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

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## EXECUTIVE SUMMARY

**The Belgian economy strengthened in 2014 though years of stagnating activity have left their mark.** Belgium has entered a slow-moving recovery with GDP growth expected to accelerate from 1% in 2014 to 1.4% in 2016 thanks to company investments and external trade. The unemployment rate is projected to decrease from a ten-year high of 8.5% last year to 8.1% in 2016 as job creation in the private sector picks up. The rising trend of public debt is expected to be halted with debt stabilising at around 107% of GDP in 2016, but debt reduction is hampered by low growth and inflation. The latter has fallen back to around zero and is forecast to increase gradually from the second half of 2015.

**This Country Report assesses the Belgian economy against the background of the Commission's Annual Growth Survey.** The latter 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 Belgium 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 as follows:

- **While the loss of external competitiveness incurred continues to pose macroeconomic risks for the Belgian economy, the magnitude of these risks has decreased.** Regarding cost parameters, corrective measures have started narrowing the labour cost gap. Closing it entirely will require additional action and preventing new gaps from emerging hinges on reforms of the wage bargaining system. Energy input costs are found to saddle large industrial users with a competitive disadvantage as well. Scope for improving the non-cost dimension of external competitiveness is considerable, with Belgium not performing particularly strongly with respect to innovation output.
- **Public debt remains high but several factors temper associated macroeconomic risks.** On the one hand, vulnerability stems from the reduced room to absorb future shocks.

Sizeable, though decreasing, contingent liabilities related to financial sector guarantees and high domestic debt ownership imply important feedback loops. On the other hand, medium-term sustainability risks appear more manageable given low financing costs, the resumption of primary surpluses and the relatively long average maturity of the debt stock. The strong financial position of Belgian households is a particularly important factor. Despite the high public debt, the Belgian economy continues to enjoy a very positive net asset position so that, overall, short to medium term risks are contained. This is also in line with the track record in the recent and more distant past.

- **Macroeconomic risks stemming from the interplay between household debt, the financial sector and a potential correction of housing prices are found to be moderate and expected to be manageable.** Robust household balance sheets, high ownership rates, housing shortages, reasonable affordability, and demographic projections are likely to prevent an abrupt housing price decline. The impact on banks of potential downward price adjustments or adverse income shocks should be limited thanks to sound lending standards.

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

- **Structural problems characterising the Belgian labour market result in a chronic underutilisation of labour with a low aggregate employment rate.** Shortcomings are related to labour taxation and financial disincentives, educational outcomes and qualification mismatches, the wage-setting system, labour shortages, and old-age social security systems. Both young and elderly workers face important barriers to entry. People from migrant backgrounds are in a particularly precarious position.
- **The Belgian tax system is characterised by a high overall burden and by relatively high rates and narrow tax bases.** The tax burden is heavily skewed towards labour. This results in high labour costs, which discourage job creation, and large tax wedges, which contribute to

remaining unemployment traps. Certain features of the tax system are environmentally harmful.

- **Competition in several key service sectors remains low.** This affects the wider economy given that they supply important inputs. Furthermore, the precarious security of energy supply might persist as a result of inadequate domestic generation capacity, the nuclear phase-out, a rising proportion of intermittent power and the low spare import capacity. There appears to be ample scope to improve public infrastructure through higher investments.

**In a letter sent to the Commission in November 2014, the Belgian authorities committed to a number of structural reforms implementing the country-specific recommendations issued by the Council in July 2014.** These structural reforms were further specified in two reports sent on 30 January 2015 and 13 February 2015.

**Overall, Belgium has made some progress in addressing the 2014 country-specific recommendations.** Substantial progress was made in the area of pension reforms, with measures taken to narrow the gap between the effective and the statutory retirement age, as well as the intention to increase the latter in the longer term. Some progress was made towards restoring competitiveness with corrective measures adopted to narrow the relative labour cost gap and first steps taken to reform the wage-setting system. Some progress was made on the employment challenges with policy responses the least developed with respect to increasing labour market access and participation for disadvantaged groups. At the same time, limited progress has been made towards a comprehensive tax reform entailing in particular a clear shift from labour towards less growth-distorting tax bases. There has also been limited progress on the functioning of retail markets and deregulation of professional services. On the recommendation to ensure that greenhouse gas reduction targets are met, progress is considered limited in the absence of an intergovernmental agreement on the distribution of efforts and auctioning revenues. Finally, progress to align the contribution of transport with the objective of reducing road congestion was limited.

The Country Report reveals policy challenges stemming from the analysis.

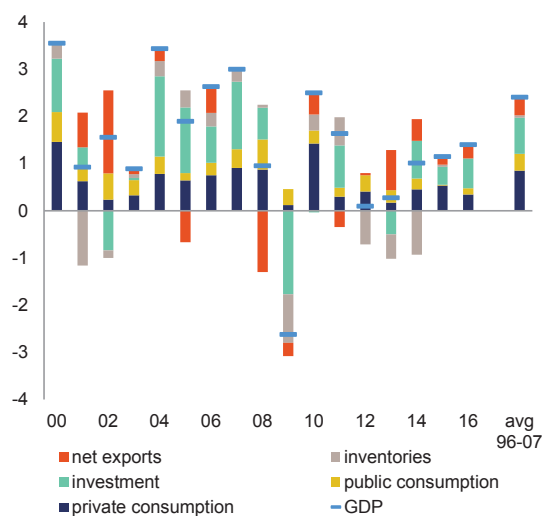
- **Sustained consolidation efforts would be instrumental in reducing risks resulting from public indebtedness.** To offset the budgetary impact of an ageing population, a successful consolidation strategy depends on the swift implementation of planned pension reforms, as well as other reforms to lift economic growth.
- **Pursuing tax reforms aimed among other things at rebalancing the tax system towards non-labour tax bases would promote the further unwinding of the competitiveness imbalance.** Tax bases with scope for broadening include, among others, environmental and consumption taxes, certain types of financial income, and recurrent property taxation. In addition, efforts to make wage formation more responsive to the business cycle and productivity evolutions would ease the impact on job creation.
- **A stronger performance on innovation and R&D valorisation could improve the non-cost dimension of competitiveness.** The same holds for reducing red tape and administrative barriers, and tackling rigidities affecting product, service and the labour market. This would also strengthen the investment climate.
- **Efforts to lift employment would be helped by preventing early school leaving and a reduction of inequalities of educational outcomes.** In view of the low labour market participation of the young and people with a migrant background, the timely provision of customised activation trajectories remains crucial. Policies to promote active ageing and increase demand for elderly labour would assist measures to reduce early exit possibilities.
- **Eliminating infrastructure bottlenecks and improving the quality and adequacy of the capital stock would strengthen overall economic performance.** Particular attention could be paid to transport and to preventing disruptions to the energy supply by enhancing grid interconnectivity and domestic generation capacity.

# 1. SCENE SETTER: ECONOMIC SITUATION AND OUTLOOK

## Economic growth: recovering but unable to reconnect with pre-crisis levels

**The Belgian economy took a turn for the better in 2014 though several years of stagnating activity have left their mark.** Growth reached 1% in 2014 on the back of company investments and net external trade. Despite several favourable factors, such as energy price dynamics and external demand, growth is projected to accelerate only moderately, reaching 1.1% in 2015 and 1.4% in 2016. Belgium has entered what appears to be a slow-moving recovery with growth considerably below pre-crisis levels. The same applies to the potential growth rate, with the structural growth capacity of the Belgian economy seemingly impacted by the recent crisis. Contributions from productivity, in particular, have faltered, highlighting the impact of certain structural bottlenecks discussed later in this document.

Graph 1.1: Real GDP growth and contributions



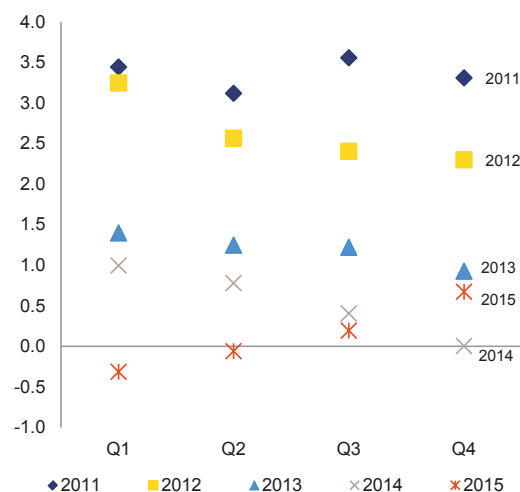
Source: European Commission

**Belgian companies are expected to contribute significantly to overall growth in 2016.** This reflects mainly the initial effects of measures to restore cost competitiveness discussed in section 2.1. Their effect should be compounded by the further easing of already soft financing conditions, relatively low energy prices and accelerating external demand. In parallel, export performance is set to improve.

**Company investments and net external trade would compensate for slowing household consumption.** The latter has traditionally been an important contributor to GDP growth, a reflection of the high income level the country has attained. Continued strong wage growth given high inflation supported private consumption throughout the crisis. However, this also resulted in a further deterioration of external cost competitiveness, prompting the Belgian authorities to pursue wage moderation policies. This moderation has been confirmed by the new government, resulting in a protracted period of low wage growth. While current low inflation partly offsets the effects of low income growth, private consumption growth is expected to slow down from next year.

**Furthermore, household investment is expected to show modest growth rates in future.** Before 2008 the private housing market performed strongly for several years, partly due to supportive fiscal measures. Investment in homes contracted on average in 2008-13. Overall, house prices rose by about 50% in real terms in 2000-08, but did not see a significant price correction as they remained broadly stable. The housing market is looked at in depth in section 2.4.

Graph 1.2: Inflation (y/y %change)



Source: European Commission



### **Inflation: gradual rebound in the course of 2015 after going into negative territory**

**Price pressures have been abating since 2012.** Sharper competition on domestic energy markets as well as wage moderation were the initial drivers. Over the past year a VAT reduction and falling international energy prices added to the downward pressure. As a result, headline inflation fell back to zero at the end of 2014 though core inflation was still well above 1%.

**This downward trend is set to continue with inflation turning negative in the first half of 2015.** As the substantial downward pressure from energy items fades, a slow uptick is forecast for the second half of 2015. Overall, the general price level is expected to rise by just 0.1% in 2015. At 1.1%, it is estimated that price pressures will remain muted in 2016: prices for most components are expected to experience an extended slowdown due to timid economic activity, stagnant wage growth and international price developments.

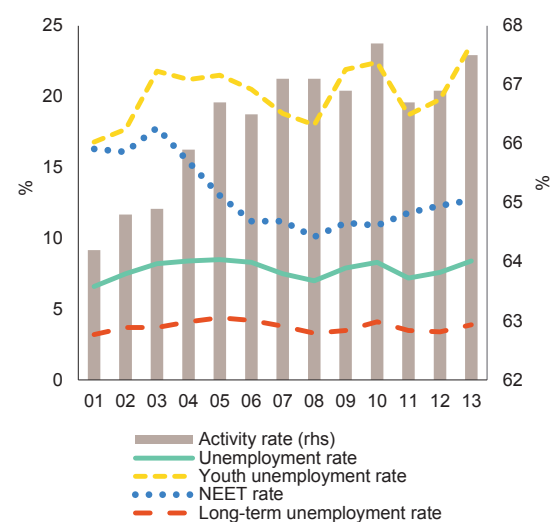
### **Labour market: cyclical improvement but lasting structural issues**

**The slow-moving recovery and the legacy of a prolonged crisis make for a muted labour market turnaround.** Prior to 2008, the Belgian unemployment rate compared favourably with the euro area average as well as with the rates observed in most neighbouring countries. Since the outbreak of the crisis, it has crept up to reach a ten-year high of 8.5% last year. As job creation in the private sector picks up, unemployment is expected to decrease to 8.1% in 2016. All the while, vacancy rates have remained comparatively high, suggesting matching issues. Furthermore, a high proportion of the population of working age has pulled out of the labour market entirely, as reflected in a low activity rate, in particular for older workers. The various bottlenecks in the Belgian labour market are probably the country's deepest-rooted challenge. They are analysed in more detail in section 3.1.

**High labour taxation is one of the issues in play.** As well as the perverse effects it has on external competitiveness and employment, high marginal rates also discourage people from working, or working more. Taxation in general is looked at in section 3.2. Shifting taxation away from labour —

one of the Council recommendations to Belgium for several years — has been a major point of discussion on the Belgian political stage of late.

Graph 1.3: **Labour market indicators**



Source: European Commission

### **Current account: returning to surplus despite continuing goods balance deficit**

**Until 2007 Belgium saw a steady decline in its long-running current account surplus.** The main driver was the trade balance, with a narrowing goods balance only partially offset by a rising services surplus. The latter has been fairly stable in recent years at about 2% of GDP. Terms of trade losses due to rising commodity prices and export volume growth being outpaced by import growth were behind the constant worsening of the goods balance. The deterioration accelerated in 2008 and the goods trade balance has been in deficit since.

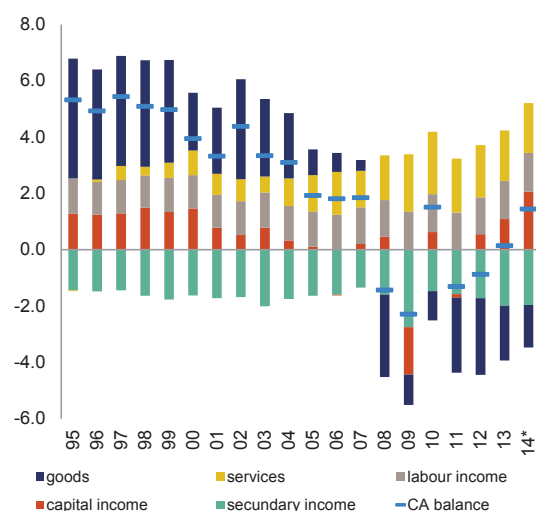
**Recent developments have been more encouraging, with the current account balanced in 2013 and expected to have recorded a surplus in 2014.** This shift has its origin mainly in the capital income balance, which in 2013 recorded its highest surplus since 2000 <sup>(1)</sup> and appears to have strengthened further since. To some extent, this reflects a cyclical event resulting from strong gains in financial markets. Yet, the goods balance has also staged an improvement in recent years: from a deficit of almost 3% of GDP in 2011-12 to an

<sup>(1)</sup> Comparability is hampered by the change in methodology from 2008. However, the trend is also visible for 2008-14.



estimated deficit of 1.5% in 2014. Whether this heralds a trend reversal needs further confirmation, given the important contribution of price changes as well.

Graph 1.4: Current account balance (%GDP)

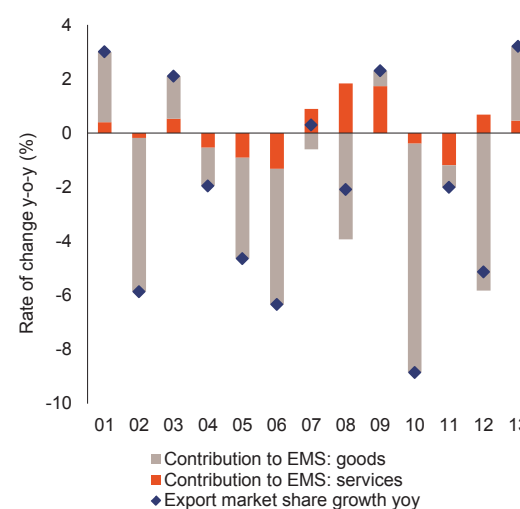


- BPM5 methodology until 2007, BPM6 thereafter  
- 2014: 4Q-2013/3Q-2014

Source: European Commission

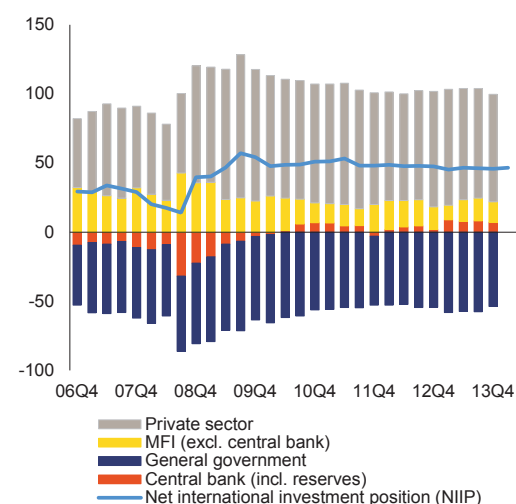
The tentative improvement in external performance is also evident in the export market shares. Over the longer term, services have on average delivered a small positive contribution while goods were generally unable to keep pace with global export growth. Substantial losses in export market share in 2010-12 were followed by a gain in 2013. This was the first since 2009, and the largest in many years. Nevertheless, over time Belgium's share of export markets has suffered a large drop. The dual trend of dwindling export market shares and a weakening current account balance has been pointing to weakness in its ability to compete. Belgium's external competitiveness is examined closer in sections 2.1 and 2.2. These sections build on findings from previous In-Depth Reviews and try to see whether the recent apparent improvement in external performance can be linked to recent developments in cost and non-cost competitiveness.

Graph 1.5: Export market shares: evolution and breakdown



Source: European Commission

Graph 1.6: Net international investment position (NIIP, %GDP)



Source: European Commission

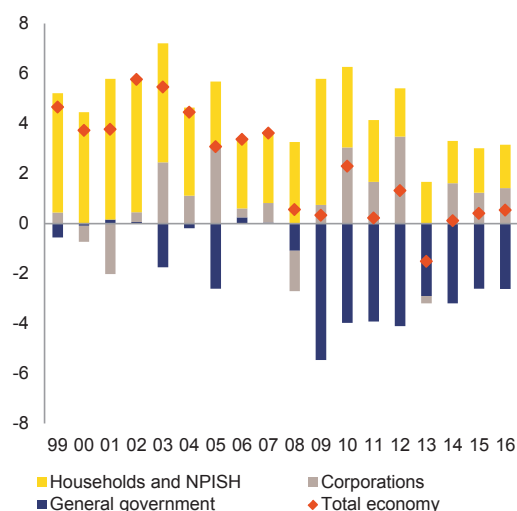
### Overall external position: still very strong

The external sustainability of the Belgian economy is considered robust given its very positive net international investment position (NIIP). The 'NIIP' reflects the balance between external financial assets and liabilities. It has been stable at around 45-50% of GDP. Whereas the current account balance equals flows, the NIIP can be interpreted as the stock indicator of a country's external position. Considering the accumulated net

external assets, this means that Belgium could afford a modest current account deficit without jeopardising overall external sustainability.

**While external sustainability does not seem to be at risk, a closer look at the net international investment position reveals that internal balances are nevertheless affected.** The strongly positive NIIP reflects the creditor status of the private sector, which broadly offsets the structural debtor position of the public sector. The crisis years shifted the external lending position of the overall economy from a steady surplus towards a broadly balanced position. This is in line with what has been observed for the current account balance.

Graph 1.7: **Net lending/borrowing by sector (%GDP)**



Source: European Commission (ESA2010)

#### Public finances: increase to be halted following narrowing of fiscal deficit

**The high public debt has been a constant feature of the Belgian economy in recent decades.** The long effort to reduce debt stopped in 2008 when the authorities were forced to support several failing financial institutions and the economic crisis pushed public finances into the red. The deficit hit a high of 5.5% of GDP in 2009. It fell to 2.9% in 2013 but is estimated to have widened again to 3.2% in 2014 on the back of looser fiscal policy and disappointing revenue growth. In 2015 and 2016 the fiscal deficit is expected to narrow again, falling back to 2.6% and 2.4% of GDP respectively, according to the latest

Commission forecast. This reflects consolidation measures recently taken at all levels of government.

**The debt level rose from 86.9% of GDP in 2007 to around 106% in 2014.** With still weak nominal growth in 2015 unlikely to offset the impact of further deficit accumulation and stock-flow adjustment, Belgium's debt is projected to hit almost 107% of GDP, before stabilising in 2016. In addition, contingent liabilities related to guarantees to the financial sector remain not inconsiderable. They have been decreasing steadily but risks are concentrated on one single entity, worth 9.4% of GDP at the end of 2014. Public debt and its implications for the overall macroeconomic stability of the Belgian economy will be discussed in section 2.3.

### Box 1.1: Economic surveillance process

The Commission's Annual Growth Survey, adopted in November 2014, marked the start of the 2015 European Semester, proposing that the EU pursues 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 proposed 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 in November 2014.

Based on the In-Depth Review of Belgium published in March 2014, the Commission concluded that the country was experiencing macroeconomic imbalances requiring monitoring and policy action. In particular, developments with regard to the external competitiveness of goods continued to deserve attention as a persistent deterioration would threaten macroeconomic stability.

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 Belgium concerned the correction of public finances, tax reform, the long-term impact of ageing costs, labour market reforms, competitiveness measures and greenhouse gas emissions.

Table 1.1: **Macroeconomic Imbalance Procedure: scoreboard**

			Thresholds	2008	2009	2010	2011	2012	2013
External imbalances and competitiveness	Current account balance (% of GDP)	3 year average	-4%/6%	0.8	0.0	-0.7	-0.7	-1.1	-1.6
		p.m.: level year	-	-1.4	-2.3	1.5	-1.3	-3.5	0.1
	Net international investment position (% of GDP)		-35%	39.7	54.2	50.9	48.1	47.6	45.8
	Real effective exchange rate (REER) (42 industrial countries - HICP deflator)	% change (3 years)	±5% & ±11%	3.4	3.9	0.5	-1.6	-4.3	-0.3
		p.m.: % y-o-y change	-	2.7	0.5	-2.6	0.6	-2.3	1.5
	Export market shares	% change (5 years)	-6%	-14.0	-10.3	-14.2	-10.3	-15.1	-9.1
		p.m.: % y-o-y change	-	-2.1	1.6	-6.9	-2.0	-5.3	3.6
	Nominal unit labour costs (ULC)	% change (3 years)	9% & 12%	9.1	10.7	7.8	6.1	6.0	8.6
		p.m.: % y-o-y change	-	4.5	3.7	-0.5	2.8	3.6	2.0
	Internal imbalances	Deflated house prices (% y-o-y change)		6%	1.1	0.0	1.4	0.9	0.0
Private sector credit flow as % of GDP, consolidated		14%	18.0	4.6	2.9	19.3	1.8	1.1	
Private sector debt as % of GDP, consolidated		133%	157.9	161.5	155.6	165.0	161.1	163.0	
General government sector debt as % of GDP		60%	92.2	99.3	99.6	102.1	104.0	104.5	
Unemployment rate		3-year average	10%	7.6	7.5	7.7	7.8	7.7	7.7
		p.m.: level year	-	7.0	7.9	8.3	7.2	7.6	8.4
Total financial sector liabilities (% y-o-y change)		16.5%	-1.7	-2.0	-0.7	8.1	-5.7	-2.4	

Notes: (1) Figures highlighted are those falling outside the threshold established in the European Commission's Alert Mechanism Report. For REER and ULC, the first threshold applies to euro area Member States.

(2) Figures in italics are calculated according to the old standards (ESA95/BPM5).

(3) Export market share data: total world exports are based on the fifth edition of the Balance of Payments Manual (BPM5).

Source: European Commission

Table 1.2: Key economic, financial and social indicators

	2008	2009	2010	2011	2012	2013	Forecast		
							2014	2015	2016
Real GDP (y-o-y)	1.0	-2.6	2.5	1.6	0.1	0.3	1.0	1.1	1.4
Private consumption (y-o-y)	1.8	0.2	2.8	0.6	0.8	0.3	0.9	1.0	0.7
Public consumption (y-o-y)	2.9	1.5	1.2	0.8	1.4	1.1	1.0	0.1	0.5
Gross fixed capital formation (y-o-y)	2.9	-7.3	-0.1	4.0	0.0	-2.2	3.6	1.7	2.8
Exports of goods and services (y-o-y)	1.6	-9.5	10.0	6.6	1.9	2.9	3.4	3.5	4.8
Imports of goods and services (y-o-y)	3.5	-9.2	9.6	7.2	1.9	1.8	2.8	3.4	4.5
Output gap	2.0	-1.8	-0.5	-0.2	-1.0	-1.5	-1.3	-1.0	-0.6
Contribution to GDP growth:									
Domestic demand (y-o-y)	2.2	-1.3	1.7	1.4	0.8	-0.1	1.5	0.9	1.1
Inventories (y-o-y)	0.1	-1.0	0.3	0.6	-0.7	-0.5	-0.9	0.0	0.0
Net exports (y-o-y)	-1.3	-0.3	0.5	-0.3	0.1	0.8	0.5	0.2	0.3
Current account balance (% of GDP), balance of payments	-1.4	-1.2	1.5	-1.3	-3.5	0.1	.	.	.
Trade balance (% of GDP), balance of payments	-1.3	1.0	1.2	-0.8	-0.9	-0.2	.	.	.
Terms of trade of goods and services (y-o-y)	-2.6	3.4	-1.6	-1.0	-0.3	0.1	0.1	0.1	0.0
Net international investment position (% of GDP)	46.7	54.8	59.8	56.5	48.4	48.8	.	.	.
Net external debt (% of GDP)	-73.1*	-105.5*	-109.5*	-108.0*	-93.7*	-86.8*	.	.	.
Gross external debt (% of GDP)	334.5*	301.9*	283.0*	285.1	269.8	235.7	.	.	.
Export performance vs advanced countries (% change over 5 years)	-2.7*	-2.0*	-6.3*	-1.7*	-6.2*	-2.6	.	.	.
Export market share, goods and services (%)	2.1	2.1	2.0	1.9	1.8	1.9	.	.	.
Savings rate of households (net saving as percentage of net disposable income)	11.2	12.8	10.1	8.5	7.5	6.9	.	.	.
Private credit flow, consolidated, (% of GDP)	18.6	8.7	4.3	24.8	3.8	-2.0	.	.	.
Private sector debt, consolidated (% of GDP)	151.7	161.2	154.3	163.6	162.0	162.1	.	.	.
Deflated house price index (y-o-y)	1.1	0.3	1.2	0.9	-0.2	0.0	.	.	.
Residential investment (% of GDP)	6.5	6.1	6.2	6.1	6.1	5.9	.	.	.
Total financial sector liabilities, non-consolidated (y-o-y)	-4.5	-1.0	1.1	6.3	-3.0	-1.2	.	.	.
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)	1.8	-0.2	0.7	1.4	0.3	-0.3	0.3	0.5	0.6
Unemployment rate	7.0	7.9	8.3	7.2	7.6	8.4	8.5	8.3	8.1
Long-term unemployment rate (% of active population)	3.3	3.5	4.1	3.5	3.4	3.9	.	.	.
Youth unemployment rate (% of active population in the same age group)	18.0	21.9	22.4	18.7	19.8	23.7	22.6	.	.
Activity rate (15-64 year-olds)	67.1	66.9	67.7	66.7	66.9	67.5	.	.	.
Young people not in employment, education or training (%)	10.1	11.1	10.9	11.8	12.3	12.7	.	.	.
People at risk of poverty or social exclusion (% of total population)	20.8	20.2	20.8	21.0	21.6	20.8	.	.	.
At-risk-of-poverty rate (% of total population)	14.7	14.6	14.6	15.3	15.3	15.1	.	.	.
Severe material deprivation rate (% of total population)	5.6	5.2	5.9	5.7	6.3	5.1	.	.	.
Number of people living in households with very low work-intensity (% of total population aged below 60)	11.7	12.3	12.7	13.8	13.9	14.0	.	.	.
GDP deflator (y-o-y)	1.9	1.1	2.0	2.2	2.1	1.5	0.7	0.8	1.2
Harmonised index of consumer prices (HICP) (y-o-y)	4.5	0.0	2.3	3.4	2.6	1.2	0.5	0.1	1.1
Nominal compensation per employee (y-o-y)	3.6	1.2	1.3	3.0	3.4	2.6	0.7	0.4	0.1
Labour productivity (real, person employed, y-o-y)	-0.8	-2.4	1.8	0.2	-0.2	0.6	.	.	.
Unit labour costs (ULC) (whole economy, y-o-y)	4.5	3.7	-0.5	2.8	3.6	2.0	-0.1	-0.3	-0.7
Real unit labour costs (y-o-y)	2.5	2.5	-2.5	0.6	1.5	0.5	-0.7	-1.1	-1.8
REER <sup>3</sup> (ULC, y-o-y)	2.9	0.7	-2.6	2.3	-0.7	3.0	-0.9	-3.1	-1.6
REER <sup>3</sup> (HICP, y-o-y)	1.3	-0.1	-2.8	0.5	-1.9	1.2	1.1	-1.6	-0.7
General government balance (% of GDP)	-1.1	-5.5	-4.0	-3.9	-4.1	-2.9	-3.2	-2.6	-2.4
Structural budget balance (% of GDP)	.	.	-3.7	-3.6	-3.0	-2.6	-2.8	-2.1	-2.0
General government gross debt (% of GDP)	92.2	99.3	99.6	102.1	104.0	104.5	106.4	106.8	106.6

(1) Domestic banking groups and stand-alone banks.

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

(3) Real effective exchange rate

(\*) Indicates BPM5 and/or ESA95

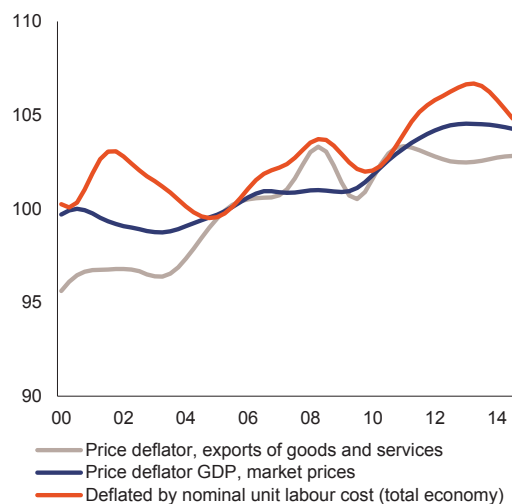
Source: Commission, 2015 winter forecast; ECB

## 2. IMBALANCES, RISKS AND ADJUSTMENT

## 2.1. COST COMPETITIVENESS

**Belgium's real effective exchange rate (REER) has been appreciating over the past decade (see Graph 2.1.1).** This trend points to a loss in cost competitiveness relative to other euro area Member States. The REER deflated by unit labour costs has appreciated the most, suggesting that the loss can be traced back at least partly to unfavourable labour cost dynamics. However, measurements based on broader price deflators have also been appreciating over the years. On the basis of the REER developments, the loss in cost competitiveness relative to euro area peers appears still limited, at up to 5% over the past decade. However, within the context of a currency union it is crucial to avoid a structural underperformance relative to fellow members. The build-up of a cost disadvantage comes with job losses and will eventually provoke a correction if left unaddressed. The following sections look into developments in the main cost factors for most companies: labour costs, energy costs, and the cost of intermediate service inputs. Policy measures to address the underlying problems are discussed as well.

Graph 2.1.1: **Real effective exchange rate (100 = EA18 2005)**



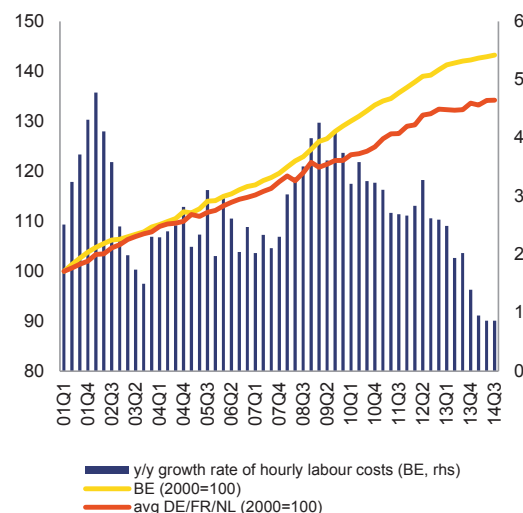
Source: European Commission

### Labour cost

**Belgian labour costs have on average outpaced those in neighbouring countries (see Graph 2.1.2).** This is despite the coordinated, top-down wage-setting mechanism, discussed below. Wages grew especially fast between 2009 and 2011, when

the inflation differential with neighbouring countries was particularly high.

Graph 2.1.2: **Hourly labour cost evolution in the business sector**

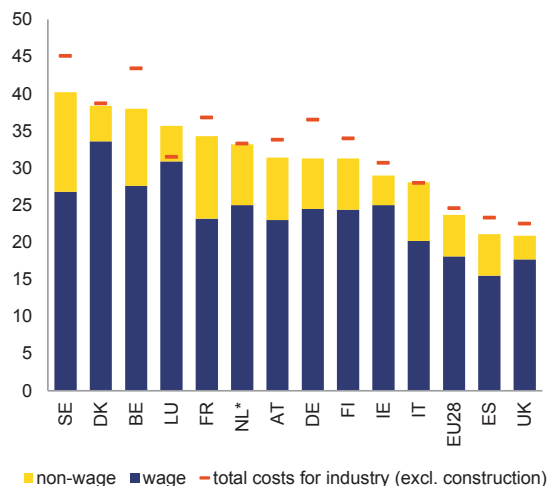


Source: European Commission

**The fast growth rate added to the country's already high labour cost level.** In 2013, Belgium's hourly labour costs were the third highest among EU Member States for the total economy and the second highest for industry (see Graph 2.1.3). The difference mostly reflects Belgium's high social security charges on labour, which add to the large tax wedge discussed in section 3.1. It also underscores the importance of a broad-based tax shift towards non-labour tax bases, as discussed in section 3.2.

**While labour cost levels need to be analysed in function of productivity and composition of economic activity, absolute levels have an important signal function for international investors.** Multinational manufacturing companies compare the labour costs of (prospective) plants across countries with comparable productivity levels. This is reflected in developments in the Belgian automobile industry, which has suffered substantial job losses over the years, often to other European plants located in countries that cannot be considered to be low-cost producers. This points to the generalised problem of high labour costs for the Belgian economy, with also higher-skilled, highly productive jobs being jeopardised.

