social protection stood at 17.4 % of GDP in 2012 (EU-28 average: 29.0 %). The coverage and adequacy of social transfers, <sup>(50)</sup> the quality of social services and access to these are all low. In particular, a significant proportion of unemployed people are not covered by standard safety nets (unemployment benefits and social assistance) and tend to rely on family support or informal work. Job creation is therefore key to reducing poverty and social exclusion, but adequate income support and access to ALMP measures is also required for unemployed people.

Graph 3.2.5: Reduction in the risk of poverty after social transfers



Source: European Commission

**Social assistance schemes are still ineffective in supporting the inclusion of those furthest from the labour market.** Means-tested benefits have not increased noticeably since the crisis, unlike non-means-tested ones. In particular, the coverage of the general minimum income (GMI) is low. <sup>(51)</sup> As a result, a growing number of unemployed and inactive people are not eligible for unemployment benefits or for GMI, and therefore have no incentive to register with the employment offices, which leads many of them to face poverty and social exclusion. Possible explanations for this include the strict eligibility thresholds and the lack of indexation rules for those thresholds. In

<sup>(50)</sup> Bulgaria is the country with the third-least effective social transfer system in the EU (as measured by the SPPM indicator on the efficiency of social protection spending)

<sup>(51)</sup> 6 % according to the World Bank; see also the IMF Country Report, 2014.

addition, eligibility for GMI requires that a person has been registered with the employment office for at least 6 months. Although this waiting period has been reduced from the previous 9 months, this is contrary to the principle that social assistance should be a safety net of last resort. In addition, all GMI beneficiaries have to participate in community work on a part-time basis. This condition was tightened in 2010, with an increase in the amount of working time required.

**Bulgaria has not adopted (or planned) any measures or new legislation to increase social assistance's effective coverage or increase its link with activation measures.** Efficient provision of adequate social benefits also requires the development of sufficient administrative capacity to manage them, including planning and coordinating the institutions involved, and systems to monitor effectiveness and efficiency.

**Children continue to face a high risk of poverty and social exclusion** (51.5 % in 2013), with 46.3 % of the population aged 0-17 living in severe material deprivation. Low work intensity appears to be the main factor affecting poverty for households with children.<sup>(52)</sup> The lack of access to early childhood education services especially among the poorest families, comparably high out-of-pocket fees to be paid by parents, and low wages act as work disincentives for lone parents and low-skilled second earners. Pension payments contribute substantially to the income of households with children, given that the other social transfers are rather ineffective in lifting families out of poverty. Although the process of de-institutionalisation of children in care has continued, a particular challenge remains to ensure the financial sustainability of the newly-developed services when the European Structural Funds support ends. Much remains to be done on preventing child abandonment and promoting good-quality alternative family and community-based services.

**The challenge of the integration of Roma people also remains.** Roma people face an extremely high risk of poverty and social exclusion (87 %), which

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<sup>(52)</sup> Use of childcare services for children aged 0 to 2 stood at 8 % in 2012 (EU-28: 28 %), with particularly low participation rates for children from households in the poorest income quintile (EU-SILC 2011).

is only partially linked to unemployment, with three quarters of working Roma suffering from in-work poverty. Poverty among Roma is exacerbated by a lack of basic housing amenities.<sup>(53)</sup> Antidiscrimination campaigns, communication activities on Roma integration, and monitoring and fighting discrimination in the labour market are still undeveloped. Some efforts have been made to activate local actors on Roma integration. However, the implementation of the Roma integration strategy would require more systematic measures in mainstream housing, healthcare, education, employment, and anti-discrimination policies at national and local levels. Although steps have been taken towards setting up a national monitoring system to assess the impact of measures on the Roma, the fact remains that very few measures have been implemented specifically to further the integration of the Roma population in society. It remains to be seen if the National Roma Contact Point will be provided with an adequate mandate and resources appropriate to its role, so that it can effectively coordinate the cross-sectorial implementation and follow-up of the National Roma Integration Strategy.

**The analysis in this section suggests that the policy challenges identified in last year's staff working document remain valid.** In particular, insufficient targeting of education and training practices, limited active labour market policies and poor activation of non-registered young people, and lack of integration of Roma people into the labour market have a negative impact on labour market participation, employability and poverty levels.

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<sup>(53)</sup> 51 % of Roma people live without water, sewage or electricity, while 28 % do not have a toilet, kitchen or bathroom in the house; source: FRA Roma Survey, 2014.

### 3.3. BUSINESS ENVIRONMENT, PUBLIC ADMINISTRATION AND JUDICIARY

**Broad economic reforms to spur competitiveness and productivity can help Bulgaria unlock its growth potential.** Bulgaria's growth model relies heavily on foreign direct investment (FDI). However, FDI flows have fallen significantly since the crisis. This could have a negative long-term impact on growth, particularly because investment in research and development (R&D) is low and companies depend largely on imported technology. Creating a business environment conducive to investment, research and innovation, increased energy and resource efficiency and improvements to safe and efficient transport infrastructure would contribute significantly to growth potential. A well-functioning judicial system is also an essential element of a healthy, supportive and competitive business climate. The 2014 country-specific recommendations for Bulgaria addressed the need for structural measures promoting growth and competitiveness, particularly in the areas of business environment, public sector administration, justice and energy.

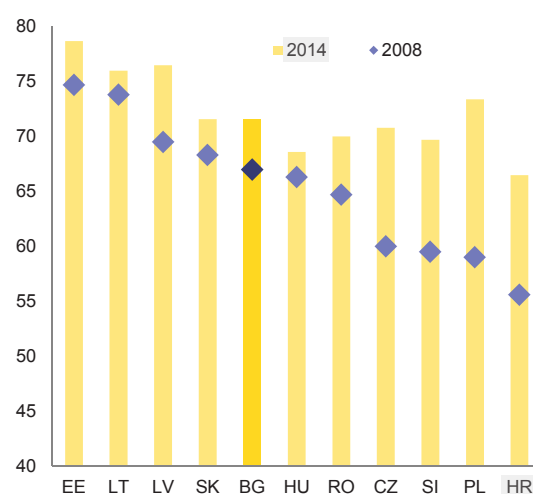
#### Business Environment

**Bulgaria faces significant challenges in creating a business environment conducive to growth.** According to the World Bank's 'Doing Business' report 2015, Bulgaria ranked 38th in the global ranking on ease-of-doing business and lies in the EU-10 mid-range (Graph 3.3.1). Despite progress in lowering the cost of starting a business, key challenges remain in respect of obtaining access to electricity and construction permits, the time needed to register a business and paying taxes. The fragmented institutional set-up and the rapidly changing governance arrangements for the business environment are major bottlenecks and are responsible for a lack of continuity and efficiency in the implementation of business-friendly policies. In addition, the complex regulatory environment and the significant red tape in public sector administration impact negatively on the business climate. Regulatory restrictions on telecommunications and professional services subsectors are relatively high in Bulgaria, even when compared to regional peers. <sup>(54)</sup> Enabling more competition in sectors that serve as inputs to medium- to high-tech industries, would be key to

<sup>(54)</sup> According to the World Bank Services Trade Restrictiveness Index (STRI) database.

Bulgaria increasing its proportion of higher value-added exports.

