# Quarterly Newsletter of the Federal Planning Bureau

Short Term Update (STU) is the quarterly newsletter of the Belgian Federal Planning Bureau. It contains the main conclusions from the publications of the FPB, as well as information on new publications, together with an analysis of the most recent economic indicators.

## HEADLINES BELGIAN ECONOMY

The new Economic outlook for Belgium for the period 2011-2016 is based on a context that is characterised by a stronger-than-expected recovery of the world economy, spurred on in particular by the Asian emerging economies and the US economy. Three main risks could undermine this international scenario: the budgetary position of several countries and the financial risks that this may entail; the volatility of commodity prices; and the overheating of several emerging economies.

Belgian GDP growth should amount to 2.2% in 2011 and in 2012, affirming its outperformance compared to the euro area since the start of the crisis. This growth rate should persist in the medium term. In 2011 and 2012, domestic demand growth should accelerate, backed by private consumption and business investment. Public investment should be highly dynamic in the run-up to the local elections of 2012. After an impressive increase in 2010, exports are expected to increase at a slower pace in 2011 and 2012 due to the deceleration in world trade growth. From 2013 onwards, growth in domestic demand and exports should remain close to historical average rates.

Belgian inflation should accelerate considerably in 2011 (3.5%), mainly due to a steep increase in raw material prices. Without new shocks on commodity prices, inflation should stabilise around 2% in the medium term.

Belgian employment coped remarkably well with the crisis. The rise in employment in the enterprise sector in 2010 (+27 000 persons) had already compensated for the decline in 2009. This performance seems to be related mainly to the so-called temporary unemployment system and the further increase in the number of people working in the government-subsidised voucher programme for domestic-type services. From 2011 onwards, employment in the enterprise sector should increase by roughly 46 000 persons per year. The number of unemployed should decline by 8 000 units in 2011 and by 3 000 units in 2012, followed by a strengthening in the annual decline in unemployment of up to 16 000 persons in 2016. The unemployment rate (broad administrative definition) should fall from 12.6% of the labour force in 2010 to 11% at the end of the projection period.

The general government deficit amounted to 4.1% of GDP in 2010 and should shrink to 3.8% of GDP in 2011, taking into account the budget information up to mid-April. Under a constant policy assumption, the public deficit should increase significantly in 2012 (4.4% of GDP) and decline gradually from 2013 onwards to reach 3.6% of GDP in 2016. The deficit reduction path, which aims to achieve a balanced budget in 2015, requires structural consolidation measures amounting to 17 billion euro.

STU 2-11 was finalised on 1 June 2011.

The Federal Planning Bureau (FPB) is a public agency under the authority of the Prime Minister and the Minister of Economy and Reform. The FPB has a legal status that gives it an autonomy and intellectual independence within the Belgian Federal public sector.

FPB activities are primarily focused on macroeconomic forecasting, analysing and assessing policies in the economic, social and environmental fields.

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# What has been the damage of the financial crisis to Belgian economic activity?

A consensus quickly emerged among national and international organisations, based on past experiences, that the financial crisis that erupted in 2008 would have a long-lasting impact on the level of output. Those same institutions acknowledged that the expected magnitude of the adverse effects remained a major uncertainty as the financial crisis could affect output through a variety of channels. In the literature, a methodology often used to assess the economic underperformance ("output loss") resulting from a financial crisis is to compare the medium-term level of output to the level it would have reached if it had followed the pre-crisis trend.

#### An evaluation of the impact on GDP

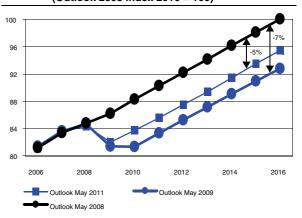
Without the necessary hindsight, a way to evaluate the medium-term impact of the latest financial crisis on Belgian output is to compare the level of economic activity as projected by the Federal Planning Bureau (FPB) before the outbreak of the crisis with the results of similar exercises after the crisis hit. As a benchmark we are using the May 2008 release of the FPB's Economic Outlook. Firstly, we will compare it with the results of the May 2009 edition, which represents an initial attempt to quantify the short- and medium-term impact of the crisis on Belgian economic activity. We will consequently examine the revisions entailed by the latest data, extended with the May 2011 Outlook.

The upper line of Graph 1 represents the trajectory of real GDP (scaled to 100 in 2016) as projected in May 2008 and the lower line the evolution of GDP according to the May 2009 release. The distance between the two lines measures the initial evaluation of output loss attributable to the financial crisis, which is estimated at 7%. The intermediate line corresponds to national accounts data up to 2010, extended with the projection taken from the May 2011 Economic Outlook. It reveals that the recession in Belgium was less steep than initially feared and that the recovery in 2010 was faster and stronger than expected. It is fair to say that the unprecedented monetary and fiscal policy response at the global level as well as the remarkable resilience of emerging and developing countries played an important role in cushioning the shock caused by the turmoil on the financial markets. The performance of Belgian economic growth in 2010 was also boosted by the unexpectedly strong rebound in German exports.

All these factors explain why the estimate of output loss attributable to the financial crisis is now projected to be

less than 5%. This downward revision is in line with the findings of a comprehensive study produced by the IMF based on a large sample of past banking crises. According to this study, the first-year loss is a good predictor of the medium-term impact, and macroeconomic stimulus in the short run and a favourable external environment are generally associated with smaller medium-term output losses. This new estimation is also very close to that computed by the CPB for the Netherlands using a comparable methodology.

Graph 1 - Revision to projections of real GDP (Outlook 2008 index 2016 = 100)



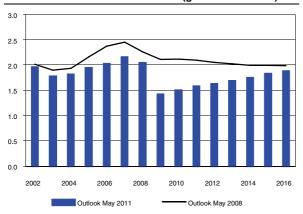
# An assessment based on potential GDP

The approach used above has some shortcomings. In particular, estimating the trajectory of GDP had there been no crisis may be tricky as a financial crisis is usually preceded by a boom, which may give a misleading picture of the underlying growth trend. To overcome this problem, some authors in the literature suggest excluding a number of years preceding the onset of the crisis when computing the pre-crisis trend. Transposed to our application - using a projection made before the outbreak of the crisis to define the pre-crisis trend – we propose an assessment based upon the concept of potential GDP, which allows the starting point to be corrected.

Since potential output is not directly observable, it may be computed through a variety of methods. The FPB uses the methodology developed by the European Commission but applies it to its own historical data base, extended with its medium-term projection. This approach ensures full compatibility between the potential GDP estimates and the medium-term macro-economic scenario produced by the HERMES model. Graph 2 reveals large downward revisions to potential GDP growth between the 2008 and 2011 releases of the Economic Out-

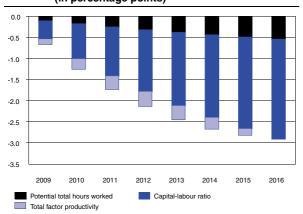
look. Potential growth was indeed reduced significantly for the year 2009, but also for the years prior to the crisis. These revisions reflect the view that the economic growth recorded during the years preceding the burst of the financial bubble turned out *ex post* to be unsustainable.

Graph 2 - Potential GDP growth: comparison between the 2008 and 2011 estimates (growth rates in %)



In cumulated terms, the level of potential output in 2008 appears at present to have been overestimated by nearly 2%. If we correct this starting point, we now obtain an estimated loss of potential output limited to roughly 3%. This potential output loss can be broken down into its labour and productivity components. The latter can be further split into the contribution of the capital-labour ratio (capital deepening) and of total factor productivity. As shown in the graph below, almost 2.5 %-points of the shortfall in output is attributable to a permanent reduction in the capital-labour ratio. Total factor productivity should be only temporary affected by the crisis and by 2016 should consequently find back the level projected for it before the crisis, while potential labour (expressed in hours worked) is assumed to contribute a little more than 0.5 %-points.

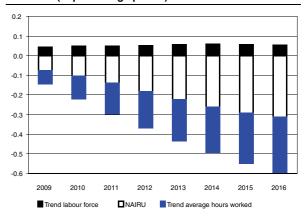
Graph 3 - Decomposition of potential output loss (in percentage points)



This scenario is consistent with past findings that a financial crisis depresses investment and slows capital accumulation over a protracted period as firms face tougher financing conditions in the form of tighter lending standards and higher effective costs of borrowing. According to the OECD, the latest financial crisis is expected to have caused an increase in the cost of capital equivalent to a rise in interest rates of 150 basis points, reducing thereby potential output in the OECD countries by about 2 %-points. The fact that total factor productivity should fully recover in the medium run is not in contradiction with theoretical considerations that state that the global impact of a financial crisis on total factor productivity is ambiguous. On the one hand, total factor productivity could be permanently affected by a reduction in innovative activity due to lower R&D expenditure. On the other hand, this result could be counterbalanced by a "cleaning-up" effect, as the least productive firms are forced out of the market during downturns and by a shift of resources to more productive uses.

The contribution of potential total hours worked can also be broken down. Previous historical experience suggests that sharp increases in unemployment following recessions are long-lasting and may lead to a rise in the structural unemployment rate as the long-term unemployed become less attractive to employers and as they reduce their job search intensity. This kind of severe increase in unemployment was also expected for Belgium but has not materialised up to now. This explains why the structural unemployment rate contributes merely 0.3 %-points to the total potential output loss in 2016. Trend average hours worked have also been slightly reduced compared to the pre-crisis projected level and contribute an additional 0.3 %-points.

Graph 4 - Decomposition of loss in potential total hours worked (in percentage points)



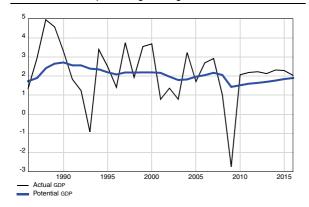
#### Economic forecasts 2011-2016

The new Economic outlook for Belgium for the period 2011-2016 is linked to an international context that is characterised by a stronger-than-expected recovery of the world economy, spurred on in particular by the Asian emerging economies and the US economy. This global recovery should consolidate after 2011 and, in the medium term, economic growth in developed economies should be close to its pre-crisis average.