Graph 2.1.3: Hourly labour cost levels (2013; EUR)



\* 2012 data for NL industry; Including those wage subsidies granted through the withholding tax, such as for shift labour, researchers and the general reduction.

Source: European Commission

### The wage-setting framework

**An important part of total wage growth is due to the practice of automatic wage indexation.** Wages in Belgium are commonly adjusted for inflation in a mechanical way through indexation clauses in sectoral collective bargaining agreements. The almost universal applicability of some form of indexation introduces a degree of solidarity between stronger and weaker sectors and helps to assure social stability. However, at the same time it dilutes the signalling role of relative wages, which risks resulting in avoidable job destruction. Wages in countries where the practice of automatic wage indexation is less widespread are also adjusted to rising prices, though in a less mechanical way so that labour market and business cyclical elements can be factored into wage negotiations. This allows temporary shocks to be partly absorbed through real wage reductions rather than permanent job losses.

**Higher price pressures have led to fast wage growth, with the wages of nearly all workers being automatically adjusted for inflation.** In turn, this has exerted upward pressure through the creation of 'second round' effects, not least because of the widespread practice of indexing prices, especially in less competitive sectors. Furthermore, projections for wage growth

prompted by wage indexation have generally been underestimated when setting the margin for real wage growth. Real wage increases in Belgium result from a stepwise process, starting at the national level with social partners negotiating every two years an 'interprofessional' agreement (IPA). One element of the intersectoral IPA is the wage norm, the maximum increase in hourly wages that can be granted during subsequent collective bargaining at lower levels, in particular at the sectoral level.

**The national wage norm introduces a high degree of coordination among sectors, which is further enhanced by other national standards, e.g. on minimum wages, which set the boundaries for negotiations between the social partners at lower levels.** This macroeconomic wage policy is based on the 'Law of 1996', which was introduced to safeguard the cost competitiveness of the Belgian economy. To that end, the ex-ante margin for wage growth is set on the basis of the projected development of hourly labour costs in Germany, France and the Netherlands. Adjustments for inflation and automatic wage scale increases fall outside the scope of the law, and are guaranteed on the basis of what was decided in the applicable collective bargaining agreements.

**In case social partners fail to come to a comprehensive agreement, the federal government can decide to step in, as it has done in recent IPAs.** To facilitate agreement, authorities have often made the precise apportionment of reductions in social security contributions and increases in wage subsidies and social allowances the subject of negotiations between social partners. As budgetary room for manoeuvre has continued to narrow, it has become increasingly difficult for the federal government to play this role of 'midwife' in the negotiations between the social partners. Discussions at the national level have become less successful, with negotiations on the IPAs covering 2011-12 and 2013-14 failing. This has led the government to intervene more directly, giving wage bargaining a more centralised character than before.

**With hindsight, consecutive wage norms have been largely respected but were set too high.** Underlying assumptions resulted in over-optimistic margins for real wage increases, for which no

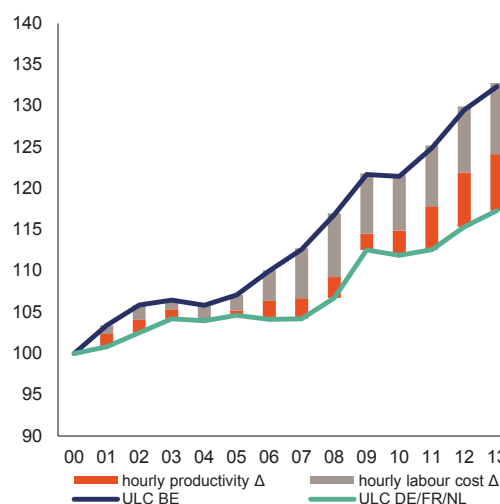


corrections were made afterwards. Growth in hourly labour costs in the three reference countries has been repeatedly overestimated. The wage cost differential this has created has become entrenched as the ex-post verification of follow-up and the appropriateness of the ex-ante wage norm has failed. Indeed, the correction mechanisms provided for in the Law of 1996, with wage overruns under the previous wage norm being compensated under the next one, have never been applied in practice. This was due to lack of consensus between the social partners and within the government, and to the fact that guaranteed wage increases (indexation and wage scales) largely ate up the room for correcting excessive past wage growth. Maintaining the use of a macroeconomic wage norm thus requires basing the norm on actual wage changes in neighbouring countries or more adequate ex-post correction mechanisms to compensate for the difference between projected and effective hourly labour cost developments in the reference countries.

**Another major shortcoming of the wage-setting system is its disconnection from domestic productivity developments, which are not considered when determining the wage norm** <sup>(2)</sup>. In principle, a faster rise in hourly labour costs can be justified if productivity growth is also greater than in competing countries. However, productivity gains in Belgium have been modest. This is made clear by the development of unit labour costs (ULC). These reflect the cost of labour inputs to productivity developments.

<sup>(2)</sup> The same can be said about so-called wage subsidies, which are more common in BE than in other Member States. However, the extent to which all of these subsidies should be factored in to arrive at the most appropriate gauge of labour cost competitiveness has been the subject of heated debate between stakeholders (see in this respect In-Depth Review 2014; GECE 2013). The new federal government has announced its intention to settle the debate on which wage subsidies are to be considered relevant for calculating the wage gap.

Graph 2.1.4: **Development of unit labour costs (2000 = 100, total economy)**



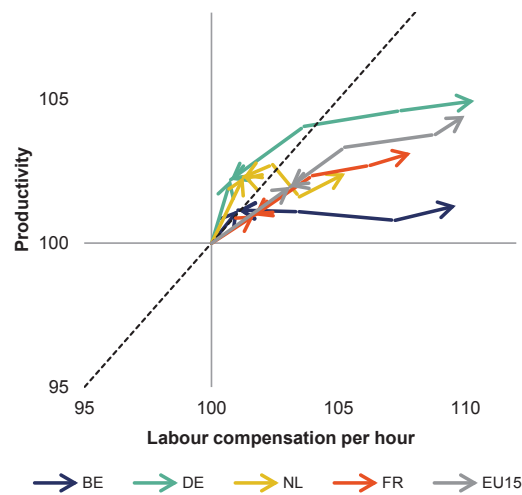
Source: European Commission, OECD

**As illustrated in Graphs 2.1.4 and 2.1.5, the gap between Belgian ULC and the weighted average of ULC in neighbouring countries has widened consistently over the past decade.** As shown, this is due both to a slowdown in relative productivity gains (compared with the reference countries) and to faster increases in hourly labour costs. This naturally affects the export performance of the Belgian economy since, together with non-cost elements such as quality, unit labour costs determine the ability of Belgian companies to compete internationally. Whereas the graph shows aggregate data for the entire Belgian economy, the rise in ULC has been particularly steep in manufacturing industries <sup>(3)</sup> according to a 2013 report <sup>(4)</sup>. Factors driving overall productivity are looked at in more detail in section 2.2. However, but it can already be highlighted that, when contemplating ways to improve the situation, attention will have to be paid both to stagnating productivity and the increasing wage costs.

<sup>(3)</sup> On the basis of the National Accounts according to the ESA95 methodology. The new ESA2010 methodology appears to sketch a more favourable picture, though important data series still need confirmation.

<sup>(4)</sup> Groupe d'experts Compétitivité et Emploi (GECE), Coût salarial, subventions salariales, productivité du travail et effort de formation des entreprises, Rapport au Gouvernement, 2013.

Graph 2.1.5: Productivity and wage evolution (2009 = 100)



Source: European Commission

As the wage norm is based on hourly labour costs in the neighbouring countries, Belgian labour costs are indirectly linked to productivity developments in these countries. Introducing a link with domestic productivity trends would better align wage cost with the goal of preserving employment. Productivity levels in Belgium are generally high and thus compensate to some extent for high labour costs. However, this positive aggregate picture disguises important differences in performance between sectors and asymmetries between companies within the same sector <sup>(5)</sup>.

Furthermore, high labour costs appear to have led to fast capital deepening in manufacturing, contributing to the high level of productivity. Strong increases in labour costs create incentives for companies to introduce more capital intensive production methods, which mitigate the impact on unit labour costs but reduce labour demand. This results in job losses for low- to medium-skilled labour, which in turn harbours problems for the sustainability of the social model. This process of capital intensification has its limits, though, as it is subject to the pace of technological progress and has already reached a high level. Also, if other countries pursue strong wage moderation policies, as some did prior to and in the wake of the crisis,

this results in a fast deterioration in external competitiveness.

**Seniority-based wage growth also contributes to the general problem of decoupling of productivity and wage developments.** Most collective bargaining agreements covering white-collar workers include seniority-based wage scales, with seniority used as an imperfect proxy for individual productivity developments. However, productivity generally slows down at some point during one's career as the marginal return on acquired experience declines <sup>(6)</sup>. Among other factors, seniority-based compensation also contributes to the low employment rate for workers above 55 (see section 3.1) as it inhibits mobility and deters timely job-switching by pushing up the reservation wage, which in turn hurts employment prospects. The federal government has announced that it will take initiatives to reduce the weight of seniority in wage growth within the context of the planned rationalisation of the Joint Committees. The High Council for Employment has put forward several options in this regard.

#### Recent trends and policy measures

**As Graph 2.1.2 shows, the growth rate in hourly labour costs in Belgium has slowed markedly in recent quarters <sup>(7)</sup>.** While a slowdown is obvious in the light of fading inflationary pressures since 2013, it is important to note that the growth rate of labour costs has also converged with that observed in the neighbouring countries. In the first nine months of 2014 they rose by 0.8% for the total economy, against 2.8% on average in 2001-13. So far, the wage slowdown has been more pronounced in the services sectors than in manufacturing, though at 1.2% labour cost growth in the first nine months of 2014 has also been decelerating in the manufacturing sectors.

<sup>(5)</sup> Ibidem; NBB, 2013 Annual report, 2014; Abraham, F., Konings, J., Loonkosten, productiviteit en werkgelegenheid in een concurrentiële internationale omgeving: een analyse met Belgische bedrijfsgegevens, 2010.

<sup>(6)</sup> Hoge Raad voor de Werkgelegenheid, Advies over het verband tussen loon en anciënniteit, 2014.

<sup>(7)</sup> According to the latest Technical Report by the Central Economic Council (Dec-2014), the hourly wage cost gap is estimated to have decreased to 2.9% at the end of 2014. The gap is defined on the basis of the Law of 1996, i.e. relative to the weighted average of the three neighbouring countries and with 1996 as base year.

### Box 2.1.1: Performance of manufacturing activities

Belgium has been no exception to the long-term trend of deindustrialisation in advanced economies. This trend is intrinsically positive as it reflects how more services are consumed as countries grow wealthier. The flipside is that manufacturing <sup>(1)</sup> is no longer a major source of job growth in advanced economies. Despite a fall of its relative economic weight, it remains nevertheless an important driver of added value and of – generally well-paid – employment. It remains also the key contributor to productivity growth, innovation and trade <sup>(2)</sup>. Aside from these direct effects, there are important spill-over aspects that should be taken into account since industrial activity creates demand for services with a high value added such as R&D or logistics. While this interplay works in both directions, the intermediate use of services by the industry is higher than the intermediate use of industrial output by the services sectors <sup>(3)</sup> with only 26% of the Belgian economy composed of stand-alone services <sup>(4)</sup>. For these reasons, a fast dwindling of manufacturing activities is not without danger for the performance of the overall economy, not least because the sector creates many jobs for middle class workers.

Table 1: **Share of manufacturing industry in total employment**

	1970-79	1980-89	1990-99	2000-09	2010-13	2013/1970	
						Δ share (pp.)	Δ absolute employment
BE	27%	21%	18%	14%	12%	-0.18	-52%
DE	33%	29%	23%	19%	18%	-0.18	-22%
FR	23%	19%	15%	12%	10%	-0.13	-44%
IT	26%	24%	21%	19%	17%	-0.09	-21%
NL	20%	16%	13%	10%	9%	-0.14	-38%

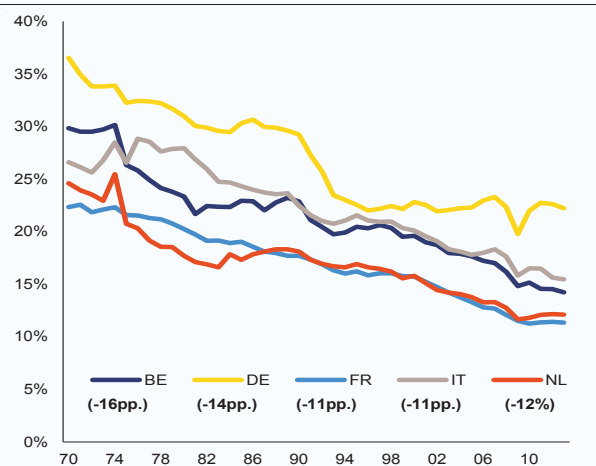
Source: European Commission

The decline of manufacturing in Belgium appears nevertheless to be higher than in other countries <sup>(5)</sup>. When looking at employment, the share of manufacturing jobs in total employment has fallen across the board. This reflects rising productivity through optimization, innovation and automation of production processes as well as the outsourcing of certain activities that were

erstwhile performed in-house. However, for Belgium the decrease has been steeper than in other EU15 Member States (see Table 1). When looking at the evolution of employment in absolute levels, the manufacturing sector in Belgium has shrunk by more than half since 1970. Aside from the factors described, this reflects the high degree of capital deepening in the Belgian industry in response to elevated labour costs. This deteriorating cost competitiveness manifests itself also in the downward evolution of profit margins <sup>(6)</sup>.

Also in terms of the share in total value added the loss for Belgian manufacturing sectors has been more pronounced (see Graph 1). This reflects mainly a price effect with value added in constant prices sketching a more stable picture. This relates to Belgium's specialisation in intermediate products (see section 2.2), which makes it difficult to pass on rising input costs to final prices. The experience in other countries demonstrates that curbing trends in the manufacturing sector is achievable if a focus on innovative activities is maintained. Countries that performed better in the past decade (DE, AT & SE) were found to have a comparatively large machinery sector with focused spending on R&D, resulting in a higher share of high-end products. Other important prerequisites are access to a skilled labour force, a solid business service sector and a generally favourable business climate <sup>(7)</sup>.

Graph 1: **Share of manufacturing industry in total value added**



Source: European Commission.

<sup>(1)</sup> Industry excluding mining and utilities.

<sup>(2)</sup> McKinsey Global Institute, Manufacturing the future: the next era of global growth and innovation, 2012.

<sup>(3)</sup> Avonds, L., De gecumuleerde kosten 1995-2005, Working Paper 9-13, FPB, 2013.

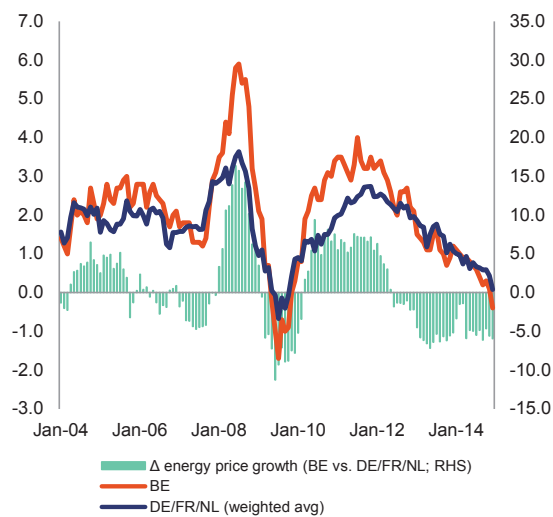
<sup>(4)</sup> Roland Berger, Reindustrializing Flanders – the burning platform, Voka management report, 2014.

<sup>(5)</sup> In 2013, BE had the lowest EU27 share of activities traditionally considered 'tradable' (Nace rev.2 A, B-E, G-I, J) in total employment and one of the lowest shares in total value added.

<sup>(6)</sup> See In-Depth Review, 2014.

<sup>(7)</sup> Roland Berger, 2014.

Graph 2.1.6: HICP (annual % change)



Source: European Commission

In addition to low inflation, the slowdown in relative labour cost growth rates is the consequence of a number of government measures affecting both wage indexation and real wage increases. As well as the decision to freeze wages in real terms in 2013-14 and reduce certain employer social security contributions, the previous government made successful attempts to rein in price pressures. Past inflation was on average higher than in the euro area and the neighbouring countries (see Graph 2.1.6), which can be a problem as monetary policy within a monetary union is geared towards the aggregate.

To mitigate the vicious inflation-wage cycle, Belgian authorities have been focusing efforts on tempering inflationary pressures. To this end, the functioning of the domestic energy and telecom markets was improved. For energy, the ensuing price effect has been compounded by the reduction in the VAT rate for electricity since April 2014, though this effect will dissipate over the course of 2015. Finally, there have been several changes in the way the health index, to which wages and benefits are linked, is calculated. Taken together, these measures have brought inflation into line with neighbouring countries (see Graph 2.1.6). Still, on average, core inflation remained 0.5 pp. higher in 2014, mainly due to higher price inflation for services and processed food items. This underscores how continued vigilance with regard to market functioning

remains warranted given that several product and service markets have major shortcomings, while legacy costs risk undoing the gains achieved in recent years on energy prices (see section 3.3).

**The structural reductions in social security contributions decided earlier have been maintained by the new government.** However, the timing of the reductions (initially EUR 450mn each in 2015, 2017 and 2019) has been changed by combining the 2015 and 2017 rounds in 2016 for a total amount of EUR 960mn (0.2% of GDP). This comprises (1) linear reductions (EUR 300mn), (2) low wages (EUR 300mn), and (3) wage subsidies for sectors exposed to international competition and whose growth potential is at risk because of the evolution of labour costs compared to productivity (EUR 360mn). At the same time, the federal government has announced its intention to reduce the standard rate of employers' social security contributions from 33% to 25% by the end of the current parliamentary term. This would be done by abolishing some of the existing reductions and wage subsidies, which were partly introduced to offset high and rising labour costs but have led to a complex system and may thwart foreign investments as they coexist with high nominal rates. Ultimately, a comprehensive solution still involves a broad tax reform (see section 3.2). This would create room for wage cost reductions.

**The new federal government has also decided to continue the strategy of wage moderation so that slow wage growth is projected to continue in future years.** In recent years Belgian wages have been frozen in real terms as the government allowed no increases on top of corrections for inflation, with a zero wage norm applied in 2013-14. For 2015-16 the social partners have agreed a national wage norm of 0.8%, which can be used only in 2016<sup>(8)</sup>. The government has decided to suspend all wage-indexation schemes. This suspension will last until the health index has risen by 2%. On the basis of the current inflation outlook, the 2% erosion in real wages will materialise only slowly, leading to a prolonged period of very low wage growth. According to simulations by the National Bank of Belgium, the suspension of wage indexation implies, all other things being equal, a positive shock for Belgian

<sup>(8)</sup> 0.3% of the 0.8% is reserved for forms of compensation that are not subject to social security contributions.

companies. Over a five-year period, the measure would yield 33 300 additional jobs, boost overall GDP by 0.5 pp. and lower inflation by 1.1 pps., resulting in a further limitation of wage growth once indexation is reactivated <sup>(9)</sup>.

**All in all, it appears that Belgium's historic labour-cost gap is set to narrow steadily over the medium term following corrective measures taken in recent years.** To fully correct the historic labour-cost gap, additional measures might be required as comparably low inflation in trading partners limits Belgium's relative gains. This may involve continued wage moderation against the background of subdued inflation or further alleviation of the tax pressure on labour.

**To prevent past problems from recurring, a revision of the Law of 1996 is envisaged.** Headway on this point is less tangible than for the corrective measures. As well as projections, the wage norm would have to factor in actual wage developments in the reference countries in the past two years. An automatic correction mechanism for past increases above the norm would also be introduced. Furthermore, the norm would be enshrined in a generally binding collective agreement or Royal Decree if no agreement were reached between the social partners. Lastly, enforcement of the law would be improved by tightening the sanction mechanism for sectors or companies allowing wage increases surpassing the norm. If enacted, such reforms would improve Belgium's intersectoral wage policies by strengthening both preventive and corrective elements.

#### Evaluation of progress made on labour costs

**In spite of the measures listed, important shortcomings in the wage-setting framework have been left unaddressed.** It is unclear how deviations from the national norm in lower-level negotiations between the social partners would be made possible. Also, no action has been taken to bring wage and productivity developments more closely into line, including at industry or company level. Finally, wage indexation and seniority-based wage scales would continue to fall outside the scope of

the wage norm. This risks undoing certain planned improvements to this norm if inflation differentials with neighbouring countries start to rise again.

**Therefore, initiatives to soften the negative effects of how wage indexation is applied should not be a taboo.** Indeed, the focus on safeguarding indexation in its current form has led to several measures to lower inflationary pressures, which, although not entirely unsuccessful, came at a high budgetary cost and could produce unintended consequences, such as is the case for the decision to reduce VAT on electricity consumption by households. Still, the government had to resort to the drastic decision of blocking wage indexation altogether to correct for the past. At the same time some of the problematic features intrinsic to the system have been left unaddressed.

**The use of all-in wage agreements could compensate for the effect of non-anticipated indexation.** Such agreements cap nominal instead of real wage growth, as the wage norm does. Their use was promoted in the 2007-08 interprofessional agreement and about a quarter of all private sector employees were covered by sectoral all-in agreements at that time. They help to shield the domestic economy from exogenous commodity shocks, limit price volatility in case of demand shocks (lowering the need for ex-post corrections) and allow for differentiation between sectors and companies on the basis of productivity differentials <sup>(10)</sup>. Especially for sectors or companies facing shrinking margins and heavily exposed to international cost competitiveness promoting all-in agreements could be a viable strategy to strike a more appropriate balance between labour cost growth and employment preservation, on the one hand, and the exact timing of corrections for inflation, on the other.

#### Energy cost

**The Belgian economy has a higher energy intensity than the neighbouring economies and the euro area.** These differences are mainly due to a different economic composition of final demand. Exports have a particularly high energy intensity. This reflects the fact that Belgium has a high level of energy-intensive industrial activities, such as the

<sup>(9)</sup> The simulations assume a sustained zero wage growth in real terms once indexation is reactivated. See NBB, Economic projections for Belgium — Autumn 2014, Economic Review, 2014.

<sup>(10)</sup> NBB, Indexering in België: omvang, aard en gevolgen voor de economie en mogelijke alternatieven, 2012.



(petro)chemical industry, which typically feed into the country's exports and generate high value added. This intensity is also evident in industry's share of overall electricity and gas consumption (see Tables 2.1.1 & 2.1.2). Given Belgian exports' high energy intensity, it is important to ensure competitive prices for energy and gas, in particular for big professional users.

**Table 2.1.1: Share of total final gas consumption**

	Industry	Households	Services	Primary sector	Other
EA18	38%	39%	19%	2%	2%
BE	51%	24%	15%	2%	8%
DE	41%	41%	17%	0%	1%
FR	31%	43%	23%	1%	2%
NL	27%	38%	24%	11%	0%

**Source:** European Commission

**Table 2.1.2: Share of total final electricity consumption**

	Industry	Households	Services	Primary sector	Other
EA18	37%	29%	30%	2%	3%
BE	47%	24%	26%	0%	2%
DE	43%	26%	29%	0%	2%
FR	26%	36%	32%	2%	3%
NL	33%	24%	35%	7%	2%

**Source:** European Commission

**For natural gas, all three Belgian regions were found to have cheaper prices for industrial consumers than DE, FR, NL and the UK in 2010<sup>(11)</sup>.** The positive gap was due to taxation and network charges, with many large industrial users avoiding distribution charges by being directly connected to the Belgian transport network. This favourable situation has not changed significantly since<sup>(12)</sup>.

**Average electricity prices for companies have converged with those in neighbouring countries, but this average probably paints too rosy a picture of the situation faced by the largest industrial users<sup>(13)</sup>.** For medium-sized industrial users (25GWh/y), Belgium's regions generally had

the highest prices in 2010 due to higher taxes and levies. For large industrial users (250GWh/y) the price difference with the other countries was smaller — though purchased volumes are evidently higher — but prices were still at the upper end, with higher taxes and levies. The federal authorities have taken several measures since to tackle the situation. The federal contribution to financing public service obligations and regulatory costs was substantially lowered. In addition, the contribution was made degressive with rising use and the absolute annual cost ceiling was extended to medium-sized industrial users. A similar decreasing contribution formula was introduced for the contribution to support offshore wind farms. However, rising charges at the regional level have partially offset lower federal charges<sup>(14)</sup>.

**As a result, prices for large industrial electricity users are still relatively high compared to neighbouring countries although the difference has decreased since 2013<sup>(15)</sup>.** This difference falls as consumption rises, though for the largest consumers<sup>(16)</sup> prices in Flanders and Wallonia were still about 10% higher than the average for the three benchmark countries in 2014 (see Graph 2.1.7 for a comparison for 500GWh). This difference primarily reflects higher taxes and the incorporation of costs for renewable energy support in network charges. France and the Netherlands apply low taxes for high electricity volumes, while Germany as well as the Netherlands offer major discounts on network charges, a policy which France has also introduced recently.

**The biggest charges for industrial users are regional ones.** Following the sharp decrease in (federal) charges for offshore wind farms, (regional) levies linked to the purchase of certificates for green energy and combined heating accounted for roughly 80% of total charges for the biggest industrial users in Flanders in 2014. Regional contributions to the purchase of green certificates

<sup>(11)</sup> Frontier Economics, International comparison of electricity and gas prices for commerce and industry, 2011.

<sup>(12)</sup> van der Linden, J., De prijs van elektriciteit en aardgas voor ondernemingen in België, Working Paper 10-14, FPB, 2014; CCERB, Sociaal-economische nieuwsbrief 199, 2014.

<sup>(13)</sup> Gas and electricity prices for most SMEs fall under energy policies for residential users (see section 3.3). For these users, the government has decided to continue the specific monitoring of price developments. This monitoring is based on the 'safety net mechanism' (filet de sécurité/vangnet) which checks whether commodity component prices for adjustable contracts are broadly comparable to those in neighbouring countries.

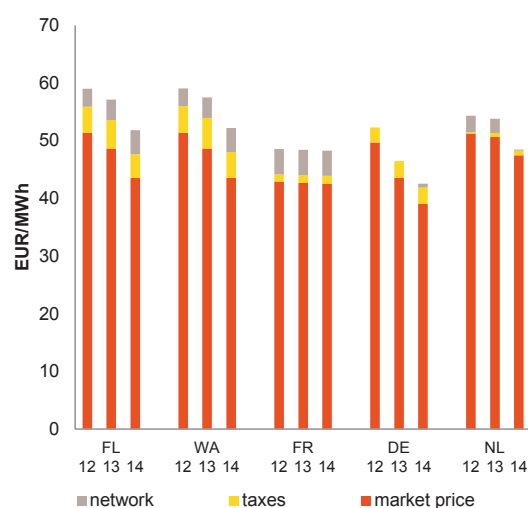
<sup>(14)</sup> van der Linden (2014).

<sup>(15)</sup> Deloitte, Benchmarking study of electricity prices between Belgium and neighbouring countries, 2014.

<sup>(16)</sup> The simulations in the study compare profiles with yearly consumption ranging from 100GWh to 1 000GWh, i.e. directly connected to the high-voltage grid. The numbers referred to are for base load profiles. van der Linden (2014) comments on the methodology applied, which would result in higher prices for users in Wallonia with an annual profile up to 200 GWh.

amounted to 75% of total non-commodity costs for the same user profile in Wallonia. This underscores the role of regional authorities in assuring the overall cost competitiveness of their major industrial corporations. The legacy cost of uncharged certificates, the costs of additional renewable capacity and the precarious security of supply only add to the challenge for policy makers. Costs linked to the creation of a strategic reserve in the light of recent supply concerns again risk affecting big users significantly (see section 3.3).

Graph 2.1.7: Total electricity prices for base load profile of 500 GWh

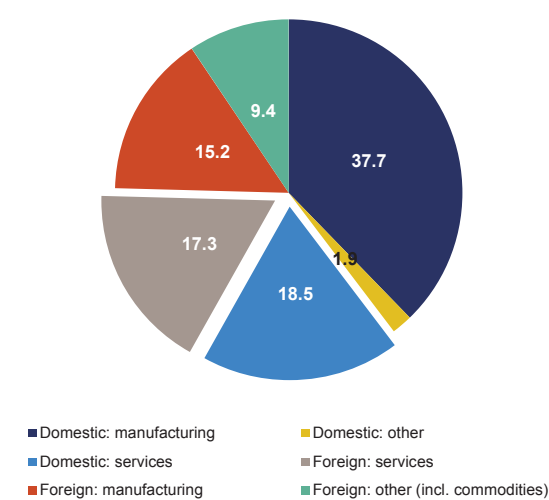


Source: Deloitte/Febeliec (2014)

At the federal level, the new government launched the plan for an energy norm similar to the national wage norm. In practice, norms would be created for different user profiles. The aim would be to ensure that the different price components are aligned with those observed in neighbouring countries. Given that certain price components are decided at the regional level whereas others are a federal competence, such monitoring would require close collaboration between both levels. The fact that federal attempts to lower energy prices in recent years have been partly undone by higher regional charges highlights the potential problems a lack of solidarity might create. Furthermore, there is the risk of interfering excessively on energy markets and further discouraging investment in already impaired domestic capacity. Enhancing grid interconnectivity to ensure close alignment between

market prices for the commodity component would therefore appear a more rewarding approach, on top of which the other price components could be targeted by the different policy levels responsible. In this respect, it will also be important to make sure that a tax shift (see section 3.2) safeguards the competitiveness of the industrial sectors.

Graph 2.1.8: Breakdown of gross manufactured exports by value added (% of total, 2009)



Source: OECD/WTO TiVA

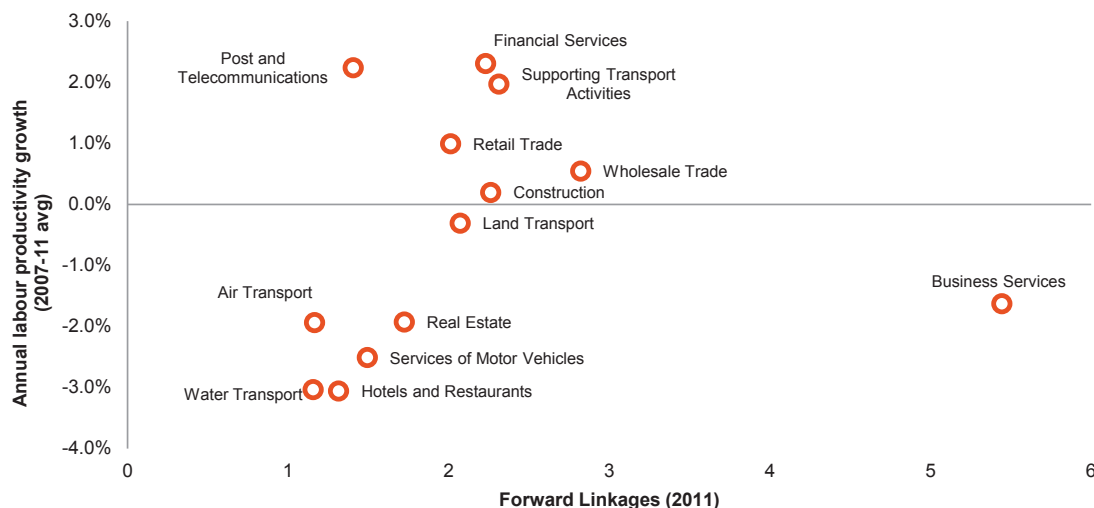
### Cost of service inputs

Services have become increasingly interconnected with the rest of the economy as they supply important inputs for the production process of other sectors. In 2011, Belgian exporting companies purchased intermediary inputs worth at least EUR 10 000 from on average eight domestic companies that do not export themselves as they are generally smaller and less productive<sup>(17)</sup>. Many of these domestic suppliers are service providers whose activities have become more tradable thanks to technological developments. Services such as R&D, design, marketing and distribution represent more than one third of the value added of total manufactured exports (see Graph 2.1.8).

<sup>(17)</sup> NBB, 2013 Annual report, 2014.



Graph 2.1.9: Forward linkages and productivity growth of the Belgian service sectors



Source: European Commission

**Domestic services thus form an integral part of external competitiveness, even when they do not participate directly in external trade.** The existence of large and increasing 'forward linkages' of services magnify their positive spillover effects. Therefore, increased productivity growth in services, would translate into increased competitiveness at the industry level. As illustrated by Graph 2.1.9 business services can be considered particularly important as they have the largest forward linkages with the rest of the Belgian economy. However, they also show negative productivity growth.

**This highlights the importance of ensuring these sectors function properly.** To the extent that business services are still relatively highly regulated and shielded from competition, this indicates the untapped potential for productivity gains in the sector and the wider economy. Considering that about half of the value added by services in total exports is imported (see Graph 2.1.8), this could not merely improve cost parameters for goods exporters but could also directly boost activity in the services sectors. It has been estimated that more ambitious implementation of the Services Directive would yield additional gains of up to 1.7% of GDP for Belgium in the long term.

## 2.2. NON-COST COMPETITIVENESS

The ability of a country to preserve and even increase high income and employment levels can be greatly influenced by cost factors. However, over the longer term a country's performance is largely determined by a number of structural factors that define its capacity to withstand exposure to international competition. Previous In-Depth Reviews highlighted that Belgium's weakened external competitiveness also reflected its performance on non-cost parameters. This section looks at the structural components of competitiveness and discusses policy measures.