Graph 3.3.1: Doing business for EU10



Source: IMF Doing business

**The insolvency framework appears ineffective, increasing uncertainty among market participants and reducing the country's overall attractiveness to investors.** According to the Doing Business indicators, handling insolvencies takes longer than in neighbouring countries, over three years, and the recovery rate of claims is less than one third of the sum due (significantly lower than the OECD average). The number of insolvencies increased considerably in Bulgaria in recent years, but in absolute numbers is significantly lower than the number of insolvencies recorded in neighbouring countries. A possible explanation for the relatively small number of insolvencies could be the ineffectiveness of insolvency proceedings, which makes creditors and debtors more likely to engage in informal negotiations. <sup>(55)</sup> The lack of transparency in these arrangements leads to uncertain outcomes for the actual rescue of companies. The need for an efficient framework for handling insolvencies should also be seen in the light of the high indebtedness of non-financial corporations in Bulgaria, as highlighted in section 2.2 above.

<sup>(55)</sup> In a ranking of the overall efficiency of pre-insolvency frameworks (based on Insol external study), Bulgaria scores the lowest in the EU. Bulgaria's poor performance is a combination of very limited opportunities to restructure debt to sustainable levels and a lack of incentives for debtors to enter pre-insolvency procedures.

Quick resolutions of insolvency cases can have a positive impact on the economy by, for example, providing clarity on debtors' rights that could pave the way for future investments.

**Businesses in Bulgaria are lagging behind in integrating digital technology in their processes and sales channels.** In 2014, cloud computing services were used by just 8 % of Bulgarian businesses, compared to the EU average of 19 %, and only 7 % of companies used social media for internal collaboration and to reach customers (compared to an EU average of 14 %). Just 8 % of large companies sold products and services online in 2014, significantly below the EU average of 35 %. SMEs were even less active online, with 6 % of SMEs selling online (compared to an EU average of 15 %).

#### Network Industries

**Limited progress has been made on promoting competition and efficiency in energy markets.**

Urgent reforms are needed to address key problematic areas such as structural overcapacity, the single-buyer model, regulated prices, the accumulation of tariff deficits, the financial stability of state-owned enterprises, reliance on a single route and single supplier for natural gas, and the independence and administrative capacity of the national regulator. With regard to electricity, Bulgaria made attempts to restructure its balancing market and trading rules by announcing the setting-up of a power-exchange. The day-ahead market for electricity is still not operational. The Bulgarian electricity market remains non-competitive, as the quota system for power plants and regulated electricity prices have not been addressed. Construction of critical infrastructure projects, which would modernise Bulgaria's gas network and improve gas links with its neighbours, is subject to delays mainly as a result of regulatory and financial difficulties. Bulgaria is vulnerable to gas supply disruptions, being nearly 100 % dependent on gas imports from one foreign source.

**There is a need to address the National Electricity Company (NEK) situation, to avoid a future negative impact on the government's budget.** The Bulgarian economy is highly energy intensive and the state-owned vertically-integrated Bulgaria Energy Holding (BEH) accounts for almost half of Bulgaria's generation capacity.

NEK, a large BEH subsidiary, faces financial difficulties because of contractual obligations for high purchase prices and low administered selling prices. In addition, over the past five years, there has been an increase in energy system costs due to the recent expansion of renewable energy sources, stimulated by generous subsidies for solar power and co-generation, long-term purchase power agreements and delays in market liberalisation.<sup>(56)</sup> Revenue from regulated end-consumer-tariff schemes is not sufficient to cover the corresponding costs borne by electricity utility companies. The existence of this tariff deficit is not recognised by the authorities as a public sector liability and the utility company cannot recover the relevant amounts.<sup>(57)</sup>

**The weak financial position of some segments of the energy sector could pose significant fiscal risks, if not adequately addressed.**

A deficit has accumulated in the energy system, especially in foreign-owned distribution companies (which also collect revenues from energy consumers) and in the incumbent state-owned electricity supplier, NEK. NEK's financial situation continues to deteriorate. At the end of 2013, NEK's debt was EUR 1.2 billion (3 % of GDP) and one third of this amount consists of liabilities to energy producers. Foreign-owned energy distribution firms have announced their intention to sue Bulgaria over non-compensated obligations to purchase electricity from renewable energy sources. They claim to have incurred substantial losses as a result of these obligations. NEK and the distribution companies are also in dispute over the amounts of renewable subsidies, which are collected by the distribution companies and are supposed to be paid to NEK.

**The state-owned railway operator also faces financial and restructuring difficulties.**

Traffic has declined by about 70 % since the mid-1990s, and annual subsidies amount to 0.5 % of GDP. Plans to privatise the cargo unit of the railway operator were scrapped in 2013, even though the

<sup>(56)</sup> Investment in wind and solar power installations in recent years in Bulgaria is estimated to be more than EUR 4 billion. By 2012, Bulgaria had already reached its renewable target for 2020.

<sup>(57)</sup> The situation is further complicated by lack of accounting standards for regulated utilities, lack of cost benchmarking, and market distortions such as cross subsidies and purchase power agreements.

procedure was already under way. The state-owned railway operator defaulted in 2010. Creditors and suppliers of the company have taken action to recover sums due and negotiations are still ongoing on the restructuring of loans. Competition in the cargo sector has opened up and its proportion of overall land transport is above the EU average. Passenger rail services need to be better aligned with demand and infrastructure charges should be set and paid on a non-discriminatory basis. Reforms based on recommendations by the World Bank and privatisation work relating to the rail freight company are currently on hold.

**Development of the broadband network is lagging behind, in particular in rural areas.**

While high speed broadband is available to 68 % of homes in Bulgaria, there is virtually no high speed coverage in rural areas, leading to a digital divide between urban and rural areas. Wireless broadband has the potential to bridge this divide, but deployment of the long-term evolution wireless networks has been slow. One of the main obstacles is that the majority of the 800 MHz frequencies are still used by the Ministry of Defence. In addition, Bulgaria has the lowest proportion of households with a broadband subscription in the EU (57 % in 2014, compared to an EU average of 78 %). This is due to both a lack of digital skills in the population and the low availability of broadband infrastructure outside the main cities. In 2014, Bulgaria adopted a 'next generation networks broadband' plan, but this does not fulfil all the criteria required under the European Structural and Investment Funds.

**Bulgaria continues to face major challenges in meeting water supply and sanitation requirements.**

Water losses are more than 60 % of the supply, while the current coverage levels of wastewater collection (66 %) and connections to urban wastewater treatment plants (50 %) do not comply with the regulations. In order to achieve the desired changes in the water supply and sanitation sector, the water sector requires adequate financing and improvements in sector governance (e.g. the regionalisation of water services), as well as institutional and regulatory frameworks planned in the water sector reform that began in 2009, but which has not yet been fully implemented.

**Air pollution represents a serious threat for human health, while having direct economic costs.**

97.3 % of the Bulgarian urban population is exposed to air pollution which is a major cause of damage to the environment and human health, while at the same time it impacts on the national economy, as Bulgaria is ranked first among the EU member-states, with more than double the damage costs resulting from industrial pollution compared to the second on the list. This makes Bulgaria the country with the highest share of external costs associated with air pollution in the EU, estimated in the range of 5-16 % of GDP. The main sources of air pollution remain solid fuel use in the energy sector and domestic solid fuel combustion.