Owing to the upturn in the world economy since mid-2009, global GDP increased by 5% in 2010. Backed by emerging countries' buoyant economies, growth in the world economy should amount to 4.5% in both 2011 and 2012. The steady increase in oil prices and the poor performance of some Member States should curb the recovery in the euro area, resulting in GDP growth of 1.7% for both years. The macroeconomic scenario for the period 2013-2016 assumes that growth in the developed economies will be close to its pre-crisis average. In the euro area, average GDP growth should amount to 2.2% over the period 2013-2016.

Three main risks could undermine this international scenario: the budgetary position of several countries and the financial risks that this may entail; the volatility of oil and other raw material prices; and the overheating of several emerging economies.

Graph 1 - Actual and potential GDP growth annual percentage changes

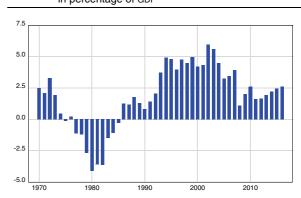


Belgian economic growth should amount to 2.2% in 2011 and in 2012, affirming its outperformance compared to the euro area since the start of the crisis. This growth rate should persist in the medium term.

In 2011, economic growth should be backed by an acceleration of private consumption growth (1.6%) and by positive investment growth. Public investment in particular is expected to be highly dynamic (10.7%) in the run-up to the 2012 local elections. In 2012, growth in both private consumption (1.8%) and private invest-

ment (2.5% for households and 3.3% for businesses) should continue to pick up. As from 2013, growth in domestic and foreign demand should remain close to its historical rates. After a decrease in 2011 (to 1.6% of GDP) due to a rise in raw material prices, the current account surplus should increase steadily to 2.6% of GDP in 2016 as a result of a more favourable international context.

Graph 2 - Current external balance in percentage of GDP



Belgian inflation, as measured by the national CPI, should accelerate considerably in 2011 (3.5%). As a result of a steep rise in raw material prices, especially for energy and agricultural products, growth in prices and costs in Belgian should exceed that of our main trading partners, notwithstanding the fact that wage increases are subject to the 1996 "Employment and Competitiveness Law".

Without a new commodity price shock, medium-term inflation should stabilise around 2%, the maximum rate considered by the ECB as compatible with price stability.

In terms of employment, Belgium coped remarkably well with the crisis. In 2010, employment growth in businesses turned positive again (+27 000 persons), thus compensating for the 2009 decline. Although it is still too early to provide a comprehensive explanation for the surprisingly strong employment growth in 2010, the following two factors appear to have contributed: the temporary unemployment system for blue-collar workers – which was intensified after the start of the crisis and later partially extended to white-collar workers – and the further increase in the number of people working in the government-subsidised voucher programme for domestic-type services.

Employment in the enterprise sector should increases by 44 000 units in 2011 and is expected to expand by 46 000 units per year on average over the period 2012-2016.

The number of unemployed should decline by 8 000 units in 2011 and by 3 000 units in 2012. Subsequently the annual decline in unemployment should intensify (up to 16 000 persons in 2016). Between 2013 and 2016, broad administrative unemployment should decrease by 47 000 units, reaching a level of 596 000 persons in 2016. The unemployment rate should fall from 12.6% of the labour force in 2010 to 11% at the end of the projection period. As measured by the Eurostat definition, the unemployment rate ought to fall from 8.3% in 2010 to 7.3% in 2016.

The Kyoto target for cutting greenhouse gas (GHG) emissions will be amply met. During the period 2008-2012, annual GHG emissions should amount to 129 million tons of  $\rm CO_2$  equivalents on average – approximately 6 million tons below the target.

By 2020, Belgium will also have to meet the targets set in the EU Climate and Energy Package. In 2016, GHG emissions from sectors not covered by the EU Emissions Trading System should come close to the 15% GHG reduction target set for Belgium (as compared to 2005). As for the share of renewable energy in final gross energy consumption, a 13% target was set for 2020, whereas this share should amount to only 7.5% at constant policy in 2016. Consequently, considerable efforts will be needed to meet the European requirement.

The general government deficit amounted to 4.1% of GDP in 2010, but should shrink substantially in 2011. Taking into account the budget information available at the closing date of these forecasts, it should fall to 3.8% of GDP. All in all, the Stability Programme's objective for 2011 is expected to be met, possibly through some additional measures.

At constant policy, the public deficit should increase significantly in 2012 (4.4% of GDP). From 2013 onwards, the deficit should gradually shrink and reach 3.6% in 2016. Hence, even without new measures, the general government debt ratio should barely increase (from 97.1% of GDP this year to 97.5% in 2016) and the threshold of 100% should not be exceeded. Nevertheless, the deficit reduction path, which aims to achieve a balanced budget in 2015, requires structural consolidation measures amounting to 17 billion euro.

The gradual improvement of the fiscal position from 2013 onwards mainly results from a decline in operational costs (based on an extension of the restrictive expenditure policy of the last few years) and the drop in local authorities' investment after the 2012 elections. The increase in compulsory taxes on labour resulting from a rise in employment and wages should also contribute to this improvement. On the other hand, the

share of social expenditure in GDP should grow and indirect taxes should decline.

During the period 2013-2016, primary expenditure should decrease by 0.7% of GDP, while government revenue should grow by 0.3% of GDP. Broken down by level of government, the overall balance remains unfavourable to the federal government, its deficit deteriorating from 3.3% of GDP to 3.5% in 2012. The social security account should be balanced in 2011 thanks to a special transfer granted by the federal government, but should again register a deficit (-0.5%) as from 2012 that is expected to roughly stabilise afterwards.

The fiscal position of communities and regions should improve markedly in 2011, notably due to a sharp rise in the funds allocated in accordance with the Special Financing Law. They should reach a balanced budget from 2012 onwards and record surpluses afterwards (up to 0.5% of GDP in 2016), assuming a constant policy that partially reflects the restrictive policy implemented since 2009. Local authorities should register a deficit for the whole projection period. As the investment cycle is influenced by local elections, the deficit should be higher in 2012 (-0.5% of GDP) and stabilise afterwards at -0.3% of GDP. All in all, Entity II (regions, communities, and local authorities) should almost reach a balanced budget in 2014 and record a surplus of 0.2% GDP in 2016.

Key figures for the medium-term economic outlook

Period averages, changes in volume unless otherwise stated

	1999- 2004	2005- 2010	2011- 2016
Potential export markets	6.2	4.1	6.7
Private consumption	1.5	1.2	1.8
Public consumption	2.3	1.3	1.7
Gross fixed capital formation	2.0	1.8	2.6
Stock building (contribution to GDP growth)	-0.1	0.0	0.0
Final domestic demand	1.6	1.4	1.9
Exports	4.6	2.4	4.7
Imports	3.9	2.5	4.5
Net exports (contribution to GDP growth)	0.7	0.0	0.3
GDP	2.2	1.3	2.2
Real gross national income	1.7	1.0	1.8
Private consumption deflator	1.8	2.3	2.2
Households' real disposable income	1.1	1.5	1.7
Domestic employment (annual changes in '000)	37.7	44.7	46.9
Unemployment, FPB definition <sup>a</sup>			
- thousands	710.1	653.7	596.0
- % of labour force	14.3	12.6	11.0
Current account balance (% of GDP) <sup>a</sup>	4.5	2.6	2.6
General government financing capacity, EDP def, (% of GDP) <sup>a</sup>	-0.3	-4.1	-3.6

a. End of period

"Perspectives économiques 2011-2016 / Economische vooruitzichten 2011-2016", FPB, May 2011

# **Summary of Economic Forecasts**

## **Economic forecasts for Belgium by the Federal Planning Bureau**

Changes in volume (unless otherwise specified) (cut-off date of forecasts: 15 April 2011)

	2009	2010	2011	2012
Private consumption	-0.3	1.4	1.6	1.8
Public consumption	0.5	1.1	1.2	1.7
Gross fixed capital formation	-5.4	-1.8	3.2	3.5
Final national demand	-2.2	0.2	1.7	2.1
Exports of goods and services	-11.6	10.1	4.8	4.5
Imports of goods and services	-11.1	7.9	4.3	4.4
Net-exports (contribution to growth)	-0.8	2.0	0.6	0.3
Gross domestic product	-2.8	2.1	2.2	2.2
p.m. Gross domestic product - in current prices (bn euro)	339.16	352.07	367.14	382.81
National consumer price index	-0.1	2.2	3.5	2.0
Consumer prices: health index [2]	0.6	1.7	3.0	2.0
Real disposable income households	1.6	-0.1	0.8	2.0
Household savings ratio (as % of disposable income)	18.3	17.0	16.3	16.4
Domestic employment (change in '000, yearly average)	-15.9	28.6	43.0	45.0
Unemployment (Eurostat standardised rate, yearly average) [1]	7.9	8.3	8.1	8.0
Current account balance (BoP definition, as % of GDP)	0.4	1.4	0.3	0.3
Short term interbank interest rate (3 m.)	1.2	0.8	1.6	2.5
Long term interest rate (10 y.)	3.9	3.4	4.4	4.6

#### Economic forecasts for Belgium by different institutions

_	GDI	P-growth	lr	nflation	Governme	ent balance	Date of update	
	2011	2012	2011	2012	2011	2012		
Federal Planning Bureau [1]	2.2	2.2	3.5	2.0	-3.8	-4.4	05/11	
INR/ICN [1]	2.0		2.7				01/11	
National Bank of Belgium [2]	1.8		2.1		-4.7		12/10	
European Commission [2]	2.4	2.2	3.6	2.2	-3.7	-4.2	05/11	
OECD [2]	2.4	2.0	3.6	2.4	-3.6	-2.8	05/11	
IMF [2]	1.7	1.9	2.9	2.3	-3.9	-4.0	04/11	
ING [1]	2.3	1.7	3.2	2.2	-3.6	-2.8	05/11	
Dexia [1]	2.3	1.6	3.2	2.2			05/11	
KBC Bank [1]	2.4	2.2	3.7	2.3	-3.6	-3.0	05/11	
Deutsche Bank	2.5	1.9	3.2	2.1	-3.7	-3.5	05/11	
IRES [1]	2.4		3.2	•	-3.6		04/11	
Consensus Belgian Prime News [2]	2.0	1.9	3.0	2.2	-4.4	-3.8	03/11	
Consensus Economics [2]	1.9	1.8	2.5	2.1			05/11	
Consensus The Economist [2]	1.8	1.7	2.7	2.1			05/11	
Consensus Wirtschaftsinstitute [2]	2.2	1.5	2.8	1.9	-4.5	-4.1	04/11	
Averages								
All institutions	2.2	1.9	3.1	2.2	-3.9	-3.6		
International public institutions	2.2	2.0	3.4	2.3	-3.7	-3.7		
Credit institutions	2.2	1.8	3.2	2.2	-3.8	-3.3		

<sup>[1]</sup> Inflation forecasts based on the evolution of the national index of consumer prices

<sup>[1]</sup> Other unemployment definitions can be found on page 14 [2] Inflation forecasts were recently revised. See page 15 for more information.