### Total factor productivity

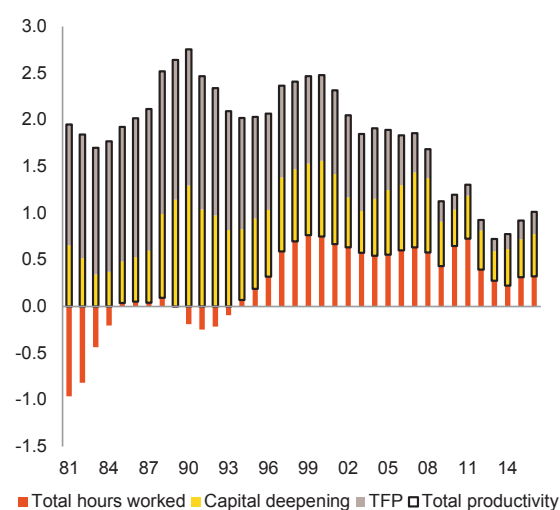
**These structural factors and their importance for the overall economic performance of a country are generally captured by total-factor productivity (TFP).** TFP reflects an economy's efficiency in allocating the labour and capital inputs available for productive ends. The interplay with these inputs determines potential growth (see Graph 2.2.1). The positive contribution from labour inputs (total hours worked) in recent decades primarily reflects an expanding labour force due to demographic trends, with hours worked *per employee* much more stable. Belgium's low participation rate still provides ample scope for enhancing potential growth, though <sup>(18)</sup>. This is discussed in section 3.1.

**Total labour productivity growth is the sum of TFP and capital deepening.** As was discussed in section 2.1 and presented in Graph 2.2.1, capital deepening in Belgium has been solid in the past thanks to developments in manufacturing. This has led to a high productivity level but has also limited the potential for future productivity gains. Such gains would therefore have to come from TFP growth, which in the long term is often considered to be the ultimate driver of growth in advanced countries. Rising productivity due to an improvement in TFP would also be more favourable for employment than capital deepening driven by labour costs.

**However, TFP contributions to potential growth have fallen to a very low level.** This has been the main driver behind the overall slowdown

in productivity growth, with capital deepening lower but still considerable. Even before the crisis TFP contributions were assessed as lower than in neighbouring countries. Part of the divergence over the past decade can be attributed to the creation through subsidised schemes of — generally less productive — jobs for the low-skilled. However, the difference in performance compared with neighbouring countries predates these measures. An explanation might be the sectoral composition of the Belgian economy. As discussed in section 2.1, Belgium has witnessed a strong shift towards service activities. These generally show a lower productivity growth rate.

Graph 2.2.1: Breakdown of potential growth



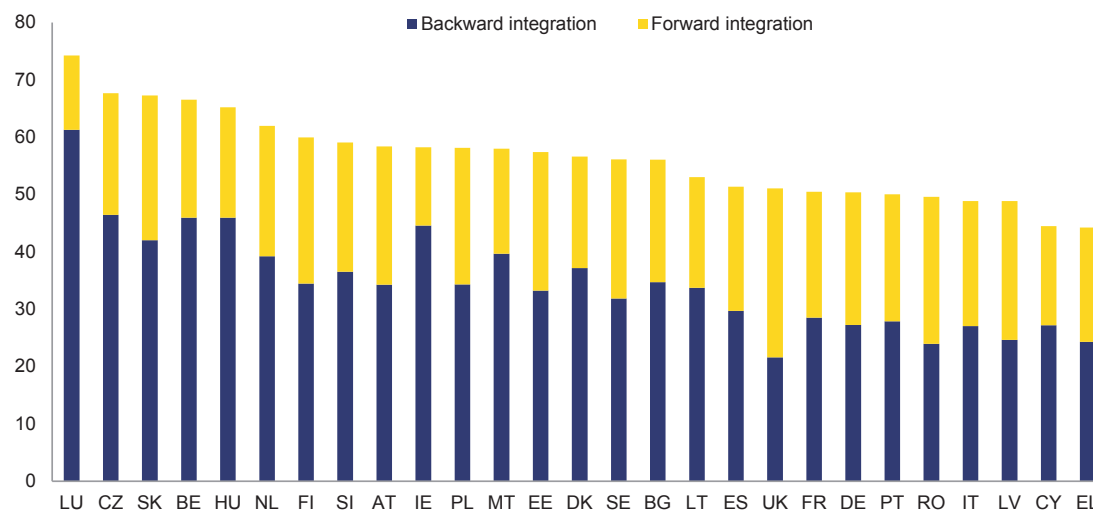
Source: European Commission

**Disappointing TFP developments point to problems of non-cost competitiveness and the existence of certain misallocations.** Total factor productivity being non-observable and computed as a residual <sup>(19)</sup>, its precise determinants are generally hard to grasp. However, a number of elements are commonly considered to be crucial drivers. These include the quality of a given amount of inputs of human and physical capital, the general business climate, the allocative capacity of the economy through the labour and product markets, and innovation in its many

<sup>(18)</sup> At the same time an ageing population can be expected to result in slower growth of the labour force and the increase of the ratio between non-active and active persons.

<sup>(19)</sup> Also known as the Solow residual. For a discussion of the European Commission methodology, see D'Auria et al., The production function methodology for calculating potential growth rates and output gaps, EC-DG ECFIN, Economic Papers 420, 2010. This methodology is based on (smoothed) trend calculations of TFP.

Graph 2.2.2: Global value chain participation index (%)



- backward integration: foreign value added content share of total gross exports

- forward integration: value added content share of total gross exports by other countries

Source: European Commission, based on WIOD

aspects. A number of these factors are discussed subsequently; others, which relate to the overall functioning of the economy, are looked at in section three on other structural issues. Before turning to performance on innovation and the business environment, Belgium's position in value chains is discussed to get a better understanding of the non-cost drivers of the country's export performance.

### Position in value chains

**Belgium's export market orientation reflects the country's tight integration into regional and international value chains through the dense cross-linkages with the French and German economies and the presence of important ports.** Considering the generally slow import growth of Belgium's trading partners, this traditional trade orientation has been one of the drivers behind a subdued export performance and the general trend of falling export market shares for goods. However, the deep integration into value chains (see Graph 2.2.2) also implies that Belgian exports feed through into third countries' exports, so that fast-growing markets are in the end more important for Belgian producers than they appear at first sight.

Table 2.2.1: Manufacturing exports by type (%)

		2003	2008	2013
BE	capital	10.0	9.6	8.2
	intermediate	54.2	58.9	60.9
	consumption	35.7	31.3	30.6
	unclassified	0.1	0.2	0.2
EA17	capital	18.7	18.3	17.6
	intermediate	49.8	52.8	53.0
	consumption	30.8	28.3	28.9
	unclassified	0.7	0.6	0.5
DE	capital	22.2	22.1	21.5
	intermediate	49.8	50.8	50.7
	consumption	27.2	25.9	26.8
	unclassified	0.9	1.2	1.0
FR	capital	21.8	19.0	19.4
	intermediate	45.6	51.0	49.7
	consumption	31.5	29.8	30.7
	unclassified	1.1	0.2	0.2
NL	capital	18.2	19.2	19.8
	intermediate	53.2	55.7	56.2
	consumption	28.3	24.8	23.7
	unclassified	0.2	0.3	0.3

Source: European Commission

**Belgium's overall position and specialisation within these value chains is, however, unfavourable due to its high labour costs.** Belgium is broadly positioned in the intermediate range as Belgian exports mostly serve as inputs for final products (see Table 2.2.1). Conversely, Belgian companies export few capital goods: their share in manufactured exports is less than half that of the average euro area country and neighbouring countries. Furthermore, their share has fallen

steadily over time. Margins for intermediate products are generally lower as their product differentiation is also lower, resulting in strong price competition. This makes it hard to pass on the costs of imported commodities and domestic labour inputs into final prices without running the risk of losing market shares.

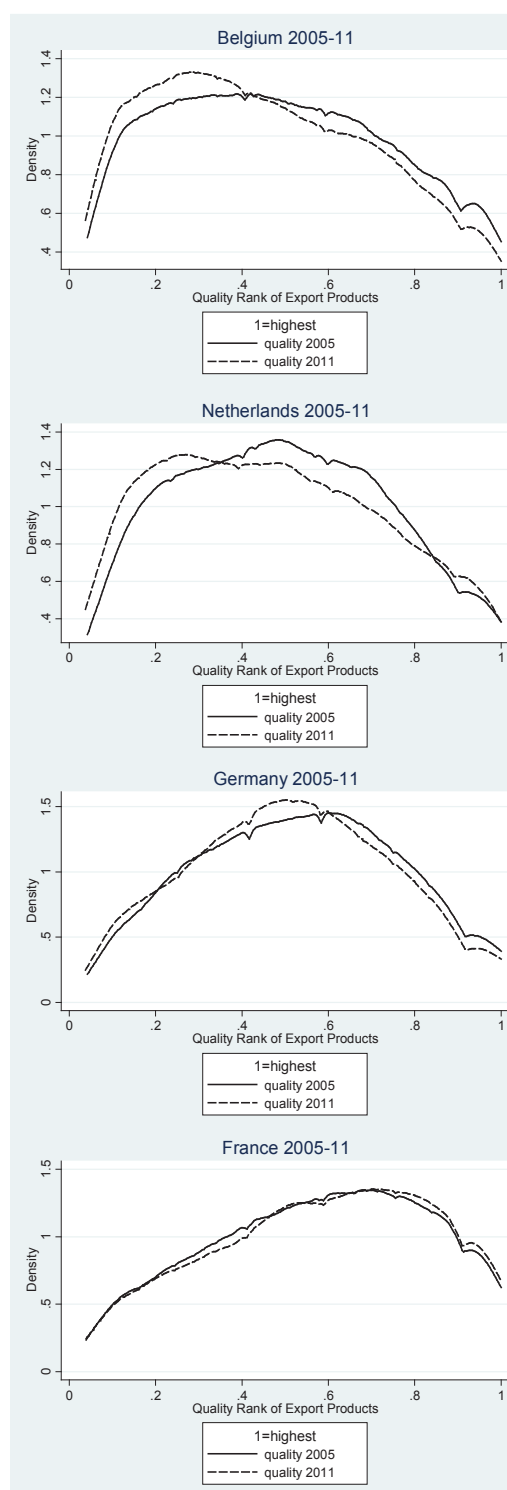
**This fits with findings on the average quality of the products Belgium exports, another indicator relevant to specialisation.** The typical Belgian manufactured product is of medium to low quality, i.e. skewed to the left in Graph 2.2.3. Moreover, between 2005 and 2011 Belgium saw quality deteriorate as the share of products considered 'top' quality declined sharply. On average product quality, the common peer countries are generally found to perform better, as do most EU-15 countries. This is particularly the case for France and Germany.

**Given Belgium's product specialisation, a misalignment seems to exist with its high labour costs.** To compensate for the latter and allow for future export growth, a general upscaling of the product range would be beneficial. This highlights the importance of fostering broad-based innovation.

## Innovation

**Innovation is paramount in speeding up the transition to a more knowledge-intensive economy as it allows for specialisation in new or better products and services with higher added value and lower price-sensitivity.** Innovation can take several forms, resulting in different outcomes. Whereas process innovation increases efficiency and lowers costs, product innovation allows the creation or improvement of products which can be sold at a premium or be used to tap into new markets. The latter's beneficial effect on external competitiveness and the domestic economy is clearly longer-lasting.

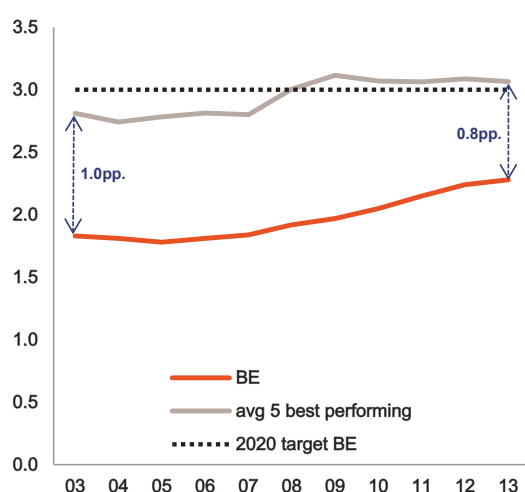
Graph 2.2.3: Quality rank of export products



**Source:** Vandenbussche, H., Quality in exports, EC-DG ECFIN, Economic Papers 528, 2014.

**Belgium is considered to have a high-quality research system, with particularly strong public research institutions and universities.** Businesses have many opportunities to cooperate with both and have been increasing expenditure on R&D. Total spending by all actors rose from a low of 1.8% of GDP in 2005 to 2.3% in 2013 (see Graph 2.2.4), with the main increase stemming from business expenditure: from 1.2% of GDP in 2005 to 1.6% in 2013. The continuation of this trend would push Belgium to within reach of its 2020 target of 3%. The gap to the five best performing EU countries has narrowed over the period under consideration, but was still 0.8 pp. of GDP in 2013.

Graph 2.2.4: R&D intensity (%GDP)



Note: 5 best performing countries in 2013: FI, SE, DK, DE & AT  
Source: European Commission

**The overall increase in business R&D intensity in recent years has been principally driven by a particularly good performance in the bio-pharmaceutical sector.** In this sector, high scientific quality, business investment, product innovation and trade performance reinforce each other. Knowledge intensification and broadening of the innovation base beyond this sector has improved but there is potential for further progress.

**The rising total R&D intensity also reflects stronger public support for business spending as the different levels responsible have developed detailed policy plans over the years.** The federal level has focused on fiscal incentives with a payroll withholding tax exemption for

researchers of 80% and an equal deduction for patent revenues <sup>(20)</sup>. Regions provide direct support through subsidy schemes as well as indirect support through facilitator policies, with e.g. a focus on clusters in Wallonia — a policy which Flanders has announced it will give more emphasis to as well.

**Access to public support is, however, considered complex and time-consuming, and the support available fragmented.** This discourages absorption, especially by smaller companies. A proliferation of initiatives and institutions also weakens the focus of policies. Consequently Belgium has been recommended to streamline incentive schemes and reduce administrative barriers.

**The new Flemish and Walloon governments have announced their intention to address the suboptimal efficiency of innovation support.** Flanders plans, for instance, a rationalisation of the current landscape of intermediate structures and has started merging some entities. Wallonia plans to assess all types of financial assistance to firms in order to simplify the overall system. A point that merits additional attention is the overall coordination of the policy mix. Although the funding of business R&D is split between the federal government and the regions, there is no organised coordination to ensure that support is optimally balanced between the different instruments and that trans-regional synergies are fully exploited.

**In spite of Belgium's relatively solid performance on R&D spending and other input parameters, performance indicators for innovation output paint a more mixed picture.** The strengths of the research and innovation system are inadequately translated into economic performance, with Belgium generally lacking fast-growing firms in innovative sectors. This is also evident in the comparatively low share of total company sales resulting from new innovations. To strengthen the translation of research into commercial products, the Walloon government agreement sets out its intention to reinforce its Marshall Plan by concentrating on innovation

<sup>(20)</sup> As a result, revenues foregone due to R&D tax incentives are now about twice the amount of direct public funding of business R&D.

policy measures with the highest value added in terms of job creation and commercial valorisation. Flanders aims to strengthen innovation by means of a cluster policy.

**Bottlenecks discussed in other sections on taxation and labour market performance contribute to the overall innovation challenge.** Site selection for R&D operations is primarily determined on the basis of access to qualified staff, universities, R&D funds and suppliers. For decisions on the location of actual labour-intensive manufacturing activities based on research carried out, labour costs are a more important factor. This underscores the importance of rebalancing overall tax pressure, as discussed in section 3.2.

**The translation of technology into new ideas and products also hinges on the availability of a vast pool of aptly skilled workers.** While Belgium has a generally well-qualified workforce with a high participation rate in tertiary education, the share of science and engineering graduates remains low. Shortages in these fields could become a major barrier to innovation, with shortages already emerging for certain functions. This is the case for professional digital skills, for example. Whereas Belgium has good broadband infrastructure and is above the EU average in computer and internet skills, there is a shortage of qualified ICT experts such as application developers. In 2014, 37.7% of enterprises with job vacancies requiring specialised ICT skills reported problems in filling these positions. For the ICT workforce alone, the shortfall is expected to rise from about 8 000 in 2012 to 30 000 in 2020 <sup>(21)</sup>. On the matching between education systems and the labour market, see section 3.1.

**In addition, companies could pay more attention to lifelong learning throughout the career of their employees.** Belgian companies perform rather poorly on participation in lifelong learning <sup>(22)</sup>. However, on-the-job training yields both a wage and a productivity premium, with the latter exceeding the former. Productivity gains from training are slightly higher in the non-manufacturing than in the manufacturing

sector <sup>(23)</sup>. Another enabler of innovation is 'entrepreneurship', which in turn is greatly influenced by the general business environment and the quality of public services.

## Business environment

**As well as an unfavourable product mix, there is also the fact that relatively few new Belgian companies are created.** Belgium generally performs weakly on entrepreneurship. It has a very low start-up rate (see Graph 2.2.5), which suggest a business climate that is unfavourable to the generation of new activities and natural expansion. This in turn lowers the pressure on existing firms to become more efficient. Considering that the main source of job creation is young rather than merely small firms <sup>(24)</sup>, it is paramount to facilitate the natural expansion of new companies.

**The low start-up rate can be related to several factors discouraging company expansion, including, once more, high labour costs.** To soften the burden for start-ups, social security contributions were lowered for the hiring of the first three employees. This federal reduction was recently increased as well as expanded to the first five employees. Company expansion beyond this level nevertheless remains hampered, which might necessitate further action and points again to the general need to shift taxes away from labour. Certain non-labour taxes also come across as very counterproductive for entrepreneurship. This is the case with a number of smaller taxes on capital goods levied at the local level, e.g. on propulsion.

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<sup>(23)</sup> Konings, J., Vanormelingen, S., The impact of training on productivity & wages: firm level evidence, 2014.

<sup>(24)</sup> Criscuolo et al., The dynamics of employment growth: new evidence from 18 countries, OECD Science, Technology and Industry Policy Papers, No 14, 2014; Geurts, K., Van Biesebroeck, J., Job creation, firm creation, and de novo entry, K.U.Leuven CES, 2014.

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<sup>(21)</sup> empirica, e-skills in Europe, country report Belgium, study commissioned by European Commission, 2014.

<sup>(22)</sup> 6.7% of those aged 25-64 in 2013, compared with an EA-19 average of 10.4% and more than 17% in FR and NL and 7.8% in DE.



Country	Average number of children per woman
LT	21.0
LV	16.5
BG	14.2
SK	14.0
PL	12.8
PT	12.5
EE	12.8
RO	11.5
UK	11.2
FR	11.2
DK	10.8
NL	10.8
SI	10.5
FI	9.8
LU	9.5
HU	9.5
CZ	9.0
DE	8.5
ES	7.8
SE	7.2
IT	6.8
IE	6.2
AT	6.2
MT	5.5
BE	5.0
CY	4.0

**Source:** European Commission

**Belgium ranks only 130<sup>th</sup> out of 144 countries on the World Economic Forum's 'burden of government regulation' indicator.** Like support for innovation, access to employment and business support schemes is greatly hampered by their vast number. Overall, administrative costs for businesses represented 1.7% of GDP in 2012, with the majority borne by smaller companies and the

**The low penetration of ICT also hampers the judicial system, as the 2015 EU Justice Scoreboard shows.** Maintaining initiatives already started to improve the use of ICT solutions will be of particular importance to supporting the implementation of recent judicial reforms and to helping courts handle the high number of incoming cases. Certain measures that could support the quality of the justice system are still missing, though. In particular, Belgium does not provide data on efficiency indicators for the international exercise assessing judicial systems. This comparative approach supports efforts to modernise the judicial system in Member States. Concerns have also been raised by the new College of courts and tribunals over whether the justice reforms can be carried through in the context of reduced budgets.

(<sup>25</sup>) Kegels, C., Les charges administratives en Belgique pour l'année 2012, Planning paper 114, Federal Planning Bureau, 2014.

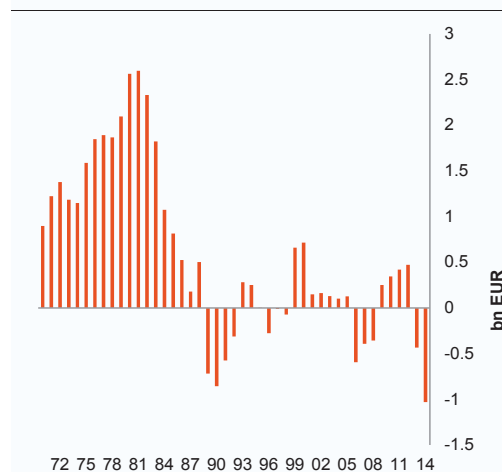


### Box 2.2.1: Adequacy of public infrastructure

The availability of and the smooth access to public infrastructure are important facilitators of productivity. Higher spending on transport and electricity infrastructure has been found to positively impact economic growth, provided no excess capacity is created<sup>(26)</sup>. Investments serve to maintain the quality and volume of the existing infrastructure or to expand it. As a consequence, persistent cutbacks in investment budgets or a continuous deferral of maintenance works may over time result in a significant deterioration of a country's capital stock.

Belgium has important investment needs, the tackling of which would give impetus to productivity growth and overall economic performance. Transport infrastructure is the most obvious example (cf. infra), but the country's infrastructure gap surpasses network structures, touching also on education and social infrastructure despite long-term demographic trends that could have been anticipated. Communities have outlined plans to improve the capacity and quality of the educational infrastructure.

Graph 1: Net fixed capital formation: general gov't

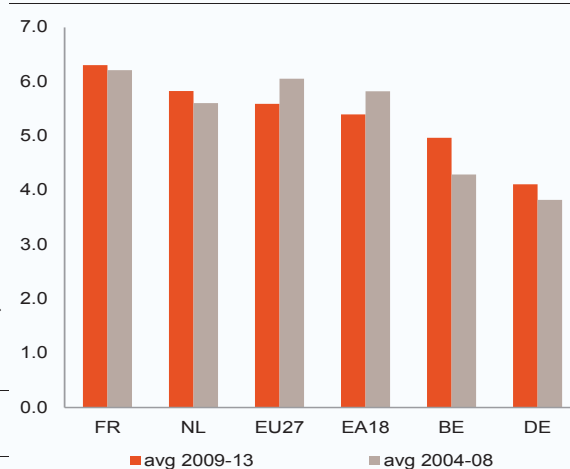


Source: European Commission

This broad-based adequacy problem of Belgium's public infrastructure reflects the persistently low rate of public investment. This rate has fallen back to 2.2% of GDP in 2013, near the very bottom of all EU countries. Fiscal consolidation in recent decades has been skewed towards investments, a policy choice which has never been fully reversed. In this respect, public spending priorities have not always been optimal despite high aggregate government spending. Since the end of the 1980s net investment – i.e. corrected for use and wear – has been negative on average (see Graph 1), implying that the stock of public investments has shrunk.

Total spending on (non-housing) construction<sup>(27)</sup> gives a somewhat better picture (see Graph 2), though performance remains below that of most other countries<sup>(28)</sup>. Some catching-up appears to have taken place in recent years.

Graph 2: Gross fixed capital formation of non-residential construction and civil engineering: economy-wide (% of GDP)



Source: European Commission

The most pressing gap with respect to the general business climate and attractiveness of the Belgian economy probably relates to the transport network. The quality of the latter is of utmost importance to fully exploit the country's favourable geographic position, which provides the country with a natural advantage for the establishment of a logistics base, headquarter or distribution centre. This is underpinned by the World Bank's global 'Logistics Performance Index'. In 2014 Belgium ranked 3<sup>rd</sup> in the global ranking, up from the 12<sup>th</sup> position in 2007.

The level of satisfaction with the quality of the transport infrastructure is one of the elements assessed by the World Economic Forum's 'Global Competitiveness Index' (GCI). The most recent GCI ranks Belgium 20<sup>th</sup> worldwide in relation to its general transport infrastructure. Especially the satisfaction with port infrastructure is high: Belgium is ranked 6<sup>th</sup> worldwide. For airport infrastructure Belgium ranks 15<sup>th</sup>. Both for port and airport infrastructure the ranking is rather stable over the period 2006-15.

However, the situation is different for the satisfaction with road and rail infrastructure. Whereas for road infrastructure Belgium was still ranked 10<sup>th</sup> worldwide in 2006-07, its ranking has dropped to the 27<sup>th</sup> position since. For rail infrastructure, the ranking went from 11<sup>th</sup> in 2010-11 to 14<sup>th</sup> in 2014-15. This steady decline in satisfaction with the Belgian road and rail network

(Continued on the next page)

*Box (continued)*

indicates that further improvements are needed in order to maintain Belgium's position as a hub for European and international logistics.

To be sure, scope for upgrading or expanding the basic transport infrastructure appears to be ample, especially considering the high concentration of economic activity around the capital and the several ports. Indeed, congestion and missing links are key issues of concern for the Brussels and Antwerp ring roads. In particular action on the Antwerp bottlenecks has been delayed repeatedly. For rail infrastructure the realisation of the Brussels Regional Express Network is the main workload. Following repeated delays due to licencing difficulties, finalisation of the network is currently estimated in 2025. However, available funding runs about EUR 500mn short of remaining needs <sup>(29)</sup>. Both for road and rail infrastructure, coordination between the federal and the regional authorities will be crucial to ensure effective planning and project selection, as well as swift implementation.

<sup>(1)</sup> European Commission, Infrastructure in the EU: Developments and impact on growth, DG ECFIN, Occasional Papers 203, 2014.

<sup>(2)</sup> In Belgium, certain infrastructure investment has been increasingly financed through off-balance constructions such as public-private partnerships or capital grants.

<sup>(3)</sup> It should be noted that DE, with a performance comparable to that of BE, has received a recommendation with respect to the level of (public) investment in infrastructure, education and research.

<sup>(4)</sup> Reply by Minister of Mobility J. Galant to question raised by MP O. Maingain, Chambre des représentants de Belgique, 22-12-2014.

**Overall, Belgium has considerable scope to expand the non-cost dimension of competitiveness.** This would help to balance overall macroeconomic risks. Wage moderation will be indispensable in the short term, but it does not provide a long-lasting strategy for a high income country. To safeguard and enhance the welfare level reached, more emphasis will have to be put on productivity gains, in particular those stemming from other sources than a continued capital intensification of production processes. This requires a sustained push towards products and associated services higher up the value chain, implying stronger performance on innovation with Belgium being an average performer in terms of innovation output.

**With this aim in mind, Belgian authorities would be well advised to introduce major policies to facilitate this change.** For instance, public innovation support can be further streamlined and made more targeted. Belgium's weak performance in maximising the commercial benefits of R&D would profit from a reduction in administrative barriers and, more generally, measures to unchain entrepreneurship and unleash greater business dynamism. A timely and resolute

approach to addressing infrastructure bottlenecks would also help the country's overall productivity. The same applies to ensuring that labour and product markets function well, which is discussed later.

<sup>(29)</sup> Reply by Minister of Mobility J. Galant to question raised by MP O. Maingain, Chambre des représentants de Belgique, 22-12-2014.

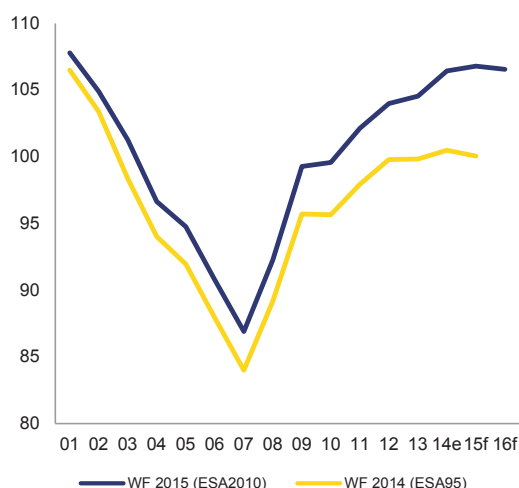
## 2.3. PUBLIC INDEBTEDNESS

**The high level of public debt in Belgium is a long standing structural issue. According to the European Commission's 2015 winter forecast, the consolidated public debt reached 106.4% of GDP at the end of 2014.** This is substantially above the threshold of 60% of the Macroeconomic Imbalance Procedure and also above the euro area aggregate (94.3% of GDP in 2014). This section discusses the recent evolution of the public debt and its macroeconomic risks.

### Public debt – recent developments

Since the start of the financial and economic crisis in 2007, the Belgian government debt has been rising again. However, despite massive interventions in the financial sector and a deficit above or around 3% of GDP since 2009, the recent debt increase is less pronounced in Belgium (BE: 20 pps. of GDP between 2007 and 2014) than in many other Member States and the euro area as a whole (29 pps. of GDP in the euro area on aggregate).

Graph 2.3.1: **Public debt (% of GDP) - Comparison between 2014 and 2015 vintage of the EC winter forecast**



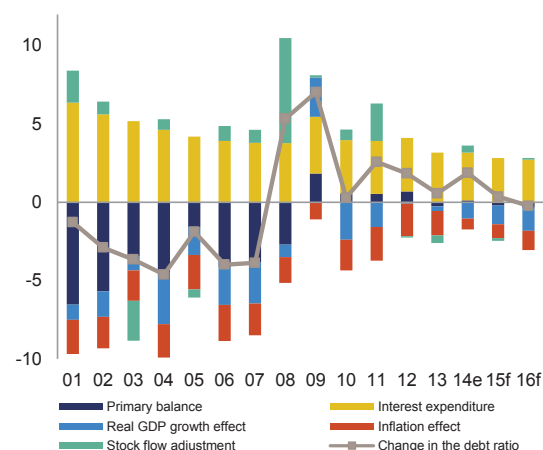
Source: European Commission

**The public debt level has been considerably revised upward since last year's In-Depth Review, when it was expected to stabilise at around 100% of GDP in 2014 (see Graph 2.3.1).** This revision is largely due to the reclassifications of corporations into the general government sector, which resulted in an increase in the gross debt

level by almost 7 pps. of GDP. This is partly offset (-3.5 pps of GDP) by an upward revision of GDP levels (the denominator) following the introduction of the new accounting system ESA2010. The reclassified units mainly consisted of investment vehicles of regional authorities, and thus the debt increase was accompanied by an increase in government fixed assets.

**In 2013, the general government's primary balance had turned positive for the first time since 2008 but it is estimated to have turned slightly negative again in 2014.** A negative snowball effect continued, with interest expenditure – although historically low – exceeding nominal GDP growth (see Graph 2.3.2).

Graph 2.3.2: **Contributions to the change in the gross debt ratio (pps. of GDP)**



Source: European Commission

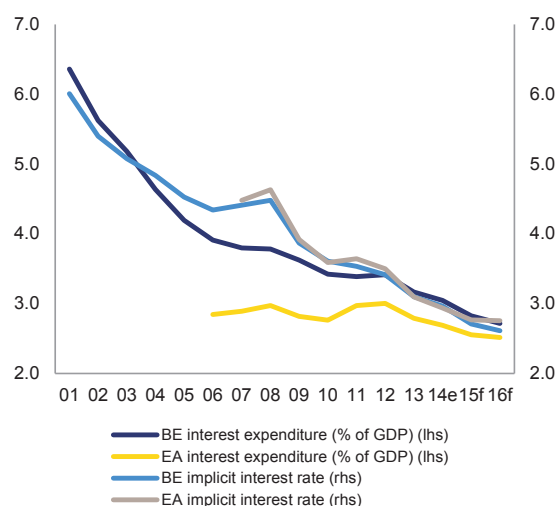
**At unchanged policy, the gross debt ratio is forecast to rise further in 2015, to 106.8% of GDP, and to stabilise in 2016.** This would mean that the gap with the euro area aggregate is widening again. Current fiscal consolidation commitments, if implemented, should ensure a steady reduction in the Belgian public debt in the coming years. However, the reduction in the debt ratio is hampered by low inflation, subdued GDP growth, and, in the longer term, the impact of an ageing population (see below). A new economic downturn or financial shocks (e.g. the activation of guarantees to the financial sector, see below), could push debt levels to less sustainable levels.

The following sections will put Belgium's high public debt level into perspective.

### Risks of short-term fiscal stress

Despite the high level of its public debt, Belgium seems to have rapidly regained market confidence after the sudden increase in risk premium on Belgian government bonds towards the end of 2011. The country currently enjoys relatively low financing costs (see Graph 2.3.3). By refinancing its debt at low rates, the Belgian sovereign has been able to drastically reduce its interest burden, even after debt levels started to rise again.

Graph 2.3.3: Interest expenditure and implicit interest rate



(1) EA12 up to 2010, EA19 as of 2011

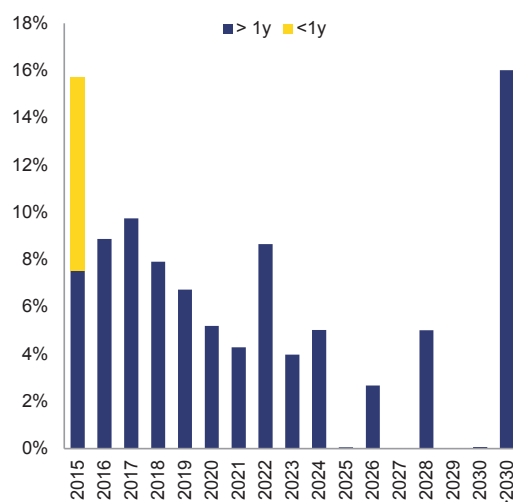
Source: European Commission

Currently, Belgium does not seem to face a risk of fiscal stress in the short term. The average life to maturity of the federal debt portfolio (which represents 84% of Belgium's total debt) is relatively long, at 7.8 years in October 2014. The Belgian government used the current low interest environment to refinance the outstanding debt at low rates and pre-financed part of the 2015 financing needs. The 12-month and 60-month refixing risk<sup>(30)</sup> of the federal debt decreased from

<sup>(30)</sup> The share of outstanding debt which matures in a given time period or which is subject to changes in interest rates (because of a floating interest rate). Figures from the Belgian Debt Agency, 'Review 2014 - 2015 Outlook', December 2014.