**Public Administration and Judicial System**

**In spite of reforms to modernise public sector administration, the efficiency of government institutions remains low due to the fragmentation of efforts and the lack of policy steer.**

<sup>(58)</sup> Institutional shortcomings and shortcomings in administrative capacity remain, affecting key sectors of the economy and causing delays to structural reforms and low absorption of EU funds (see Graph 3.3.2). <sup>(59)</sup>

**Corruption remains a persistent problem in Bulgaria, potentially deterring investment and undermining the quality of government services.**

<sup>(60)</sup> The policy challenges faced by Bulgaria in this area are set out in the recent report issued under the Cooperation and Verification Mechanism (CVM). <sup>(61)</sup> These include a lack of overall strategy and coordination, institutional shortcomings, and a weak track record on reaching

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<sup>(58)</sup> According to the World Economic Forum's 2014-15 Global Competitiveness report, the main obstacles to a well functioning business environment in Bulgaria are corruption, bureaucracy, access to financing and unstable policies.  
[http://www3.weforum.org/docs/WEF\\_GlobalCompetitivenessReport\\_2014-15.pdf](http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2014-15.pdf).

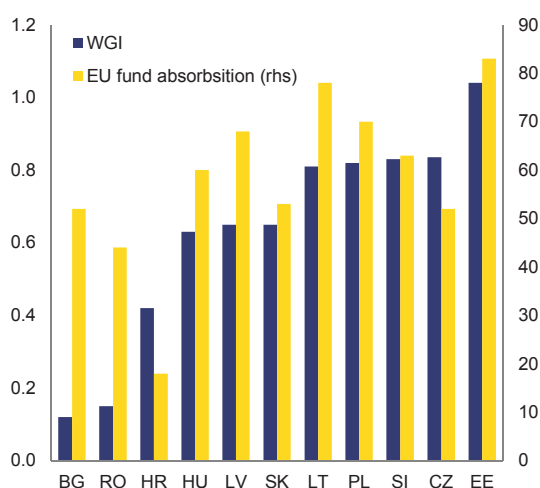
<sup>(59)</sup> As of 31 December 2014, a little over 56 % of European Structural Funds have been claimed. Eligibility of the remaining EUR 2.45 billion to be claimed expires 31 December 2015.

<sup>(60)</sup> In the World Bank governance indicators, Bulgaria ranks last among EU Member States on control of corruption. A study recently produced as part of the Southeast European Leadership for Development and Integrity (SELDI) anti-corruption initiative shows that corruption in Bulgaria has increased dramatically to levels not otherwise seen since Bulgaria's EU accession.

<sup>(61)</sup> COM(2015) 36 final; SWD(2015) 9 final.

final convictions in court, especially in cases involving high-level corruption. The report identifies a need to improve the competencies and independence of the administrative bodies charged with preventing and detecting corruption in public sector administration and to further improve the effectiveness of the prosecution and investigative agencies. Consistent checks and dissuasive sanctions are not yet applied in cases of conflict of interest.

Graph 3.3.2: **Worldwide Governance Index (WGI) and EU Cohesion Policy Funds absorption rates**



Source: World Bank, European Commission

**Strategies to develop public sector administration and e-government were adopted in March 2014.** The e-government strategy is underpinned by a roadmap with concrete measures and a financial plan. Although the strategic framework has been set up, there are still no sufficiently noteworthy results for the citizens and businesses. No progress has been made on strengthening the role of administration and improving efficiency at local level. As regards implementation of the three recent packages for reducing the administrative and regulatory burden, 50 measures (out of the 138 adopted) have been fully implemented. <sup>(62)</sup> No steps have been taken to improve civil service professionalism and merit-based career development.

<sup>(62)</sup> <http://www.strategy.bg/Publications/View.aspx?lang=bg-BG&categoryId=&Id=177&y=2014&m=8&d=>

**The insufficient development of e-government limits efforts to increase transparency and reduce the administrative burden.** In particular, further development of the e-government portal and single point of contact procedures to rationalise e-administrative services remains crucial. In 2014, only 21 % of citizens interacted with public sector authorities over the internet, well below the EU average of 47 % and only 7 % of citizens sent completed forms online, compared to an EU average of 26 %. The lack of digital skills in the population and the low number of households with an internet connection only partly explain the slow take-up of e-government. Bulgaria is one of the last EU countries to make its government services available online in a manner that is both user-friendly and transparent. In 2013-14, the user-centric e-government indicator <sup>(63)</sup> for Bulgaria stood at 61, i.e. one of the lowest in EU (where the average is 73) while the transparent e-government indicator <sup>(64)</sup> stood at 32, again well below the EU average of 51.

**Public policies in research and innovation suffer from inefficient governance structures, weak long-term financial commitment and a lack of policy focus.** <sup>(65)</sup> EU funds provide huge opportunities to support R&D activity, but building a functioning national R&D system requires overhauling the governance of public and publicly funded research. The quality of government R&D investment is hampered by a lack of performance-based institutional funding to incentivise higher quality research, and limited cooperation between science and businesses. The effectiveness and impact of government programmes to support research and innovation is not evaluated using international peer review

<sup>(63)</sup> The ‘user-centric e-government’ indicator is a composite indicator measuring the availability of e-government services, their connectedness and their user-friendliness for seven areas of government services through a user journey approach using the concept of life events (well defined user needs).

<sup>(64)</sup> The ‘transparent e-government’ indicator is a composite indicator measuring the online transparency of governments on the different aspects of online service delivery, treatment of citizens’ personal data and activities of the public sector. The indicator has been measured over seven areas of government services through a user journey approach using the concept of life events (well defined user needs).

<sup>(65)</sup> Bulgaria has the third lowest proportion of innovative firms in the EU, the lowest R&D government spending and a low level of R&D outputs, such as patents or medium-high and high-tech exports.

standards, resulting in a lack of transparency, accountability and predictability of funding. Poor administrative capacity to implement a smart specialisation strategy limits the impact of government funding on business investment. Developing effective strategies and operational programmes for using EU funds remains a challenge for Bulgaria, and an effective policy response to address challenges in this area is not yet in place.

**Public procurement is affected by a frequently changing legal framework and insufficient administrative capacity.** Bulgarian public procurement legislation and the implementation of this continue to raise concerns. The complicated legal landscape and the numerous modifications to this have resulted in a lack of legal certainty. The amendment to the Public Procurement Act of May 2014 has further aggravated the situation, with different commencement dates for its specific parts, while a number of weaknesses in the legal framework remain unaddressed. Its implementation still requires standardised guidelines that should be applicable throughout the country. The ex-ante verification of tender procedures is often performed in a formalistic way. The limited and non-exhaustive ex ante controls are explained by the authorities as the result of the insufficient administrative capacity of the Public Procurement Agency, which is entrusted with those checks. At the same time, however, many procurement procedures are subject to overlapping ex post controls, sometimes resulting in divergent findings. The lack of transparency in the bidding process is also due to the — still incomplete — process of installing the full range of e-procurement platforms. <sup>(66)</sup> These difficulties resulted in irregularities that were significant causes of delays in implementing projects under the 2007-13 Structural Funds.

**The effective application of public procurement rules now constitutes a general ex ante conditionality applicable to all EU funds under**

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<sup>(66)</sup> The gains deriving from the switch to e-platforms could improve overall public procurement administrative efficiency by cutting the duration of the purchase-to-pay cycle, reducing the administrative burden and improving traceability. These, in turn, reduce the opportunity for corruption and tax fraud and lead to lower prices and better quality, by stimulating competition across the Single Market.