<sup>[2]</sup> Inflation forecasts based on the evolution of the harmonised index of consumer prices

# General economic activity

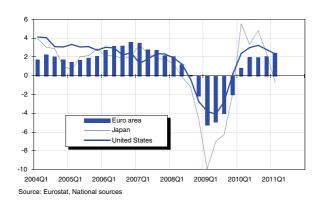
Table 1 - GDP growth rates, in % [1]

				YoY g	rowth rates,	in %		QoQ growth rates, in %						
	2009	2010	2010Q1	2010Q2	2010Q3	2010Q4	2011Q1	2010Q1	2010Q2	2010Q3	2010Q4	2011Q1		
Germany	-4.7	3.5	2.3	3.9	3.9	3.8	4.8	0.5	2.1	0.8	0.4	1.5		
France	-2.6	1.4	1.0	1.5	1.7	1.4	2.2	0.2	0.5	0.4	0.3	1.0		
Netherlands	-3.9	1.8	0.3	2.7	1.9	2.2	2.7	0.3	1.1	0.1	0.7	0.9		
Belgium	-2.7	2.1	1.7	2.7	2.0	2.1	3.0	0.1	1.1	0.4	0.5	1.0		
Euro area	-4.1	1.7	0.8	2.0	1.9	2.0	2.4	0.4	1.0	0.3	0.3	0.8		
United States	-2.6	2.9	2.4	3.0	3.2	2.8	2.3	0.9	0.4	0.6	0.8	0.5		
Japan	-6.3	4.0	5.5	3.3	4.8	2.4	-0.7	2.2	0.1	0.9	-0.8	-0.9		

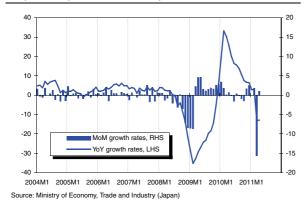
[1] Adjusted for seasonal and calendar effects

Source: INR/ICN, National sources, Eurostat

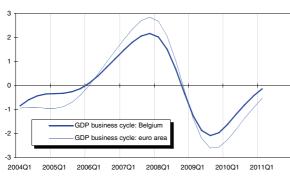
Graph 1 - GDP-growth (t/t-4), in %



Graph 2 - Japanese industrial production



Graph 3 - GDP business cycle



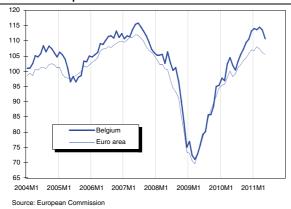
Source: INR/ICN, Eurostat, FPB

US economic growth slowed to 0.5% in 2011Q1 after an expansion of 0.8% in the previous quarter. Rising gasoline and food prices almost neutralised payroll tax cuts (2011 stimulus measure), leading to a slowdown in private consumption growth. Heavy winter weather during 2011Q1 also weighed down on private consumption and, furthermore, resulted in delayed construction investment, which augurs for some rebound in GDP growth during 2011Q2. Finally, the large decrease in military spending constituted a drag on economic growth. It is widely expected that economic growth will pick up again in 2011Q2 and strengthen further in the second half of the year. Labour market conditions improved markedly over the last three months, but employment growth has remained too slow so far to result in a significant decline in the unemployment rate (down 1 %-point (to 9%) from its peak reached at the end of 2009). The aftermath of the financial crisis, with reduced access to credit, household deleveraging, and rising commodity prices, augurs for an extended period of subpar economic growth (i.e. below its historical average).

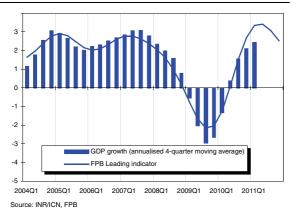
The Japanese economy shrank by 0.9% in 2011Q1, following a 0.8% drop in 2010Q4. Graph 2 shows the extent of the havoc on the economy from the March 11 earthquake and tsunami. The full impact of the natural disaster and the nuclear crisis will become clearer when GDP figures for 2011Q2 are released. In the second half of the year, the disappearance of power cuts, the restoration of supply chains, and the reconstruction effort ought to allow for a strongly positive growth rate.

Euro area GDP growth accelerated to 0.8% in 2011Q1 (from 0.3% in the previous quarter), powered by Germany (1.5%) and France (1%). These big countries' economic strength spilled over into the euro area's mid-sized core countries: Austria, Belgium, and the Netherlands all registered growth rates of about 1%.

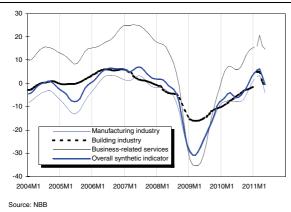
Graph 4 - Economic sentiment indicator: international comparison



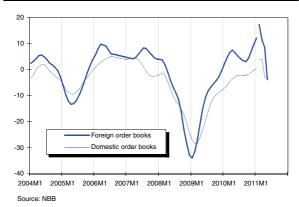
Graph 5 - GDP growth and leading indicator



Graph 6 - Belgian business cycle indicator



Graph 7 - Manufacturing industry: order books



The euro area average was once again pulled down by Italy (0.1%) and peripheral countries such as Portugal (-0.7%) and Spain (0.3%). Greece surprisingly posted a positive growth rate, but this is likely to prove transitory given the ongoing austerity measures. While Germany and Belgium have already recovered all terrain lost during the recession and France and the Netherlands are close to doing so, the southern countries (hit by austerity measures, a collapse of the housing market, and/or ingrained uncompetitiveness) are still very far from achieving this feat. Worst off is Ireland, which is almost 15 %-points below its peak GDP level.

Belgian GDP growth (1%) was once again higher than the euro area average (0.8%) in 2011Q1 and the Belgian business cycle continues to lead that of the euro area (Graph 3). This is corroborated in the European Commission's latest forecast showing a GDP forecast of 2.4% for Belgium and 1.6% for the euro area for the whole year 2011.

A comparison of the economic sentiment indicators (ESI) for Belgium and the euro area (Graph 4) confirms that the Belgian economy is performing better than that of the euro area, the latter being hampered by problems related to the sovereign debt crisis in southern European countries. The differential between both ESI has widened significantly since mid-2010 and has been influenced by the development of consumer as well as business confidence.

After a temporary weakening around mid-2010, Belgian industrial confidence (Graph 6) improved again and in the course of 2011Q1 reached levels close to those seen in 2007. This improvement was supported by all sectors covered in the survey, although to a smaller extent by the building sector, for which activity was hampered by harsh weather conditions during 2010Q4. Over the last two to three months, however, confidence has declined in all sectors. Initially, the decline was mainly related to a worsening of demand prospects, but the assessment of current activity developments was also affected recently. A comparison of foreign and domestic order books (Graph 7) shows that increased pessimism is mainly due to a decline in export orders and less to a weakening of domestic demand. Exports are expected to be hampered by various factors. First, the past increase in oil prices is starting to weigh on economic activity. Second, the (expected) tightening of monetary and budgetary policy should negatively affect demand worldwide. Finally the appreciation of the euro against most currencies makes exports coming from the euro area relatively more expensive outside the euro area. These factors are also behind the weakening of the FPB leading indicator for Belgian GDP in the second half of this year (Graph 5).

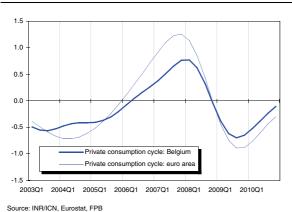
# **Private consumption**

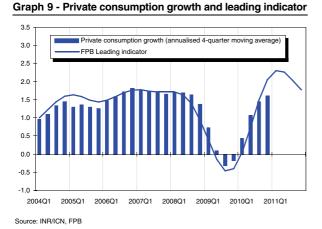
Table 2 - Private consumption indicators

	2009	2010	2010Q2	2010Q3	2010Q4	2011Q1	2010M12	2011M1	2011M2	2011M3	2011M4	2011M5
New car registrations [1]	-11.1	14.9	22.8	11.9	11.9	5.3	10.6	7.8	11.7	-1.2	-7.0	
Consumer confidence indicator [2]	-16.9	-7.7	-10.0	-5.0	-1.3	-1.3	-2.0	-3.0	1.0	-2.0	-1.0	1.0

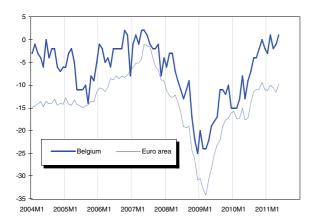
[1] Change (%) compared to same period previous year; [2] Qualitative data Source: NBB. Febiac

Graph 8 - Private consumption cycle





Graph 10 - Consumer confidence: international comparison



Source: NBB, European Commission

After a sharp drop in the private consumption cycles of Belgium and the euro area in 2008 and most of 2009, they recovered in the course of 2010. By 2010Q4, both cycles were quite close to zero, implying that private consumption is again close to its trend level. The downturn in private consumption was more pronounced in the euro area than in Belgium: while it declined by 1.8% between 2008Q1 and 2009Q3 in the euro area, it actually rose somewhat in Belgium (0.4%).