20.3% and 56.8% at the end of 2012 to 16.1% and 46.4% at the end of 2014.

Graph 2.3.4: Maturing debt of central government (% of total outstanding central government debt)



Source: Bloomberg and European Commission

In line with developments in the euro area as a whole, interest rates and risk premium on Belgian debt instruments abated further in 2014 (see Graph 2.3.5). The spread between Belgian and German bonds averaged 55 basis points in 2014, against 84 basis points in 2013, and a high of 366 basis points on 25 November 2011. At the end of 2014, it stood at 28 basis points (see Graph 2.3.6).

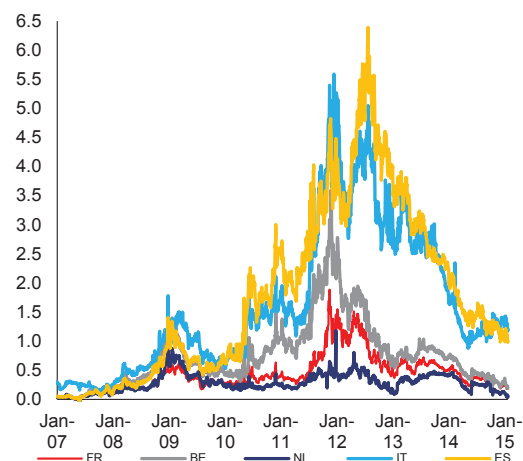
Although the risk of short term fiscal stress seem to be contained, a sustained period of higher interest rates on government debt would have a substantial impact on Belgium's public finances. Current annual refinancing needs are estimated at over 15% of GDP at federal level alone. Hence renewed financial market turbulence entailing higher risk premium would rapidly increase interest expenditure. Currently, part of the consolidation strategy is built on the assumption of falling interest expenditure. Higher interest expenditure would have to be compensated by a higher tax burden or expenditure cuts elsewhere which could in turn impact economic activity. In addition, interest payments to non-residents would worsen the primary income balance and thus weaken the country's external position.

Graph 2.3.5: Recent evolution of annual yields on Belgian debt instruments (%)



Source: IHS Global Insight

Graph 2.3.6: Spread of selected government bonds vis-à-vis German bunds



Source: IHS Global Insight

**Increased financing costs for the government would also pass through to the private sector, driving up financing costs for domestic financial institutions and ultimately for non-financial companies and households.** This would have a negative impact on investment and innovation. For instance, the cost of mortgage loans with a floating interest rate is legally bound to the market interest rate of Belgian bonds. The high public debt level also reduces the capacity of public finances to face potential adverse economic

shocks, and thus increases the vulnerability of the economy as a whole.

#### Inter-linkages with the financial sector

**Belgium still carries substantial contingent liabilities due to guarantees granted to the financial sector, although they have been substantially reduced since last year's In-Depth Review and now concern only the guarantee scheme for Dexia, which is partly owned by the Belgian state.** In December 2014, outstanding guarantees had declined to 9.4% of GDP, from 15.3% at the end of 2012. Belfius, one of the four large banks on the Belgian market, is owned by the federal state and the insurance company Ethias is owned by federal and regional authorities. New capital needs of these corporations might have an adverse impact on government gross debt levels.

**The interaction between the sovereign debt and the financial sector also plays in the opposite direction, in particular through the substantial public debt holdings on the financial sector's balance sheet.** Holdings of Belgian bonds by the domestic financial sector increased strongly between 2008 and 2012, at the expense of foreign bond holdings. While this increased concentration on the home market may have acted as a buffer at the height of the sovereign-debt crisis, it also increased the potential spill-over effects between the public debt and the financial sector if the market value of government bonds falls.

**The trend of increasing exposure to the domestic public sector was reversed in 2013.** At the end of the third quarter of 2014, 50% of government bonds were held domestically, down from a peak of 57% at the end of 2012. Likewise, Belgian sovereign bonds represented 64.6% of euro area sovereign bonds held by Belgian banks in December 2014, down from a peak of 72.8% in November 2012 (see Graph 2.3.7). However, the negative feedback loops remain a source of vulnerability in case of renewed financial stress.

Graph 2.3.7: **Share of Belgian bonds in total euro area bond holdings by Belgian banks (%)**



Source: European Central Bank

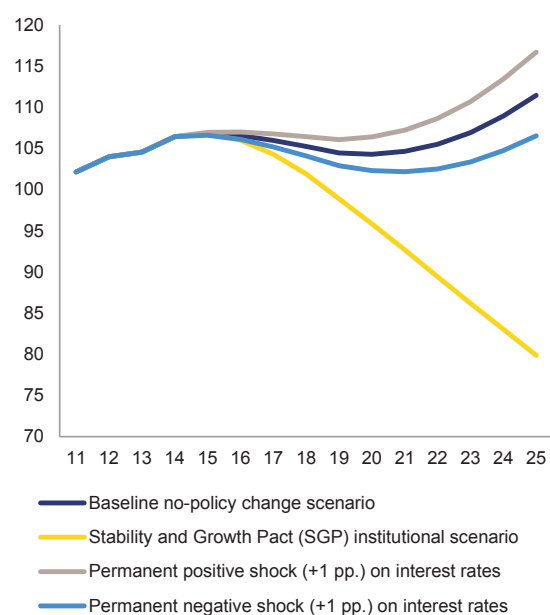
### Medium and long term sustainability of public finances

**On top of the high public debt level, Belgium's public finances are also projected to face a greater than average impact from the ageing of the population.** At unchanged policy, ageing costs are projected to push up the debt level to 111% of GDP by 2025 (see Graph 2.3.8) <sup>(31)</sup>. A 1 pp. increase in the interest rate assumptions or 0.5 pp. lower GDP growth would bring the debt level to 117% of GDP in 2025. On the other hand, adequate progress towards Belgium's Medium Term Objective (which is a surplus of the government balance in structural terms of 0.75% of GDP), as required by the Stability and Growth Pact, would put the debt on a sustained downward path, reaching around 80% of GDP by 2025. It should be noted that Belgium already has a relatively high tax burden, so the fiscal space to service a higher debt or reduce the burden through

<sup>(31)</sup> These projections start from the European Commission 2015 winter forecast, with the no-policy change assumption translated into a structural primary balance kept constant (excluding ageing costs) at the level of the last year of the forecast (2016). The baseline scenario is based on the following macro-economic assumptions for the long term: potential GDP growth remains around 1%; inflation and the change in the GDP deflator stabilise at 2% in the medium term; long-term interest rates on new and rolled-over debt converge to 3% in real terms by 2025 and short-term rates to a value consistent with the long-term interest rate and historical (pre-crisis) euro area yield curve (see also European Commission, 2012).

revenue-increasing measures is limited. However, there is room to make the tax system less growth-distorting, particularly by shifting taxes away from labour (see section 3.2).

Graph 2.3.8: **Projections of gross debt (% of GDP)**

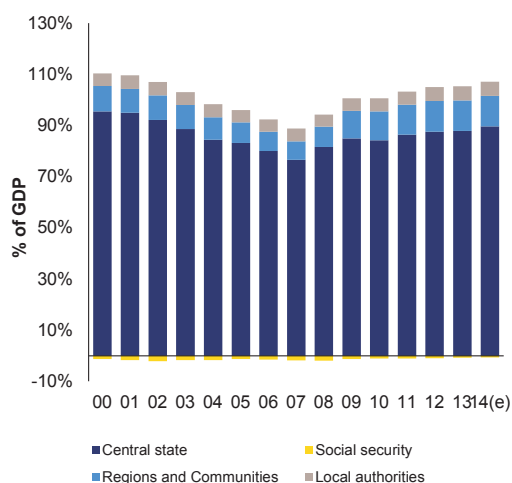


Source: European Commission calculation

**The federal government is responsible for 84% of Belgium's total public debt.** The increase in ageing costs will also occur mainly at the federal level, particularly for pensions and health care expenditure. This contrasts with the federal government's share of total revenue and final expenditure, which are expected to fall below 60% from 2015. This narrowing fiscal base at federal level may be a challenge for further fiscal consolidation and debt reduction. The recent state reform and revision of the financing of regions and communities partly addresses this challenge, among other things by curbing the financial transfers from the federal to sub-federal level, and hence creating fiscal space for the federal level at the expense of regions and communities. On the other hand, the reform puts an additional consolidation burden on the regions and communities, while these levels are responsible for the most growth enhancing expenditure, such as investment in infrastructure and education.



Graph 2.3.9: Consolidated gross debt – breakdown between government subsectors (% of GDP)



Source: Belgostat and European Commission

**Lastly, the sustainability of public debt is also determined by the economy's growth potential.**

Section 3.2 highlighted the current low potential growth of the Belgian economy, especially due to a gradual erosion of the contribution of total factor productivity since the beginning of the 1990s. The loss of competitiveness and the inefficiencies in the labour market discussed in other sections also make the high debt level even more problematic, as they weigh on growth prospects, and in turn make it more difficult to put the ratio on a downward path.

**The budgetary impact of population ageing is driven particularly by rising pension expenditure** <sup>(32)</sup>. The latest national projections indicate that the labour force will start to shrink from 2019. This poses important economic and social challenges including to the sustainability of public finances. As highlighted in section 3.1, Belgium has considerable scope to further increase the effective retirement age (which is well below the statutory age), and boost the employment rate of older workers (55-64). Under the 2014 European Semester, Belgium was recommended to step up efforts to reduce the gap between the effective and statutory retirement age, bring forward the reduction in early-exit possibilities,

<sup>(32)</sup> 2012 Ageing Report. These projections will be updated in the forthcoming 2015 edition of the Ageing Report, to be published in the first half of 2015.

promote active ageing and align the retirement age with changes in life expectancy. Recently, measures have been taken to reduce the gap between the effective and statutory retirement age (see annex tables). The federal government also announced its intention to increase the legal retirement age from 65 now to 66 in 2025 and 67 in 2030.

**The ageing of Belgian society challenges the sustainability of public finances also in relation to long-term care expenditure.** In the 2012 Ageing Report, public expenditure on long-term care was projected to more than double as a share of GDP. The increased devolution of responsibilities to the regions and communities still needs to yield cost-effectiveness benefits. In recent years Belgium has expanded the availability of home care services and other forms of community based care services. However, it still has a relatively high capacity of long-term care beds.

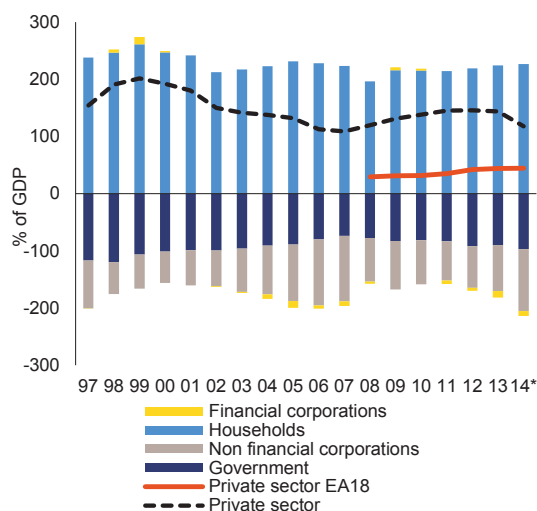
**Cooperation remains a challenge especially following the fragmentation of responsibilities between different levels of government.** The use of the Belgium Resident Assessment Instrument for measuring and monitoring quality is a step in the right direction. A stronger focus on prevention and rehabilitation policies, improved conditions for independent living, a further shift away from institutional care and stronger care coordination between the different actors would be useful for increasing cost-effectiveness and limiting future needs and their related costs. Flanders has announced a reform to better integrate services and benefits.

#### Public debt and overall financial situation of the Belgian economy

**The net financial asset position of the Belgian economy is highly positive (+42.5% of GDP in 2013), and compares with a net debtor position of 10% of GDP for the euro area as a whole.** This healthy overall position is mainly thanks to the very high net assets of Belgian households (224% of GDP, against 139% in the euro area), which more than offset the net liabilities of the public sector and the non-financial corporations (see Graph 2.3.10). The financial situation of households is discussed in the next section.



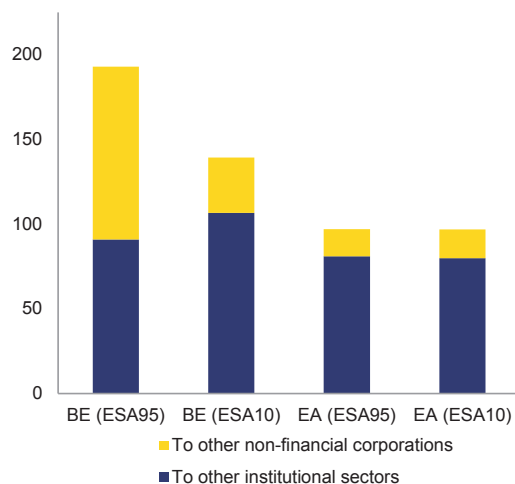
Graph 2.3.10: **Net financial assets/liabilities by sector (ESA2010)**



Source: European Commission

**The net liabilities of non-financial corporations (at 80% of GDP) are below the euro area aggregate (95% of GDP).** This figure hides a relatively high indebtedness among non-financial corporations, which is however partly offset by sizeable assets. In previous editions of the In-Depth Review on Belgium, the high indebtedness of Belgian corporations has been explained by a high amount of intercompany loans between intra-group financing centres (non-financial holdings) and subsidiaries of the same group. This feature is brought about by the rather unique system of notional interest deduction (allowance for corporate equity) in the Belgian corporate income taxation system. Consequently, the debt figure stood substantially lower after sector consolidation. As argued in the 2014 edition of the In-Depth Review on Belgium, the consolidated debt figure also still includes substantial intra-group lending, notably cross-border lending, which does not constitute a macroeconomic risk.

Graph 2.3.11: **Debt of non-financial corporations (% of GDP): BE versus EA, ESA95 versus ESA2010**



Source: European Commission

**The changeover from ESA95 to ESA2010 statistical rules brought substantial changes to the debt ratio of non-financial corporations (see Graph 2.3.11).** Henceforth, non-financial holdings and treasury centres, which accounted for a large share of intra-group lending, are classified in the financial sector instead of the non-financial corporations sector. Consequently, the non-consolidated debt ratio of the latter is substantially lower under ESA2010 (139% of GDP in 2012, against 193% under ESA95), and closer to the euro area aggregate (97% of GDP in both ESA95 and ESA2010). On the other hand, the consolidated debt ratio of non-financial corporations is now higher, because the consolidation no longer nets out lending and borrowing between subsidiaries and intra-group financing centres. These statistical changes confirm the previous assessment that the apparently high indebtedness of non-financial corporations can be explained by the presence of intra-group financing centres and do not point to sustainability risks.

**All in all, while public debt in Belgium remains high and continues to increase, several factors temper associated macro-economic risks, in particular the relatively healthy situation of the private sector.** Risks of short term fiscal stress are considered low, and inter-linkages with the financial sector are diminishing. Moreover, the economy as a whole is in a highly positive net asset position, which provides a buffer in case of shocks.

**This being said, Belgium's high public debt level is particularly challenging from a public finance perspective.** Current efforts to reduce the debt ratio are hampered by low inflation and subdued GDP growth. Interest expenditure, although historically low, still puts a substantial burden on the budget, especially at federal level. Further consolidation efforts are needed, especially in the light of rising social expenditure due to an ageing population. A successful consolidation strategy would thus also require swift implementation of the pension reforms announced, as well as growth-enhancing structural reforms.

**In a letter sent to the Commission in November 2014, the Belgian authorities committed to a number of structural reforms implementing the country-specific recommendations issued by the Council in July 2014.** These structural reforms were further detailed in two reports sent on 30 January and 5 February 2015 (updated on 13 February). The announced reforms are substantial and are expected to contribute to boosting the economy's growth potential and reducing the risks of macro-economic imbalances, thereby having a positive impact on debt sustainability. In this respect, the swift implementation of the ongoing structural reform agenda forms a necessary part of a credible debt reduction strategy.

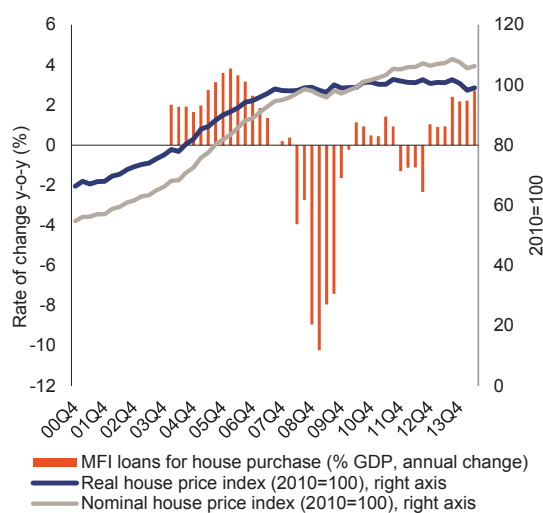
## 2.4. HOUSEHOLD INDEBTEDNESS AND THE HOUSING MARKET

As in many other European countries, property prices in Belgium rose appreciably in the years up to the crisis. As a result, banks expanded their portfolios of residential mortgage loans, at a pace largely exceeding nominal GDP growth. The rise in mortgage indebtedness has been accompanied by an increase in the vulnerability of the household sector. To identify unsustainable developments in housing markets, as well as in household indebtedness, the sections that follow give an overview of indicators reflecting past changes and provide information on the household debt burden and on the over- or undervaluation of residential housing prices.

### Evolution of property prices and explanatory factors

**Property prices have risen by 110% in real terms since 2000.** The increase has been broadly based across different regions and dwelling categories. In a long cycle starting in 1985, house prices cumulated a growth of 209% from trough to the 2010 peak, accelerating from 2005 on. Since the crisis, house prices have followed the course of the economy. In years when the economy performed better, nominal house prices rose. When the economy was weak, they stagnated. Yet, real housing prices have broadly stabilised in recent years (see Graph 2.4.1).

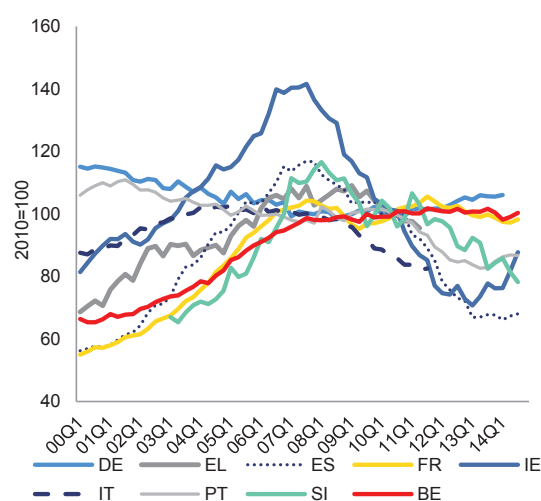
Graph 2.4.1: Evolution of house price index and loans for house purchase



Source: ECB, European Commission

**Unlike in many European countries, where house price increases were followed by a severe correction, the housing market in Belgium has stood up well to the financial crisis.** Only France experienced a similar trend, as seen in Graph 2.4.2.

Graph 2.4.2: Real house price index — selected countries



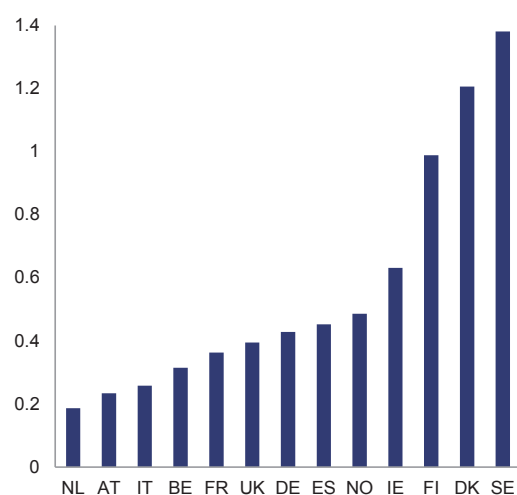
Source: OECD, BIS, European Commission calculations

**In Belgium, the price responsiveness of new housing supply has been very low<sup>(33)</sup>** (see Graph 2.4.3). In the long term, the housing supply is structurally constrained by a scarcity of land and a dense population. This is particularly the case in Flanders, where the average size of land sold for construction shrunk significantly to keep up with the growth in demand and the steep increase in the price of building plots. The rigidity of supply may also stem from strict urban and environmental planning and land use regulations. More recently, housing construction has also suffered from the general slowdown in growth. Consequently, higher housing prices did not go hand in hand with an increase in residential investment, which remained stable over the years until 2003. While real residential property prices rose by 92% since 1995, new housing investment grew by only 18% over the same period. However, residential construction is now increasing again, following a contraction in 2012-13. In January 2014, the total number of dwelling permits issued rose by 32.7% from a year

<sup>(33)</sup> Estimates of the long-term price elasticity of new housing supply where new supply is measured by residential investments (OECD, Economic Outlook 2/2010).

earlier to 5 000 permits, based on latest figures from the National Bank.

Graph 2.4.3: Price responsiveness of housing supply



Source: OECD estimates

**Belgium has seen a population increase and an even more rapid rise in new households which has driven up demand for housing.** About three quarters of the population increase is attributable to a pronounced rise in the net external migration balance, peaking in 2010. The number of households has increased, due to the fall in family size, which is the result of the increase in the number of one-parent families, ageing, and a decrease in the number of children per household.

**In addition to fundamental changes affecting demand and supply, the housing market is influenced by various other factors, most importantly housing policy, lending practices and more easily available financing.** These legal and regulatory factors have also made it easier to acquire and renovate property in the last 10 years, thereby boosting the number of transactions and prices. In particular, the favourable tax treatment of home ownership, subsidies and, atypically, a trend towards higher rates of down-payment contributed to the rise in house prices in the decade before the economic crisis.

**In 2005, the system of tax benefits to encourage owner-occupation was thoroughly revised.** The tax allowance for capital and interest payments on mortgage loans was abolished and replaced by the

‘housing bonus’, a marginal tax rate reduction, implying even higher advantages per dwelling than before. The regions also fully exploited their tax competences. Apart from introducing several deductions on the federal real estate income tax, they also cut registration duties (transfer tax) (in Flanders in 2002, in Brussels in 2003 and in Wallonia in 2009). In Flanders, this reduction was accompanied by transferability of earlier paid registration duties, encouraging (young) households to invest in their first home comparatively early on, and to buy a larger home later as their income grows.

**A very specific federal government measure was the 2005 tax amnesty, known as the ‘one-off declaration in full discharge’, encouraging Belgian households to repatriate money from abroad.** Part of this was certainly reinvested in residential property, as illustrated by tangible increases in down-payments on property purchases from 2005 as well as a fall in the loan-to-value ratio (see below). The tax amnesty expired at the end of 2013. There was also a whole raft of subsidies for energy-saving measures, such as ‘green loans’, which encouraged purchase and renovation projects, as well as mortgage loans for renovation. However, these measures have been scaled back significantly since the beginning of 2012.

**The decline in interest rates in recent years has reduced the cost of ownership, making it more affordable to buy a house, and consequently has supported price rises.** Due to a highly accommodating monetary policy and excess savings in the emerging Asian economies and oil-exporting countries interest rates declined. Other supportive demand factors that have determined house prices include lower and less volatile inflation, a fall in equity yields and a steady increase in disposable income.

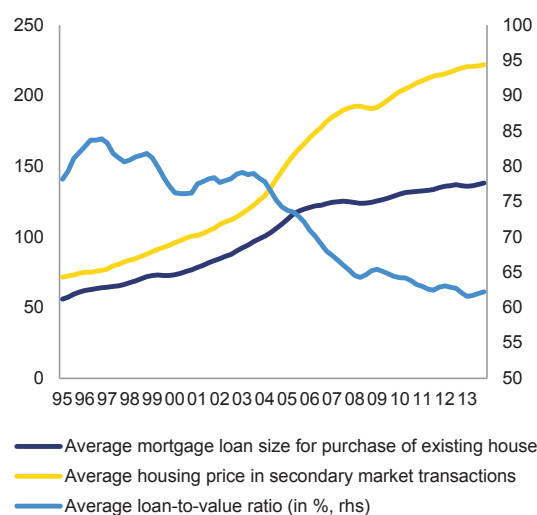
**The developments on the mortgage markets over the past decade led, among other things, and contrary to many other countries, to a decrease in the loan-to-value ratio.** Up to 2005, rising property prices also caused a sharp increase in the average amount of new mortgage loans and borrowers’ associated burden (see Graph 2.4.4). From 2005 on, the use of own funds to finance residential projects increased and the aggregate loan-to-value ratio on new mortgage loans declined (from 77% in 2005 to 61% in 2013). In

other words, the personal contribution towards a house purchase has increased from 23% in the mid-2000s to 39% in recent years. One of the reasons for this trend, as already mentioned above, is the repatriation of funds under the 2005 tax amnesty. Part of these funds were reinvested in residential property, especially in the higher end of the real estate market. Another factor is the ‘housing bonus’ introduced in 2005, which might have incited households to take out a mortgage loan for tax reasons, rather than for lack of self-funding capacity (limiting the amount borrowed to the level taken into account in the tax return). Finally, greater flexibility and a lower tax rate for gifts and donations might have stimulated additional transfers of money between generations for home purchases. However, insofar as the same factors that are responsible for the fall in the average loan-to-value also drive up property prices, buyers who are more constrained in terms of their own capital still have to borrow large amounts. Around one third of new production volumes in 2013 still had a loan-to-value ratio of more than 90%. At the end of 2013, around one sixth of the outstanding amount of loans had an indexed loan-to-value ratio of more than 90% <sup>(34)</sup>.

**There has been a trend towards longer loan maturities.** The average loan term in Belgium was traditionally estimated at 20 years, but data from the Central Individual Credit Register suggest that the share of loans with a maturity of more than 20 years at origination surged from 33.5% of the outstanding stock in 2007 to 44.2% in 2014. Clearly the increase in borrowing capacity generated by lower interest rates was not sufficient for some borrowers to offset the increase in property prices. Alternatively, some borrowers may deliberately have increased maturities in order to fiscally optimise the amortisation process. However, banks have become more selective in their credit origination policies since 2012, and a reduced prevalence of longer maturities (especially 25 years and over) in new mortgage loan production can be clearly seen since 2011. Many mortgagees refinance their loans to take advantage of the extremely low interest rates

<sup>(34)</sup> National Bank of Belgium, Financial Stability Review, 2014. Indexed LTV ratios are calculated as the ratio between the amount of the mortgage loan outstanding at reporting date (taking repayments of capital into account) and the assessed market value of the property.

Graph 2.4.4: **Developments in the average amount of new mortgage loans and aggregate loan-to-value ratio (in EUR 1 000)**



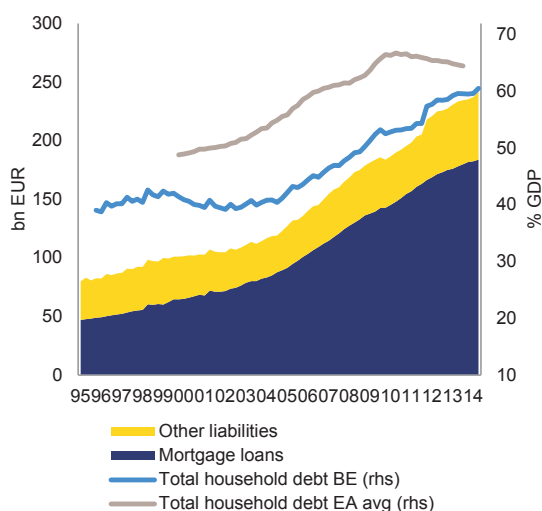
Source: NBB

**Lastly, the financial crisis and associated heavy losses on financial investments may have incited households to convert financial assets into property and real estate funds from 2008 onwards.** This helps explain why, unlike in most other European countries, the downturn that began in 2008 has also, paradoxically, tended to support property prices in Belgium, in spite of the still challenging circumstances during the euro area sovereign-debt crisis.

#### Evolution of household debt

**The marked increase in property prices resulted in an increasing number of loan-financed property transactions.** Consequently, like in the euro area, Belgian household debt accelerated from 2000 onwards, both in absolute terms and in relation to GDP. In nominal terms, Belgian household debt has doubled in the past 10 years to reach EUR 241 billion mid-2014. The household debt ratio was up from 40% to 60% of GDP at the end of 2014 (see Graph 2.4.5). Despite this upward trend, however, both the level and the increase are rather modest compared with the euro area average, which posts a debt-to-GDP ratio of 63.7% of GDP.

Graph 2.4.5: Household debt



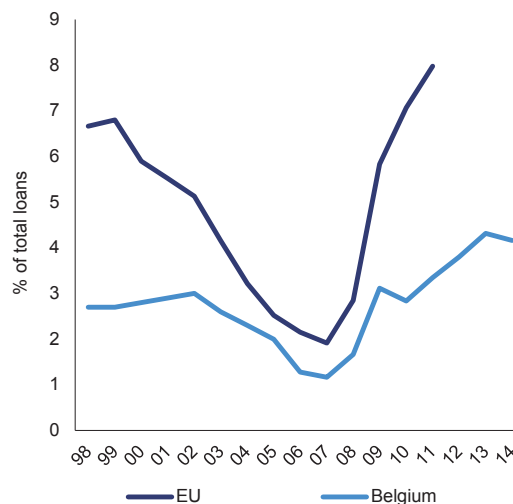
Source: NBB

An unsustainably rising debt ratio may have a significant impact on the economy at aggregate level, both in terms of real growth and also for financial stability as large numbers of households could default. Average risk weights calculated by Belgian banks are very low (10%), also in comparison with the EU average (16%). This is because there has been no major crisis in the property market and default rates have been very low, albeit increasing since 2008 <sup>(35)</sup> (see Graph 2.4.6). More than 90% of total residential mortgage lending by banks is carried out by banks under Belgian law that apply the internal ratings-based approach. However, there is considerable heterogeneity among these banks, with the share of lending for house purchases in total assets ranging from 12% to 50% <sup>(36)</sup>. Moreover, risk weights as calculated by the internal ratings-based models may be too low for losses that may emerge in less favourable market conditions. Therefore, at the end of 2013, the National Bank of Belgium took precautionary macro- and micro-prudential measures to improve banks' resilience to potentially adverse macroeconomic shocks. The most important measure is a 5 percentage point add-on to the risk weights calculated for banks using the internal ratings-based model.

<sup>(35)</sup> However, the cause of the increase does not appear to be lower quality of more recent mortgages. Indeed, the default rates on the loans completed after 2009 are lower than for those granted before the crisis. Payment difficulties faced by consumers today thus relate to older loans.

<sup>(36)</sup> European Systemic Risk Board Report 2014.

Graph 2.4.6: Non-performing loans



Source: European Commission

Indicators reflecting the ability of households to repay their outstanding debt relate the debt level to the resources available to the borrowers, i.e. assets and disposable income.

Although the ratio of debt-to-financial assets <sup>(37)</sup> was up, it reflects that, on average, there are sufficient assets to cover the liabilities. The ratio rose from 12.5% in 2001 to 20% in 2014 (see Graph 2.4.7), but is still low compared with the euro area. This is thanks to the lower debt ratio of Belgian households, but above all to their extremely favourable wealth position (both financial and non-financial assets). At the end of the third quarter of 2014 Belgian households' financial assets amounted to EUR 1 146.6 billion, equivalent to 292% of GDP (against 218% in the euro area), the highest in the euro area and an all-time Belgian record, according to figures from the National Bank. Apart from a considerable inflow of new savings, financial assets also grew thanks to the strong performance of investment funds. Once other assets are included, mainly real estate wealth (which the National Bank estimates at over EUR 1 000 billion), total wealth is much higher, at over five times GDP.

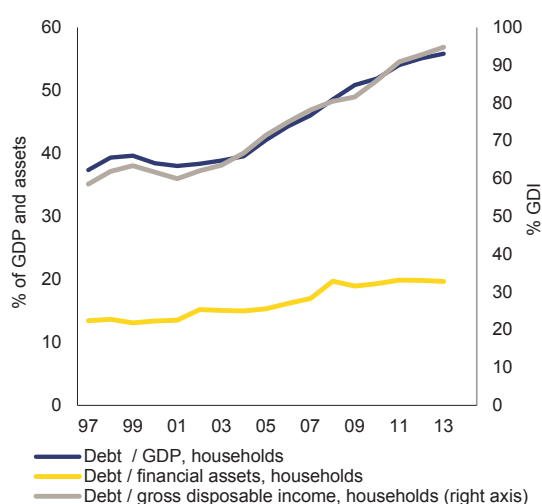
**Linking debt to income reveals a ratio of 90% at the beginning of 2014, which is still below**

<sup>(37)</sup> The debt-to-(financial) asset ratio measures whether the debt incurred can be repaid by liquidating the available (financial) assets immediately, assuming that is possible.



**that of the euro area.** In the past decade, households' debt increased significantly more than their gross disposable income, and thus the ratio between the two figures rose from 59% in 2001 to 90% in 2012 (see Graph 2.4.7).

Graph 2.4.7: Household debt indicators



Source: ECB, European Commission

**The sustainability analysis shows that the Belgian household sector does not face any immediate problems and does not need deleveraging.** Robust household balance sheets, relatively low loan-to-value ratios, and the prevalence of long loan maturities and fixed interest rate mortgages should limit the impact of interest rate or unemployment shocks on the quality of the mortgage portfolio. However, these indicators are calculated for the entire household sector, and not just for indebted households. Also, they do not reveal anything about the distribution of debt in relation to assets or income within the population. Therefore, the sustainability of household debt also needs to be assessed from a microeconomic point of view.