**the programming period 2014-20.** The national strategy on public procurement, adopted in July 2014, envisages a number of measures to address the weaknesses in the public procurement system, including: (i) introducing a simplified and codified legal framework, accompanied by centralised guidelines on implementing this; (ii) increasing administrative capacity and professionalism in public procurement; (iii) creating and implementing a e-procurement system; and (iv) introducing a more efficient appeal system, which would allow for effective reviews of procurement procedures while avoiding abuse of the remedies system. However, the Commission has noted a delay in implementing the first steps of the strategy, as a result of the prolonged political instability.

**The quality and independence of the judicial system remain a challenge.** According to the 2015 EU Justice Scoreboard perceived independence of justice in Bulgaria has further decreased, with Bulgaria now sharing with one other Member State the worst rating in the EU. The Global Competitiveness Report for 2014-15 ranks Bulgaria 126th out of 144 countries on judicial independence, 124th on the efficiency of the legal framework in settling disputes and in challenging regulations, and 110th on protection of property rights. In December 2014, the government adopted a new judicial strategy to guarantee the independence and professionalism of the courts and other judicial authorities. Bulgaria is also preparing concrete proposals to amend the Judicial System Act, including on introducing e-justice measures. Although the EU 2015 Justice Scoreboard shows that Bulgaria does randomly allocate cases, it has been reported that there are ways to easily manipulate the software that carries out the allocation. <sup>(67)</sup> With regard to improving the quality of justice, the use of electronic communication between courts and parties has increased compared to the previous year.

**Evaluation of courts' activities is limited, as there is no system of regular evaluation in place, nor are there quality standards or specialised court staff responsible for policies**

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<sup>(67)</sup> Allegations of this kind of manipulation were raised in relation to two high-profile insolvency cases in the autumn of 2014, prompting public calls from within the magistracy for the management of the Sofia City Court to be held accountable for the failings. See the CVM report, op cit.



**and systems to ensure quality.** Bulgaria does not conduct surveys of court users or legal professionals. The use of ICT systems to administer and manage cases has not increased compared to the previous year. An ICT system for electronic communication and exchange of information between the courts and their stakeholders is only used in some fields. Electronic processing of small claims and undisputed debt recovery, common in other Member States, is not possible in Bulgaria. For civil, commercial and labour law cases there is no promotion by the public sector for the use of alternative dispute resolution methods, which could represent an important means of reducing the workload of courts. Only the initial training is mandatory for judges.

**As regards the efficiency of the judicial system, the situation is improving in terms of time needed to resolve cases, the capacity of courts to manage their workload and the backlog in courts,** as shown by the 2015 EU Justice Scoreboard and analytical work on the ground. However, Bulgaria did not provide separate data on litigious civil and commercial cases, which are particularly relevant from an economic perspective. In addition, as mentioned above, the time to resolve insolvency cases continues to be particularly high in Bulgaria.

**Analysis in this section suggests that the policy challenges identified in last year's staff working document remain broadly valid.** In particular, complex regulations, weak administrative capacity, high compliance costs for businesses, high energy intensity and low energy efficiency of the economy, poor quality of transport infrastructure and the lack of effectiveness in the judiciary have negative effects on investment and productivity.

## ANNEX A

### Overview Table

2014 commitments	Summary assessment <sup>(68)</sup>
<b>Country-specific recommendations (CSRs)</b>	
<p><b>CSR 1:</b> Reinforce the budgetary measures for 2014 in the light of the emerging gap relative to the preventive arm of the Stability and Growth Pact requirements. In 2015, strengthen the budgetary strategy to ensure that the medium-term objective is reached and, thereafter, maintained. Ensure the capacity of the new fiscal council to fulfil its mandate. Implement a comprehensive tax strategy to strengthen tax collection, tackle the shadow economy and reduce compliance costs.</p>	<p>Bulgaria has made <b>no progress</b> in addressing CSR 1 (this overall assessment of CSR 1 excludes an assessment of compliance with the Stability and Growth Pact):</p> <p>No progress was made on establishing a fiscal council. The legal process setting up the fiscal council and defining the ‘correction mechanism’ has been postponed to 2015.</p> <p>Limited progress on legislation to improve tax collection and reduce tax compliance costs. The measures taken to fight tax evasion do not address the issues comprehensively. There is no comprehensive strategy addressing tax collection, as drafts are still under discussion.</p>
<p><b>CSR 2:</b> Adopt a long-term strategy for the pension system, proceeding with the planned annual increase in the statutory retirement age and setting out a mechanism to link the statutory retirement age to life expectancy in the long term, while phasing out early retirement options and equalising the statutory retirement age for men and women. Tighten eligibility criteria and procedures for the allocation of invalidity pensions, for example by taking better account of the remaining work capacity of applicants. Ensure cost effective provision of healthcare including by improving the pricing of healthcare services while linking hospitals' financing to outcomes, accelerating the optimisation of the hospital network and developing out-patient care.</p>	<p>Bulgaria has made <b>no progress</b> in addressing CSR 2:</p> <p>Some measures reverse the earlier reform, including freezing the annual increase in pensionable age and reintroducing early retirement options.</p> <p>No progress was made on linking the retirement age with life expectancy and equalising the retirement age for men and women.</p> <p>No effective change was made to eligibility criteria and checks on the allocation of invalidity pensions.</p> <p>Limited progress was made on ensuring cost effective provision of healthcare and improving the pricing of healthcare services. The National Healthcare Strategy 2014-20 has been approved but it lacks a clear implementation timeframe. Work on improving transparency in hospital financing was only begun in</p>

<sup>(68)</sup> The following categories are used to assess progress in implementing the 2013 country specific recommendations.

No progress: The Member State has neither announced nor adopted any measures to address the CSR. This category also applies if a Member State has commissioned a study group to evaluate possible measures.

Limited progress: The Member State has announced some measures to address the CSR, but these measures appear insufficient and/or their adoption/implementation is at risk.

Some progress: The Member State has announced or adopted measures to address the CSR. These measures are promising, but not all of them have been implemented yet and implementation is not certain in all cases.

Substantial progress: The Member State has adopted measures, most of which have been implemented. These measures go a long way in addressing the CSR.

Fully addressed: The Member State has adopted and implemented measures that address the CSR appropriately.

	late 2014.
<p><b>CSR 3:</b> Improve the efficiency of the Employment Agency by developing a performance monitoring system and better targeting the most vulnerable, such as low-skilled and elderly workers, the long-term unemployed and Roma. Extend the coverage and effectiveness of active labour market policies to match the profiles of job-seekers, and reach out to non-registered young people who are not in employment, education or training, in line with the objectives of a youth guarantee. Improve the effective coverage of unemployment benefits and social assistance and their links with activation measures. Take forward the comprehensive review of minimum thresholds for social security contributions so as to make sure that the system does not price the low-skilled out of the labour market. Establish, in consultation with social partners, transparent guidelines for the adjustment of the statutory minimum wages taking into account the impact on employment and competitiveness. In order to alleviate poverty, further improve the accessibility and effectiveness of social services and transfers for children and older people.</p>	<p>Bulgaria has made <b>limited progress</b> in addressing CSR 3:</p> <p>Limited progress was made on improving the efficiency of the Employment Agency and better targeting support for the most vulnerable. A performance monitoring system is being developed.</p> <p>Limited progress was made on extending the coverage and effectiveness of active labour market policies to match the profiles of jobseekers, as policies are still not well targeted.</p> <p>Limited progress was made on reaching out to non-registered NEETs. Mechanisms to monitor and evaluate the Youth Guarantee remain weak.</p> <p>Limited progress was made on improving the effective coverage of unemployment benefits and social assistance and their links with activation measures. A project on developing integrated services is planned, but no concrete steps have been taken.</p> <p>Some action was taken to analyse the impact of increases in minimum thresholds, but with unclear conclusions and policy follow-up.</p> <p>No progress was made on drawing up transparent guidelines for minimum wage setting.</p> <p>Progress was limited on improving the accessibility and effectiveness of social transfers and services for children and older people.</p>
<p><b>CSR 4:</b> Adopt the School Education Act and pursue the reforms of vocational and higher education in order to increase the level and relevance of skills acquired at all levels, while fostering partnerships between educational institutions and business with a view to better aligning outcomes to labour market needs. Strengthen the quality of vocational education and training institutions and improve access to lifelong learning. Step up efforts to improve access to quality inclusive pre-school and school education of disadvantaged children, in particular Roma, and implement strictly the rules linking the</p>	<p>Bulgaria has made <b>limited progress</b> in addressing CSR 4:</p> <p>No progress was made on the School Education Act as its approval has been postponed again.</p> <p>Some progress was made on pursuing reform of higher education. A strategy in this area has been prepared and is being discussed in the National Assembly. Measures have been undertaken to improve forecasts of labour market needs and better link university accreditation and financing to performance.</p> <p>Some progress was made on reform of vocational</p>

