# SHORT TERM UPDATE

# 2-13

## Quarterly Newsletter
## June 2013

Headlines Belgian Economy

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Forecasting Belgian GDP
in times of international crisis

Federal
Planning Bureau
Economic analyses and forecasts

# 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

*Economic activity in the euro area should be down in 2013 (-0.3%), as in 2012 (-0.6%). A recovery should occur in 2013 and lead to growth of 1.1% in 2014, which should strengthen moderately in the medium term (+1.6% at the end of projection period). The evolution of economic activity in Belgium reflects sluggish European growth. Nevertheless, the growth of the Belgian economy should exceed average growth in the euro area: it should amount to 0.2% in 2013, 1.2% in 2014 and then gradually speed up (+1.9% in 2018).*

*In spite of the unfavourable economic climate, the level of employment should not shrink in 2013. Employment growth should be modest in 2014-2015 and slightly accelerate afterwards. Employment in manufacturing industry should further decline. Job creation in market services helps global employment to remain stable in 2013 and is the key driver of the projected rise in employment.*

*Unemployment is expected to increase substantially over 2013-2015. From 2016 onwards, the acceleration of employment growth and the slowdown in labour force growth should allow a decrease in unemployment. The unemployment rate should then approximate its pre-crisis level again in 2018.*

*Belgian inflation reached 2.8% in 2012, should slow down in 2013 and become lower than inflation in the euro area (only 0.9%). The drop in energy product prices, which has been intensified by a series of measures by the federal government, is the main cause of this slowdown. Subsequently, inflation should remain relatively low (1.2% in 2014 and 1.6% afterwards).*

*Total greenhouse gas emissions should remain far below the threshold laid down under the Kyoto Protocol for the 2008-2012 period. Nevertheless, the ceiling set for the non-ETS sectors was probably slightly exceeded. Reducing emissions and increasing the share of renewable energy by 2020 remain a real challenge.*

*Despite the weak economic growth, the general government deficit should drop from 3.9% of GDP in 2012 to 2.9% of GDP this year, owing to the impact of the recapitalisation of the Dexia Group in 2012, the fall in local government investments and the restrictive budgetary stance at the different levels of government. Assuming unchanged policy and legislation, the general government deficit should increase to 3% of GDP in 2014, mainly as a result of the non-recurrent nature of certain measures taken in 2013. The deficit should then drop from 2.9% of GDP in 2015 to 2.5% of GDP in 2018. Therefore, significant efforts will be necessary to follow the pathway of the Stability programme.*

*STU 2-13 was finalised on 21 May 2013.*



The Federal Planning Bureau (FPB) is a public agency under the authority of the Prime Minister and the Minister of Economy. 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.

# Contents



All FPB publications, mentioned in this STU, can be obtained either by sending a fax (+32 2 5077373) or by filling in the necessary form on our Internet site (http://www.plan.be).

# Forecasting Belgian GDP in times of international crisis

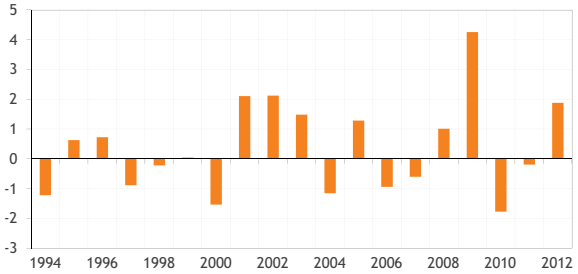
The Federal Planning Bureau (FPB) is responsible, within the National Accounts Institute, for producing the economic budget, i.e. the macroeconomic forecasts used to establish the federal government budget and perform budgetary control exercises. In order to ensure transparency, ex post evaluations of the quality of these forecasts are undertaken at regular time intervals. In the latest assessment, the one-year-ahead forecast errors for economic growth in 2009 and, to a lesser extent, in 2010 appeared as outliers. In this article we analyse the impact of world trade forecast errors on Belgian GDP forecasts.

## Setting the scene

The economic budget of September 2008 was finalised on 10 September and foresaw a deceleration in Belgian GDP growth from 1.6% in 2008 to 1.2% in 2009. The collapse of Lehman Brothers just a few days later created a worldwide panic on financial markets with devastating consequences for international trade. The year 2009 turned out to be the most severe recession recorded in Europe since World War II. In Belgium, GDP shrank by 3.0%, according to the first release of the National Accounts. This exceptionally strong downturn and the elevated levels of uncertainty caused forecasting institutions to be extremely cautious for 2010. Accordingly, in the economic budget of September 2009, Belgian GDP was projected to grow by a mere 0.4% in 2010. Against all the odds, a robust growth of 2.2% was recorded.