**The above macroeconomic view is borne out by the microeconomic analysis conducted on the basis of the ECB's Household Finance and Consumption Survey.** International comparison based on the survey data (see Table 2.4.1) <sup>(38)</sup>

<sup>(38)</sup> The debt-to-asset ratio is calculated as the ratio between total debt and total gross assets for indebted households. The debt-to-income ratio is the ratio of total debt to gross household income. The debt-service-to-income ratio is calculated as the ratio between total monthly debt

payments and household gross monthly income. The mortgage debt service-to-income ratio is the ratio of the monthly mortgage debt payments to gross household income (1/12th of the annual total), calculated for households with mortgage debt. The loan-to-value ratio of the main residence is the ratio of the household's mortgages collateralised on the household's main residence to the current reported value of the household's main residence, calculated for households having mortgage debt collateralised on their main residence.

**Unsurprisingly, these data also reveal that, among those households with an outstanding mortgage loan, it is the youngest cohort (aged below 35) and/or low-income households who face the highest liquidity and/or solvency risks.** The debt-to-asset ratio is lower in Belgium for all income groups, given the high value of Belgian households' assets and the more even distribution of those assets (notably property) among the population. Regarding the age cohorts, only around 20% of indebted households in the youngest age group in Belgium have a debt-to-assets ratio of more than 0.75, compared with only 31.9% in the euro area. In fact, in Belgium, 46.4% of young households own a property, which has to be taken into account when assessing their debt sustainability. By contrast, in the case of the debt-to-income ratio, there are more households with a higher risk in Belgium than in the euro area. However, within the lowest-income (young) households group, only a quarter of them make use of the credit market (see Graph 2.4.8), and this is often in the form of small loans, so that total amounts involved do not seem to represent a

payments and household gross monthly income. The mortgage debt service-to-income ratio is the ratio of the monthly mortgage debt payments to gross household income (1/12th of the annual total), calculated for households with mortgage debt. The loan-to-value ratio of the main residence is the ratio of the household's mortgages collateralised on the household's main residence to the current reported value of the household's main residence, calculated for households having mortgage debt collateralised on their main residence.

Table 2.4.1: Financial burden indicators — median ratios (in %)

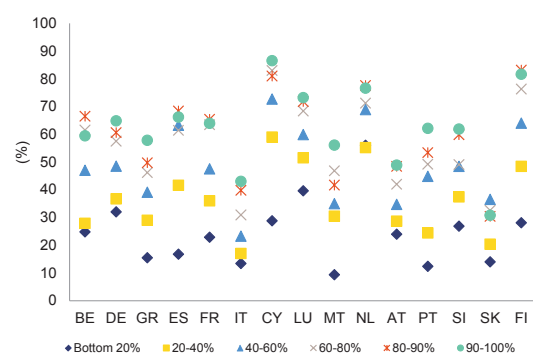
	EA	BE	DE	GR	ES	FR	IT	CY	LU	MT	NL	AT	PT	SI	SK	FI
Debt to asset ratio of indebted households	21.8	18.2	28.4	14.8	17.9	18.9	11.7	17.0	18.2	6.2	41.3	16.7	25.7	3.9	6.6	34.6
	0.6	1.5	2.4	1.8	1.2	0.8	1.0	1.4	2.1	0.9	2.5	3.6	1.6	1.0	1.1	1.0
Debt to income ratio of indebted households	62.0	79.8	37.3	47.2	113.5	50.4	50.3	157.0	86.9	52.0	194.1	35.6	134.0	26.6	22.7	64.3
	2.2	4.3	1.3	1.7	4.1	1.8	1.8	5.6	3.1	1.8	6.4	1.3	4.8	0.9	0.8	2.2
Debt service to income ratio, all indebted households	11.1	13.8	6.7	9.4	19.2	13.1	10.6	22.5	15.7	8.4	12.6	2.9	16.0	11.0	9.0	M
	0.5	0.5	0.6	0.5	0.8	0.4	0.4	0.8	0.6	0.4	0.5	0.3	0.6	0.4	0.4	0.7
Debt service to income ratio, households with debt other than credit lines, overdrafts or credit card debt	13.9	15.1	10.9	14.7	19.9	14.7	13.2	25.0	16.6	11.5	14.5	5.6	17.3	15.8	12.5	M
	0.3	0.6	0.5	0.8	0.7	0.3	0.6	1.1	0.7	1.0	0.8	0.9	0.8	0.9	0.9	0.9
Mortgage debt service to income ratio of households with mortgage debt	15.9	14.8	12.8	16.4	20.5	17.4	15.5	25.3	16.3	12.8	14.2	4.6	16.7	11.7	20.4	M
	0.2	0.5	0.6	0.9	0.9	0.3	0.8	1.1	0.7	1.3	0.6	1.4	0.7	0.8	1.5	1.5
Loan to value ratio of main residence	37.3	28.8	41.9	31.6	31.0	32.4	30.0	31.9	27.5	19.9	52.5	18.7	41.4	5.4	37.3	48.6
	1.0	1.7	2.2	3.6	1.8	1.6	2.2	2.4	2.6	2.2	3.1	7.4	2.8	5.0	3.1	1.4
Net liquid assets as a fraction of annual gross income	18.6	33.5	22.3	4.9	12.3	18.5	21.9	5.1	20.5	75.7	16.4	32.9	15.9	2.2	12.1	9.4
	0.5	0.4	0.7	0.0	1.0	0.7	0.8	1.0	2.6	2.2	2.3	2.3	1.0	0.6	1.2	0.9

(1) Standard errors are shown in grey below their corresponding figure.

Source: Eurosystem Household Finance and Consumption Survey

serious macroeconomic risk. Conversely, the youngest households in the highest income quintiles are much more inclined to borrow, being typically those with the largest outstanding debt, but with an inherently lower risk of default. These young households may have favourable future income prospects or access to other resources for repaying their debt (such as help from their family), so they can afford a heavier debt in relation to their current income.

Graph 2.4.8: Percentage of households holding debt by income



Source: Eurosystem Household Finance and Consumption Survey

**Excessive debt generally implies that both the liquidity and the solvency of households are affected.** In other words, households considered to be in difficulty are those whose debt is not fully covered by assets and which, after liquidating their assets, are still unable to repay their debt. Thus, a household with weak solvency may never encounter problems if it can bow on sufficiently large, permanent and secure income flows. Conversely, a household with a high debt-to-income ratio may be unable to meet its commitments from its current income, but does not

have a debt problem if it can free up semi-liquid assets or sell assets to pay off the debt.

**First, interest rate and/or unemployment shocks would essentially affect the debt-service-to-income ratio.** Mortgage loan portfolios are dominated by loans for which the interest rate is fixed for the whole term of the contract<sup>(39)</sup>, which reduces the sensitivity of instalments to interest rate fluctuations in comparison with variable interest rates. For the quality of the Belgian mortgage loan portfolio, a surge in unemployment is a bigger risk, as some borrowers in recent years may have stretched their mortgage loan maturities, loan sizes or debt service ratios to levels that could potentially entail a higher risk of future credit losses for banks than in the past. Households with relatively high volatility in their income or insufficient reserves of liquid assets are the most sensitive to recessions or other situations involving loss of income.

**The general economic outlook, and hence the outlook for unemployment and household disposable income has improved.** However, the economy is set to accelerate just moderately in upcoming years, reaching 1.1% in 2015 and 1.4% in 2016. Household disposable income growth is likely to remain moderate (see section 1).

**Second, a fall in property prices would primarily affect the debt-to-asset-ratio and put the solvency buffer under strain.** Although lower housing prices in themselves will not affect people's ability to repay their mortgages, a turnaround in the housing market could thus be detrimental to the wealth position of households,

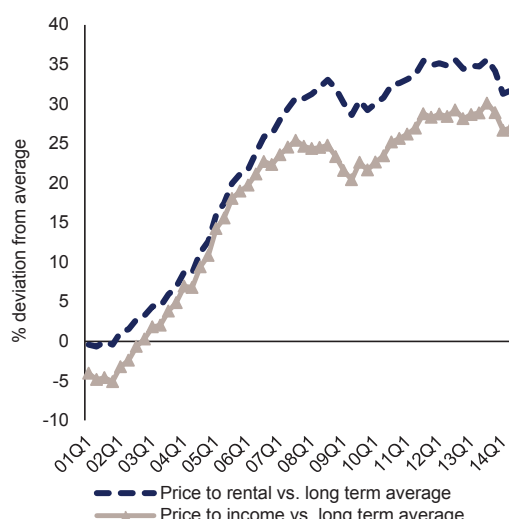
<sup>(39)</sup> At the end of 2013, these represented 60% of the outstanding stock. From one year to another, though, the relative weights of mortgages with fixed or variable interest rates can vary quite considerably.

especially if it is accompanied by income shocks in the group with the highest potential risk of encountering debt problems. In this case, the riskier loan segments in the outstanding stock of mortgages could be the source of higher-than-expected credit losses for banks.

### Assessing house prices

**In order to gauge the sustainability of the Belgian housing market this section looks at indicators that appropriately reflect past dynamics and provide information on over- or undervaluation.** Large under- or overvaluations can be interpreted as a signal of potential upward or downward pressures on house prices.

Graph 2.4.9: Price-to-rent and price-to-income ratio



Source: European Commission, OECD, ECB and BIS

**Valuation estimates based on price-to-income (affordability gap) and price-to-rent ratios (dividend gap) suggest a very high overvaluation in Belgium versus the long-term average, hovering on average around 30% (see Graph 2.4.9).** A priori, this could be a reason to expect a price correction in the future as, in theory, these ratios tend to revert to their long-term average. However, mean-reversion properties are not confirmed by empirical evidence in several countries. The equilibrium value is usually approximated as the long-term average of the indicators. However, that average value depends on the period considered (which is often too short due to lack of historical data) and there is no

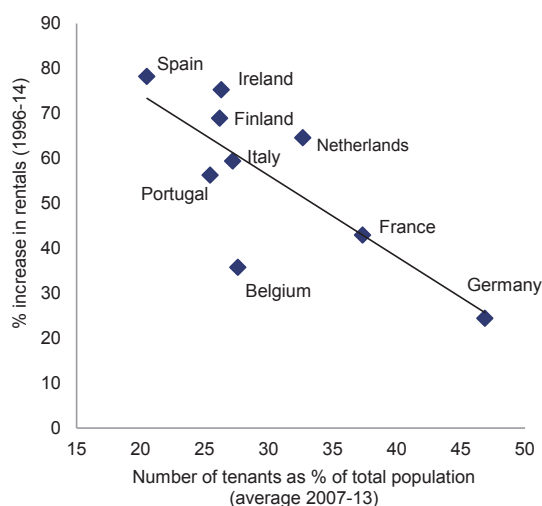
guarantee that the equilibrium value will be constant over time, because of changes in factors such as property taxation and the operation of the mortgage market. Moreover, these figures may not fully reflect shifts in other fundamentals. These include demography, the preferences of economic agents, the characteristics of the property, the tax rules applicable (for example, the deductibility of borrowing costs, which supports the affordability of housing), mortgage contract characteristics (loan-to-value ratio and maturity) which prove to be relatively sound in Belgium, rents <sup>(40)</sup> and fluctuations in mortgage interest rates. Just by adjusting the ratio between house prices and disposable income for the interest rate and population growth, the overvaluation of house prices drops to 15%, as illustrated by the interest-adjusted affordability ratio of the National Bank <sup>(41)</sup>.

**The question also arises whether these measures of housing price valuation may reflect subdued rentals in Belgium, rather than excessive increase in house prices.** Apart from Germany, rental increases in Belgium since 1997 were the lowest within the euro area (see Graph 2.4.10). The unequal distribution of subsidies (mainly directed towards home ownership), low profitability and substantive risk related to putting a property on the rental market, have led the private rental sector to an historical low for Belgium, at about 30% of the housing stock (23% in the private sector, 7% in social housing), down from 38% in 1980 and 33% in 1990. The relatively small scale of the rental market, coupled with its two-tier character (with differences in rentals between the private and social rental market), also limits the relevance of the price-to-rent ratio for Belgium.

<sup>(40)</sup> There is a key conceptual difference in that house prices (in the numerator) are based on new secondary market transactions and therefore reflect market conditions, while rents (in the denominator) usually reflect the rent fixed under existing leases rather than new leases. In addition, as rents in Belgium are subject to various legal rules restricting increases over time, such as (non-obligatory) annual indexation on the basis of the health index, the results obtained essentially reflect those index movements with smoothing and a certain time lag.

<sup>(41)</sup> NBB, End of the crisis in the housing markets? An international survey, 2011.

Graph 2.4.10: Increase in rentals and % of tenants



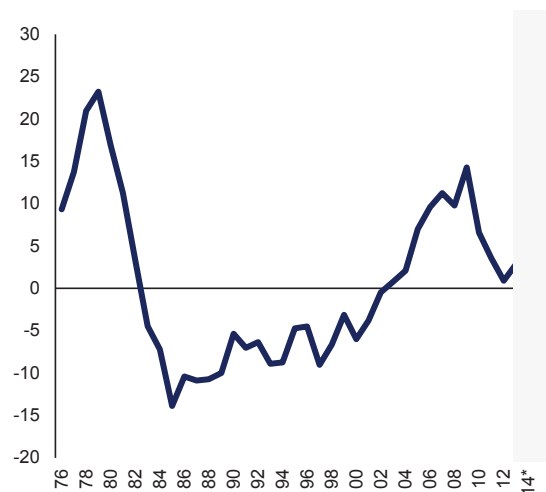
Source: European Commission

Moreover, the size of households' financial assets has probably played a greater role than income in determining house prices in recent years. The transfer from financial assets to property was encouraged through the transfer from one generation to another: the acceleration in price increases since 2005 prompted households to use more of their own resources to fund their purchase so as to avoid taking out an overly large debt. From 2009 on, the disappointing performance of some of the financial investments and fears the crisis would worsen also encouraged the shift from financial assets to property.

In fact, more detailed assessments point to a more moderate result which, depending on the specifications, fluctuates between slight over- and undervaluation. Indicators based on econometric techniques point to a moderate result which, depending on the specifications, fluctuates between slight over- and undervaluation. The European Commission's estimates point to a slight overvaluation of 0.5% in 2014 (see Graph 2.4.11). This reflects the deviation in house prices from the equilibrium value justified by housing demand (income, demographic pressures, mortgage interest rates) and/or supply fundamentals (existing stock of housing, building permits, unsold houses, land availability or construction costs) <sup>(42)</sup>.

<sup>(42)</sup> A vector error correction model has been estimated for a panel of 21 EU countries, using a system of five

Graph 2.4.11: Overvaluation gap with respect to main supply and demand fundamentals



\* 2014 preliminary estimation.

Source: European Commission

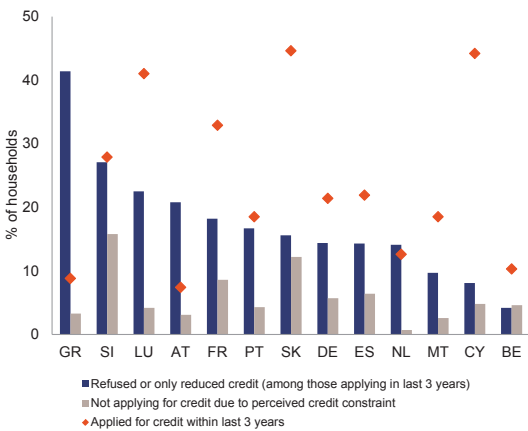
Credit market conditions need to be factored in as well. Short-term price changes are largely determined by households' ability to finance assets through external funds, independently from house valuation levels. Graph 2.4.12 shows the percentage of households who applied for credit during the period 2007-10, those who were denied credit or were offered a smaller amount than they applied for, and those not applying for credit due to a perceived credit constraint. Credit constraints have been low, compared to other European countries. According to ECB data, the national monetary financial institutions' interest rate for house purchase (at floating rate and up to 1 year initial rate fixation) decreased from 6.02% in October 2008 to 2.63% in December 2014.

Moreover, price levels remain moderate compared with other Member States and affordability is still reasonable, taking into account other fundamentals besides incomes and rentals, such as the interest rate, the length of mortgage terms and loan-to-value ratios. Belgians

fundamental variables: the relative house price, total population, real housing investment, real disposable income per capita and real long-term interest rate. A country-specific estimate on top of the panel estimates is conducted whenever the time series allow for a sound econometric analysis, leading to a valuation gap calculated as a simple average of the individual and the panel estimates.

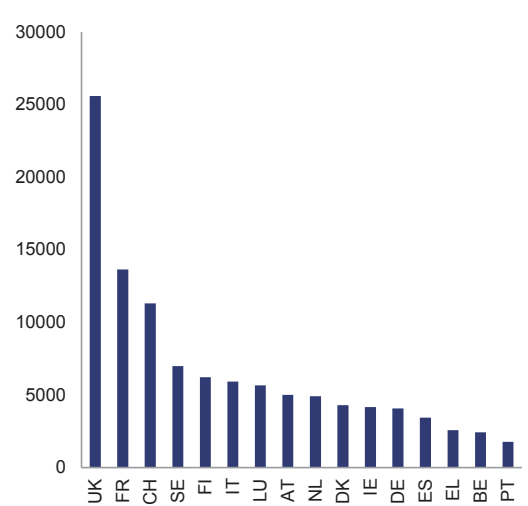
do not pay unusually high prices for homes compared with people in other European countries, especially if differences in the quality of the accommodation are also taken into account. In fact, according to Eurostat data, Belgium scores highly on the physical quality and comfort (e.g. living space) of its houses. Graph 2.4.13 illustrates the relative price differences for a 120 m<sup>2</sup> apartment in the capital.

Graph 2.4.12: Credit constraints (2010)



Source: Eurosystem Household Finance and Consumption Survey.

Graph 2.4.13: Average price/m<sup>2</sup> of a 120 m<sup>2</sup> apartment located in the capital (in EUR, end 2012)



Source: Global Property Guide

**In sum, housing prices in Belgium do not seem to be substantially over- or undervalued.** However, the Belgian housing market seems to be

characterised by an increasing divide between people who can afford to buy property because they have their own funds to do so and those for whom housing has become less affordable. The latter need increasingly large mortgage loans to become homeowners (putting upward pressure on their debt service burden), or will increasingly find their way to the rental market.

**A number of factors militate against a housing price decline and can be expected to continue to underpin prices in the medium term.**

**Interest rates are one of the most important factors affecting the residential property market.** Once the extreme easing of monetary conditions ends, a return to more normal monetary policies and real interest rates is likely. This will naturally have a dampening impact on the recourse to mortgages and could restrain investment compared to the pre-crisis period. That effect could be exacerbated if banks consider tightening their lending criteria (duration of the loan, loan-to-value ratio, collateral required), thereby limiting the supply of credit.

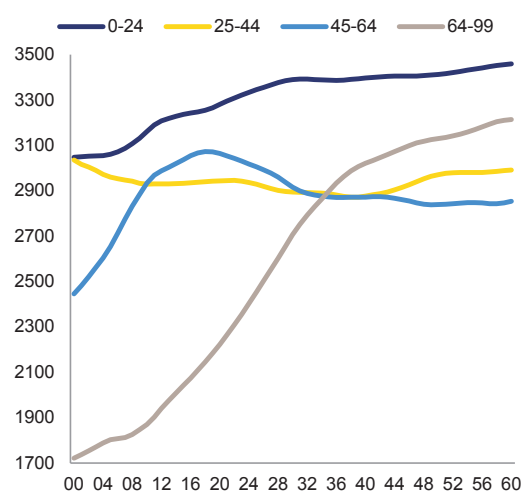
**Gross household debt is moderate and below the euro area average.** It is therefore unlikely to drag significantly on housing prices, given that Belgian households are not (yet) deleveraging. Furthermore, the build-up in household debt is also largely offset by an accumulation of financial assets; net financial incomes, even if already at an all-time high, are set to continue improving.

**Government policies tend to prevent real estate prices from falling.** Although the effect of temporary factors, such as subsidies for renovation and building, has faded, house prices have not come under downward pressure hitherto. However, home buyers and owners might turn out to be more sensitive to tax policies. Changes in the tax regime for mortgage loans (as recently in Flanders), for which legislative powers have been transferred from the federal government to the regional authorities as part of the sixth state reform, may lead to changes in the incentives for households to finance real estate transactions with mortgage loans. Similarly, an increase in, or harmonisation of, residential property taxes by updating the cadastral incomes might be envisaged, especially in a context of long-term fiscal consolidation. A clear advantage of making cadastral values more

representative of underlying property values would be that it addresses disincentives for renovations (given that these are automatically coupled to an update of the cadastral income) and would tilt tax revenues towards recurrent taxes (and would make them fairer). Yet, an update of the cadastral income might also raise the taxable rental income on non-owner occupied housing, thereby diminishing yields on rental property, and potentially giving rise to an even lower rental supply and/or to it being passed on into rents. Any reform for tax purposes should therefore carefully be considered against the background of (rental) housing market policies.

buoyant conditions in the Belgian housing market have not been accompanied by a surge in house-building. Moreover, robust household balance sheets and high ownership rates, coupled with persistent housing shortages, are likely to prevent a rapid price decline. If house prices fall, sound lending standards should limit the impact on banks.

Graph 2.4.14: Demographic evolution per age cohort 2000-2060 (thousands of people)



Source: Federal Planning Bureau

Finally, according to the Federal Planning Bureau's demographic outlook, the average rise in the total population over the next 10 years will be higher (at 0.64% per year) than in the previous 15 years (0.45% per year). The population group aged between 25 and 44 years, more representative of potential property buyers, contracted during the past decade but will broadly remain constant from 2014 on (see Graph 2.4.14). The number of households will also continue to grow more strongly than the population in general, in view of the structural trend towards a reduction in household size.

**All in all, the risk of a sharp correction in real estate prices appears contained.** Price adjustments can be expected to be gradual. The



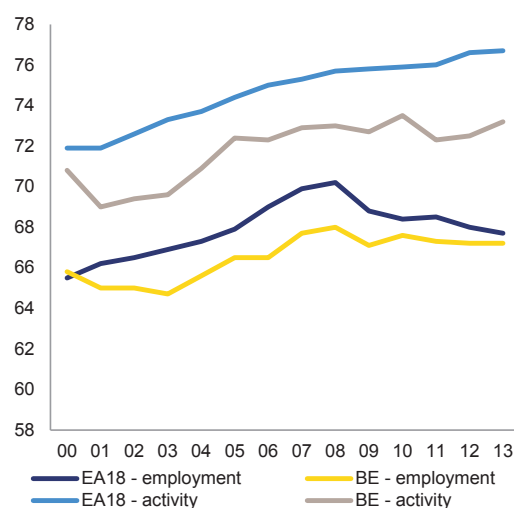
### 3. OTHER STRUCTURAL ISSUES

## 3.1. LABOUR MARKET AND EDUCATION

### Labour market

**Structural problems characterising the Belgian labour market continue to result in a chronic underutilisation of labour.** As shown in Graph 3.1.1, the Belgian aggregate employment and activity rates have remained largely stagnant since the beginning of the century, at levels below the euro area averages.

Graph 3.1.1: Employment and activity rate (% 20-64y)



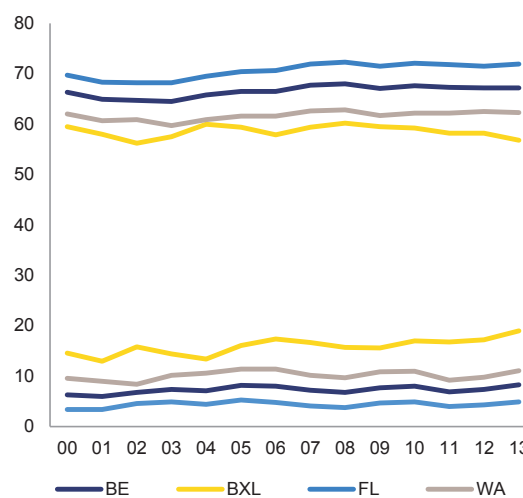
note: EA and EU averages are comparable  
Source: European Commission

**The unemployment rate of 8.4% at the end of 2014 stands below the EU average**, while the share of the long-term unemployment as a percentage of the active population has slightly increased since the outbreak of the crisis, from 3.5% in 2008 to 4.1% in 2013 (increase from 3.0% to 5.1% in the EU). The incidence of long-term unemployment over total unemployment remains high (at 50% for both Belgium and the EU average in the third quarter of 2014, from respectively 49% and 39% in 2008), especially among older workers i.e. 55-64 years (70% in 2014 against 63% in the EU).

**As depicted in Graph 3.1.2 the Belgian labour market is characterised by major differences between regions.** Flanders outperforms Wallonia and Brussels both in terms of employment and unemployment rates. The situation in Brussels is particularly worrying. At 19.2% in 2013, its unemployment rate stands at twice that of Wallonia (11.3%) and four times above the rate in

Flanders (5%). Wallonia and Brussels also have persistently high long-term unemployment, amounting to 56.6% and 51.5% of total unemployment in 2013, respectively. This compares with 32.5% in Flanders.

Graph 3.1.2: Regional employment and unemployment rates (% total labour population)



Source: European Commission

**The chronic underutilisation of labour in Belgium is rooted in a number of structural factors affecting both the demand and the supply side of the labour market, as well as the match between demand and supply.** The next sections therefore discuss (1) labour taxation and job creation, (2) interactions between the tax and benefit system and its impact on financial incentives to work, and (3) mismatches hampering the efficient allocation of resources in the labour market. The impact of these structural factors on specific groups in the labour market such as young and elderly unemployed people and those with a migrant background is illustrated in the last section.

**Additional elements, not detailed in the analysis below, should also be kept in mind.** In particular, in case of collective dismissals, Belgian labour law imposes a large number of additional information and consultation requirements compared to other OECD countries, as well as comparatively sizeable severance pay top-ups<sup>(43)</sup>, although a recent reform to harmonise dismissal procedures for blue

<sup>(43)</sup> OECD Employment Outlook 2013.

and white collar workers should significantly lower the collective dismissal costs borne by the employer. This, coupled with rather generous short-time working schemes, hinders an efficient reallocation from the labour demand side<sup>(44)</sup>, while steep seniority-based wage scales, severance pay top-ups and a wage setting system leaving limited room for wage differentiation across industries may reduce the attractiveness of job mobility (on wage setting see section 2.1).

#### Labour taxation and job creation

**Taxes on labour are among the highest in the EU for virtually all standard household types and earning levels.** The difference between total wage costs (including social security contributions) and take-home pay increases with earnings (see Table 3.1.1). For singles without children, the difference between total wage costs and take-home pay ranges between 7.9 and 14.7 percentage points above the EU average, depending on the earning level. For one- and two-earner couples with two children earning the average wage, the difference between the Belgian and the EU average tax wedge is of the same order of magnitude.

Table 3.1.1: **Tax wedge**

Earnings (% of the average wage)	50%	67%	100%
BE tax wedge	41.9%	50.1%	55.8%
EU tax wedge (avg)	34.0%	37.7%	41.1%

**Source:** European Commission, OECD Tax and Benefit Model.

<sup>(44)</sup> Belgium stands out as the country where both the structural use of the short time working schemes before the crisis and its use as an instrument to withstand it has been the most intensive in recent years. Its use remains high even after the peak of the crisis.

**By pushing up labour costs, the high tax wedge contributes to low employment creation in periods of slow growth.** It even risks triggering job destruction, especially in industries in which nominal wage changes have outpaced productivity developments in recent years (see section 2.1). Recent national data indeed show a slowdown in gross job creation throughout the country over the period 2008-13, with manufacturing and construction being hit particularly hard<sup>(45)</sup>.

**Belgium has traditionally relied on various types of wage subsidies to reduce the tax burden on labour for specific industries or types of companies.** These take many forms, ranging from structural reductions of employer social contributions to sector-specific exemptions of (part of) the withholding tax and subsidies to stimulate employment of specific target groups. As discussed in section 2.1, the new federal government has maintained planned reductions, though with an altered timing. Meanwhile, competence for granting targeted reductions in social security contributions to stimulate the hiring of people from specific groups has been transferred to the regional level under the sixth state reform. All three regional governments committed to seize this opportunity to assess and streamline the current federal schemes to ensure appropriate targeting and maximum effectiveness (see below).

**However, the fact that contributions on the lowest wages are already close to zero shows the limits of a strategy consisting of decreasing the tax wedge through ad hoc measures.** Moreover, although the planned structural and targeted wage cost reductions are set to alleviate the overall tax burden on labour somewhat, the various wage subsidies and social security reduction schemes coexist with high nominal rates. This results in the perception that Belgium has a high tax burden and makes the system hard to decipher for investors. In this context, a fundamental overhaul of the existing tax system, including a budgetary-neutral shift away from taxes on labour to other less employment and growth-distorting taxes, constitutes a more promising route.

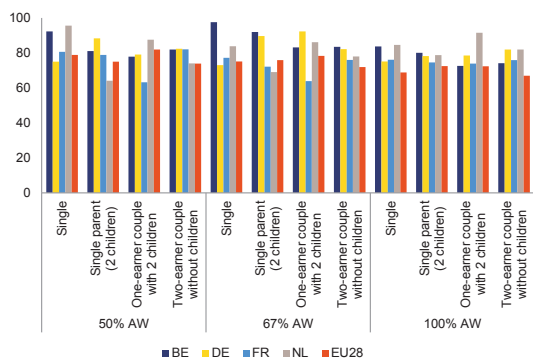
<sup>(45)</sup> At the aggregate level, both gross job creation and gross job destruction rates have fallen to their lowest level since 2008, resulting in a negative net job creation rate of -0.7% between Q2-2012 and Q2-2013.

### Financial disincentives to work

**In interaction with the benefits system, high labour taxation also has negative supply-side consequences**, as it might lower the financial incentive to move from unemployment or inactivity to work. A standard methodology to assess the financial incentives to take up work has been developed by the OECD <sup>(46)</sup>.

**Compared to the EU average, unemployment traps in Belgium (calculated at the beginning of the unemployment spell) are comparatively large for single people and single parents earning between half and two thirds of the average wage** (see Graph 3.1.3). Moreover, unemployment traps for the second earner within two-earner households also generally exceed the average, except for childless families situated at the very low end of the wage distribution. For one-earner households at the lower end of the wage distribution, unemployment traps in Belgium are generally below EU average.

Graph 3.1.3: **Unemployment trap (when taking up work at previous wage level, 2013)**



**Source:** OECD Tax Benefit indicators database. The bars indicate the part of the additional gross wage taken away in the form of increase taxes and withdrawn benefits.

**These findings about unemployment traps are consistent with the results of earlier studies from the Belgian Central Economic Council**

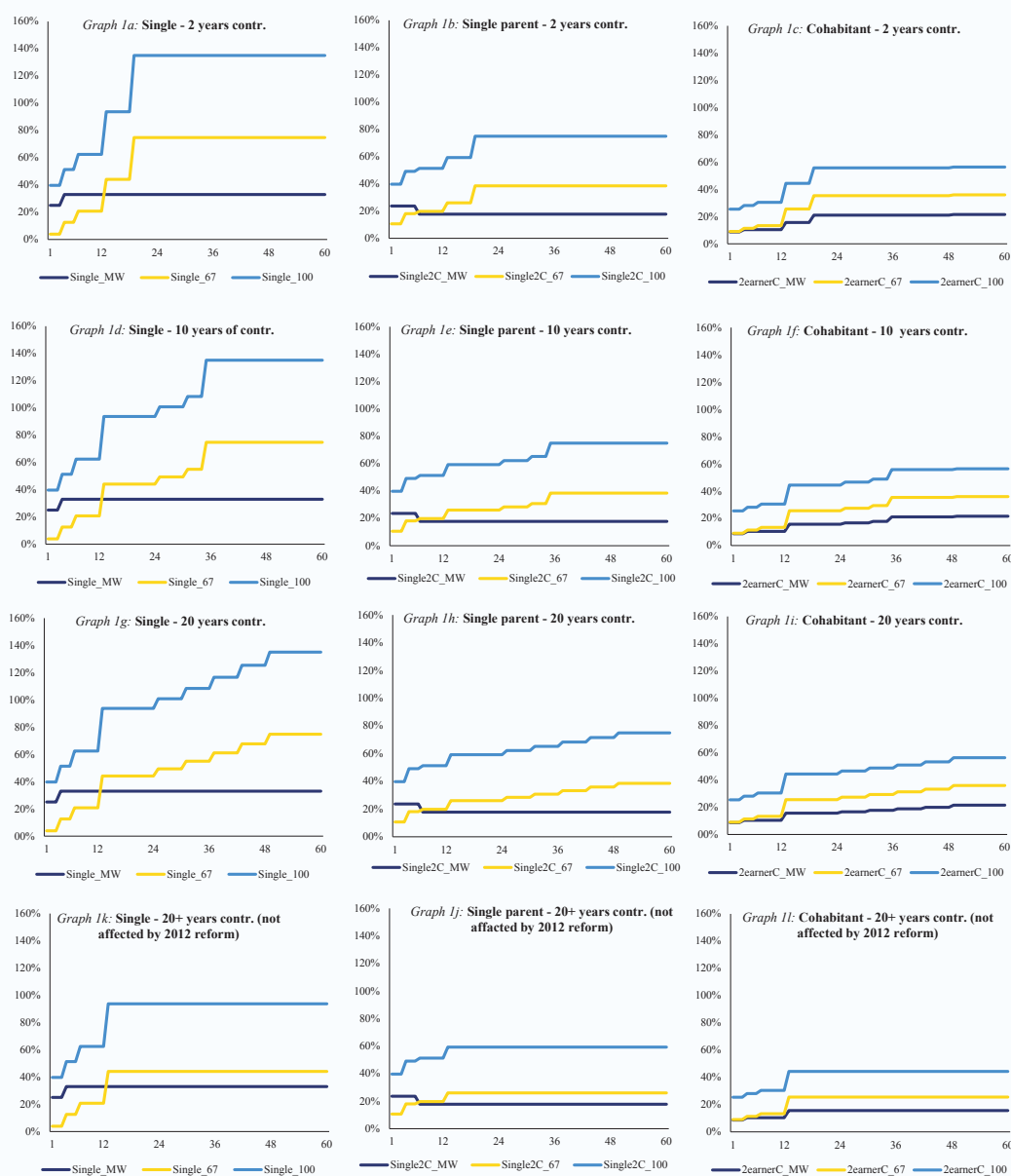
<sup>(46)</sup> By measuring the part of the additional gross wage that is taken away in the form of increased taxes and withdrawn benefits (including unemployment, family, housing and social assistance benefits), it provides an indication of the so-called 'unemployment traps' for various types of stylized households and earning situations, after an unemployment spell of a given duration.