<p>payment of child allowance to participation in education.</p>	<p>education and training (VET), with the adoption of a strategy, work to adapt VET to the needs of the labour market, in cooperation with employers and a review of legislation on internships.</p> <p>Limited progress was made on improving access to lifelong learning.</p> <p>Limited progress was made on improving access to inclusive education for disadvantaged children, in particular Roma, and on effective implementation of the rules linking the child allowance to school attendance.</p>
<p><b>CSR 5:</b> Continue to improve the business environment, in particular for small and medium-sized enterprises, by cutting red tape, promoting e-government, streamlining insolvency procedures and implementing the legislation on late payments. Improve the public procurement system by enhancing administrative capacity, strengthening the ex-ante checks performed by the Public Procurement Agency and taking concrete steps for the implementation of e-procurement. Enhance the quality and independence of the judiciary and step up the fight against corruption.</p>	<p>Bulgaria has made <b>limited progress</b> in addressing CSR 5:</p> <p>Some progress was made on reducing the administrative burden with a few measures being implemented and many more in the pipeline. Foreign trade procedures and the ease of paying taxes show some improvements.</p> <p>Limited progress was made on the introduction of e-government. An updated e-government strategy for 2014-20 was adopted in March 2014. Bulgaria started a broadband deployment project aiming to provide the necessary infrastructure to be used by government institutions.</p> <p>No progress was made on the reform of insolvency procedures.</p> <p>Some progress was made on the Late Payments Directive — it has been transposed into national law. Its impact on business operation remains to be seen.</p> <p>Limited progress was made on improving the quality and independence of judiciary, confirmed by the 2015 CVM report. The strategy for reforming the judiciary has been updated but not yet implemented.</p> <p>No progress was made on the fight against corruption. Some limited steps have been taken by the prosecution, but major challenges remain and on the preventive side no progress has been made.</p> <p>A comprehensive National Strategy aiming at the reform of the public procurement sector was adopted. Its measures, addressing systemic shortcomings, are</p>

	being implemented.
<p><b>CSR 6:</b> Scale up the reform of the energy sector in order to increase competition, market efficiency and transparency, and energy efficiency, in particular by removing market barriers, reducing the weight of the regulated segment, stepping up efforts for the creation of a transparent wholesale market for electricity and gas, phasing out quotas, and strengthening the independence and administrative capacity of the energy regulator. Accelerate interconnector projects with neighbouring Member States and candidate countries, in particular for gas, and enhance the capacity to cope with disruptions.</p>	<p>Bulgaria has made <b>limited progress</b> in addressing CSR 6:</p> <p>Limited progress was made on setting up transparent wholesale markets and on enabling competition at retail level. Bulgaria transposed the missing elements of the ‘Third Package’ electricity and gas directives and unbundled the system operator in the power sector. Limited progress was made on setting up an energy exchange. Limited progress was made on strengthening the independence and effectiveness of regulation. Administrative capacity is insufficient and staff turnover is high.</p> <p>Limited progress was made on accelerating electricity and gas interconnector projects.</p>
<b>Europe 2020 (national targets and progress)</b>	
<b>Policy field target</b>	<b>Progress achieved</b>
Early school leaving target: 11 %	The early school-leaving rate was 13.9% in 2010, 11.8 % in 2011 and 12.5 % in both 2012 and 2013. No progress was made towards meeting the target. A strategy on early school leaving is currently being implemented.
Tertiary education target: 36 %	The tertiary attainment rate was 27.7% in 2010, 27.3 % in 2011, 26.9 % in 2012 and 29.4 % in 2013. Some progress was made towards meeting the target. A strategy on higher education has been prepared and is being discussed in the National Assembly.
Employment rate target (in %): 76 %	The employment rate increased marginally to 63.5 % in 2013 (62.9 % in 2011 and 63 % in 2012).
Target on the reduction of population at risk of poverty in number of persons: Decrease by 260 000 (baseline (2008):	<p>People at risk of poverty (2012): 1 559 000.</p> <p>Some progress was made towards the target.</p>

1 632 000).	
R&D target: 1.5 % of GDP	R&D intensity increased slightly from 0.62 % of GDP in 2012 to 0.65 % in 2013. Public R&D intensity (the lowest in the EU) decreased sharply from 0.35 % in 2009 to 0.24 % in 2012 and increased only slightly to 0.25% in 2013. Private R&D intensity increased from 0.15 % in 2009 to 0.34 % in 2012 and 0.4 % in 2013.
Energy Efficiency target: 25 % in primary energy savings and 50 % energy intensity reduction by 2020  By 2020: level of 15.8 Mtoe primary consumption and 9.16 Mtoe final energy consumption	During the period 2000–09 the primary and the final energy intensity decreased at an average annual rate of about 5 %. In 2010 and 2011 the primary energy intensity increased by 1.6 % and 5.4 %, and the final energy intensity increased by 2.1 % and 2.5 % respectively <sup>(69)</sup> .  Bulgaria is not on track to meet its national target on primary energy consumption.
2020 Renewable energy target: 16 %	As the proportion of energy from renewable energy sources (RES) was 16.3 % in 2012, Bulgaria has already reached its 2020 RES target.  Nevertheless, the policy framework has deteriorated. Bulgaria introduced grid access tariffs only applicable for RES (2012) and a tax on the revenues of wind and PV producers (2013). Both measures were challenged in court and found to be discriminatory. (The grid access tariff was annulled by the Supreme Administrative Court and the law setting the tax on revenues was found unconstitutional by the Bulgarian Constitutional Court).  RES stakeholders are not involved in the decision-making process, an effect of the lack of implementation of the internal energy market rules.  In 2012, the proportion of renewable energy used across all modes of transport was 0.27 %; if these rates continue, Bulgaria may fail to reach its 2020 target.
Greenhouse gas (GHG) emissions target: +20 % (compared to 2005 emissions, ETS emissions are not covered by this national	Change in non-ETS greenhouse gas emissions between 2005 and 2013: +5%. According to the latest national projections submitted to the Commission and taking into account existing measures, it is expected that the

<sup>(69)</sup> Based on the 2014 update of the NRP. European Commission has not received the new National Action Plan on Energy Efficiency by 15 May 2014.

target)	target will be missed: +23% (3 percentage points projected shortfall) in 2020 as compared with 2005.
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## ANNEX B