Last year, Belgian private consumption registered an annual growth rate of 1.6%, while the increase in the euro area remained limited to 0.8%. After an increase of more than 1 %-point in 2009, the savings rate (in % of disposable income) in both Belgium and the euro area decreased by roughly the same extent in 2010. This implies that the main reason behind the difference in performance of private consumption in 2010 is related to the disposable income growth differential.

Belgian consumer confidence has been on an increasing path since 2009Q2 and reached its highest level since 2007 in February 2011. While the improvement in confidence was initially (up to the beginning of 2010) related to brighter economic prospects, increased optimism with respect to labour market conditions pushed confidence up further afterwards. Consumer confidence weakened somewhat in March and April, but it recovered again in May. Consumer confidence initially recovered faster from the recession in the euro area than in Belgium, but from mid-2010 onwards, it improved substantially more in Belgium than in the euro area. This is exclusively related to the better performance of the labour market in Belgium than in the euro area on average, the latter being hampered by high unemployment rates in the peripheral countries.

The FPB leading indicator points to slightly higher growth in Belgian private consumption in 2011 than in 2010. Apart from consumer confidence developments, this is also due to car sales, which registered positive yoy growth rates (2.1% on average from January to April 2011) despite the boost from the biennial motor show held in Brussels in January 2010.

#### **Business investment**

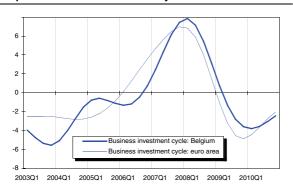
Table 3 - Business investment indicators

	2009	2010	2011	2010Q2	2010Q3	2010Q4	2011Q1	2011M1	2011M2	2011M3	2011M4	2011M5
Business survey, capital goods [2]												
Synthetic indicator	-25.5	-5.6		-7.1	-3.3	-0.1	5.6	3.7	5.5	7.5	5.4	1.8
Order book appraisal	-46.0	-34.6		-40.7	-27.3	-23.0	-10.3	-14.0	-13.0	-4.0	0.0	0.0
Demand forecasts	-28.0	2.7		5.0	4.7	6.3	15.3	16.0	13.0	17.0	8.0	-1.0
Investment survey [1]	-20.4	6.4	17.2									
Capacity utilisation rate (s.a.) (%)	72.5	79.0		78.8	79.9	80.0	81.2					

[1] Change (%) compared to same period previous year; [2] Qualitative data

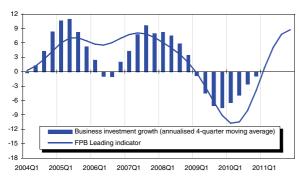
Source: NBB

Graph 11 - Business investment cycle



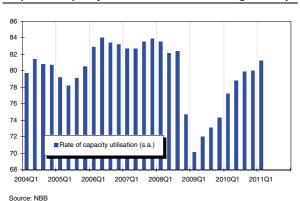
Source: INR/ICN, Eurostat, FPB

Graph 12 - Business investment growth and leading indicator



Source: INR/ICN, FPB

Graph 13 - Capacity utilisation in manufacturing industry



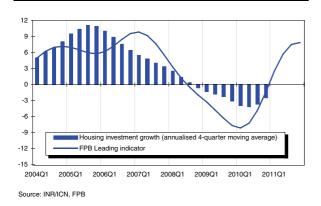
While the GDP cycles in Belgium and the euro area (Graph 3) recovered from 2009Q4 onwards, investment cycles (Graph 11) only started to increase in the course of 2010. The fact that investment cycles lag the business cycle by a few quarters is related to the low levels of capacity utilisation reached at the trough of the current business cycle. Although business investment cycles in Belgium and the euro area have been well-correlated over the past three years, investment growth has been consistently lower in the euro area than in Belgium. This implies that trend growth of investment is currently lower in the euro area than in Belgium. Investment cycles were still around 2% below their trend level in 2010Q4, indicating there is significant upward potential in the short run.

The volume of Belgian business investment declined by more than 11% from 2008Q2 to 2010Q1. By 2010Q4, it increased by 2.5% as compared to the low in the beginning of the year, but this was not sufficient to compensate for the significant decline in 2009, leading to a negative growth rate of -0.9% for 2010 as a whole. The investment rate, calculated as the share of business investment in GDP at current prices, fell from 14.4% in 2008 (the highest level since 1990) to 12.9% in 2010. As business investment started to recover last year, the investment rate is expected to go up again from this year onwards.

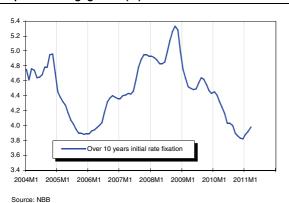
As can be seen from the FPB leading indicator, business investment growth should be in positive territory again this year. The capacity utilisation rate continued to increase in 2011Q1 and is now clearly above its long-term average, indicating the need to extend the capital stock. Indicators for the capital goods sector coming from the NBB business survey all improved up to March and weakened somewhat afterwards in line with overall business sentiment (see Graph 6). The main driver behind this recent evolution seems to be the slowdown in foreign orders related to the weakening in world trade growth.

# **Housing investment**

Graph 14 - Housing investment growth and leading indicator



Graph 15 - Mortgage rate (%)



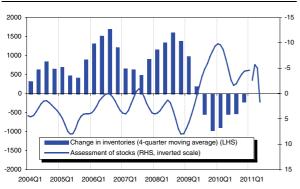
Belgian residential investment was scaled back in 2008 and 2009 (-0.8% and -3.0% respectively). A modest recovery started in the course of last year (qoq growth of 0.4% on average from 2010Q2 to 2010Q4), but this pick-up was not sufficient to compensate for the strong decline in the course of 2009. As a result, housing investment was 2.5% lower in 2010 as a whole than in 2009. Despite this decline, it still represented a considerable 5.6% of GDP in nominal terms in 2010, compared to a trough of 3.2% of GDP in 1983 and a peak of 6.2% in 2007-2008.

The upturn in housing investment is likely to persist in the short run, supported by the temporary VAT reduction for new buildings and renovation projects for which the building application was filed before April 2010. Moreover the mortgage rate declined continuously (from 5.2% in 2008Q4 to 3.8% in 2010Q4).

The past downturn in housing investment is also seen in the FPB leading indicator, which fell between the beginning of 2007 and the beginning of 2010. Most of the indicator's components lead the development of the housing investment cycle by about four quarters. Among them, the indicators from the architects' survey bottomed out in the first half of 2009, while the total value of mortgage applications reached a trough in the second half of 2009.

## Stock building

Graph 16 - Stock building indicators



Source: INR/ICN, NBB

As changes in inventories can take on positive as well as negative values, the series that can be calculated using chain-linked volume indices does not provide any useful information and is no longer published in the quarterly national accounts. Therefore, the change in inventories is only shown at current prices (Figure 16). However, their contributions to economic growth can be derived as residuals in the expenditure approach of the national accounts.

Stock building contributed negatively to economic growth in 2009 (-1 %-point) and 2010 (-0.5 %-point). Inventories at current prices have fallen continuously since mid-2009, which could be due to a stronger than expected economic upturn in which stocks were used to satisfy demand.

#### Foreign trade

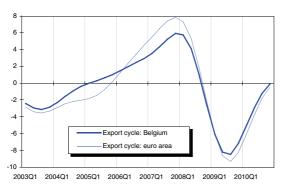
Table 4 - Belgium - Trade statistics (goods, intra/extrastat, national concept)

	2008	2009	2010Q1	2010Q2	2010Q3	2010Q4	2010M9	2010M10	2010M11	2010M12	2011M1	2011M2
Exports - value [1]	2.8	-20.6	16.0	25.3	20.8	16.5	19.5	20.2	17.8	11.5	23.5	24.6
Imports - value [1]	8.3	-22.1	11.4	23.3	17.2	16.0	14.7	15.0	21.6	11.8	23.7	24.2
Exports - volume [1]	-2.3	-14.7	11.8	14.3	12.4	5.1	11.2	12.8	5.3	-2.6	13.1	10.9
Imports - volume [1]	-0.6	-13.3	5.6	9.8	6.9	0.9	4.3	3.7	4.8	-5.7	8.9	10.2
Exports - price [1]	5.1	-6.8	3.8	9.6	7.5	10.9	7.4	6.6	11.9	14.5	9.2	12.3
Imports - price [1]	9.0	-10.0	5.4	12.3	9.6	15.1	10.0	10.9	16.0	18.5	13.6	12.7

[1] Change (%) compared to same period previous year

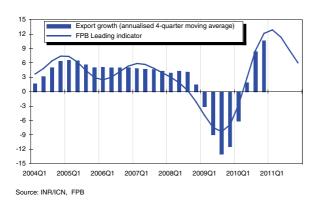
Source: INR/ICN

Graph 17 - Export cycle

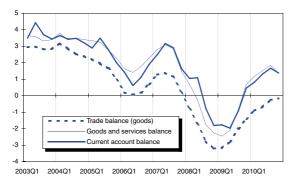


Source: INR/ICN, Eurostat, FPB

Graph 18 - Export growth and leading indicator



Graph 19 - Belgian foreign balances (4 quarters cumul, % of GDP)



Source: INR/ICN, NBB, FPB

The rebound of the Belgian and European export cycles started in 2009Q4 (Graph 17). The Belgian export cycle reached its trend level again, while the European export cycle is close to that point. German exports continue to thrive and have now recovered all the terrain lost during the Great Recession. The worst export performances since the start of the crisis have been registered in Italy, Greece (both suffering from a structural lack of competitiveness), and Finland. The latter's exports were hampered by the declining lure of Nokia (10% of total exports) and by the world's over-capacity in sea vessels (a major export sector in Finland).