(CEC) <sup>(47)</sup>. These measure the financial incentives to take up employment at previous salary levels, in terms of total additional disposable income after an unemployment spell of a given duration. Based on the legislation in force in 2010, additional disposable income increases ranged between 30% to over 100% of the income during the unemployment spell, with the exception of singles receiving maximum benefits and returning to work at low wages, and single parents. For the latter, the added disposable income remained well below 30% even in case of return to the labour market at moderate wages (between 150% and 180% of the minimum wage) after a long unemployment spell. This is to a large extent explainable by their less favourable tax treatment compared to cohabitant or married couples, and a different fiscal regime to bring into account the persons at charge.

**In 2012 Belgium has enacted a reform of the unemployment benefit to strengthen financial incentives to work.** The system of decreasing unemployment benefits over time was extended to new types of households, and this decrease was made steeper. Exemptions were made for unemployed suffering from a disability, for those older than 50, and those who have made social contributions for over 20 years, which will be progressively increased to 25 in 2017. Subsequent measures to further reduce unemployment traps include targeted interventions to increase the net take-home pay for low wage earners (through successive rounds of increases of the so-called 'work bonus'), a linear reduction of personal income taxes (through an increase of the ceiling for professional cost deductions) and a number of parametric changes to calculation methods to further reduce benefit levels, most notably of the older and part-time unemployed. In parallel, job search requirements for the unemployed have been tightened and enforcement of rules strengthened.

<sup>(47)</sup> CEC, Financiële werkloosheidvallen in België in 2010, CRB 2011 – 0189.

### Box 3.1.1: Net increase in disposable income when entering into work



**Note:** 2C: two children; MW: median wage; 67: 67% of median wage; 100: 100% of median wage

**Source:** European Commission, based on OECD Tax-Benefit models

The above graphs illustrate the net increase in disposable income from entering into work at the same wage level earned before unemployment for different durations of the unemployment spell (from 1 to 60 months). The types of households chosen (single earner, single parent with two children, and second earner or 'cohabitant' in a couple) illustrate three possible situations for which different rules apply. The contribution histories at 2, 10 and 20 years (the latter both under the new rules and if exempted) are chosen to illustrate the impact on the unemployment trap of the steeper decrease of benefits over time. The earning levels are those of a full-time worker paid, respectively, at the minimum wage, the average wage, and two thirds of the average wage. The chosen household and earning situations are not representative of the general population in a statistical sense. However, it is more appropriate to focus on the lower part of the wage distribution, as disincentives are higher at low wage levels, and because the majority of unemployed workers fall into this bandwidth of earnings.

(Continued on the next page)

Box (continued)

**In general, the proportional gain in disposable income increases with the level of earnings.** A notable exception is the case of single earners earning two thirds of the average wage, with a lower proportional increase, during the first year of unemployment, than that of singles working at the minimum wage level, due to the progressivity of the tax system. Increases over time are particularly gradual in the case of long careers (>20y), which were exempted from the 2012 reform. As for single parents, the decline in additional disposable income over time observed in some cases is the result of supplementary family benefits which are granted after six months of unemployment. The low proportional increase in net income for second earners during the first year of unemployment also reflects the fact that incomes earned (and taxes paid) by the principal-earner spouse (assumed to be working at the average wage) are considered as well.

**Nevertheless, the Belgian tax and benefit system continues to create comparatively sizeable unemployment traps, depending on the prior contribution history and earnings of the individual concerned, as well as the household type and wage level after re-entry (see Box 3.1.1).** While not all of the enacted reforms are visible in the latest available data (2013), some interesting observations can be made with regard to their impact on financial incentives to work. Box 3.1.1 shows that the increase in net disposable income when returning to the labour market varies considerably. The comparatively low proportional increases in net income for second earners also reflect the fact that the marital quotient<sup>(48)</sup> is nullified when the second partner starts to earn more than 30% of the total earned income of the couple. In this sense, this tax advantage for cohabitant or married couples adds to the unemployment trap.

**The overall complexity of the system also hampers efforts of getting people back to work.** Given the highly personalised time profiles of benefit levels, there is a risk that benefit recipients themselves are insufficiently aware of how their own situation will evolve over time.

#### Labour shortages and qualification mismatch

**Belgium also faces labour shortages.** Although unemployment has been increasing since the start of the crisis, job vacancy rates are among the highest in the EU and job offers for critical

occupations take longer to fill than the average. Employers have a hard time finding workers for these occupations due to the scarcity of applicants, qualitative requirements (qualifications, experience, languages spoken) or difficult working conditions.

**Although horizontal mismatches exist, qualification mismatches are mostly vertical<sup>(49)</sup>.** The skills mismatch is mainly related to a greater supply of low-skilled job-seekers than employers need and an under-representation of highly-skilled job-seekers. More than 80% of the active population with tertiary education is employed, against 65% for medium-skilled persons and less than 40% for the low-skilled. This is below the EU average for all three groups, but the gap is especially wide for the low-skilled. As regards horizontal mismatches, these mostly relate to skills shortages for technical and future-oriented occupations observed at all levels of education. The number of graduates in science, technology, engineering and mathematics remains low. Transition from school to work is particularly difficult for young people leaving education with low qualifications (see below).

**The mismatch between labour supply and demand is particularly acute in the Brussels-Capital Region, which mainly relates to the low education level of the workforce, faced with very high qualification standards for occupations in the city.** A majority of jobs require highly-skilled workers – 55% in 2010 – whereas barely 17% of jobs call for low-skilled workers

<sup>(48)</sup> In principle, spouses are taxed separately. The marital quotient allows cohabitant or married partners to pool their earnings, thereby reducing the total amount of income tax due. When one spouse has no earned income, or own income not exceeding 30% of the total earned income of the couple, 30% of the total taxable gross income less flat-rate allowances can be charged to that spouse up to a maximum.

<sup>(49)</sup> Vertical skills mismatch means the level of a worker's skills is higher or lower than is required by the job. Horizontal skills mismatch means workers have the appropriate qualification level but possess different skills than those required for the job they occupy (Cedefop, 2009).



<sup>(50)</sup>. Nearly half of job seekers residing in Brussels have not completed secondary studies; and early school leaving is particularly high as discussed below. Falling behind at school is also a concern, since approximately 50% of the pupils are one year or more behind.

#### Impact on disadvantaged groups

The structural factors discussed above hit a number of groups especially hard, in particular low-skilled young people, people with a migrant background and older workers.

**Unemployment among (mainly low-skilled) young people is of particular concern.** In 2014, Belgium's unemployment rate for young people (22.6%) was close to the EU average (22.1%). However, the ratio between the rate of young unemployed and the unemployment rate for people over 25 is among the highest in the EU (3.1 against an EU average of 2.5). Moreover, the unemployment rates for young people vary considerably between the different regions, ranging from almost 45% for men in the Brussels-Capital Region to only 13% in the province of West Flanders. In particular, the unemployment rate among young people with a lower level of education (i.e. elementary or lower secondary school) is much higher in Belgium than in neighbouring countries <sup>(51)</sup>, and the long-term unemployment rate among low- and medium-skilled young people exceeds that of the whole active population by more than half. Among unemployed low-skilled young people, those with a migrant background are over-represented.

**Employment among migrants with a non-EU background is one of the lowest in the EU <sup>(52)</sup>.** This gap can be explained by differences in education levels and a lack of language skills required by vacant positions, among other things. Other factors that may explain employment rate differences between non-EU immigrants and the general population are the large share of immigration for non-labour motives, such as family reunification or asylum, the adverse effects

on employment of high minimum wages and reduced incentives to take up work at low wage levels (see above). As a consequence of lower education levels and lower social capital as well as labour market barriers, including discrimination, people with a migrant background often work in sectors with high turnover rates, on part-time contracts and for lower salaries. In all groups with a migrant background (new arrivals as well as Belgian-born second or third generations), the situation of women deserves particular attention. The employment rate for women from outside the EU is lower in Belgium than in any other Member State.

**The activity and employment rates of older workers remain low.** In Q2-2014 the employment rate among 55-64 year-olds was 43.7% against an EU average of 51.7%. Steep seniority-based pay-scale increases and relatively inexpensive early retirement schemes (in particular, the topping-up of unemployment benefits with a company allowance when companies restructure) give employers a strong incentive to focus collective dismissals on older workers. On the labour supply side, the relatively high financial disincentives to work embedded in the tax and benefit system for those above 50 or on long careers reduce incentives to actively look for re-employment after dismissal.

**The regional governments have announced their intention to use the competences transferred from the federal level to develop target group policies.** Flanders has announced a focus on labour cost reductions for young people, older workers and people with disabilities. It also intends to streamline a number of employment subsidies. Wallonia has announced a reform, oriented towards growth sectors and self-employment, of labour-cost reduction measures focusing on young people and more generally vulnerable people, Brussels will focus on young people, the low-skilled and the long-term unemployed.

**The regional and community government agreements pay particular attention to easing the transition from education to employment through measures announced in the Youth Guarantee Implementation Plans.** However, the Youth Guarantee schemes remain incomplete and their implementation patchy. Effective partnerships between public employment services and

<sup>(50)</sup> Zimmer, H., Mismatches op de arbeidsmarkt, Economisch tijdschrift, Sep-2012, NBB.

<sup>(51)</sup> 39.8% vs. 11.3% (DE), 14.9% (NL), 37.6% (FR) in 2013.

<sup>(52)</sup> It is 55.2% (20-64 years) whereas the EU average stands at 63.7%. Only Spain (54.1%) and Greece (49.5%) register lower rates.

education authorities, and more comprehensive strategies to reach out to people not in education, employment or training, are still lacking. There is also a need to set up earlier, tailor-made support for the young. Also necessary are coordinated reforms to remove structural impediments to accessing the labour market and improving skill levels and their relevance to labour market needs, notably by improving the vocational and educational training systems and preventing young people from leaving education early. Better articulation of the various initiatives and better communication and information about the Youth Guarantee are needed.

**At the same time, other recent measures appear to weaken employment prospects for young people.** Probation periods have for example been abolished since January 2014. Furthermore, since January 2015 the minimum wage is applicable in full regardless of the worker's age, as compared to a gradual phase-in towards 100% of the minimum wage at the age of 21 in the past. This phase-in supported youths' employability as it compensated employers for lower initial productivity and the need for on-the-job training following recruitment.

**Although the authorities have taken several initiatives to improve participation in the labour market by people from disadvantaged groups, such people continue to face structural entry barriers.** In particular, measures targeting people with a migrant background essentially benefit newcomers. Belgian-born second or third generation migrants are not covered. Moreover, successfully integrating people with a migrant background into the labour market requires their full participation in education and training, starting with linguistic integration, education and care in early childhood (see section below).

**For older workers some reforms of the social security system have been launched over recent years to limit abuse of the early-retirement schemes and raise the effective pension age.** As a result, the total number of beneficiaries of the early-retirement system has fallen by 5% in recent years. To further accelerate this trend, the age and career-length requirements for early retirement are being progressively tightened, and the social security contributions payable by the employer on pre-pension top-ups have been increased. The reform of early retirement and pre-pension systems

(which combine unemployment benefits and company-paid allowances) provides for progressively raising the entry age and career requirements, while reducing pension rights and making stronger the links between working careers and pensions. More recently, eligibility requirements for unemployment benefit with company allowance have been further tightened while labour market availability and job-search requirements have been extended to all unemployed people below pensionable age and below 60 at the end of 2014.

**The federal government agreement envisages a major pension reform aimed at reducing the gap between the effective and statutory retirement ages as well as linking the retirement age to life expectancy.** The early retirement age is to be raised further after 2016, to 63 years by 2019 with a minimum career length requirement of 42 years. Over the longer term, an increase in the statutory retirement age is planned: from 65 to 66 in 2025 and to 67 in 2030. Moreover, the progressive introduction of a credit-based pension system is planned, with adjustment mechanisms that respond to demographic or economic developments such as an increase in life expectancy or changes in the economic dependency ratio. However, there are still few incentives to support the employability of older workers. Measures taken so far only address supply side issues.

## Education and skills

**While the Belgian education system generally works well, large disparities in educational outcomes and significant performance gaps between schools exist.** Basic skills attainment is good on average, although significant disparities between the communities exist. Also, the Programme for International Student Assessment (PISA) survey confirms large disparities in basic skills attainments which partly reflect socioeconomic or migration backgrounds. Immigrant-specific factors, like a different language spoken at home than the language of instruction, help explain the performance gap. Although participation in early childhood education is among the highest in the EU, educational inequality already starts in early childhood

education <sup>(53)</sup>. Pupils from disadvantaged backgrounds are more at risk of being directed towards special needs education or vocational pathways with limited opportunities for upward progression. They are also more at risk of dropping out of education early.

**The communities have announced their intention to lower grade repetition and to improve basic skills for all.** The different government agreements also refer to ongoing (Flanders) or new (French community) structural reforms of the lower secondary education system. Flanders has introduced measures to improve competence in the language of instruction. The French community has introduced a reform of the first grade of secondary education which includes developing an action plan at school level, and possibly at pupil level, to tackle low achievement. Measures for early corrective action are envisaged. Moreover, recognising the urgency of addressing educational challenges, in January 2015 the French community launched a process to carry out a major reform of its compulsory education system over the next ten years ('Pacte pour un enseignement d'excellence'). The scope of initiatives at pre-primary and primary levels remains limited, however.

**Long-standing priority education policies have not yielded significant results and the most disadvantaged schools lack experienced teachers and headmasters.** According to the 2013 Talis survey <sup>(54)</sup>, Flanders scores among the worst when it comes to employing the most experienced teachers in the most 'challenging' schools. Teacher training faces the challenge of adapting to an increasingly multicultural school population. Collaborative team working is not well developed. High turnover of relatively inexperienced teachers is a particular problem in the Brussels region. Other sources point to similar observations for the French community <sup>(55)</sup>.

**The communities intend to improve the efficiency of priority education policies and**

**recognise the central role of teachers in addressing the challenges.** Decisions on a possible reduction in the additional financing for disadvantaged schools have been postponed in anticipation of the results of ongoing (Flanders) or planned (French community) evaluations of the current policies. At the same time, cuts in expenditure affecting disadvantaged pupils have already been made and consequences are difficult to assess. All the communities intend to take measures to make teaching careers more attractive, reform teacher training and improve support to school teams and new modes of teaching.

**While the nationwide early school-leaving rate has been falling, it remains very high in Wallonia and Brussels <sup>(56)</sup>.** A comprehensive approach to countering this phenomenon in the most affected regions is still lacking and is hampered by a lack of data, assessments and effective coordination of action. The Brussels government has opened the existing 'Concertation Committee on Economic and Social Affairs' to the French and Flemish community. It intends to conclude a cooperation agreement with the two communities to strengthen partnerships and develop early intervention plans as well as remedial measures. Its goal is also to address insufficient language competences. The French community plans cooperation with Wallonia and Brussels to address early school leaving in the framework of the 'Youth Guarantee Implementation Plan'. The Flemish government is strengthening its 2013 action plan by expanding it to cover truancy and problematic behaviour. A draft proposal is expected by April 2015.

**Progress is slow on building stronger links between education, training and employment actors and improving vocational training.** The various government agreements make reference to the need for stronger links to address the skills mismatch, improve linguistic, vocational and educational training and develop alternative training for pupils and the unemployed. In Flanders, most basic decisions on the overall structure of secondary education have been postponed until 2016. The French community and the regions started the reorganisation of the vocational and educational training offered into ten (geographical) areas. To address horizontal skills mismatches,

<sup>(53)</sup> European commission, EAC/17/2012 Study on the effective use of early childhood education and care in preventing early school leaving, 2014.

<sup>(54)</sup> OECD, Talis 2013 results, An International Perspective on Teaching and learning, chapter 2

<sup>(55)</sup> Fourny, L., 2014-2018: (Re)motivons les enseignants et les élèves!, Itinera Institute, 2014.

<sup>(56)</sup> 17.7% in Brussels, 14.7% in Wallonia, 7.5% in Flanders.

Flanders is continuing to implement its science, technology, engineering and mathematics action plan and the development of academies covering these fields.

### Social inclusion

**Overall, the risk of poverty or social exclusion in Belgium is below the EU average, but higher than in neighbouring countries.** An increasing risk of poverty being passed from one generation to the next is due to a wide range of mutually reinforcing drivers like low work-intensity, low participation in care and low educational achievement levels. People with a migrant background are at disproportionate risk of poverty and social exclusion. The proportion of older people who are at risk of poverty has fallen but is still above the EU average and much higher than in neighbouring countries: 18.4% compared to an EU average of 13.8% in 2013.

**The impact of low work-intensity on child poverty in Belgium is considerable.** The share of people living in households with very low work-intensity (14.0% in 2013) has increased continuously since 2008 and exceeds the EU average (10.7%), while about three quarters of minors living in very low-work-intensity households are at risk of poverty.

**The social gradient in the uptake of care services for young children is the third highest in the EU.** The more disadvantaged the family, the less likely the child is to benefit from these services. Moreover, there are indications that children from disadvantaged backgrounds are more often absent from kindergarten. These trends are problematic as early childhood education and care services help to prevent early school leaving later and improve educational results in the long term. Furthermore, for parents (mainly mothers) there is a direct relationship between having childcare and being able to work. This has potential implications for enabling those further away from the labour market to become active, and thus for (female) labour market participation.

**As well as putting increased emphasis on active labour market policies, the federal government plans to increase certain social benefits to better address poverty and foster social inclusion.** The minimum pension for a full career will be set at

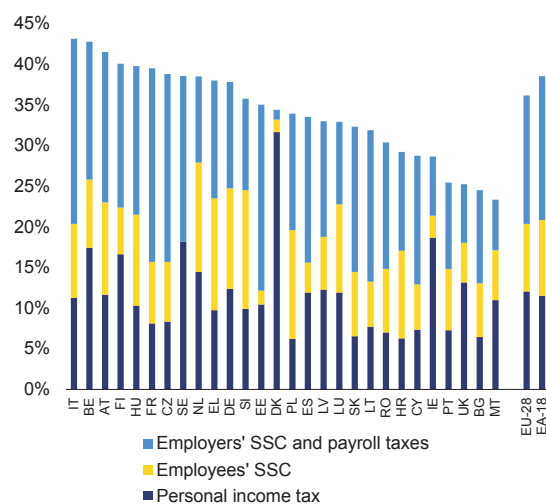
10% above the poverty threshold and the minimum social insurance and social assistance benefits will be increased progressively to this threshold. The sixth state reform has transferred a number of additional policy levers to the regions and communities, including child allowances. All the new governments have included social inclusion and anti-poverty announcements in their policy declarations, but the exact scope of the measures is not yet defined.

## 3.2. TAXATION AND FISCAL FRAMEWORK

### Taxation

The overall tax level in Belgium is the second highest in Europe, after Denmark, amounting to 45.4% of GDP in 2012. The structure is characterised by a relatively high share of direct taxes, reflecting a broad reliance on personal and corporate income taxes, and social contributions. By contrast, revenues from indirect taxes expressed as % of GDP are just below the EU average.

Graph 3.2.1: Decomposition of the implicit tax rate on labour (2012)

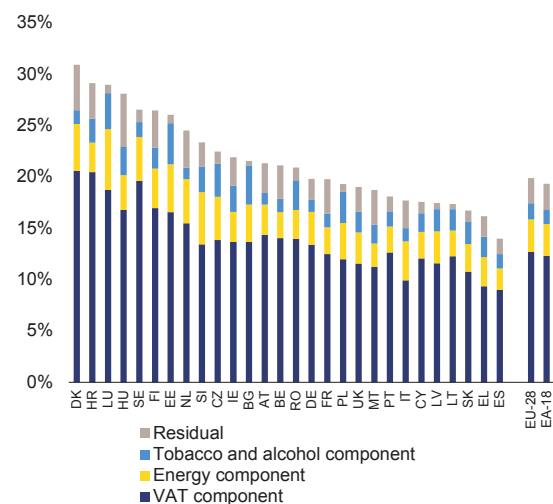


Source: Taxation Trends in the European Union, European Commission, 2014.

Belgium imposes relatively heavy taxes on labour with an implicit tax rate on labour of 42.8% in 2012 — the second highest in the EU (see Graph 3.2.1). Less growth-distorting taxes, such as environmental and consumption taxes account for a lower share of total tax revenues and as a percentage of GDP than the EU average. Revenues from consumption taxes amount to 10.8% of GDP in 2012, below the EU average of 11.2%. On the other hand, as shown in Graph 3.2.2, the implicit tax rate on consumption (21.1%) stands just above the EU average (19.9%) indicating a lower share of consumption in GDP. Revenues from environmental taxation have declined since 2005 and amounted to 2.2% of GDP in 2012 (see Graph 3.2.3), below the EU average of 2.4% of GDP. In particular, revenues from energy taxation are the second lowest in the EU (1.3% of GDP against an EU average of 1.8%)

which contrasts with the high overall tax-to-GDP ratios.

Graph 3.2.2: Decomposition of the implicit tax rate on consumption (2012)



Source: Taxation trends in the European Union, European Commission, 2014.

The Belgian tax system is characterised by relatively high tax rates and narrow tax bases. High rates of personal income taxation are accompanied by many tax expenditures (e.g. mortgage-or pension-related), while corporate taxation could be described as a ‘niche system’ with targeted specific features and high statutory rates. The VAT system taxes many goods and services at reduced rates. In general, targeted reductions and tax expenditures are often seen as convenient instruments to accommodate vested interests. Although special regimes might be warranted in particular cases (e.g. as an incentive for R&D), they generally introduce distortions among taxpayers and create efficiency losses.

The numerous special arrangements make the Belgian tax system prone to tax evasion or aggressive tax planning, and increase the implementation and compliance costs. This is the case, for example, with the system of notional interest deduction, which acts as an incentive for multinational companies to undertake intra-group lending and borrowing (see section 2.3) merely for tax reasons.

Given these weaknesses, Belgium has been repeatedly recommended to simplify and



**redesign its tax system in order to rebalance the tax burden, close tax loopholes and reduce the sometimes harmful differentiation created by taxation niches.**

#### High labour tax burden

**For nearly all indicators measuring the labour tax burden, Belgium tops the EU rankings.** The aggregate implicit tax rate on labour stood at 42.8% in 2012 compared with an EU average of 36.1% <sup>(57)</sup>. This has a major impact on labour costs and cost competitiveness (see section 2.1), and also has strong implications for some specific groups in terms of financial disincentives to work (see section 3.1).

**Overall, budgetary constraints are hampering efforts to reduce the high taxation of labour.** There is nevertheless substantial scope to rebalance the tax system. Indeed, while the general level of taxation is high, revenues from some non-labour sources are closer to or below the EU average <sup>(58)</sup>. To alleviate the tax burden on labour, economic evidence suggests shifting taxation to less-distorting types of taxes, such as consumption and environmental taxes and, potentially, recurrent taxes on immovable property <sup>(59)</sup>. In parallel, base

broadening could also contribute to reducing the high taxation of labour (see below).

**The federal government has adopted some measures to alleviate the tax burden on labour, notably by increasing take-home pay and through plans to reduce social security contributions.** The revenue loss was offset by an increase in most excise duties, some minor changes in VAT legislation, the non-indexation of a series of tax expenditures and some taxes on financial income. However, so far no comprehensive reform of the tax system has taken place.

**In the framework of their recently increased tax autonomy, the regional governments have also announced some taxation measures.** The Flemish government has reduced the personal income tax expenditure for mortgage payments and has announced it will streamline the targeted reduction of employers' social contributions (see section 2.1), simplify property transfer taxes and consider distance-related tolls or time-based user charges for passenger cars instead of the current car registration taxes. The Walloon Region has also announced that it will use its tax autonomy in the framework of a forthcoming pact for employment and training. Most existing personal income tax credits have been reduced or are under review, while some environmental taxes have increased or will have a stronger environmental element in the tax base. The Brussels-Capital Region has set up an expert group to work on a tax shift from personal income taxes towards immovable property and a broadening of tax bases, to be implemented by 2017. This move reflects Brussels's specific regional characteristics of a comparatively high stock of property and a population with a relatively low average personal income. Overall these measures seem likely to make the tax system less growth-distorting.

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<sup>(57)</sup> However, the implicit tax rate on labour does not take into account wage subsidies, which have been increasingly used over the past decade and would reduce the implicit tax rate further if taken into account: by three percentage points over the 2002–09 period, and by 3.2 pps. in 2011 (Valenduc, C., 'Imposition des revenus du travail, du capital et de la consommation: évolutions récentes', Belgian Ministry of Finance, Documentatieblad 71/3, 2011).

<sup>(58)</sup> Revenues from consumption and environmental taxes in terms of GDP are slightly below the EU average: revenues from consumption taxes excluding environmental taxes are equivalent to 8.8% of GDP in Belgium (EU average: 8.9%) while environmental taxes represent 2.2% of GDP, against an EU average of 2.4%. VAT and excise duties represent 7.2% and 2.1% of GDP respectively, the latter being the lowest in the EU (EU average: 7.1% and 2.7%). The broad category of 'taxes on capital' gives a mixed picture: taxes on capital and business income represent 5.9% of GDP (against an EU average of 5.4%), with a smaller than average share for households' income from capital (0.4% GDP against the 0.9% average) while revenues from taxes on the stock of capital wealth are relatively high in Belgium (4.1% of GDP against an EU average of 2.8%).

<sup>(59)</sup> However, overall revenues from property taxes in Belgium are among the highest in EU after the UK and France, both in terms of GDP (3.4% vs. 2.3% in EU) and share of total revenues (7.5% vs. 5.7% in EU). This is especially due to high revenues from transaction taxes on immovable property and inheritance and gift taxes (which are all levied at the regional level). On the other hand, revenues from

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recurrent taxation on immovable property amount to 2.9% of total revenues (1.3% of GDP), against an EU average of 3.8% (1.5% of GDP). Transaction taxes are considered to be economically more distorting than recurrent property taxes. Hence a tax shift within immovable property taxation could also be economically beneficial. For this purpose, the basis for recurrent taxes on immovable property in Belgium might need to be updated as the currently used cadastral values (estimates of imputed rent — the net annual revenue generated by renting out a building or plot of land) often date back to 1975 and have only been updated using consumption prices since 1990.



## Low environmentally related taxes

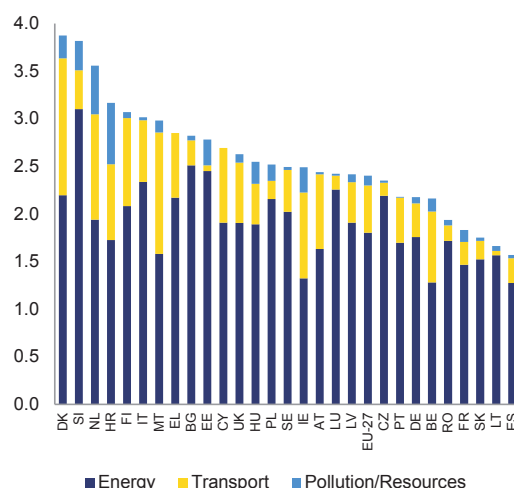
**Belgium's revenues from environmentally related taxes are among the lowest in the EU** (see Graph 3.2.3). Environmentally related taxes are not only a means for generating revenue but also offer a way of internalising the external costs — such as water, soil and air pollution, waste generation or greenhouse gas emissions — that the production and consumption of goods and services impose on the environment. Environmental taxes can also encourage the efficient use of resources, stimulate innovation and improve how markets function by correcting market failures. In 2012, revenues from environmental taxes amounted to 2.2% of GDP, compared with an EU weighted average of 2.4% (i.e. 4.8% of total tax revenues, compared with a weighted EU average of 6.1% of GDP, which ranks Belgium 27<sup>th</sup> among all Member States). The implicit tax rate on energy (EUR 131.5 per tonne of oil equivalent) is far below the EU average of EUR 222.8, putting Belgium 20th out of the 28 Member States.

**In addition, the Belgian tax system contains environmentally harmful (tax) subsidies which send the wrong price signals in terms of the environmental impact of activities and behaviour**<sup>(60)</sup>. One example is the favourable tax treatment of company cars in personal income taxation<sup>(61)</sup>. These in-kind benefits are often included in employees' remuneration packages in order to offset high labour taxation, especially social security contributions. However, at macro-level the system has a considerable budgetary cost. Moreover, because it encourages both professional and private use of the car, it creates harmful environmental and economic effects in terms of congestion costs and pollution. By removing the price signal to the driver, it also hinders some of the incentive effects of efficient environmental taxation (e.g. km charging).

<sup>(60)</sup> See for example Eunomia and Aarhus University, 'Study on environmental fiscal reform potential in 12 EU Member States', 2014.

<sup>(61)</sup> The annual effective tax advantage given by a company car in Belgium (EUR 2763) is the highest among the 27 OECD countries surveyed in Harding, M., 'Personal Tax Treatment of Company Cars and Commuting Expenses: Estimating the Fiscal and Environmental Costs', OECD Taxation Working Papers, No. 20, 2014.

Graph 3.2.3: **Environmental taxation (2012, % of GDP)**



Source: Taxation Trends in the European Union, European Commission, 2014

**Given the need to take additional measures to achieve national greenhouse gas emission targets, Belgium could benefit from greening its tax system.** In particular, current low fuel prices provide an opportunity to re-assess the low taxation of some energy products, such as diesel and heating oil. Increased revenues from energy taxation would create fiscal space to decrease high taxes on wages.

## Narrow tax bases

**The total amount of tax expenditures (i.e. tax relief) is sizeable in Belgium, and still rising as a percentage of GDP.** The foregone revenue reached EUR 25.6 billion or 6.8% of GDP for income year 2012, mainly from reduced rates in VAT and tax deductions in personal income taxation<sup>(62)</sup>.

**In general, a broad tax base with a lower rate is economically less distortive than a narrow base with a higher rate.** Broadening the tax base by removing some tax expenditures could simultaneously make the tax system simpler,

<sup>(62)</sup> Chambre des Représentants, 'Inventaire 2013 des exonérations, abattements et réductions qui influencent le budget de l'Etat' Annex to the 2015 budget', Doc. 54 0495/006, December 2014. For a recent review, see Haulotte S., Valenduc C., 'Réduire les dépenses fiscales : une voie de réforme ?', Reflets et perspectives de la vie économique Vol. 2014-1, 2014.

fairer, and more efficient. Moreover, it would generate additional revenues which would allow a reduction in tax rates on labour. Although some well-designed tax expenditures can enhance positive spill-overs and welfare, it is important to ensure that they do not cause harmful economic distortions and that they are the most effective and cost-efficient means of achieving their economic and social policy objectives. The decision on whether to introduce or keep tax expenditures in place should therefore be based on a case-by-case analysis of costs and benefits.

#### *Value added taxes*

**VAT efficiency could be improved by having a broad base, limiting the use of exemptions and reducing the scope for a diversified rate structure** <sup>(63)</sup>. This would also help to simplify the tax system and could, in the context of a tax shift, allow labour taxes to be reduced. The potential redistributional effects could be offset by accompanying measures outside the VAT system. Policy tools other than VAT might be better targeted at specific groups, and may achieve the envisaged goals at a lower budgetary cost with fewer economic distortions. Hence there is a need for a comprehensive tax reform rather than isolated adjustments <sup>(64)</sup>.

**The federal government has announced a limited broadening of the scope of the standard VAT rate** by making plastic surgery services for non-medical reasons subject to VAT and strengthening the conditions for applying a reduced VAT rate on the renovation of private dwellings. However, no measures involving a broad review of current reduced rates have been announced.

<sup>(63)</sup> There are four VAT rates. The standard rate has remained unchanged at 21% since 1996. There are 2 reduced rates (at 6% and 12%) and a zero rate applying to newspapers and weeklies. In this respect, see: See Kalyva, A., Princen S., Van Noten, H., 'The Belgian VAT rate structure in need of reform', ECFIN Country Focus Vol.11-13, European Commission, 2014.

<sup>(64)</sup> Changes in VAT rates will also have an impact on inflation and therefore on the evolution of wages through the generalised practice of automatic indexation of wages to inflation. To offset the negative impact on competitiveness, accompanying wage cost measures might be needed.

#### *Personal income taxation and social security contributions*

**The main tax expenditures** have a social character (e.g. tax reduction for some social benefits), promote home ownership (e.g. tax reductions for mortgage payments) or stimulate certain forms of financial investment (e.g. pension savings). Work-related tax expenditures aim to make work pay'. These include tax credits, tax rate reliefs and exemptions for specific individuals. Their aim is to stimulate labour supply as well as redistribute income. The tax rebates for service vouchers and extra-hours have shown a steady increase since they were introduced. Extra-hours are also incentivised on the employers' side through the exemption of withholding taxes. This wage subsidy for particular workers and/or industries was introduced in 2005 and further expanded (shift work, night work, researchers and scientific workers). Moreover, most salary packages include in-kind advantages as a way to avoid high labour taxes. Collective pension plans and company cars are the most common fringe benefits. Lastly, a tax exemption on the interest income on savings deposits (up to a certain threshold) raises both efficiency and equity concerns.