### Standard Tables

Table B.1: **Macroeconomic indicators**

	1996-2000	2001-2005	2006-2010	2011	2012	2013	2014	2015	2016
<b>Core indicators</b>									
GDP growth rate	0.9	5.2	3.0	2.0	0.5	1.1	1.4	0.8	1.0
Output gap <sup>1</sup>	1.6	0.5	1.0	-0.3	-0.1	0.3	0.0	-0.9	-1.5
HICP (annual % change)	n.a.	5.5	6.5	3.4	2.4	0.4	-1.6	-0.5	1.0
Domestic demand (annual % change) <sup>2</sup>	2.1	7.7	2.3	0.6	2.8	-1.5	2.0	0.1	0.4
Unemployment rate (% of labour force) <sup>3</sup>	14.2	14.7	7.7	11.3	12.3	13.0	11.7	10.9	10.4
Gross fixed capital formation (% of GDP)	12.5	20.9	28.3	21.3	21.5	21.3	21.1	20.3	19.4
Gross national saving (% of GDP)	17.1	16.8	16.4	22.9	21.5	23.7	23.3	22.9	21.7
<b>General government (% of GDP)</b>									
<b>Net lending (+) or net borrowing (-)</b>	-1.8	0.5	-0.6	-2.0	-0.5	-1.2	-3.4	-3.0	-2.9
<b>Gross debt</b>	n.a.	44.4	16.3	15.7	18.0	18.3	27.0	27.8	30.3
<b>Net financial assets</b>	n.a.	5.2	6.6	1.2	0.4	n.a.	n.a.	n.a.	n.a.
Total revenue	35.8	39.0	37.1	32.6	34.7	37.1	37.1	37.4	37.2
Total expenditure	37.5	38.6	37.6	34.7	35.2	38.3	40.5	40.4	40.1
<i>of which: Interest</i>	7.4	2.4	1.0	0.7	0.8	0.8	0.8	0.8	0.9
<b>Corporations (% of GDP)</b>									
<b>Net lending (+) or net borrowing (-)</b>	5.6	1.6	-5.7	6.6	5.4	n.a.	n.a.	n.a.	n.a.
<b>Net financial assets; non-financial corporations</b>	n.a.	-75.6	-169.1	-179.5	-157.0	n.a.	n.a.	n.a.	n.a.
<b>Net financial assets; financial corporations</b>	n.a.	-2.6	-14.0	10.5	-0.2	n.a.	n.a.	n.a.	n.a.
Gross capital formation	9.5	17.7	23.9	16.0	18.3	n.a.	n.a.	n.a.	n.a.
Gross operating surplus	23.7	27.1	28.3	30.1	29.4	n.a.	n.a.	n.a.	n.a.
<b>Households and NPISH (% of GDP)</b>									
<b>Net lending (+) or net borrowing (-)</b>	-7.5	-7.6	-7.8	-3.4	-4.8	n.a.	n.a.	n.a.	n.a.
<b>Net financial assets</b>	n.a.	49.3	63.5	71.7	77.5	n.a.	n.a.	n.a.	n.a.
Gross wages and salaries	24.6	30.4	30.9	31.8	31.4	n.a.	n.a.	n.a.	n.a.
Net property income	3.8	0.4	0.4	-0.1	0.1	n.a.	n.a.	n.a.	n.a.
Current transfers received	12.0	15.3	13.3	14.8	15.0	n.a.	n.a.	n.a.	n.a.
Gross saving	-6.3	-7.0	-5.8	-1.8	-3.4	n.a.	n.a.	n.a.	n.a.
<b>Rest of the world (% of GDP)</b>									
<b>Net lending (+) or net borrowing (-)</b>	4.2	-5.9	-14.6	2.3	0.5	3.5	3.1	3.4	3.1
<b>Net financial assets</b>	0.0	0.0	0.0	101.8	85.1	n.a.	n.a.	n.a.	n.a.
Net exports of goods and services	4.7	-10.7	-13.6	1.0	-2.8	-0.6	-0.6	0.3	0.4
Net primary income from the rest of the world	-2.5	1.1	-3.6	-3.3	-1.7	-1.9	-2.2	-2.3	-2.5
Net capital transactions	0.2	0.4	0.3	1.2	1.3	1.3	1.4	1.3	1.2
Tradable sector	50.7	50.6	46.2	47.5	47.3	47.9	n.a.	n.a.	n.a.
Non-tradable sector	38.8	36.4	38.8	39.6	38.7	38.2	n.a.	n.a.	n.a.
<i>of which: Building and construction sector</i>	3.7	4.4	6.8	5.4	5.1	4.1	n.a.	n.a.	n.a.

Notes:

<sup>1</sup> The output gap constitutes the gap between the actual and potential gross domestic product at 2010 market prices.

<sup>2</sup> The indicator of domestic demand includes stocks.

<sup>3</sup> Unemployed persons are all those 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:** European Commission, 2015 Winter forecast. European Commission calculations



Table B.2: **Financial market indicators**

	2009	2010	2011	2012	2013	2014
Total assets of the banking sector (% of GDP) <sup>1)</sup>	108.6	111.2	109.5	113.7	118.7	110.0
Share of assets of the five largest banks (% of total assets)	58.3	55.2	52.6	50.4	49.9	n.a.
Foreign ownership of banking system (% of total assets)	83.7	80.5	75.0	73.0	69.6	n.a.
Financial soundness indicators:						
- non-performing loans (% of total loans)	6.4	11.9	15.0	16.6	16.9	n.a.
- capital adequacy ratio (%)	17.0	17.4	17.6	16.6	17.0	n.a.
- return on equity (%)	9.8	7.8	5.7	6.3	5.7	n.a.
Bank loans to the private sector (year-on-year % change) <sup>1)</sup>	4.1	1.6	3.8	3.5	1.1	2.8
Lending for house purchase (year-on-year % change) <sup>1)</sup>	8.6	3.7	1.3	1.0	-0.8	-0.8
Loan to deposit ratio <sup>1)</sup>	126.4	117.4	107.6	102.4	94.1	92.6
Central Bank liquidity as % of liabilities <sup>2)</sup>	0.0	0.0	0.0	0.0	0.0	0.0
Private debt (% of GDP)	138.4	137.8	127.9	128.1	134.7	n.a.
Gross external debt (% of GDP) <sup>3)</sup>						
- public	8.1	7.9	7.2	8.7	8.5	8.4
- private	76.6	75.4	71.0	69.5	70.3	67.6
Long-term interest rate spread versus Bund (basis points)*	399.3	326.2	274.8	300.3	190.3	218.4
Credit default swap spreads for sovereign securities (5-year)*	351.5	254.2	248.6	227.7	102.1	119.4

1) Latest data November 2014.

2) Latest data September 2014.

3) Latest data June 2014. Monetary authorities, monetary and financial institutions are not included.

\* Measured in basis points.

**Source:** IMF (financial soundness indicators); European Commission (long-term interest rates); World Bank (gross external debt); ECB (all other indicators).