Belgian exports surged rapidly between mid-2009 and mid-2010, but they lost momentum in the second half of 2010 owing to the decline in world trade growth. Export growth is expected to strengthen again in the first quarter of 2011 as GDP growth among our main trading partners (Germany, France, and the Netherlands, together representing 48% of Belgian export markets) proved to be very strong. World trade growth might slow down again during the second half of 2011 as emerging markets are tightening monetary policy to cool down their economies. Furthermore, the euro has appreciated considerably, further hampering exports. This scenario is confirmed by our leading indicator (Graph 18).

The rising prominence of emerging markets on the world scene is also reflected in the changing geographical orientation of Belgian exports. Over the past five years the export shares of the BRIC and OPEC countries and Eastern Europe rose significantly (by 1.6, 0.9 and 1.1 %-points respectively) to the detriment of the US and the EU-15 (-0.9 and -3.0 %-points). India and China have now entered Belgium's top-ten list of export destinations.

Following a huge deterioration in terms of trade in 2010, export price growth seems to have caught up with import price growth in February. This is likely to be a temporary phenomenon as oil prices have risen strongly since then.

#### Labour market

Table 5 - Labour market indicators

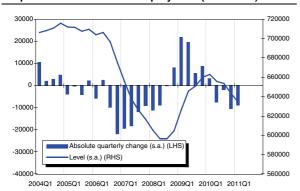
	2009	2010	2010Q2	2010Q3	2010Q4	2011Q1	2010M11	2010M12	2011M1	2011M2	2011M3	2011M4
Unemployment [1][2]	645.7	653.7	655.4	653.6	643.2	634.4	643.8	637.8	636.4	633.5	633.1	631.0
Unemployment rate [2][3]	12.5	12.6	12.6	12.5	12.4	12.2	12.4	12.3	12.2	12.2	12.2	12.1
Unemployment rate-Eurostat [3][4]	7.9	8.3	8.4	8.3	8.0	7.7	8.0	7.9	7.8	7.7	7.7	7.7

[1] Level in thousands, s.a.; [2] Broad administrative definition; [3] In % of labour force, s.a.

[4] Recent figures are based on administrative data and may be subject to revision

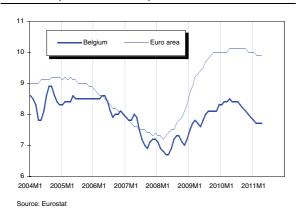
Source: RVA/ONEM, FPS Employment, Eurostat, FPB

Graph 20 - Evolution of unemployment (incl. older)

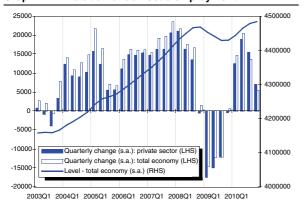


Source: RVA/ONEM

Graph 21 - Harmonised unemployment rates (% of labour force)



Graph 22 - Evolution of domestic employment



Source: INR/ICN

Private sector employment started to recover from the consequences of the financial crisis in 2010Q1 and had already returned to pre-crisis levels in 2010Q3. Both the limited extent of the initial drop in employment and the swift recovery are uncharacteristic given the size of the downward shock on activity. In part, this favourable outcome is the result of economic growth picking up faster and stronger than previously expected, with value added growing by 2% in 2010 after having dropped by 3.2% in 2009. But secondly, apparent labour productivity only grew by 1.2% last year, with both average hours worked per person (+0.2%) and hourly productivity (+1%) picking up much less than expected.

A first possible explanation is that the strength of the ongoing recovery is even now being underestimated in the current figures for activity growth. Second, although firms seem to have been very keen on rehiring the more flexible fringes of their workforce (interim workers and other people on temporary contracts), they may still be accepting a significant amount of labour hoarding for workers on longer-term contracts. Logically, this would eventually have to give way to stronger productivity growth as the recovery is confirmed. Third, the sudden loss of activity may have led - through capital destruction - to a larger permanent downward shock on labour productivity than previously expected.

The second argument seems to be backed by the fact that - according to the quarterly national accounts - private sector qoq job growth would have lost a lot of pace in the second half of last year (0.5% growth in 2010Q2, 0.4% in 2010Q3, and 0.2% in 2010Q4). However, social security records suggest a much weaker deceleration in job growth. Moreover, unemployment has come down rapidly since 2010Q2, with the (seasonally adjusted) administrative unemployment rate dropping from 12.6% in 2010Q2 to 12.2% in 2011Q1. Incidentally, this confirms that the Belgian labour market has fared significantly better than the euro area labour market on average during the entire post-financial crisis period, as witnessed clearly by the evolution in the harmonised unemployment rates (see Graph 21).

Table 6 - Inflation rates: change compared to the same period in the previous year, in %

			1									
	2009	2010	2010Q2	2010Q3	2010Q4	2011Q1	2010M12	2011M1	2011M2	2011M3	2011M4	2011M5
Consumer prices: all items	-0.05	2.19	2.18	2.60	2.99	3.37	3.10	3.22	3.39	3.52	3.41	3.35
Food prices	1.06	1.54	1.07	2.31	2.56	1.94	2.68	2.09	2.21	1.53	2.00	2.13
Non food prices	-2.72	3.17	3.47	3.74	4.40	4.97	4.76	4.50	5.10	5.29	5.00	4.96
Services	2.85	1.43	1.26	1.50	1.67	2.50	1.43	2.57	2.18	2.76	2.49	2.23
Rent	2.01	1.11	1.10	0.93	0.98	0.97	1.04	0.92	1.04	0.97	1.08	1.15
Health index	0.59	1.67	1.55	2.26	2.56	2.82	2.60	2.71	2.82	2.93	2.88	2.89
Brent oil price in USD (level)	61.5	79.5	78.4	76.8	86.5	104.9	91.5	96.5	103.7	114.6	123.7	115.1

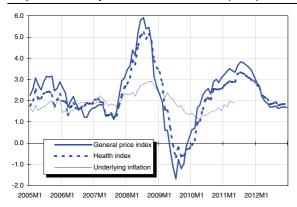
Source: FPS Economy, Datastream

Table 7 - Monthly inflation forecasts

	2011M1	2011M2	2011M3	2011M4	2011M5	2011M6	2011M7	2011M8	2011M9	2011M10	2011M11	2011M12
Consumer prices: all items	115.66	116.33	116.91	117.20	117.59	117.93	118.17	118.22	118.46	118.52	118.52	118.64
Consumer prices: health index	114.38	115.05	115.39	115.57	115.98	116.40	116.64	116.67	116.92	116.98	116.99	117.14
Moving average health index	113.81	114.21	114.67	115.10	115.50	115.84	116.15	116.42	116.66	116.80	116.89	117.01
	2012M1	2012M2	2012M3	2012M4	2012M5	2012M6	2012M7	2012M8	2012M9	2012M10	2012M11	2012M12
Consumer prices: all items	118.98	119.45	119.47	119.53	119.80	119.94	120.20	120.28	120.40	120.51	120.55	120.63
Consumer prices: health index	117.49	118.01	118.02	118.10	118.39	118.54	118.81	118.89	118.99	119.11	119.15	119.27
Moving average health index	117.15	117.41	117.67	117.91	118.13	118.26	118.46	118.66	118.81	118.95	119.04	119.13

Source: Observations (up to 11M5): FPS Economy; forecasts: FPB

Graph 23 - Monthly inflation evolution in % (t/t-12)



Source: FPS Economy, from 11M6 on: forecasts FPE

Graph 24 - Harmonised inflation rates in % (t/t-12)



Source: Eurostat

Yoy growth rates of oil prices expressed in euro reached a peak in February and March 2011 (over 40%), but afterwards declined somewhat to 33% in May. Inflation declined less than could have been expected as the May figure was influenced upwards by around 0.15 %-points by an increase in distribution tariffs on electricity. On the basis of future market quotations, oil prices are expected to decline slightly, while the euro should depreciate somewhat against the dollar, leading to a quasi-stabilisation of oil prices expressed in euro. Nonetheless, yoy growth rates in oil prices in euro should remain higher than 30% up to November 2011 and only become slightly negative from March 2012 onwards. Inflation should react with a lag of a few months to these developments due to the delayed reaction of gas and electricity prices to oil prices. Moreover, underlying inflation is currently on a rising path and is not expected to initiate a decline before 2012.

All in all, headline inflation should amount to 3.5% this year and 2% next year. The health index - which does not take price developments in car fuels, tobacco products and alcoholic beverages into account - should increase by 3% in 2011 and 2.1% in 2012. The current pivotal index (standing at 117.27) should be crossed in February 2012 by the four-month moving average of the health index. This should lead to an increase of 2% in social benefits in March 2012 and public wages will follow suit in April 2012.