#### *Corporate income taxation*

**In corporate income taxation, there is considerable room for a review of existing tax expenditures, as the system is characterised by a high rate and narrow base.** The statutory rate in Belgium stands at nearly 34%, which makes it one of the highest in the EU. However, other indicators such as estimates of the effective average tax rate rank lower and are closer to the levels in comparable EU economies <sup>(65)</sup>. This big difference between statutory and effective rates is due to several features of the tax system, including

<sup>(65)</sup> The average effective tax rate following the Devereux-Griffith methodology (measuring the tax burden on the average investment in a domestic setting) stands at 27% while the marginal effective tax rate is much lower, even if the effect of the notional interest deductions is underestimated in the methodology. The average effective tax rate obtained by analysis of micro-data is around the 30% range and results show a high dispersion. Results do not significantly differ by size of companies (Conseil Supérieur des Finances, 'A tax shift in favour of labour, and broader tax bases — Scenarios for a global and significant tax reform', Belgian Ministry of Finance, 2014).

the allowance for corporate equity (ACE), referred to as 'notional interest on corporate capital', which aims to reduce the tax bias between debt and equity financing by allowing the deduction of a 'notional interest' on all equity. Other tax expenditures, such as the reduced rates for small and medium-sized enterprises, and accelerated depreciation mechanisms, also contribute to eroding corporate tax revenues.

**The international dimension, especially the EU context, has to be considered in applying the concept of tax expenditures to corporate taxation.** Some of the features of Belgium's corporate income tax system may be used for tax planning purposes by cross-border structures. Provisions such as the 'excess profit ruling' <sup>(66)</sup> are currently under scrutiny by the European Commission. Some of the provisions of the allowance for corporate equity are open to abuse, entailing budgetary costs <sup>(67)</sup>. While there is room to close these loopholes, the federal government has reiterated its commitment to maintaining the allowance for corporate equity and has recognised the need to ensure stability and trust to promote entrepreneurship. The decrease in the reference government bond rate as well as provisions for limiting the eligible equity in the financial sector will decrease the budgetary impact of the system.

#### Reforming the tax system

**Since the last European Semester, Belgium has taken some measures to lower the tax burden on labour, while most tax increases seem to avoid the most growth-distorting tax bases.** However, the measures adopted so far are of rather limited scope given the size of the challenge and do not constitute a comprehensive rethink of the tax system as suggested by the recommendation addressed to Belgium in the 2014 European Semester.

<sup>(66)</sup> According to the Belgian tax code, corporate tax liability can be reduced by the additional ('excess') profit resulting from the integration into a multinational group instead of stand-alone companies (for instance through synergies and economies of scale). Prior confirmation through ex ante ruling is required, however. The European Commission opened an in-depth inquiry of the system in February 2015.

<sup>(67)</sup> See: Zangari, 'Addressing the debt bias: A comparison between the Belgian and Italian ACE Systems', Taxation Papers WP No 2014-44, European Commission, 2014.

**This being said, there is a proclaimed political commitment to implement further tax reforms.**

In the coalition agreement, the federal government took a commitment to reform, simplify and modernise the tax system, and to implement a tax shift. Some preparatory work has been done both through parliamentary hearings and an analytical and detailed report, including quantitative estimates, prepared by the High Council of Finance and published in August 2014 <sup>(68)</sup>. Proposals for tax reform have been the subject of much discussion, albeit mainly as part of a polarised debate about striking the right balance between taxation of labour and capital. In contrast to this narrow interpretation, a genuine tax reform should be interpreted broadly, i.e. through a shift to a wide range of taxes which distort growth less, in combination with cuts in tax expenditures (reviewing existing tax provisions, subsidies, exemptions and deductions). In this respect, an overall tax reform needs to be carefully designed, taking into account budgetary, economic, social and environmental objectives, and simultaneously fight against tax evasion and aggressive tax planning.

#### Fiscal framework

**The sixth state reform, adopted at the end of 2013, devolved additional responsibilities to the Belgian regions and communities as of mid-2014.** Their share in general government primary expenditure will rise from around 26% before the reform to 32%. The regions also won additional tax autonomy through 'enlarged regional surcharges' on federal personal income taxes, which is offset by an equivalent tax reduction at federal level. However, the devolved responsibilities are not fully matched by additional financial resources. In other words, besides a transfer of responsibilities, the sixth state reform also

<sup>(68)</sup> See Chambre des représentants et Sénat, 2014, 'La réforme fiscale: rapport fait au nom de la Commission mixte chargée de la réforme fiscale', Doc. 533343/001 (Chambre) et 5-2272/1 (Sénat), February 2014; and Conseil supérieur des Finances, 'A tax shift in favour of labour, and broader tax bases — Scenarios for a global and significant tax reform', Belgian Ministry of Finance, 2014. The latter contains a detailed discussion and assessment of the feasibility and effects of several scenarios: a tax shift towards consumption (VAT, VAT broadening, environmental taxes), a tax shift towards taxation of savings and capital gains (broadening the personal income tax base), and possible reforms of corporate income taxation.

transfers some of the burden of consolidation to the regions and communities.

**Belgium's decentralised structure and the lack of a 'hierarchy of norms' between the different levels of government call for effective budgetary coordination in order to reach general government fiscal targets and respect European fiscal rules.** In the 2014 European Semester, it was recommended that Belgium ensures a balanced contribution by all levels of government to the fulfilment of fiscal rules including the structural budget balance rule, through a binding instrument with an explicit breakdown of targets within a medium-term planning perspective. An ad hoc burden-sharing arrangement for 2014, which had been concluded in July 2013, does not seem to have been respected, resulting in a substantial slippage in the 2014 general government target. The changeover to ESA2010 statistical rules and reclassification of some investment inside the general government sector, especially at regional level, has complicated the implementation of the arrangements and the achievement of agreed targets.

**At the end of 2013, a Cooperation Agreement on fiscal coordination was concluded between the federal government and the regional and community governments to implement the Fiscal Compact.** The agreement introduces a structural government balance rule (defined in line with the medium-term objective) at general government level. Furthermore, it formalises established coordination practice by making official the role of the intergovernmental 'Consultative Committee' in the process and making the advisory role of the High Council of Finance (Public Borrowing section) more explicit. The agreement also envisages strengthening the monitoring role of the High Council by introducing an explicit correction mechanism in case of significant deviation from the agreed targets. However, this agreement does not seem to have been fully implemented so far. The new governments in place at federal, community and regional level have all set their own fiscal trajectory for 2015 and beyond without formal coordination to date.

**Lastly, it is important to ensure concrete arrangements ensuring the autonomy of the High Council of Finance (Public Borrowing**

**section) in terms of its composition, decision-making, communication and access to information in view of the greater responsibilities granted by the recent cooperation agreement.** Another institution, the Federal Planning Bureau, has a longstanding tradition of producing the macroeconomic forecasts underlying budgetary planning at all levels of government.

### 3.3. SERVICE AND PRODUCT MARKETS

**Well-functioning domestic product markets contribute to external competitiveness.** They do so directly by providing important inputs to other companies (see section 2.1). However, there is also an indirect effect given that, even for 'non-tradable' items, their cost affects the general price level. As such, they are an important driver of wage growth given the general practice of automatic wage indexation in Belgium.

**A new integrated competition authority was set up in 2013.** It ensures continuity by pursuing the enforcement work of its predecessor. It has also launched a number of new antitrust investigations and adopted a new policy on fines and informal opinions. However, its staffing level has further decreased since its creation, affecting its ability to enforce competition rules more comprehensively.

#### Service markets

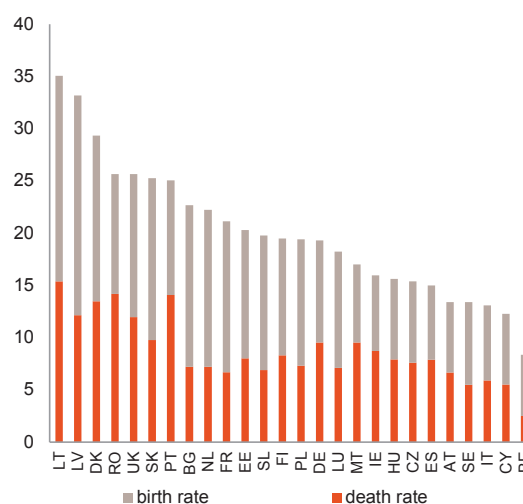
**The low availability of e-procedures and their cross-border accessibility is a general obstacle to the smooth functioning of service markets.** This reflects the general underuse of ICT solutions in public services. Service sectors that are considered to feature certain problematic characteristics are the professional services sector and the retail sector.

#### Professional services

**Professional services are among the business services discussed in section 2.1, where their importance as inputs for the wider economy was underscored.** However, high entry and conduct barriers have been found for certain professions. Legal and accounting activities, in particular, have both high entry and conduct regulations, according to the OECD Product Market Regulation indicator <sup>(69)</sup>. For architects conduct regulations were also seen as high, while for engineers no restrictions whatever were found. Regulations cover the required legal form and shareholding requirements, entry tests, obligatory chamber membership, and authorisation schemes. The existence of such regulations constrains business dynamics through entry and exit rates and

creates inefficiencies as well as excessive rents <sup>(70)</sup>. Conversely, lowering or abolishing them enhances the allocative efficiency of the economy.

Graph 3.3.1: 'Churn' rate: professional, scientific and technical activities (avg 2008-11)



Note: 'Churn' rate = company start-ups ('birth rate') + insolvencies ('death rate')

Source: European Commission

**Belgium's 'churn' rates — the sum of company start-ups and insolvencies and as such an indicator of a sector's dynamism and its capacity for renewal — are among the lowest in the EU for all four professions mentioned above.** Both start-up and insolvency rates are particularly low in Belgium for business services in general (see Graph 3.3.1) <sup>(71)</sup>. Furthermore, while several Member States, including neighbouring France, have been reforming regulated professions, action in Belgium has been rather muted.

**The sixth state reform devolved power over access to a number of regulated professions to the regions.** While this mainly affects technical professions (i.e. commercial and craft professions such as e.g. bakers, undertakers and opticians), it is unclear how mutual recognition of professional qualifications will be organised if regions develop

<sup>(69)</sup> This OECD indicator is often used as a proxy of countries' regulatory framework. It translates policy action into a quantitative indicator. Professional services considered are legal, accounting, architecture and engineering. The 2013 update reflects the situation at the end of 2012.

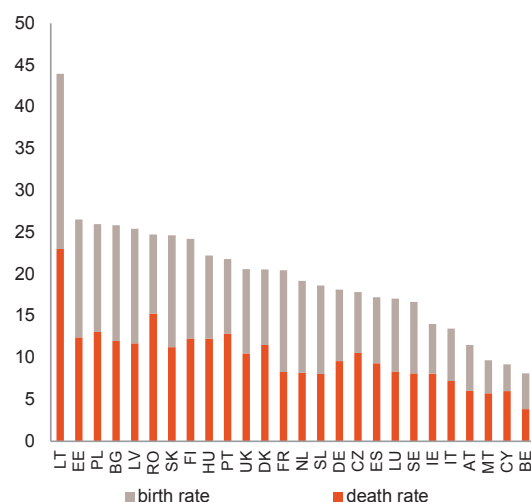
<sup>(70)</sup> Canton et al., The economic impact of professional services liberalisation, EC-DG ECFIN, Economic Papers 533, 2014.

<sup>(71)</sup> These low 'churn' rates are a general feature of the BE economy; they also apply to other sectors, indicating that factors other than market regulation — such as how the labour market functions — are probably also important.



different qualification requirements. Changes made so far have had little impact on the restrictions that apply to professional services.

Graph 3.3.2: 'Churn' rate: retail (average 2008-11)



Note: 'Churn' rate = company start-ups ('birth rate') + insolvencies ('death rate')

Source: European Commission

## Retail services

**The retail sector continues to be the subject of a number of regulations that hinder its development.** Price levels and growth rates for both food and non-food products are substantially higher in Belgium than in neighbouring countries. While certain factors inherent to the country help to explain this difference<sup>(72)</sup>, the Belgian retail sector also displays one of the highest levels of regulation and operational restrictions, according to the OECD Product Market Regulation indicator. These hinder the sector's development and may impact prices. Estimates suggest the price-cost margin or mark-ups in the Belgian retail trade sector are the second highest of all Member States<sup>(73)</sup>.

**Following last year's transfer of responsibility for retail establishments to the regions, new regulatory frameworks have been introduced but have not yet become operational.** Brussels has adopted new regulations, in Wallonia the

adoption process is on-going, and Flanders has presented a draft law. All three regions aim to relax the regulatory environment by introducing a single permit system. The implementation of these new frameworks will show whether the reform has a positive impact on market entry barriers by reducing the length and complexity of the procedures for authorising retail establishments.

## Transportation

**The transport sector is still suffering from the inefficient way the market functions.** No steps have been taken to open up the domestic rail passenger market to competition. Although rail punctuality improved in 2014, domestic indicators show it remains rather poor. The planned Brussels Regional Express Network has suffered repeated delays and is scheduled to become operational only in 2025.

**Port labour legislation prevents port service providers from freely choosing their workforce and requires workers to register in a labour pool.** Moreover, these restrictions to the freedom of establishment are applied in a discriminatory manner. Given the importance of ports for the Belgian economy, a modernisation of port labour legislation could serve as a catalyst for further development of the sector and enhance its international position. The Belgian authorities are currently revising the legislation to accommodate these concerns.

## Energy markets

**Retail markets for gas and electricity have become significantly more dynamic in recent years, as reflected in lower market shares, higher switching rates and higher entry rates.** This was triggered by several government measures to enhance price-consciousness and make it easier to switch providers which have stimulated competition on the market. The 'safety net mechanism' introduced continuous monitoring by the federal regulator of the commodity compo-

<sup>(72)</sup> van der Linden, J., *Consumptieprijsen in België en de buurlanden*, Working Paper 13-12, FPB, 2012.

<sup>(73)</sup> Thum-Thysen & Canton (forthcoming).



### *Box 3.3.1: Security of energy supply*

**Over the course of 2014 it became clear that domestic generation problems would push the import capacity towards its limits during the winter months of 2015, risking to result in temporary supply shortages in case of severe weather conditions.** In recent years, several (gas-fired) electricity plants have been shut down because of the weak profitability compared to coal-fired and renewable units. As a consequence, demand has been increasingly met through imports. This gas-fired capacity is however needed to meet peak demand of around 14 000MW during winter, all the more so as domestic capacity was substantially further reduced following the prolonged outage of three nuclear reactors with a combined power of 3 000MW or about a quarter of domestic generation capacity.

**In order to avert severe supply problems, Belgian authorities took a series of measures, including the creation of a strategic reserve.** This reserve represents 850MW, mainly composed of generation units that were temporarily stopped recently or that were already mothballed. Costs will be covered by a surcharge on transport tariffs. In addition, a public awareness campaign was launched. As a measure of last resort a plan was developed to activate controlled power cuts of 3 000MW in case supply would nevertheless fall short of demand. Relatively mild weather conditions made that no shortfall emerged in the first two months of 2015.

**The supply outlook for upcoming winters remains precarious with several additional gas-fired plants expected to be taken offline.** The impact in the short term hinges on the availability of the nuclear facilities with only little renewable capacity scheduled to be added to the grid. To accommodate for this risk, the new government wants to raise the strategic reserve to 3 500MW, less if nuclear units are reactivated timely. It remains to be seen whether such amount of back-up capacity can effectively be pulled together <sup>(74)</sup>. At the same time the government announced its intention to further delay the start of the nuclear phase-out, which would still be completed by 2025 <sup>(75)</sup>. This entails a total loss in domestic production by about 6 000MW, roughly half of the total.

**In order to avert the scenario of a chronic supply risk and to enable a proper absorption of renewable energy the interconnectivity of the Belgian electricity grid needs to be enhanced.** Even during normal winter conditions, Belgium relies significantly on imports from France and the Netherlands. Evidently, the use of the 3 500MW import capacity depends on excess capacity in these countries. Given domestic developments, both an increase and a broadening of interconnectedness are required. The Nemo project will create the first interconnection to the UK, ALEGrO the first direct interconnection to the German grid. The projects have a combined capacity of 2 000MW and are scheduled to become operational in 2019. Other projects aim to expand the capacity for electricity generated in France and the Netherlands.

**However, overall security of supply bows to a large extent on domestic generation adequacy through the development of new capacity <sup>(76)</sup>.** A recent study highlighted the daunting investment needs Belgium faces over the long term given the nuclear phase-out and the growing share of intermittent capacity <sup>(77)</sup>. Especially in 2020-25 important replacement capacity will be required, necessitating short term action. To provide for a better investment climate, the federal government plans to come to an 'energy pact', underpinned by a common energy vision with the regions. The overarching goal of the pact would be to guarantee the supply of clean and affordable energy for the next 20-25 years. In the short term, a call for tender for new conventional plants with a total capacity of 800MW is planned. In order to ensure cost-effectiveness a state support mechanism would be attached, offering ex-post compensation for unfavourable market conditions.

<sup>(1)</sup> The initial aim for the strategic reserve for this winter was 1 200MW, 350MW more than was effectively found.

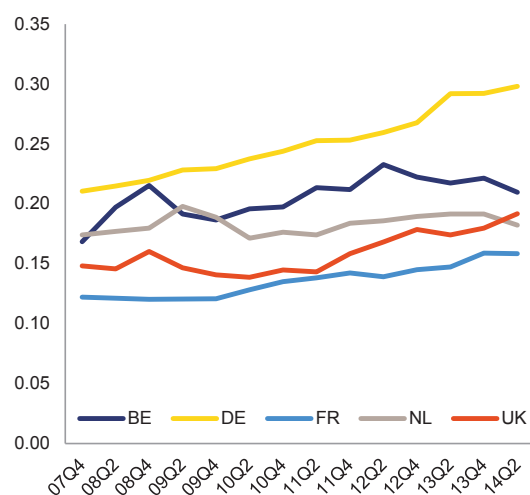
<sup>(2)</sup> The two smallest nuclear units were scheduled to be closed this year. On the basis of the new plans, the first unit would be taken offline in 2022.

<sup>(3)</sup> It should be noted that the impairment of the security of energy supply was already highlighted in a 2007 report by federal regulator CREG given the observed lack of investment.

<sup>(4)</sup> FPB, Het Belgische energiesysteem in 2050: Waar naartoe?, 2014.

nent of energy prices in Belgium and neighbouring countries. As a result, energy suppliers need to be able to justify price changes. This has made price formulas and adjustments more transparent and has broken the erstwhile link with oil prices. The federal government has decided to extend this mechanism by a maximum of three years, i.e. until December 2017. Overall, average energy prices have moved closer to those in neighbouring countries. This is especially the case for gas, whereas overall electricity prices for residential users continue to be higher than those in most neighbouring countries (see Graph 3.3.3). The disruption to domestic nuclear production (see Box 3.3.1) also led to a spike in wholesale future prices in Q3-2014, underscoring the need for grid interconnectedness to be developed further. Considering that German market prices (i.e. excluding taxes and levies) are considerably below Belgian prices, the need to create links with Germany appears the most acute.

Graph 3.3.3: **Electricity prices for residential consumers (all taxes and levies included)**



annual consumer profile: between 2 500 and 5 000KWh  
**Source:** European Commission

**The lasting price differential for electricity mainly reflects taxes and levies.** Distribution network tariffs, in particular, are high in Belgium. These are charged by distribution network operators. As well as actual distribution costs resulting from grid management, the costs of public service obligations are also included, such as those arising from the distributors' obligation to purchase green certificates. Network distribution

tariffs applicable during 2008-12 were extended until the end of 2014, with the competence for setting the tariffs transferred to the regional regulators since July 2014.

**Frozen tariffs were too low to cover all costs incurred by network distributors, resulting in the build-up of a sizeable overhang in recent years.** In particular in Flanders, the rapidly rising costs of renewable energy and combined heat and power support schemes saddled distributors with a growing volume of green certificates that could not be passed on to final prices given the tariff freeze. At unchanged policy, certificates worth EUR 1.8bn would be pre-financed by distributors at the end of 2015 <sup>(78)</sup>.

**At the end of 2014, Flanders adopted a new tariff methodology.** It switched to a 'revenue cap' approach to encourage distribution system operators to find efficiency savings and to prevent a rapid build-up of new losses. The regulators in the two other regions decided to continue using the federal methodology.

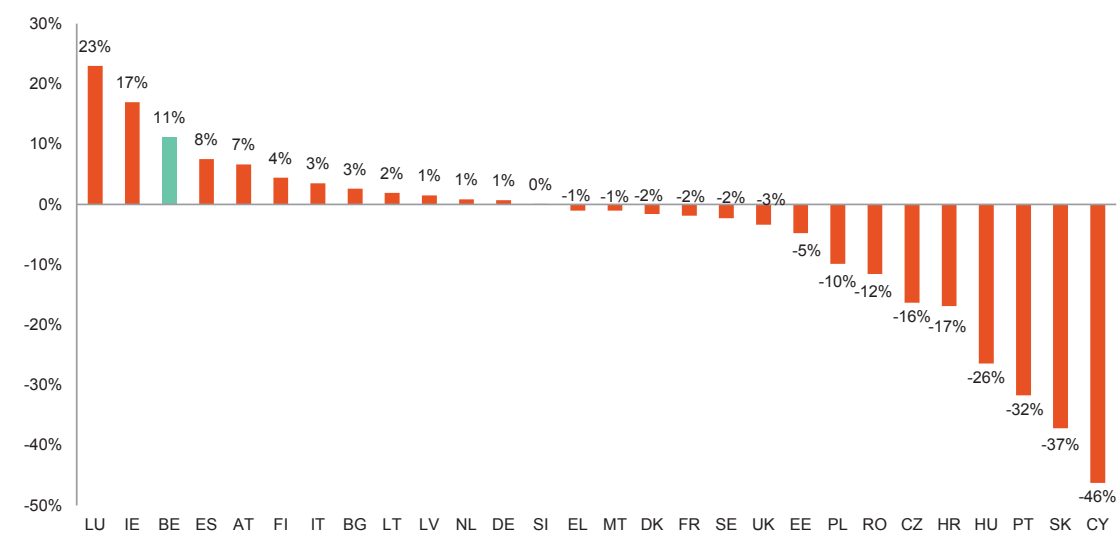
**The new Flemish electricity tariff covers 2015-16 and entails a first increase to recover costs incurred in 2008-09.** Given the fast build-up of uncharged certificates in 2010-14, further major increases will be required to recover the legacy cost of generous and protracted subsidy schemes. This is expected to lead to considerable price increases for residential users, including most SMEs. The full pass-through of the overhang by 2019, combined with the additional costs of certificate schemes at the federal and Flemish level (due to offshore wind power and biomass plants respectively), might push up overall prices by 20% for the average Flemish SME according to Serv estimations.

Belgium also faces important challenges regarding the adequacy of its domestic power generation and security of supply in general (see Box 3.3.1).

<sup>(78)</sup> SERV, Nieuwe riemen voor het energiebeleid 2014-2019, 2014.

### 3.4. GREENING THE ECONOMY

Graph 3.4.1: Remaining gap to 2020 reduction target for non-ETS greenhouse gas emissions



- gaps (+/- for shortfall/over-delivery) are expressed as percentages of the base year (2005)  
 - non-ETS emissions: emissions not covered by the European Emissions Trading System (EU ETS)  
**Source:** European Commission, based on Member State projections

#### Greenhouse gas emissions

**Without additional measures or the use of flexible mechanisms Belgium would miss its 2020 greenhouse gas emission reduction target by 11 pps., according to its own projections<sup>(79)</sup>.** This implies one of the largest remaining efforts among all Member States (see Graph 3.4.1). More affirmative action is hindered by the absence of a political agreement between the federal and regional entities on the distribution of the effort needed and revenues from the auctioning of emission allowances under the EU ETS. It remains unclear to what extent the cooperation agreement under negotiation will provide a satisfactory answer to the need for a clear distribution of efforts.

**Several policies and measures to reduce emissions have been announced but their implementation remains uncertain.** The regional government declarations put energy efficiency forward as the main priority. However, without a, effort-sharing agreement the auction revenues cannot be mobilised to support these measures. Furthermore, in Flanders a significant proportion of these funds will likely be earmarked for

compensating energy-intensive industries for electricity price increases. It is therefore unclear how much will actually be available for climate protection and by when. Revenues from auctioning amounted to almost EUR 115mn in 2013, but it is not clear what share was (planned to be) used for climate and energy related purposes. There is also no clarity on how far flexible mechanisms will be used to meet the targets. The situation is particularly pressing for the residential sector and road transport, which in 2012 were responsible for 14.6% and 21.4% of total greenhouse gas emissions, compared with EU averages of 9.4% and 19.7%. On this basis, it remains unclear whether the planned measures will be fully implemented and sufficient to reach the 2020 target.

#### Renewable energy

**Belgium has made good progress in developing renewables.** The country's 2020 target is 13% of final energy consumption. This goal provides a strong incentive to invest in the fast-growing sector of renewable energy technology. In 2012 the renewable share reached 6.8 % and provisional data for 2013 indicate it rose to 7.5%. The distance to the 2020 target remains large, though.

**The generation of renewable electricity has been rising especially fast, supported by green**

<sup>(79)</sup> Under the EU 2020 strategy, BE has committed to reduce its greenhouse gas emissions from the sectors not covered by the EU Emissions Trading System (ETS) by 15% below 2005 levels by 2020.

**certificates, guaranteed price schemes and an offshore wind installation programme.** The share of renewables in total electricity generation rose to 25% in 2013. Their cost, however, translates into high distribution tariffs. As discussed in section 3.3, these tariffs are set to rise further. Consequently, support levels were already reduced in 2013 and 2014, and distribution tariffs are gradually being applied to all producers, including those generating electricity for their own consumption. In coming years, offshore wind will be further developed at the federal level, while support to renewables could be subject to further revisions in line with new EU state aid provisions. There seems to be no intention, however, to improve synergies between the different green certificate systems in the regions and exploit the potential efficiency gains.

### Resource efficiency

**Lacking natural resources and being a centre of energy-intensive industrial activity, Belgium is a structural net energy importer.** Energy intensity is also relatively high for the transport and residential sectors. Measures to stimulate investment in energy efficiency would therefore improve Belgium's overall economic efficiency, reduce its import dependency, strengthen the balance of payments position, reduce the economy's vulnerability to external price shocks and cut greenhouse gas emissions. Although primary and final energy consumption both fell in 2005-13, Belgium is not on track to meet its national energy efficiency targets.

**A number of measures have been announced to improve energy efficiency, especially in the buildings sector.** There is no guarantee that these measures will be implemented, however, given that the revenues from the auctioning of emission allowances are not available for use, as mentioned above, and that the federal coalition agreement envisages that an energy vision and energy pact will be agreed only by the end of 2015. It is therefore unclear what the effect on energy demand and emission reductions will be.

**The Commission's 2015 Annual Growth Survey underlines the need for better waste management, recycling and water treatment facilities.** Preventing and reducing waste generation together with increasing reuse, recycling and innovative

product design could improve resource efficiency. Belgium has already made some headway on this broad challenge. Additional progress could be made by introducing new economic instruments to promote waste prevention, avoid incinerating reusable or recyclable waste, and make the reuse and recycling of waste more economically attractive. At the same time, phasing out subsidies for incineration would help in shifting taxation towards environmental taxes (see section 3.2).

### Congestion

**Compared with most other countries, Belgium has a serious and growing <sup>(80)</sup> problem with peak hour congestion, both in urban areas and on essential interurban links.** It has been estimated that the annual costs of delays from congestion in Belgium are around 1% of GDP <sup>(81)</sup>. Road congestion generates higher fuel consumption and contributes to air pollution. Total air pollution is estimated to be responsible for almost 10 000 premature deaths annually in Belgium and 2.5 million lost workdays due to related sickness <sup>(82)</sup>.

**In several cases, the intention to tackle congestion announced in the federal and regional government agreements still needs to be turned into tangible measures.** The timing of some of the measures announced is unclear, as is whether they can be achieved. Despite the increasing seriousness of the problem, several elements remain partially unaddressed, including (1) the potential for time-differentiated congestion charging to encourage better use of the infrastructure by passenger cars; (2) the favourable tax treatment of the private use of company cars and fuel cards; and (3) inefficiencies in public transport.

<sup>(80)</sup> Nine out of ten employees spend 25% more time commuting into Brussels than in 2012 according to a recent Agoria enquiry.

<sup>(81)</sup> Christidis, P., Ibáñez Rivas, J.N., Measuring road congestion, JRC technical notes, EC JRC-IPTS, 2012.

<sup>(82)</sup> Calculations are derived from the Impact Assessment for the Commission's Integrated Clean Air Package (2013).

## ANNEX A

### Overview Table

Commitments	Summary assessment <sup>(83)</sup>
<b>2014 Country-specific recommendations (CSRs)</b>	
<p><b>CSR 1</b></p> <p>Following the correction of the excessive deficit, reinforce the budgetary measures for 2014 in the light of the emerging gap of 0.5% of GDP based on the Commission services 2014 spring forecast, pointing to a risk of significant deviation relative to the preventive arm of the Stability and Growth Pact requirements. In 2015, significantly strengthen the budgetary strategy to ensure the required adjustment of 0.6% of GDP towards the medium-term objective, which would also ensure compliance with the debt rule. Thereafter, until the medium-term objective is achieved, pursue the planned annual structural adjustment towards the medium-term objective, in line with the requirement of an annual structural adjustment of at least 0.5% of GDP, and more in good economic conditions or if needed to ensure that the debt rule is met in order to put the high general government debt ratio on a sustained downward path. Ensure a balanced contribution by all levels of government to the fulfilment of fiscal rules including the structural budget balance rule, through a binding instrument with an explicit breakdown of targets within a medium-term planning perspective.</p>	<p>Belgium has made <b>limited progress</b> in addressing CSR 1 (this overall assessment of CSR1 excludes an assessment of compliance with the Stability and Growth Pact):</p> <p>Belgium has made limited progress to ensure a balanced contribution by all levels of government to the fulfilment of fiscal rules:</p> <ul style="list-style-type: none"> <li>• A Cooperation Agreement concluded between the federal government and regional/community governments on 13 December 2013 introduces a structural budget balance rule for general government and formalises fiscal policy coordination among different layers of government. It has not been put into practice so far. The new governments in place at federal, community and regional level have all set their own fiscal trajectory for 2015 and beyond without formal coordination to date.</li> </ul>
<p><b>CSR 2</b></p> <p>Improve the balance and fairness of the overall tax system and prepare a comprehensive tax reform that will allow shifting taxes away from labour towards more growth friendly bases, simplifying the tax system, closing loopholes, increasing VAT efficiency, broadening tax bases, reducing tax expenditures and phasing out environmentally harmful subsidies.</p>	<p>Belgium has made <b>limited progress</b> in addressing CSR 2:</p> <ul style="list-style-type: none"> <li>• <i>Shifting taxes away from labour</i>: Increase in the ceiling of the lump sum allowance for professional expenses (by EUR 14/month in 2015, repeated in 2016). Tax duties on standard shares were increased from 2.5% to 2.7%, on capitalisation shares from 1% to 1.3%.</li> <li>• All excise duties are annually indexed as of 2015. Additional increases in excise duties are planned</li> </ul>

<sup>(83)</sup> The following categories are used to assess progress in implementing the 2014 CSRs: No progress: the Member State has neither announced nor adopted measures to address the CSR. This category also applies if the 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 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 are promising, but not all of them have been implemented and implementation it is not certain that all will be. Substantial progress: the Member State has adopted measures, most of which have been implemented. They go a long way towards addressing the CSR. Fully addressed: the Member State has adopted and implemented measures that address the CSR appropriately.