Table B.3: **Taxation indicators**

	2002	2006	2008	2010	2011	2012
<b>Total tax revenues</b> (incl. actual compulsory social contributions, % of GDP)	28.5	30.7	32.3	27.5	27.3	27.9
<b>Breakdown by economic function</b> (% of GDP) <sup>1</sup>						
Consumption	11.9	16.6	17.2	14.4	14.2	14.9
of which:						
- VAT	7.3	10.7	10.9	9.2	8.7	9.4
- excise duties on tobacco and alcohol	1.6	2.2	2.8	2.5	2.6	2.6
- energy	2.1	2.5	3.0	2.6	2.6	2.5
- other (residual)	0.9	1.1	0.4	0.2	0.3	0.3
Labour employed	11.9	10.0	9.7	9.0	9.2	9.1
Labour non-employed	0.0	0.1	0.1	0.1	0.1	0.1
Capital and business income	4.2	3.2	4.3	3.2	3.1	3.1
Stocks of capital/wealth	0.5	0.8	1.0	0.8	0.8	0.8
<i>p.m.</i> Environmental taxes <sup>2</sup>	2.3	2.9	3.4	2.9	2.9	2.8
<b>VAT efficiency</b> <sup>3</sup>						
Actual VAT revenues as % of theoretical revenues at standard rate	45.1	71.6	75.6	65.5	62.9	65.1

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

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

<sup>3</sup> VAT efficiency is measured via the VAT revenue ratio. It is defined as the ratio between the actual VAT revenue collected and the revenue that would be raised if VAT was applied at the standard rate to all final (domestic) consumption expenditures, which is an imperfect measure of the theoretical pure VAT base. A low ratio can indicate a reduction of the tax base due to large exemptions or the application of reduced rates to a wide range of goods and services ('policy gap') or a failure to collect all tax due to e.g. fraud ('collection gap'). It should be noted that the relative scale of cross-border shopping (including trade in financial services) compared to domestic consumption also influences the value of the ratio, notably for smaller economies. For a more detailed discussion, see European Commission (2012), Tax Reforms in EU Member States, and OECD (2014), Consumption tax trends.

**Source:** European Commission

Table B.4: Labour market and social indicators

	2008	2009	2010	2011	2012	2013	2014
Employment rate (% of population aged 20-64)	70.7	68.8	65.4	62.9	63.0	63.5	65.0
Employment growth (% change from previous year)	2.4	-1.7	-3.9	-2.2	-2.5	-0.4	0.3
Employment rate of women (% of female population aged 20-64)	65.4	64.0	61.7	59.8	60.2	60.7	61.8
Employment rate of men (% of male population aged 20-64)	76.1	73.8	69.1	66.0	65.8	66.4	68.1
Employment rate of older workers (% of population aged 55-64)	46.0	46.1	43.5	44.6	45.7	47.4	49.5
Part-time employment (% of total employment, age 15 years and over)	2.3	2.3	2.4	2.4	2.4	2.7	2.7
Part-time employment of women (% of women employment, age 15 years and over)	2.7	2.7	2.6	2.6	2.7	3.2	3.0
Part-time employment of men (% of men employment, age 15 years and over)	2.0	2.0	2.2	2.1	2.2	2.2	2.4
Fixed term employment (% of employees with a fixed term contract, age 15 years and over)	5.0	4.7	4.5	4.1	4.5	5.7	5.6
Transitions from temporary to permanent employment	49.7	46.7	36.7	38.6	40.9	n.a.	n.a.
Unemployment rate <sup>1</sup> (% of labour force, age group 15-74)	5.6	6.8	10.3	11.3	12.3	13.0	11.6
Long-term unemployment rate <sup>2</sup> (% of labour force)	2.9	3.0	4.8	6.3	6.8	7.4	6.9
Youth unemployment rate (% of youth labour force aged 15-24)	11.9	15.1	21.8	25.0	28.1	28.4	23.6
Youth NEET rate (% of population aged 15-24)	17.4	19.5	21.8	21.8	21.5	21.6	n.a.
Early leavers from education and training (% of pop. aged 18- 24 with at most lower sec. educ. and not in further education or training)	14.8	14.7	13.9	11.8	12.5	12.5	n.a.
Tertiary educational attainment (% of population aged 30-34 having successfully completed tertiary education)	27.1	27.9	27.7	27.3	26.9	29.4	n.a.
Formal childcare (from 1 to 29 hours; % over the population aged less than 3 years)	2.0	1.0	1.0	0.0	0.0	n.a.	n.a.
Formal childcare (30 hours or over; % over the population aged less than 3 years)	9.0	7.0	6.0	7.0	8.0	n.a.	:
Labour productivity per person employed (annual % change)	3.3	-3.4	4.7	4.3	3.1	1.5	1.4
Hours worked per person employed (annual % change)	2.4	-2.8	-0.1	-0.1	0.1	0.0	0.0
Labour productivity per hour worked (annual % change; constant prices)	0.9	-0.6	4.8	4.4	3.0	1.5	1.3
Compensation per employee (annual % change; constant prices)	8.0	3.7	8.6	-0.2	6.1	9.7	1.7
Nominal unit labour cost growth (annual % change)	12.6	12.4	5.2	2.5	4.4	5.2	n.a.
Real unit labour cost growth (annual % change)	3.8	7.7	2.4	-2.2	1.3	6.1	n.a.

<sup>1</sup> Unemployed persons are all those who were not employed, but 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. Data on the unemployment rate of 2014 includes the last release by Eurostat in early February 2015. <sup>2</sup> Long-term unemployed are persons who have been unemployed for at least 12 months.

Source: European Commission (EU Labour Force Survey and European National Accounts)

Table B.4: *Labour market and social indicators (continued)*

	2007	2008	2009	2010	2011	2012
Sickness/healthcare	3.7	4.4	3.9	4.2	4.5	4.4
Invalidity	1.1	1.2	1.4	1.4	1.4	1.4
Old age and survivors	7.0	7.4	8.6	9.0	8.6	8.5
Family/children	1.2	1.3	2.0	2.0	1.9	1.8
Unemployment	0.3	0.3	0.5	0.6	0.6	0.6
Housing and social exclusion n.e.c.	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total</b>	13.7	15.0	16.7	17.6	17.2	16.9
of which: means-tested benefits	0.7	0.7	0.7	0.8	0.7	0.7
<b>Social inclusion indicators</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
People at risk of poverty or social exclusion <sup>1</sup> (% of total population)	44.8	46.2	49.2	49.1	49.3	48.0
Children at risk of poverty or social exclusion (% of people aged 0-17)	44.2	47.3	49.8	51.8	52.3	51.5
Elderly at risk of poverty or social exclusion (% of people aged 65+)	65.5	66.0	63.9	61.1	59.1	57.6
At-risk-of-poverty rate <sup>2</sup> (% of total population)	21.4	21.8	20.7	22.2	21.2	21.0
Severe material deprivation rate <sup>3</sup> (% of total population)	41.2	41.9	45.7	43.6	44.1	43.0
Proportion of people living in low work intensity households <sup>4</sup> (% of people aged 0-59)	8.1	6.9	8.0	11.0	12.5	13.0
In-work at-risk-of-poverty rate (% of persons employed)	7.5	7.4	7.7	8.2	7.4	7.2
Impact of social transfers (excluding pensions) on reducing poverty	21.0	17.4	23.6	19.0	18.1	21.3
Poverty thresholds, expressed in national currency at constant prices <sup>5</sup>	2368.7	2755.3	2868.6	2689.8	2552.9	2549.2
Gross disposable income (households)	41859.0	41174.0	41802.0	44879.0	46416.0	n.a.
Relative median poverty risk gap (60% of median equivalised income, age: total)	27.0	27.4	29.6	29.4	31.4	30.9
Inequality of income distribution (S80/S20 income quintile share ratio)	6.5	5.9	5.9	6.5	6.1	6.6

<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 (AROP): proportion of people with an equivalised disposable income below 60 % of the national equivalised median income.