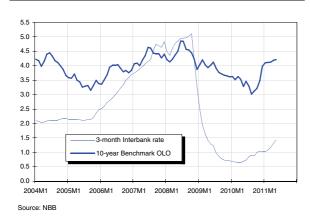
#### **Interest rates**

Table 8 - Interest rates

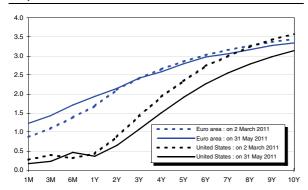
	2009	2010	2010Q2	2010Q3	2010Q4	2011Q1	2010M12	2011M1	2011M2	2011M3	2011M4	2011M5
Short-term money market rates (3 r		2010	201002	201000	2010Q4	201101	201010112	20111111	ZOTTIVIZ	20111110	20111114	20111113
,	1.23	0.81	0.69	0.87	1.02	1.09	1.02	1.02	1.09	1.18	1.32	1.43
Euro area (Euribor)	1.23	0.61	0.09	0.67	1.02	1.09	1.02	1.02	1.09	1.10	1.32	1.43
United States	0.56	0.31	0.42	0.34	0.28	0.28	0.30	0.29	0.28	0.28	0.23	0.21
Japan	0.52	0.29	0.29	0.33	0.27	0.32	0.37	0.36	0.33	0.25	0.23	0.24
Long-term government bond rates	(10 years)											
Belgium	3.89	3.43	3.43	3.14	3.56	4.11	3.98	4.10	4.12	4.12	4.19	4.22
Germany	3.26	2.77	2.82	2.45	2.60	3.17	2.90	3.04	3.22	3.24	3.35	3.08
Euro area	3.71	3.34	3.37	3.10	3.37	3.94	3.73	3.84	3.98	4.02	4.10	3.94
United States	3.24	3.20	3.47	2.77	2.85	3.45	3.29	3.37	3.57	3.41	3.43	3.15
Japan	1.34	1.17	1.27	1.04	1.04	1.24	1.18	1.20	1.28	1.24	1.26	1.14

Source: Datastream

Graph 25 - Interest rate levels in Belgium, %



Graph 26 - Yield curves for the euro area and the US



Source: Datastream, data based on interest rate swaps

In April, the ECB raised its policy rate by 25 basis points (to 1.25%) for the first time in 3 years. The ECB wants to move away from the emergency level of policy rates, prevailing since the break-out of the financial crisis, as it is no longer warranted, with GDP growth firming and inflation (headline and core) rising considerably. While the euro area on average needs monetary tightening (real interest rates are negative, even after this rise), it constitutes a danger for the peripheral countries, where the economy is still in the doldrums (problem of "one size fits all"). In Spain, e.g., about 90% of mortgages are at variable rates and depend on the (12M) Euribor. The rise in rates hence raises the mortgage bill for households, potentially leading to an increase in bad bank loans. In the meantime the ECB continues to meet fully euro area banks' demand for liquidity. A next interest rate hike is expected for June or July.

The Federal Reserve is in no hurry to hike interest rates soon as GDP growth proved to be quite subdued in 2011Q1. Nevertheless monetary policy will be tightened gradually. Initially the Fed will stop QE2 (end of June), then it will stop reinvesting agency and treasury coupons and redemptions. Only in 2012 is the Fed expected to hike interest rates and start selling its assets (agency debt and treasuries).

In the first four months of 2011, US long-term interest rates rose considerably on the back of a strengthening of economic activity, rising inflation, and worries about the state of US public finances. In May, long-term interest rates declined again because of renewed growth worries and increased risk aversion (which tends to benefit US treasuries). The same evolution was seen in average long-term interest rates for the euro area, although the decline was less pronounced since GDP growth in the euro area was much stronger than in the US. Discrepancies between long-term interest rates of euro area countries remain close to all-time highs as the European sovereign debt crisis is far from being resolved.

#### Exchange rates

Table 9 - Bilateral exchange rates

	2009	2010	2010Q2	2010Q3	2010Q4	2011Q1	2010M12	2011M1	2011M2	2011M3	2011M4	2011M5
USD per EUR	1.393	1.327	1.273	1.293	1.359	1.368	1.321	1.337	1.365	1.402	1.446	1.433
UKP per EUR	0.891	0.858	0.853	0.834	0.860	0.854	0.848	0.847	0.846	0.868	0.883	0.877
JPY per EUR	130.3	116.4	117.3	110.8	112.1	112.6	110.0	110.5	112.8	114.5	120.2	116.3

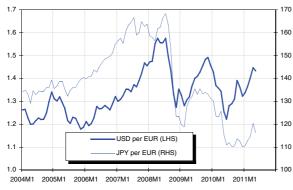
Table 10 - Nominal effective exchange rates (2005=100)

	2009	2010	2010Q2	2010Q3	2010Q4	2011Q1	2010M11	2010M12	2011M1	2011M2	2011M3	2011M4
Euro	112.8	104.9	103.4	102.1	104.4	103.8	104.8	102.2	102.2	103.5	105.3	107.6
Growth rate [1]	0.2	-7.0	-5.7	-1.3	2.3	-0.7	-1.5	-2.5	0.0	1.2	1.8	2.2
US dollar	94.0	90.6	93.1	91.3	87.8	86.5	87.6	88.6	87.5	86.6	85.4	84.0
Growth rate [1]	4.4	-3.6	3.2	-1.9	-3.9	-1.5	0.5	1.2	-1.3	-1.1	-1.4	-1.7
Japanese yen	116.9	122.9	119.1	127.0	128.0	127.1	127.8	127.8	127.6	126.6	127.0	122.3
Growth rate [1]	15.7	5.2	1.3	6.7	0.8	-0.7	-0.5	0.1	-0.2	-0.8	0.3	-3.7

[1] Change (%) compared to previous period

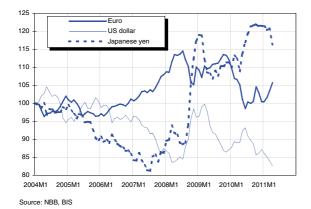
Source: BIS, NBB

Graph 27 - Euro-dollar and euro-yen bilateral exchange rates



Source: NBB

Graph 28 - Nominal effective exchange rates (2003M1=100)



The euro has been appreciating against the US dollar since mid-2010 because of stronger GDP growth in the euro area and the corresponding anticipation of faster monetary tightening by the ECB than by the Fed. However, the euro's strengthening has been limited by the European sovereign debt crisis. Every time panic flared up about certain countries' solvency and contagion risks, the euro was under selling pressure. In May, for example, the EUR/USD started the month at almost 1.50 and was hovering around 1.40 by the end of the month.

Since the start of this year, the euro has appreciated against almost all currencies in Asia, Latin America, and Africa. It depreciated moderately, however, against the currencies of Sweden, Norway, Switzerland, and some Eastern European countries. It should hence not come as a surprise that the nominal effective euro exchange rate has also appreciated throughout this year. Between December 2010 and April 2011 it gained some 5%.

The maintenance of near-zero interest rates and extensive quantitative easing resulted in a further decline in the nominal effective US dollar so far this year. It is currently at its lowest point in at least 50 years.

While China has allowed a gradual appreciation of its currency (yuan) against the dollar over the last year (+5%), following a two-year period of complete stabilisation, pressure on Chinese authorities is mounting to let its currency float (more) freely. Pressures originate increasingly from other emerging countries, which have seen their currencies appreciate against the yuan. A faster yuan appreciation would also make it easier to contain Chinese inflation by reducing imported inflation.

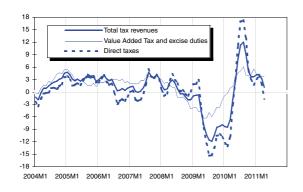
## Tax indicators

Table 11 - Tax revenues [1]

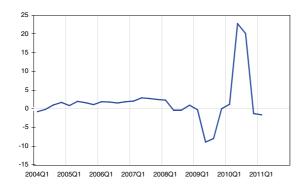
			1				1					
	2009	2010	2010Q2	2010Q3	2010Q4	2011Q1	2010M11	2010M12	2011M1	2011M2	2011M3	2011M4
Total [2], of which:	-8.0	5.9	30.4	3.4	-8.2	5.1	-12.8	3.0	4.1	-4.0	15.3	2.8
Direct taxes, of which:	-11.0	3.9	49.8	3.2	-21.1	5.1	-27.1	-7.6	5.5	-3.2	13.3	2.1
Withholding earned income tax (F	PAYE)-0.1	0.8	59.7	-1.5	-27.0	3.7	-27.0	-17.0	-0.8	4.5	10.1	0.5
Prepayments	-26.1	11.0	11.3	20.0	0.8			0.2				-0.8
Value Added Tax and excise duties	-2.0	7.9	9.9	2.4	10.9	2.7	2.9	17.7	-0.8	-9.2	17.7	3.6

<sup>[1]</sup> Change (%) compared to same period previous year; [2] Total received by federal government, excl. of death-duties. Source: FPS Finance

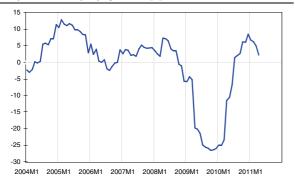
Graph 29 - Real tax revenues [3]



Graph 30 - Real withholding earned income tax (PAYE) [4]



Graph 31 - Real prepayments [3]



<sup>[3]</sup> Change (%) over past 12 months, compared to previous 12 month period, deflated by consumer price index

Tax collection accelerated during 2010, reflecting the business cycle upturn. The progression remained significant in the beginning of 2011: total tax revenues recorded a nominal yoy increase of 5.1% in 2011Q1 and most tax categories contributed to this positive evolution.

The increase in PAYE tax collection benefited from the positive evolution of employment as from the first half of 2010, but was hampered by the very moderate or even negative development in real wage rates. The increase in tax revenue would also have been higher without the continuing sharp increase in labour cost reductions in the form of exemptions from payments of PAYE.

Prepayments grew by 11% in 2010 reflecting the recovery in business profitability, which is also shown by the sharp increase in taxes on dividends. However, figures for April 2011 (April is the first due date for prepayments) show a moderate decrease of 0.8% as compared to April 2010. As there is no indication of a deterioration in profitability, this decrease could be explained by deductions from taxable income of both losses carried forward and risk capital accumulated during the crisis.

The strong growth in indirect taxes observed in 2010 continued in 2011Q1, especially for VAT revenue. The sectors that contributed most to the increase in net VAT revenue in the first quarter of 2011 were commerce, manufacturing industries, and production and distribution of electricity. It should, however, be noted that these contributions to net VAT do not reflect contributions to value added from all sectors. This is because storage and investment activities, which can be significant in some sectors other than those mentioned, contribute to value added but do not contribute to net VAT.

Significant increases were also noted in 2010 and again in 2011Q1 regarding registration duties (benefitting from the recovery in the real estate market), inheritance taxes (given the rebound in asset prices), and customs duties (through the expansion in world trade). On the other hand, taxes on interest payments continued to decrease in 2011Q1.