	<p>for tobacco (2015) and diesel (2016). The Brussels Capital Region has set up a task force to simplify the tax framework and introduce a shift to immovable property taxes.</p> <ul style="list-style-type: none"> <li>• <i>Simplifying the tax system:</i> Announced reduction in social security contributions by employers from 33% to 25% through absorption of existing reductions.</li> <li>• <i>Reducing tax expenditures:</i> A number of tax expenditures will not be adjusted for inflation between 2015 up to 2018. The Flemish region reduced the personal income tax reduction for owner-occupied housing.</li> <li>• <i>Phasing out environmentally harmful subsidies:</i> By the automatic annual adjustment of the CO2 baseline emissions for the year 2015, the private use of company cars is taxed slightly higher. Regional governments have announced the introduction of a kilometre-based charge for trucks as of 2016. The Flemish region aims to change the fiscal base for car taxation in line with 'polluter-pays' principle.</li> <li>• <i>Increase in VAT efficiency:</i> Forthcoming VAT increase to standard rate of 21% for plastic surgery (for non-medical purposes) and for renovations of dwellings less than 10 years old (instead of 5 years).</li> </ul>
<p><b>CSR 3</b></p> <p>Contain future public expenditure growth relating to ageing, in particular from pensions and long-term care, by stepping up efforts to reduce the gap between the effective and statutory retirement age, bringing forward the reduction of early-exit possibilities, promoting active ageing, aligning the retirement age to changes in life expectancy, and improving the cost-effectiveness of public spending on long-term care.</p>	<p>Belgium has made <b>substantial progress</b> in addressing CSR 3:</p> <p>Substantial progress towards reducing the gap between effective and statutory retirement age:</p> <ul style="list-style-type: none"> <li>• Minimum age and career length requirements for early exit through the elderly unemployment benefit system ('unemployment benefits with company top-ups') are tightened progressively with the minimum age increased to 62y since Jan-2015. Transitional rules and exceptions apply for arduous professions, long careers and collective dismissals.</li> <li>• Labour market availability and job search requirements have been extended to all unemployed below the pensionable age (previously 60y) with the exception of</li> </ul>



	<p>unemployed aged 60 at the end of 2014.</p> <ul style="list-style-type: none"> <li>• Further increases announced in the minimum age and minimum career length for early retirement after 2016 (from 62y to 63y and from 40 to 42 career years between 2016 and 2019).</li> <li>• Gradual reform of the civil servant pension scheme planned for 2016, altering the accrual rules so as to extend the average working career.</li> </ul> <p>Limited progress to promote active ageing</p> <ul style="list-style-type: none"> <li>• The pension bonus for those working beyond the age of 62 has been abolished, <i>reducing</i> the financial incentive to extend the working career.</li> <li>• The time credit system, enabling workers to take a career break while receiving an allowance, has been reformed. While the system of 'unmotivated breaks' has been abolished, the possibility to take up 'motivated time credit' has been extended from 36 to 48 months for childcare, palliative care or to assist a seriously ill member of the household.</li> <li>• Access to 'end-of-career' time credit for elderly workers with a career of at least 25 years, will be granted from 60 years of age. Access at the age of 55 remains possible for arduous professions, night work, the construction sector and (anticipatory) collective dismissals.</li> <li>• FL: employment incentive for elderly workers has been refocused on the age group above 55: subsidy no longer applies to workers between 50 and 55 who have been unemployed less than a year.</li> </ul> <p>Some progress to align the retirement age with changes in life expectancy:</p> <ul style="list-style-type: none"> <li>• Increase announced in statutory retirement age, to 66 in 2025 and 67 in 2030.</li> <li>• Planned reform would introduce a credit-based pension system allowing for automatic adjustment mechanisms in response to demographic and/or economic developments.</li> </ul>
<p><b>CSR 4</b></p> <p>Increase labour market participation, in</p>	<p>Belgium has made <b>some progress</b> in addressing CSR 4:</p>

<p>particular by reducing financial disincentives to work, increasing labour market access for disadvantaged groups such as the young and people with a migrant background, improving professional mobility and addressing skills shortages and mismatches as well as early school leaving. Across the country, strengthen partnerships of public authorities, public employment services and education institutions to provide early and tailor-made support to the young.</p>	<p>Some progress to reduce financial disincentives to work:</p> <ul style="list-style-type: none"> <li>• Increase in the ceiling of the lump sum allowance for professional expenses (by EUR 14/month in 2015, repeated in 2016).</li> <li>• Temporary unemployment benefits are calculated on the basis of 65% of the reference wage (instead of 70% before).</li> <li>• Eligibility requirements for the income top-up for part-time unemployed are tightened and the allowance is reduced. A time limit of 2 years is also envisaged, following which an evaluation is planned.</li> <li>• Seniority top-up for elderly unemployed has been abolished, bar certain exceptions.</li> <li>• Eligibility criteria for insertion allowance are tightened (age ceiling for new entrants lowered from 30y to 25y). Allowance for young unemployed below 21 will become conditional on obtaining a high-school or equivalent alternate learning degree.</li> <li>• Reference wage used to calculate unemployment benefits is altered resulting in a slight decrease in the average allowance.</li> <li>• Tax reduction on unemployment benefits is not indexed during 2015-19.</li> <li>• Fiscal part of the 'workbonus' will be increased in Jan-2016 resulting in higher take home pay for low wage earners. A second increase is planned in 2019.</li> <li>• The federal government coalition agreement intends to make unemployment benefits for the long-term unemployed conditional on recipients doing two half days of 'community service'. This is to be implemented through a cooperation agreement with the regions.</li> </ul> <p>Limited progress to increase labour market access for disadvantaged groups:</p> <ul style="list-style-type: none"> <li>• The structural reduction in employers' social security contributions (ESSCs) for low-wage earners was increased in Jan-2015 by EUR 14 (to</li> </ul>
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	<p>EUR 476.6/quarter) to encourage demand for low-wage labour. Additional increases by the same amount are planned in 2017 and 2019. The wage limit to qualify for these reductions is indexed and increased, extending the target group.</p> <ul style="list-style-type: none"> <li>• Regions: The sixth state reform transferred competence for granting target group specific reductions in ESSC, allowing regions to better align employment incentives with the differing needs of the regional labour markets.</li> <li>• FL: simplification of the existing system announced, refocusing incentives on young unemployed, unemployed above the age of 55 and people with disabilities.</li> <li>• FL: reform of subsidised service vouchers for domestic and/or proximity services has been tabled. The requirement that at least 60% of those hired must be on unemployment benefit or welfare recipients would be abolished, increasing the barrier for entry to this labour market circuit for the most disadvantaged.</li> <li>• WA: government agreement envisages improving targeted policies aimed at getting young people with low qualifications into the labour market.</li> </ul> <p>Some progress towards addressing skills mismatches and early school leaving (see CSR 5 below)</p> <p>Limited progress towards strengthening partnerships between public authorities, public employment services and educational institutions:</p> <ul style="list-style-type: none"> <li>• BXL: Plans to strengthen partnerships between PES and education/training providers and actors.</li> <li>• FL: Youth Guarantee Implementation Plan will be updated to better integrate education and employment actions.</li> <li>• WA: government agreement envisages conclusion of a 'Pact for employment and training' with the social partners. Entry into force planned for 2016.</li> </ul>
<p><b>CSR 5</b></p> <p>Restore competitiveness by continuing the reform of the wage-setting system, including wage indexation, in consultation with the social</p>	<p>Belgium has made <b>some progress</b> in addressing CSR 5:</p> <p>Some progress in reforming the wage-setting system:</p>

<p>partners and in accordance with national practice, to ensure that wage evolutions reflect productivity developments at sectorial and/or company levels as well as economic circumstances and to provide for effective automatic corrections when needed; by strengthening competition in the retail sectors, removing excessive restrictions in services, including professional services and addressing the risk of further increases of energy distribution costs; by promoting innovation through streamlined incentive schemes and reduced administrative barriers; and by pursuing coordinated education and training policies addressing the pervasive skills mismatches and regional disparities in early school leaving.</p>	<ul style="list-style-type: none"> <li>• Temporary suspension of all wage indexation agreements until inflation has eroded real wages by 2%.</li> <li>• Planned reform of the Law of 1996 announced to operationalize the national 'wage norm' to close by 2019 the wage gap vis-à-vis neighbouring countries that has built up since 1996. The wage norm will be set taking into account actual relative wage developments over the past two years. It will be enshrined in a generally binding collective agreement or Royal Decree, and sanctions for exceeding it will be made more automatic.</li> <li>• Wage cost reductions already planned have been maintained, though with altered timing: two rounds scheduled for 2015 and 2017 have been combined in 2016; the third round remains planned for 2019.</li> </ul> <p>Limited progress towards strengthening competition in the service sector and addressing the problem of distribution costs:</p> <ul style="list-style-type: none"> <li>• Retail: new draft laws for the regions have been presented (WA/FL) or adopted (BXL), but the measures proposed are insufficient to guarantee that conditions for retailers will be simplified and eased in practice.</li> <li>• Professional services: changes have been introduced for land surveyors (legal person), patent agent (group representation) and accountants (protected title also for employees). However, these changes have little impact on the restrictions applicable to professional services. In addition, other restrictions (shareholding requirements) were introduced at the same time.</li> <li>• Distribution costs: regional regulators adopted tariff methodologies for the period 2015-16. For FL, the new methodology does not solve the issue of the accumulated past costs of the green certificates from 2008-14 when tariffs were frozen. However, it does prevent a rapid build-up of new losses.</li> </ul> <p>Some progress in promoting innovation through streamlined incentive schemes and lower administrative barriers:</p> <ul style="list-style-type: none"> <li>• Federal: planned assessment of the need to</li> </ul>
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	<p>increase the wage tax exemption for researchers.</p> <ul style="list-style-type: none"> <li>• FL: streamline innovation support and increase effectiveness through merger by early 2016 of the Flemish Agency for Entrepreneurship and the Agency for Innovation by Science and Technology and the integration of the Hercules Foundation (for investment in research infrastructure) within the more encompassing Fund for Scientific Research.</li> <li>• WA: Concentration of Marshall Plan on measures with the highest value added, maximising the commercial benefits of research, job creation and export opportunities.</li> </ul> <p>Some progress towards addressing skills mismatches and early school leaving:</p> <ul style="list-style-type: none"> <li>• Allowance for young unemployed below 21 will become conditional on obtaining a high-school or equivalent alternate learning degree.</li> <li>• French community: entry into force (Sep-2014) of (1) decrees to prevent early school leaving and improve the coordination of education and youth policies; (2) a reform of lower secondary education encompassing action plans at school and possibly at pupil level to tackle low achievement and support pupils with difficulties.</li> <li>• WA: government agreement envisages conclusion of a 'Pact for employment and training' with the social partners. Entry into force planned for: Jan-2016.</li> <li>• FL: rollout and update of 2013 'Action plan against early school leaving', combining preventive, interventionist and compensation measures. School-level data on ESL to be made available and use of flexible learning pathways in secondary education to be actively promoted. Qualifying vocational education trajectories are to be further developed through cooperation programmes between the regional PES, the regional agency for entrepreneurial training and specific industry sectors and companies.</li> <li>• FL: Additional measures announced to fight early school leaving and skills mismatches: (1) strengthening of work-based learning and its integration into all relevant branches of study, (2)</li> </ul>
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	<p>continued actions on STEM, (3) promotion of entrepreneurship and (4) introduction of a new 'dual' system of learning and working.</p> <ul style="list-style-type: none"> <li>• FL: Youth Guarantee Implementation Plan will be updated to better integrate education and employment measures.</li> <li>• BXL: Plans to strengthen partnerships between PES and education/training providers and actors in the framework of the regional 'Alliance for jobs and training'.</li> </ul>
<p><b>CSR 6</b></p> <p>Ensure that the 2020 targets for reducing greenhouse gas emissions from non-ETS activities are met, in particular as regards buildings and transport. Make sure that the contribution of transport is aligned with the objective of reducing road congestion. Agree on a clear distribution of efforts and burdens between the federal and regional entities.</p>	<p>Belgium has made <b>limited progress</b> in addressing CSR 6:</p> <ul style="list-style-type: none"> <li>• The three regions and the federal government have made no further progress in discussions on how to distribute the effort needed in 2013-20 through an effort-sharing agreement. This should cover the distribution of the non-ETS emissions objective, of the renewable energy objective and of revenues from the auctioning of emission allowances (these are blocked on an account).</li> <li>• A mechanism for increasing regional bodies' awareness of responsibility for climate protection has started in 2015. This involves determining a multiannual reference trajectory on the reduction of GHG emissions in the residential and tertiary building sector for each region. If a region meets (misses) its assigned objective, it receives a financial bonus (penalty) proportional to its distance to the trajectory. The mechanism would be funded by the (blocked) revenues from the auctioning of emission allowances.</li> <li>• The intention exists to prepare a specific national system for GHG reduction policies, measures and projections, as already exist for GHG inventories.</li> <li>• Important elements of the 'Flemish Climate Policy Plan 2013-2020' are still to be finalised, such as the Flemish Mobility Plan. The Flemish Climate Fund provides a financial framework for additional climate policy, but will draw on the (blocked) auctioning revenues.</li> <li>• The Walloon region's first 5-year 'plan air-climat-énergie' presenting concrete measures is still under development (the public consultation ended</li> </ul>



	<p>in Sep-2014).</p> <ul style="list-style-type: none"> <li>• The Brussels region's 'air-climate-energy plan' defining measures and actions is undergoing an environmental impact evaluation before being submitted to public scrutiny.</li> <li>• Policy intentions aimed at reducing congestion are contained in the respective government agreements for 2014-19. The adoption of some of these measures at risk, however. The different regions seem to have conflicting intentions on the introduction of road charging for passenger cars. On the other hand, the kilometre charge for heavy vehicles will be introduced in 2016 in all regions. Several other policy intentions still need to be transposed into concrete measures e.g. infrastructure works around Brussels and Antwerp and encouraging a modal shift by investing in inland waterways.</li> </ul>
<b>Europe 2020 (national targets and progress)</b>	
Employment rate target set in the 2014 NRP: 73.2%.	<p>The employment rate stood at:</p> <ul style="list-style-type: none"> <li>• 67.3% in 2011;</li> <li>• 67.2% in 2012;</li> <li>• 67.2% in 2013.</li> </ul> <p>In view of past performance the Europe 2020 employment rate target of 73.2% appears ambitious. Achieving it would require creating over 50,000 jobs a year, much more than the average since 2008 and even more than before the 2008 crisis.</p>
R&D target set in the 2014 NRP: 3% of GDP (including budgetary costs of federal tax measures in favour of R&D staff, estimated at 0.18% of GDP in 2020 by BE).	<p>Gross domestic expenditure on R&amp;D (in % of GDP):</p> <ul style="list-style-type: none"> <li>• 2.15% in 2011;</li> <li>• 2.24% in 2012;</li> <li>• 2.28% in 2013.</li> </ul> <p>On the basis of recent trends, BE would be within reach of attaining the 2020 target.</p>
Greenhouse gas emissions, national target: -15% in 2020 compared to 2005 (in non-ETS sectors).	<p>According to the latest national projections submitted to the Commission and taking into account existing measures, it is expected that the target will be missed: -4% in 2020 compared with 2005 (i.e. projected</p>

	<p>shortfall of 11 pps.).</p> <p>The change in non-ETS greenhouse gas emissions between 2005 and 2013 was -8%.</p>
2020 renewable energy target: 13%.	<p>Share of renewable energy in gross final energy consumption:</p> <ul style="list-style-type: none"> <li>• 5.2% in 2011;</li> <li>• 6.8% in 2012;</li> <li>• 7.5% in 2013 (provisional, EurObserv'ER).</li> </ul> <p>Belgium has made good progress on developing renewables, with 2011/2012 and 2013/2014 interim targets more than met. However, the distance to the target remains considerable.</p>
<p>Energy efficiency, 2020 energy consumption targets:</p> <ul style="list-style-type: none"> <li>• 43.7Mtoe (primary energy consumption);</li> <li>• 32.5Mtoe (final energy consumption).</li> </ul>	<p>Gross inland consumption of energy:</p> <ul style="list-style-type: none"> <li>• 50.0Mtoe in 2011 (final consumption: 36.1Mtoe);</li> <li>• 46.2Mtoe in 2012 (final consumption: 33.8Mtoe);</li> <li>• 47.4Mtoe in 2013 (final consumption: 34.8Mtoe).</li> </ul> <p>Belgium is not on track to meet its national energy efficiency targets, either for final or for primary energy consumption.</p>
Early school leaving (ESL) target: 9.5%.	<p>Young people leaving education and training early (percentage of the population aged 18-24 with at most lower secondary education and not in further education or training):</p> <ul style="list-style-type: none"> <li>• 12.3% in 2011;</li> <li>• 12.0% in 2012;</li> <li>• 11.0% in 2013.</li> </ul> <p>Early school leaving remains below the EU-28 average (11.0% compared with 12.0%) but above the 2020 target of 9.5%.</p> <p>This average masks large disparities between population sub-groups and regions. The rate among young people with a migrant background is twice the overall rate. Rates are significantly higher in WA (14.7%) and BXL (17.7%) than in FL (7.5%).</p>

Tertiary education target: 47%	<p>The tertiary educational attainment rate stood at:</p> <ul style="list-style-type: none"> <li>• 42.6% in 2011;</li> <li>• 43.9% in 2012;</li> <li>• 42.7% in 2013.</li> </ul> <p>Belgium's rate significantly exceeds the EU average (36.9% in 2013). The gap to the national target has been widening, however.</p>
Target on the reduction of population at risk of poverty or social exclusion in number of persons: 380 000 (as compared to 2010).	<p>The number of people at-risk-of-poverty or social exclusion (x 1 000 persons) stood at:</p> <ul style="list-style-type: none"> <li>• 2 271 in 2011;</li> <li>• 2 353 in 2012;</li> <li>• 2 286 in 2013.</li> </ul> <p>Even though the increase seen until 2012 has stopped, Belgium is unlikely to achieve the 2020 target. It should be pointed out that some population sub-groups are disproportionately at risk.</p>

## ANNEX B

### Standard Tables

Table AB.1: **Macroeconomic indicators**

	1996- 2000	2001- 2005	2006- 2010	2011	2012	2013	2014	2015	2016
<b>Core indicators</b>									
GDP growth rate	2.9	1.7	1.3	1.6	0.1	0.3	1.0	1.1	1.4
Output gap <sup>1</sup>	0.4	0.4	0.8	-0.2	-1.0	-1.5	-1.3	-1.0	-0.6
HICP (annual % change)	1.6	2.0	2.2	3.4	2.6	1.2	0.5	0.1	1.1
Domestic demand (annual % change) <sup>2</sup>	2.6	1.4	1.5	2.0	0.0	-0.6	0.6	1.0	1.1
Unemployment rate (% of labour force) <sup>3</sup>	8.7	7.8	7.8	7.2	7.6	8.4	8.5	8.3	8.1
Gross fixed capital formation (% of GDP)	22.1	21.5	23.1	23.0	23.0	22.3	22.8	23.0	23.5
Gross national saving (% of GDP)	26.9	26.7	26.2	24.5	24.1	21.2	22.2	22.6	23.3
<b>General government (% of GDP)</b>									
Net lending (+) or net borrowing (-)	-1.6	-0.9	-2.0	-3.9	-4.1	-2.9	-3.2	-2.6	-2.4
Gross debt	119.0	101.1	93.8	102.1	104.0	104.5	106.4	106.8	106.6
Net financial assets	-104.9	-86.8	-74.4	-79.2	-79.8	-81.1	n.a.	n.a.	n.a.
Total revenue	48.8	48.6	48.0	49.3	50.7	51.5	51.2	50.9	50.7
Total expenditure	50.4	49.4	50.0	53.2	54.8	54.4	54.4	53.5	53.0
of which: Interest	7.3	5.2	3.7	3.4	3.4	3.2	3.0	2.8	2.7
<b>Corporations (% of GDP)</b>									
Net lending (+) or net borrowing (-)	0.8	1.0	0.7	1.7	3.5	-0.3	1.6	1.2	1.5
Net financial assets; non-financial corporations	-88.8	-99.1	-98.8	-72.7	-90.3	-90.8	n.a.	n.a.	n.a.
Net financial assets; financial corporations	-6.9	-5.5	1.9	4.7	3.0	0.3	n.a.	n.a.	n.a.
Gross capital formation	14.3	14.6	15.4	15.6	14.9	14.4	14.1	14.3	14.8
Gross operating surplus	21.4	22.7	24.5	25.1	24.1	23.9	24.2	24.7	25.5
<b>Households and NPISH (% of GDP)</b>									
Net lending (+) or net borrowing (-)	4.9	4.4	3.4	2.5	1.9	1.7	1.5	1.7	1.4
Net financial assets	249.0	227.5	205.5	200.6	213.2	220.0	n.a.	n.a.	n.a.
Gross wages and salaries	37.9	38.3	37.7	37.7	38.1	38.1	37.8	37.2	36.5
Net property income	11.7	9.8	8.9	8.2	7.6	7.2	6.8	6.6	6.4
Current transfers received	21.3	21.1	21.1	21.8	22.3	22.8	23.1	23.2	23.1
Gross saving	11.1	10.1	10.2	8.9	8.4	8.0	8.0	8.0	7.8
<b>Rest of the world (% of GDP)</b>									
Net lending (+) or net borrowing (-)	4.1	4.5	2.0	0.2	1.3	-1.5	-0.1	0.3	0.5
Net financial assets	-46.3	-34.2	-31.9	-49.0	-41.6	-44.9	n.a.	n.a.	n.a.
Net exports of goods and services	3.2	4.6	2.5	0.6	0.5	1.3	1.8	2.1	2.4
Net primary income from the rest of the world	2.4	1.5	1.0	1.1	1.8	-1.0	-0.1	-0.3	-0.3
Net capital transactions	0.0	-0.1	-0.2	-0.1	0.7	-0.1	0.0	0.3	0.3
Tradable sector	42.6	41.9	39.9	38.0	37.6	37.2	n.a.	n.a.	n.a.
Non-tradable sector	46.9	47.7	49.5	51.6	51.9	52.3	n.a.	n.a.	n.a.
of which: Building and construction sector	4.5	4.4	4.9	5.1	5.1	5.0	n.a.	n.a.	n.a.

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

2 The indicator of domestic demand includes stocks.

3 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 AB.2: **Financial market indicators**

	2009	2010	2011	2012	2013	2014
Total assets of the banking sector (% of GDP) <sup>1)</sup>	339.8	318.9	325.2	288.8	266.9	280.2
Share of assets of the five largest banks (% of total assets)	77.1	74.9	70.8	66.3	64.0	n.a.
Foreign ownership of banking system (% of total assets)	60.6	59.4	64.3	64.1	65.4	n.a.
Financial soundness indicators:						
- non-performing loans (% of total loans) <sup>2)</sup>	3.1	2.8	3.3	3.8	4.3	4.1
- capital adequacy ratio (%) <sup>2)</sup>	17.3	19.3	18.5	18.2	18.7	17.7
- return on equity (%) <sup>2)</sup>	-2.5	10.6	1.2	3.4	16.0	4.0
Bank loans to the private sector (year-on-year % change) <sup>1)</sup>	-5.1	-2.4	-1.4	-1.2	6.2	6.2
Lending for house purchase (year-on-year % change) <sup>1)</sup>	-8.1	6.6	-1.9	6.0	10.1	16.3
Loan to deposit ratio <sup>1)</sup>	65.2	62.4	60.1	56.6	58.2	60.1
Central Bank liquidity as % of liabilities <sup>3)</sup>	4.6	0.9	6.1	4.8	2.0	1.8
Private debt (% of GDP)	161.5	155.6	165.0	161.1	163.0	n.a.
Gross external debt (% of GDP) <sup>4)</sup> - public	61.2	57.1	51.4	57.1	57.8	65.4
- private	91.7	92.5	106.4	115.5	100.1	98.2
Long-term interest rate spread versus Bund (basis points)*	67.9	71.9	162.5	150.5	84.0	55.0
Credit default swap spreads for sovereign securities (5-year)*	66.0	94.9	173.2	124.8	36.3	31.0

1) Latest data in November 2014.

2) Latest data Q2 2014.

3) Latest data September 2014.

4) 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 AB.3: **Taxation indicators**

	2002	2006	2008	2010	2011	2012
<b>Total tax revenues</b> (incl. actual compulsory social contributions, % of GDP)	45.2	44.4	44.2	43.8	44.2	45.4
<b>Breakdown by economic function</b> (% of GDP) <sup>1</sup>						
Consumption	10.9	11.1	10.7	10.8	10.7	10.8
of which:						
- VAT	6.9	7.1	7.0	7.1	7.0	7.2
- excise duties on tobacco and alcohol	0.8	0.7	0.7	0.7	0.6	0.7
- energy	1.4	1.4	1.2	1.3	1.3	1.3
- other (residual)	1.9	1.9	1.8	1.7	1.7	1.7
Labour employed	22.7	21.3	21.7	21.9	22.2	22.4
Labour non-employed	2.1	1.7	1.9	2.0	2.0	2.0
Capital and business income	5.9	6.3	6.2	5.2	5.5	5.9
Stocks of capital/wealth	3.4	3.8	3.7	3.7	3.7	4.1
<i>p.m.</i> Environmental taxes <sup>2</sup>	2.4	2.3	2.1	2.2	2.3	2.2
<b>VAT efficiency</b> <sup>3</sup>						
Actual VAT revenues as % of theoretical revenues at standard rate	48.3	50.6	48.7	48.2	47.9	48.2

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

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

3 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 AB.4: Labour market and social indicators

	2008	2009	2010	2011	2012	2013	2014
Employment rate (% of population aged 20-64)	68.0	67.1	67.6	67.3	67.2	67.2	67.2
Employment growth (% change from previous year)	1.8	-0.2	0.7	1.4	0.3	-0.3	0.4
Employment rate of women (% of female population aged 20-64)	61.3	61.0	61.6	61.5	61.7	62.1	62.9
Employment rate of men (% of male population aged 20-64)	74.7	73.2	73.5	73.0	72.7	72.3	71.4
Employment rate of older workers (% of population aged 55-64)	34.5	35.3	37.3	38.7	39.5	41.7	42.4
Part-time employment (% of total employment, age 15 years and over)	22.6	23.4	24.0	25.1	25.1	24.7	24.0
Part-time employment of women (% of women employment, age 15 years and over)	40.9	41.5	42.3	43.4	43.6	42.7	41.3
Part-time employment of men (% of men employment, age 15 years and over)	7.9	8.6	9.0	9.8	9.7	9.4	8.9
Fixed term employment (% of employees with a fixed term contract, age 15 years and over)	8.3	8.2	8.1	9.0	8.1	8.2	8.6
Transitions from temporary to permanent employment	40.6	36.1	36.1	32.5	43.2	n.a.	n.a.
Unemployment rate <sup>1</sup> (% of labour force, age group 15-74)	7.0	7.9	8.3	7.2	7.6	8.4	8.5
Long-term unemployment rate <sup>2</sup> (% of labour force)	3.3	3.5	4.1	3.5	3.4	3.9	4.2
Youth unemployment rate (% of youth labour force aged 15-24)	18.0	21.9	22.4	18.7	19.8	23.7	22.6
Youth NEET rate (% of population aged 15-24)	10.1	11.1	10.9	11.8	12.3	12.7	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)	12.0	11.1	11.9	12.3	12.0	11.0	n.a.
Tertiary educational attainment (% of population aged 30-34 having successfully completed tertiary education)	42.9	42.0	44.4	42.6	43.9	42.7	n.a.
Formal childcare (from 1 to 29 hours; % over the population aged less than 3 years)	20.0	17.0	17.0	19.0	21.0	n.a.	n.a.
Formal childcare (30 hours or over; % over the population aged less than 3 years)	23.0	16.0	19.0	20.0	27.0	n.a.	n.a.
Labour productivity per person employed (annual % change)	-0.8	-2.4	1.8	0.2	-0.2	0.6	0.8
Hours worked per person employed (annual % change)	-0.4	-1.2	0.4	0.7	0.1	0.2	-0.1
Labour productivity per hour worked (annual % change; constant prices)	-0.4	-1.3	1.4	-0.5	-0.3	0.3	0.9
Compensation per employee (annual % change; constant prices)	1.6	0.0	-0.7	0.8	1.3	1.0	0.0
Nominal unit labour cost growth (annual % change)	4.4	3.9	-0.3	2.7	4.1	1.9	n.a.
Real unit labour cost growth (annual % change)	2.2	2.7	-2.3	0.7	2.1	0.3	n.a.

1 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.

2 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 AB.5: **Expenditure on social protection benefits (% of GDP)**

	2007	2008	2009	2010	2011	2012
Sickness/healthcare	7.2	7.6	8.3	8.2	8.3	8.5
Invalidity	1.8	1.9	2.1	2.1	2.2	2.3
Old age and survivors	10.2	10.8	11.6	11.3	11.6	11.7
Family/children	2.1	2.1	2.2	2.2	2.2	2.1
Unemployment	3.2	3.3	3.8	3.7	3.7	3.7
Housing and social exclusion n.e.c.	0.1	0.2	0.2	0.2	0.2	0.3
<b>Total</b>	25.5	26.7	29.1	28.6	29.0	29.4
of which: means-tested benefits	1.2	1.4	1.5	1.5	1.4	1.5
<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)	20.8	20.2	20.8	21.0	21.6	20.8
Children at risk of poverty or social exclusion (% of people aged 0-17)	21.3	20.5	23.2	23.3	22.8	21.9
Elderly at risk of poverty or social exclusion (% of people aged 65+)	22.9	23.1	21.0	21.6	21.2	19.5
At-risk-of-poverty rate <sup>2</sup> (% of total population)	14.7	14.6	14.6	15.3	15.3	15.1
Severe material deprivation rate <sup>3</sup> (% of total population)	5.6	5.2	5.9	5.7	6.3	5.1
Proportion of people living in low work intensity households <sup>4</sup> (% of people aged 0-59)	11.7	12.3	12.7	13.8	13.9	14.0
In-work at-risk-of-poverty rate (% of persons employed)	4.8	4.6	4.5	4.2	4.5	4.4
Impact of social transfers (excluding pensions) on reducing poverty	45.6	45.3	45.3	45.0	44.8	42.6
Poverty thresholds, expressed in national currency at constant prices <sup>5</sup>	10598.4	10891.9	10977.5	11027.6	10814.2	11163.1
Gross disposable income (households)	213171.0	217208.0	218884.0	223600.0	231779.0	n.a.
Relative median poverty risk gap (60% of median equivalised income, age: total)	17.2	18.1	18.0	18.6	18.7	19.2
Inequality of income distribution (S80/S20 income quintile share ratio)	4.1	3.9	3.9	3.9	4.0	3.8

1 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).

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

3 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.

4 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.

5 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)

6 2014 data refer to the average of the first three quarters.

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

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Table AB.6: **Product market performance and policy indicators**

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	2004-08	2009	2010	2011	2012	2013	2014
Labour productivity <sup>1</sup> in total economy (annual growth in %)	1.0	-2.5	1.6	0.5	-0.2	0.7	n.a.
Labour productivity <sup>1</sup> in manufacturing (annual growth in %)	3.4	-7.3	9.1	-0.4	3.8	2.4	n.a.
Labour productivity <sup>1</sup> in electricity, gas (annual growth in %)	-0.1	17.1	0.1	-5.0	-19.3	-2.5	n.a.
Labour productivity <sup>1</sup> in the construction sector (annual growth in %)	2.4	-2.2	0.0	5.4	1.3	0.1	n.a.
Labour productivity <sup>1</sup> in the wholesale and retail sector (annual growth in %)	0.9	-2.6	2.1	-0.1	-2.7	1.0	n.a.
Labour productivity <sup>1</sup> in the information and communication sector (annual growth in %)	0.4	0.4	-0.5	2.5	-0.5	0.5	n.a.
Patent intensity in manufacturing <sup>2</sup> (EPO patent applications divided by gross value added of the sector)	0.0	0.0	0.0	0.0	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)	505	505	505	505	505	505	505
Time to start a business <sup>3</sup> (days)	20.6	4	4	4	4	4	4
R&D expenditure (% of GDP)	1.8	2.0	2.1	2.2	2.2	2.3	n.a.
Total public expenditure on education (% of GDP)	6.1	6.6	6.6	6.6	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	1.52	n.a.	n.a.	n.a.	n.a.	1.39	n.a.
Product market regulation <sup>4</sup> , retail	4.56	n.a.	n.a.	n.a.	n.a.	4.06	n.a.
Product market regulation <sup>4</sup> , professional services	2.47	n.a.	n.a.	n.a.	n.a.	2.47	n.a.
Product market regulation <sup>4</sup> , network industries <sup>5</sup>	2.08	2.01	1.96	1.86	1.86	1.84	n.a.

1 Labour productivity is defined as gross value added (in constant prices) divided by the number of persons employed.

2 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.

3 The methodologies, including the assumptions, for this indicator are presented in detail here:

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

4 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>

5 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 AB.7: **Green growth**

Green growth performance		2003-2007	2008	2009	2010	2011	2012
<b>Macroeconomic</b>							
Energy intensity	kgoe / €	0.19	0.18	0.18	0.19	0.18	0.17
Carbon intensity	kg / €	0.46	0.42	0.39	0.41	0.37	0.36
Resource intensity (reciprocal of resource productivity)	kg / €	0.52	0.56	0.52	0.51	0.54	n.a.
Waste intensity	kg / €	n.a.	0.15	n.a.	0.19	n.a.	0.20
Energy balance of trade	% GDP	-3.5	-5.4	-3.3	-3.8	-4.8	-5.2
Energy weight in HICP	%	10.0	10.9	10.9	11.2	11.0	11.7
Difference between energy price change and inflation	%	2.8	21.7	-12.9	4.7	14.6	3.3
Ratio of environmental taxes to labour taxes	ratio	10.2%	9.0%	9.1%	9.3%	9.3%	8.8%
Ratio of environmental taxes to total taxes	ratio	5.4%	4.8%	5.0%	5.1%	5.1%	4.8%
<b>Sectoral</b>							
Industry energy intensity	kgoe / €	0.24	0.22	0.20	0.23	0.27	0.27
Share of energy-intensive industries in the economy	% GDP	11.5	11.4	10.6	11.3	11.0	11.2
Electricity prices for medium-sized industrial users**	€ / kWh	n.a.	0.10	0.11	0.11	0.11	0.11
Gas prices for medium-sized industrial users***	€ / kWh	n.a.	0.04	0.03	0.03	0.03	0.03
Public R&D for energy	% GDP	n.a.	0.01	0.01	0.01	0.01	0.01
Public R&D for the environment	% GDP	n.a.	0.01	0.02	0.02	0.01	0.02
Recycling rate of municipal waste	ratio	87.6%	93.3%	95.8%	97.4%	96.8%	97.3%
Share of GHG emissions covered by ETS*	%	n.a.	40.8	37.5	38.4	38.4	37.0
Transport energy intensity	kgoe / €	0.60	0.64	0.66	0.63	0.60	0.56
Transport carbon intensity	kg / €	1.58	1.57	1.62	1.58	1.51	1.40
<b>Security of energy supply</b>							
Energy import dependency	%	79.1	81.1	75.9	78.2	73.9	74.0
Diversification of oil import sources	HHI	0.17	0.15	0.15	0.16	0.18	0.14
Diversification of energy mix	HHI	n.a.	0.29	0.30	0.29	0.26	0.26
Renewable energy share of energy mix	%	2.0	3.1	3.8	4.2	4.8	5.9

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 vs. total HICP inflation (% 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 GVA 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 GVA 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, calculated as sum of 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, unless indicated otherwise