<sup>3</sup> Proportion of people who experience at least four of the following forms of deprivation: not being able to 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: proportion of people aged 0-59 living in households where the adults (excluding dependent children) worked less than 20 % of their total work-time potential in the previous 12 months.

<sup>5</sup> For EE, CY, MT, SI and SK, thresholds in nominal values in euros; harmonised index of consumer prices (HICP) = 100 in 2006 (2007 survey refers to 2006 incomes)

<sup>6</sup> 2014 data refer to the average of the first three quarters.

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



Table B.5: Product market performance and policy indicators

	2004-08	2009	2010	2011	2012	2013	2014
Labour productivity <sup>1</sup> in total economy (annual growth in %)	3.0	-1.1	4.9	4.6	2.1	1.6	n.a.
Labour productivity <sup>1</sup> in manufacturing (annual growth in %)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Labour productivity <sup>1</sup> in electricity, gas (annual growth in %)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Labour productivity <sup>1</sup> in the construction sector (annual growth in %)	-4.1	7.0	1.0	10.9	4.6	3.0	n.a.
Labour productivity <sup>1</sup> in the wholesale and retail sector (annual growth in %)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Labour productivity <sup>1</sup> in the information and communication sector (annual growth in %)	15.1	-5.7	-5.3	0.6	-2.9	-0.4	n.a.
Patent intensity in manufacturing <sup>2</sup> (EPO patent applications divided by gross value added of the sector)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Policy indicators</b>	<b>2004-08</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Enforcing contracts <sup>3</sup> (days)	564	564	564	564	564	564	564
Time to start a business <sup>3</sup> (days)	35.4	18	18	18	18	18	18
R&D expenditure (% of GDP)	0.5	0.5	0.6	0.6	0.6	0.7	n.a.
Total public expenditure on education (% of GDP)	4.2	4.6	4.1	3.8	n.a.	n.a.	n.a.
(Index: 0=not regulated; 6=most regulated)	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Product market regulation <sup>4</sup> , overall	n.a.	n.a.	n.a.	n.a.	n.a.	1.57	n.a.
Product market regulation <sup>4</sup> , retail	n.a.	n.a.	n.a.	n.a.	n.a.	0.20	n.a.
Product market regulation <sup>4</sup> , professional services	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Product market regulation <sup>4</sup> , network industries <sup>5</sup>	n.a.	n.a.	n.a.	n.a.	n.a.	2.45	n.a.

<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 here: "<http://www.doingbusiness.org/methodology>".

<sup>4</sup> Index: 0 = not regulated; 6 = most regulated. The methodologies of the OECD product market regulation indicators are presented in detail here "<http://www.oecd.org/competition/reform/indicatorsofproductmarketregulationhomepage.htm>"

<sup>5</sup> Aggregate OECD indicators of regulation in energy, transport and communications (ETCR).

**Source:** European Commission; World Bank — Doing Business (for enforcing contracts and time to start a business); OECD (for the product market regulation indicators)

Table B.6: **Green Growth**

<b>Green growth performance</b>		<b>2003-2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
<b>Macroeconomic</b>							
Energy intensity	kgoe / €	0.85	0.71	0.66	0.67	0.71	0.67
Carbon intensity	kg / €	2.80	2.39	2.18	2.27	2.44	2.24
Resource intensity (reciprocal of resource productivity)	kg / €	5.52	5.49	4.64	4.56	4.96	n.a.
Waste intensity	kg / €	n.a.	5.99	n.a.	6.30	n.a.	5.92
Energy balance of trade	% GDP	-0.7	-8.4	-5.3	-6.1	-6.7	-7.2
Energy weight in HICP	%	14.8	14.2	13.2	14.1	11.9	13.7
Difference between energy price change and inflation	%	1.8	-1.3	3.2	-3.7	-0.4	6.5
Ratio of environmental taxes to labour taxes	ratio	27.1%	35.6%	31.0%	32.1%	31.3%	30.7%
Ratio of environmental taxes to total taxes	ratio	9.7%	10.7%	10.5%	10.6%	10.5%	10.2%
<b>Sectoral</b>							
Industry energy intensity	kgoe / €	0.88	0.66	0.48	0.51	0.50	0.46
Share of energy-intensive industries in the economy	% GDP	13.7	13.3	12.6	12.3	13.1	12.4
Electricity prices for medium-sized industrial users**	€ / kWh	n.a.	0.06	0.06	0.07	0.07	0.07
Gas prices for medium-sized industrial users***	€ / kWh	n.a.	0.02	0.03	0.03	0.03	0.04
Public R&D for energy	% GDP	n.a.	0.03	0.01	0.00	0.00	0.00
Public R&D for the environment	% GDP	n.a.	0.00	0.00	0.01	0.01	0.01
Recycling rate of municipal waste	ratio	18.3%	19.4%	19.9%	24.5%	26.2%	25.0%
Share of GHG emissions covered by ETS*	%	n.a.	57.3	55.5	55.6	60.6	57.4
Transport energy intensity	kgoe / €	1.87	2.28	2.40	2.25	2.65	2.41
Transport carbon intensity	kg / €	5.13	6.28	6.74	6.23	7.36	6.59
<b>Security of energy supply</b>							
Energy import dependency	%	47.5	51.7	45.1	39.6	36.0	36.1
Diversification of oil import sources	HHI	0.48	0.40	0.39	0.60	0.62	0.65
Diversification of energy mix	HHI	n.a.	0.27	0.26	0.27	0.29	0.27
Renewable energy share of energy mix	%	5.2	5.3	6.3	8.2	7.1	8.9

Country-specific notes:

2013 is not included in the table due to lack of data.

General explanation of the table items:

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 CO<sub>2</sub> 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 proportion of "energy" items in the consumption basket used for the construction of the HICP

Difference between energy price change and inflation: energy component of HICP, and total HICP inflation (annual % change)

Environmental taxes over labour or total taxes: from DG TAXUD's database 'Taxation trends in the European Union'

Industry energy intensity: final energy consumption of industry (in kgoe) divided by gross value added of industry (in 2005 EUR)

Share of energy-intensive industries in the economy: share of gross value added of the energy-intensive industries in GDP

Electricity and gas prices for medium-sized industrial users: consumption band 500–2000MWh and 10000–100000 GJ; figures excl. VAT.

Recycling rate of municipal waste: ratio of recycled municipal waste to total municipal waste

Public R&D for energy or for the environment: government spending on R&D (GBAORD) for these categories as % of GDP

Proportion of GHG emissions covered by ETS: based on greenhouse gas emissions (excl LULUCF) as reported by Member States to the European Environment Agency

Transport energy intensity: final energy consumption of transport activity (kgoe) divided by transport industry gross value added (in 2005 EUR)

Transport carbon intensity: greenhouse gas emissions in transport activity divided by gross value added of the transport sector

Energy import dependency: net energy imports divided by gross inland energy consumption incl. consumption of international bunker fuels

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

Renewable energy share of energy mix: %-share of gross inland energy consumption, expressed in tonne oil equivalents

\* European Commission and European Environment Agency

\*\* For 2007 average of S1 & S2 for DE, HR, LU, NL, FI, SE & UK. Other countries only have S2.

\*\*\* For 2007 average of S1 & S2 for HR, IT, NL, FI, SE & UK. Other countries only have S2.

**Source:** European Commission