<sup>[4]</sup> Change (%) over past 4 quarters, compared to previous 4 quarter period, deflated by consumer price index

#### Transport Satellite Accounts in 2005

The transport satellite accounts (TSA) give total transport expenses and their structure for Belgium in 2005. Similar TSA were calculated for the years 1995 and 2000 in a previous Planning Paper (PP106, 2008). The TSA give information on transport activities that complements the national accounts as these activities are only partially described in the general framework. They notably take into account transport for own account, which is especially important for road transport. They also provide estimates of the expenditures by public authorities for transport activities (maintenance and investments in infrastructure, traffic police, subsidies, etc). Moreover, they provide estimates for transport-related taxes and fees that generate public revenues. The calculation of TSA for the year 2005 enables an initial view to be taken of the inter-temporal evolution of transport-related expenses. Finally, it is worth underlying that TSA are only drawn up for a few specific years. This is due to the availability and timing of publication of the major part of the data required.

The TSA cover six transport modes: road transport, local public transport, rail transport, air transport, inland navigation, and maritime transport. Total expenses are split into main items: current expenses, gross capital expenses, and consumption of fixed capital. The sum of the current and net capital expenses (i.e., gross capital expenses minus consumption of fixed capital) corresponds to the total expenses. Expenses are also presented in two other ways: according to each institutional sector (households, businesses, public authorities, and the rest of the world); and according to the purpose of the transport expenditure (passenger transport, freight transport or infrastructure expenditure).

In 2005, total transport expenses amounted to EUR 70.5 billion, current expenses to EUR 57.2 billion, gross capital expenses to EUR 15.8 billion, and consumption of fixed capital to EUR 2.2 billion. Road transport alone accounted for nearly 80% of total expenditure. As regards institutional sectors, households are responsible for 39% of the total transport expenses, businesses for 46%, and

public authorities for 15%. As regards the purpose of transport, passenger transport generates 57% of total transport expenses, freight transport 34%, and infrastructure 9%.

Taxes and fees, which are an integral part of the total expenditure, are covered in a separate chapter. They amounted to EUR 11.4 billion in 2005. Value added tax (VAT) amounted to EUR 4.2 billion and taxes excluding VAT to EUR 7.2 billion. Businesses are liable for 25% of all taxes from transport, households for 70%, and public authorities for 5%. 84% of these taxes derive from passenger transport, 11% from freight transport, and 7% from infrastructure.

The development of TSA for the year 2005 enables an initial view to be taken on the inter-temporal evolution of total transport expenses between 1995 and 2005. The TSA show that total expenses increased by 18% between 2000 and 2005, which is lower than nominal GDP growth over the same period of time. This is an opposite trend to that of the evolution between 1995 and 2000, which was characterised by an increase in transport expenses (25%) that was above nominal GDP growth. Current expenses rose by 20% between 2000 and 2005 (compared to 23% between 1995 and 2000). Unlike the previous period analysed, that is 1995-2000, current expenses experienced a stronger increase than total expenses over the same period of time. Finally, gross capital expenses increased by 13% between 2000 and 2005, which was much lower than the increase in total expenses, while they rose by 32% between 1995 and 2000, which was much higher than the corresponding increase in total expenses.

"Comptes satellites des transport en 2005 – Satellietrekeningen Transport in 2005", study carried out in the framework of a collaboration agreement between the Federal Planning Bureau and the Mobility and Transport Federal Public Service, D. Goffin and E. Nayes, Planning Paper 109, April 2011

# Reform of Belgian fiscal federalism and fiscal sustainability

A reform of Belgian fiscal federalism is currently being discussed. In line with its work on fiscal sustainability, in this study the FPB analyses some possible consequences of this reform on fiscal sustainability.

The study is divided into two sections, each one broach-

ing a different aspect of the issue.

The first section examines the impact of a transfer of fiscal power and budget size from the federal government to the regions and communities on the capacity to take up the challenge of fiscal sustainability. The federal government has a high debt and deficit and faces a rise in expenditure related to an ageing population. As a consequence, scaling down its room for manoeuvre could compromise its capacity to achieve the necessary budgetary adjustment (measured using the so-called "sustainability gap" concept used by the EC) and to react to fluctuations in interest rates on its debt.

Currently, federal government expenditure still represents about 30% of GDP but only a third of this consists of final primary expenditure. Indeed, more than half of federal government expenditure finances the other government levels (transfers for the financing of the regions and communities, alternative financing of social security, and other various allocations – see Table 1) and thus comes under the scope of budget agreements that have to be negotiated between the entities (including the social partners for social security) within the framework of Belgian federalism.

Table 1 - Federal government expenditure

	As a percentage of GDP	As a percent- age of total expenditure
Total expenditure	30.0	100
Financing of other government levels	16.5	55
Financing of regions and communities	9.0	30
Financing of social security	6.8	23
Financing of local governments	0.6	2
Final expenditure	13.5	45
Interest charges	3.8	13
Final primary expenditure	9.7	32

The ratio between the sustainability gap and final primary expenditure is an important indicator of the sustainability challenge for each government level: it represents the cut in final primary expenditure or the increase in revenue – expressed as a percentage of this expenditure – that is necessary to ensure long-term fiscal sustainability. That percentage is already at a very considerable 36.2% for the federal government in a constant policy scenario (see Table 2).

Table 2 - The sustainability gap and final primary expenditure by level of government

	gap (as a percent-	expenditure	Sustainability gap (as a percent- age of final primary expenditure)
General government	6.2	47.5	13.1
Entity I	6.3	32.0	19.8
Federal government	3.5	9.7	36.2
Social security	2.8	22.3	12.4
Entity II	-0.1	15.4	-0.6
Regions and communities	-0.3	9.3	-2.7
Local governments	0.2	6.2	2.6

In order not to aggravate the sustainability challenge when regions and communities acquire new competencies and the financing of these from the federal government, the regions and communities would have to bear the budgetary adjustment that would have been made by the federal government on the corresponding budget had it not been transferred. In other words, the reform should not increase the sustainability gap of the federal government expressed as a percentage of its final primary expenditure. As a consequence, per billion euro budgeted for competencies transferred to the regions and communities, the corresponding transferred amounts should be limited to EUR 638 million.

The study also examines what would happen if the same criterion was applied to Entity I as a whole (federal government and social security), which would mean that the social security budget could be used for the necessary consolidation effort towards restoring sustainability. In this case, per billion euro budgeted for competencies transferred to the regions and communities, the corresponding transferred amounts should be limited to EUR 802 million.

The first section of the study also examines to what extent the federal government's sustainability gap could be closed if the regions and communities were made liable for the funding of their civil servants' pensions.

The second section of the study presents the results of a statistical analysis of the cyclical volatility of tax revenues. The results show that all tax revenue categories are separately more cyclically volatile than total tax revenues and than GDP, and, thus, than GDP-indexed budget allocations. If a revised law on the financing of the regions and communities regionalises some levies and reduces regional and community income from GDP-indexed budget allocations, the budgets of the regions and communities will be more exposed to economic cycles and the federal budget's exposure will not decrease, and may even increase.

Yet if the federal budget is scaled down in favour of the regions and communities, it will be advisable to reduce its exposure to cycles. Indeed, with reduced budgetary room for manoeuvre, it will be more difficult to achieve the budgetary adjustments that are required by the inevitable errors in the real time assessment of the cyclical component of the budget.

"Herziening van het Belgisch fiscaal federalisme: vragen omtrent de budgettaire houdbaarheid en omtrent budgettair beleid en economische cyclus - Révision du fédéralisme budgétaire belge : questions de politique de soutenabilité budgétaire, et de politique budgétaire dans le cycle",

M. Saintrain,

Working Paper 23-10, November 2010

# The determinants of industry-level total factor productivity in Belgium

In this Working Paper the impact of the determinants of total factor productivity (TFP) is estimated for Belgium, using data on 21 industries for the period 1988-2007. The impact of Research and Development (R&D) on TFP appears to be industry-specific. Own R&D activities are especially important for high-tech manufacturing industries whereas the absorption of spillovers from the R&D activities of other domestic and foreign industries are more relevant for low-tech and medium-tech manufacturing industries and services.

The share of the output of a company, industry or country that cannot be explained by the amount of capital and labour used for production is called total factor productivity (TFP). TFP growth is considered as a proxy for disembodied technological change, which is generally believed to be the predominant explanation of economic growth in developed countries. However, as TFP is a residual, it may be a biased indicator of technological efficiency due to measurement errors, omitted variables, aggregation and misspecification, which warrants some caution in its interpretation.

R&D activities are considered as the main determinant of TFP. Not only may own R&D activities affect innovation and productivity growth, but firms may also benefit from R&D carried out by other domestic or foreign firms or research organisations. Empirical studies have shown the importance of these so-called "spillovers" for TFP and provide an argument for governments to stimulate R&D, e.g. through subsidies or fiscal support, as spillovers also imply that firms cannot fully appropriate all benefits resulting from their own R&D and may therefore invest too little in R&D from a macroeconomic point of view. Human capital, the diffusion of new technologies (e.g. ICT), international trade and competition are other determinants of TFP (growth) that have been put forward in the literature and that have been considered in our analysis.

The results of our estimations show the need to account for heterogeneity between industries in what determines total factor productivity. An obvious distinction is between manufacturing industries and services. For

manufacturing industries, there is robust evidence of a positive impact of intra-industry R&D activities as well as positive domestic inter-industry R&D spillovers and foreign (knowledge) spillovers whereas in services only domestic (patent-weighted) R&D stocks are found to have had a statistically significant positive impact on TFP. However, even the group of manufacturing industries appears to be heterogeneous. The impact of intra-industry R&D investment is only significantly positive for high-tech industries, that of positive domestic inter-industry spillovers only for medium-tech and high-tech industries and that of foreign knowledge spillovers only for medium-tech industries. Estimation results suggest that the deregulation that occurred over the period considered in non-manufacturing industries has had a negative impact on TFP, which could indicate that deregulation in non-manufacturing industries has, so far, not resulted in increased competition or in downward pressure on the prices of intermediate inputs that may contribute to the productivity of downstream industries.

Our results seem to justify public support for private sector R&D, e.g. through direct subsidies or fiscal incentives. However, these incentives should take into account the heterogeneity between industries. Own R&D activities should be encouraged mainly in high-tech manufacturing industries whereas for medium- and low-tech manufacturing and services, public support should be oriented more towards enhancing technology diffusion and the absorptive capacity of companies. Finally, the negative relationship between the indicator capturing the effects of deregulation in services and network industries and TFP in other industries casts substantial doubt on the effectiveness of this Belgian structural reform. The whole process has to be monitored in such a way that deregulation will effectively increase competition and decrease the cost of intermediary consumption for the rest of the economy.

"The determinants of industry-level total factor productivity in Belgium",

B. Biatour, M. Dumont and C. Kegels, Working Paper 7-11, April 2011

# What has been the damage of the financial crisis to Belgian GDP?

Based on the comparison between different vintages of the Economic Outlook published by the Federal Planning Bureau, this Working Paper proposes a quantification of the impact of the financial and economic crisis on Belgian GDP. As such a crisis may affect medium-term output through different channels, we also examine, using a production function approach, the contribution of each factor to the loss in potential GDP.

An initial quantification of the output loss imputable to the crisis for Belgium was presented in WP10-09. We provide an update of this analysis and investigate, through the successive revisions of projections made by the Federal Planning Bureau, how the perception of the crisis has evolved over the last two years and what its implications are for the medium run. This analysis shows that the GDP shortfall is smaller than initially feared as it is essentially determined by the size of losses recorded in 2009-2010. This result is in line with some of the findings of a comprehensive study produced by the IMF according to which the first-year loss is a good predictor of the medium-term impact. But contrary to what was initially expected, apparent labour productivity now appears to be the principal victim of the crisis as does, to a lesser extent, the average number of hours worked, while total hours worked are assumed to regain most of the ground lost during the crisis. This result explains the spectacular downward revisions made to the projected evolution of the unemployment rate.

We also apply this type of evaluation to potential output. To compute potential GDP for Belgium, the Federal

Planning Bureau uses the methodology developed by the European Commission, but utilises it on its own historical data base, extended using its medium-term projections. In the paper we detail the different steps needed to compute potential GDP and describe briefly the latest developments as well as the projected values based on the May 2011 release of the Economic Outlook. Using the concept of potential output allows correction of the revision made to the business cycle prior to the crisis, which appeared to have been more favourable than initially believed. Applying this correction reduces the output loss.

The production function approach also permits the relative contributions of the production factors to the total output loss to be quantified. The results show that capital deepening is the main factor behind the deficit in structural productivity, while total factor productivity should return to its pre-crisis path in the medium term. This outcome is consistent with theoretical priors as financial crises are expected to depress investment and slow capital accumulation over a protracted period while the impact on total factor productivity is ambiguous. Finally, we found no evidence of a significant increase in the structural unemployment rate.

"What has been the damage of the financial crisis to Belgian GDP? An assessment based on the FPB's medium-term outlook".

I. Lebrun,

Working Paper 8-11, June 2011

## **Other Recent Publications**

#### Economic forecasts 2011-2016, May 2011

"Perspectives économiques 2011-2016 / Economische vooruitzichten 2011-2016"

#### Working Paper 6-11, March 2011

"Homogenising detailed employment data", B. Van den Cruyce

#### Working Paper 5-11, March 2011

"Productivity gains and spillovers from offshoring", B. Michel

#### Working Paper 4-11, March 2011

"Liaison au bien-être des prestations sociales et des allocations d'assistance / Welvaartsbinding van sociale en bijstandsuitkeringen",

G. De Vil, N. Fasquelle, M.-J. Festjens, Ch. Joyeux

#### Economic forecasts, January 2011

"Prévisions économiques 2011 / Economische vooruitzichten 2011"

#### Working Paper 3-11, February 2011

"Niveau de décentralisation de la négociation et structure des salaires", Salimata Sissoko

#### Working Paper 2-11, February 2011

"Analyse de politiques de transport : rapprochement des acci-ses sur les carburants et Eurovignette III", Dominique Gusbin, Marie Vandresse

# Working Paper 1-11, February 2011

"Analyse du secteur Horeca en Belgique / Analyse van de horecasector in België", Caroline Hambÿe, Bart Hertveldt

#### Recent history of major economic policy measures

May 2011

The powers of the market regulator of airports to set landing rights will be reduced. They will be limited to intervention in the case of complaints supported by a significant share of the market players. This decision has, however, been legally challenged.

April 2011

In a 2011-2014 update of the Stability Programme, the Belgian authorities reaffirmed their commitment to balancing (in structural terms) the general government budget by 2015. As an interim target, the 2012 deficit should be limited to 2.8% of GDP (allowing Belgium to be no longer subject to the excessive deficit procedure), of which a deficit of 2.5% of GDP is at the federal level (central government and social security) and a deficit of 0.4% of GDP is for the subfederal public entities (Regions, Communities and local authorities together).

The ECB raised its main refinancing rate by a quarter of a point to 1.25%.

Subject to parliamentary approval, the third European energy package (Directive 2007/72) was transposed into Belgian law. At the federal level, the market regulator will become more independent, the outlook studies will be extended and consumers' rights be better guaranteed. At the level of the regions, minor changes will be made to, amongst other things, the status of the regulators, the responsibilities of the DSOs and the regulations for closed and private networks. Furthermore a cost-benefit analysis of introducing smart meters will be carried out.

Two royal decrees were approved within the scope of railway Directives 2001/14 and 2004/49. One concerns a bonus-malus system for the use of the network. Its aim is to improve regularity of both passenger and freight traffic. The other designates DVIS as the agency for railway safety and establishes an agency for the investigation of safety and accidents.

March 2011

The acting federal government decided on a budget for 2011 after several months of delays. This budget is based on assumptions of 2.0% economic growth (2.0% in 2010) and 2.7% inflation (2.2% in 2010). The Government expects a deficit for Entity I (the federal authority and social security) in 2011 of 3.1% of GDP (3.2% in 2010). The deficit in Entity I is entirely located in the federal authority, taking into account an exceptional transfer to balance the social security account. Assuming that Entity II (the regions, communities and local authorities) meets its objectives in the January 2010 Stability program (0.5% of GDP deficit), the general government deficit for 2011 should be reduced to 3.6% of GDP. This represents an improvement of 0.5% of GDP as compared to the 2010 deficit. The 2011 federal budget relies mainly on high non-tax revenue, revenue from the fight against tax evasion, and strict control of expenditure.

The federal energy market regulator (CREG) obtained the power to approve consumer prices of energy. This may help to lessen price volatility. The new powers will be evaluated in 2014 and may be extended afterwards.

February 2011

The draft of the 2011-2012 Interprofessional Agreement was not ratified by all social partners (management and labour). Nevertheless, a mediatory Interprofessional Agreement (11 February 2011) proposed by the government will be implemented. The Agreement includes the following measures:

- Wages: the real growth rate of wages is not to exceed 0.3% in 2011-2012; taxes on low-wage labour will be reduced, either by making the existing employee SSC cuts more generous or by lowering personal income taxes.
- Social benefits: the entire available envelope for welfare adjustments was allocated, i.e. 233.8 million in 2011 and 497.9 million in 2012.
- Temporary crisis measures have become permanent: the unemployment benefits paid during temporary unemployment, the white-collar temporary unemployment facility, the redundancy bonus.
- Redundancy: a total tax exemption is to be granted for payments made for the first two weeks of the notice period; as to future labour contracts, the redundancy payments for blue-collar workers will be made more generous whereas redundancy payments for white-collar workers earning more than average wages will be reduced (the latter depends on the consent of the employer and employee federations).
- Other: extension of various existing agreements to 2011 and 2012 (e.g. the special early retirement schemes).

January 2011

A new Postal Act came into force, completing the market opening prescribed by the Third Postal Directive. Under this Act, entrants must fulfil certain conditions to safeguard Universal Service. Within two years after starting their operations, they must make at least two deliveries per week. Within five years, their operations must cover at least 80% of each of the three Belgian regions' territory. Furthermore, the Act contains strong protection against social dumping. In 2010 the incumbent, bPost, had already been assigned as the Universal Service Provider until at least 2018. Later during the month, bPost announced that it would further modernise and centralise the sorting process.

The mobile termination rates were reduced to about €0.04 per minute.

A more complete overview of "Recent history of major economic policy measures" is available on the FPB web site (http://www.plan.be)

#### Abbreviations for names of institutions used in this publication

BIS Bank for International Settlements

CPB Netherlands Bureau for Economic Policy Analysis

CRB/CCE Centrale Raad voor het Bedrijfsleven / Conseil Central de l'Economie

DGSB FPS Economy - Directorate-General Statistics Belgium

ECB European Commission
ECB European Central Bank

EU European Union

FÉBIAC Fédération Belge des Industries de l'Automobile et du Cycle "réunies"

FPB Federal Planning Bureau

FPS Economy Federal Public Service Economy, S.M.E.s, Self-employed and Energy
FPS Employment Federal Public Service Employment, Labour and Social Dialogue

FPS Finance Federal Public Service Finance

IMF International Monetary Fund

INR/ICN Instituut voor de Nationale Rekeningen / Institut des Comptes Nationaux

IRES Université Catholique de Louvain - Institut de Recherches Economiques et Sociales

NBB National Bank of Belgium

OECD Organisation for Economic Cooperation and Development

RSZ/ONSS Rijksdienst voor Sociale Zekerheid / Office national de la Sécurité Sociale

RVA/ONEM Rijksdienst voor Arbeidsvoorziening / Office national de l'Emploi

#### Other Abbreviations

BoP Balance of Payments
CPI Consumer Price Index

EUR Euro

GDP Gross Domestic Product

JPY Japanese yen

LHS Left-hand scale

OLO Linear obligations

qoq Quarter-on-quarter, present quarter compared to previous quarter of s.a. series

RHS Right-hand scale
s.a. Seasonally adjusted

t/t-4 Present quarter compared to the corresponding quarter of the previous year t/t-12 Present month compared to the corresponding month of the previous year

UKP United Kingdom pound
USD United States dollar
VAT Value Added Tax

yoy Year-on-year, i.e. t/t-4 (for quarters) or t/t-12 (for months)