These forecast errors, calculated as the difference between forecasts and outcomes, are put in perspective in Graph 1. The forecast error for the year 2009 appears to be by far the largest made since the launch of the economic budget in 1994. For the year 2010, the magnitude of the error is, in absolute terms, more in line with those recorded during the period 2000-2003, but it nevertheless represents the greatest underestimation of growth in the sample.

**Graph 1 - GDP growth: one-year-ahead forecast errors (in %-points)**




## The forecasting process at the FPB

While the quarterly econometric model MODTRIM constitutes the corner stone of the production process of the economic budget, it has to be supplemented with information that is produced outside the model. These so-called exogenous variables are assumed not to be affected by the model results. The most important exogenous variables in the context of this analysis are those that form the international environment, which is crucial for a small open economy. Assumptions for world trade, commodity prices and financial variables are founded on international forecasts and future market quotations. Other exogenous variables are related to the Belgian socio-demographic context, the development of wages and fiscal and social policies.

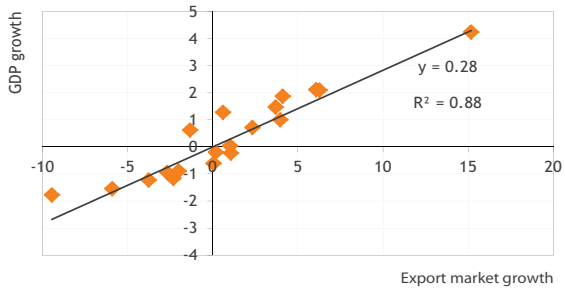
Once the trajectory for all exogenous variables is settled, the MODTRIM model can be simulated. The model outcome is then confronted with external information such as business cycle indicators, near-term forecasting methods or any other type of recent information that cannot be inserted directly into the model equations. The model solution can then, if necessary, be amended using so-called "add-factors". These adjustment variables are introduced in such a way that the consistency of the model is fully respected. This external information is of importance merely in the very short run, with their impact fading with the lengthening of the forecasting horizon.

## Why were the GDP forecasts for 2009-2010 so wrong?

Within the bulk of exogenous variables, the development of foreign export markets is essential to determine Belgian GDP growth. The export markets are computed using a reweighted average of world trade reflecting the geographical orientation of Belgian exports. To perform these calculations, the FPB uses world trade forecasts produced by international organizations such as the IMF, the OECD or the European Commission.

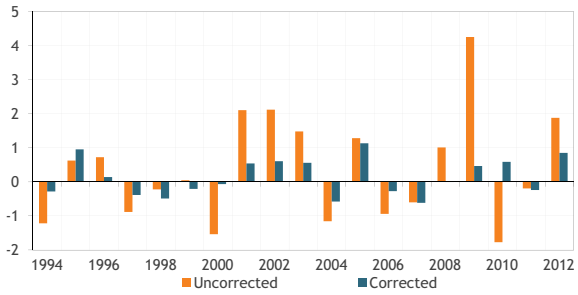
As can be seen in Graph 2, errors on foreign export market and GDP growth are highly correlated. The coefficient of determination of the estimated linear equation indicates that almost 90% of the variance in the errors on GDP growth is explained by errors on potential export market growth.

**Graph 2 - Link between forecast errors on GDP and on export market growth (in %-points)**




However, it is clear that the equation presented here is a reduced form which captures not only international trade surprises but also the impact of other international variables correlated with world trade, such as oil prices, asset prices or interest rates. It may even capture the effects of fiscal policy if the latter is pro-cyclical. Therefore, to isolate the impact of export market growth errors on GDP forecasts, a standard simulation measuring the sole impact of a shock on foreign export markets was produced with the MODTRIM model. This simulation indicates that a 1% rise in export markets raises GDP by 0.25% after four quarters. The unadjusted GDP forecast errors and those adjusted for errors in export market growth are presented in Graph 3.

**Graph 3 - GDP growth forecast errors: uncorrected and corrected for export market growth (in %-points)**




After correction, neither 2009 nor 2010 appear as outliers. In other words, if the dramatic downturn in world trade had been properly anticipated in September 2008, Belgian GDP growth for 2009 would have been overestimated by only 0.5 %-points (instead of 4.3 %-points). For 2010, the GDP forecast error would have been 0.6 %-points (instead of -1.8) with an accurate evaluation of the upswing in export markets. The poor forecasting performance of world trade during this period is related to the well-known difficulty of predicting turning points. Moreover, recessions are even harder to foresee and may even be considered by their nature as impossible to anticipate.

## Implications for the statistical properties of the forecast errors

It is also interesting to examine the implications of this adjustment on the overall properties of the forecast errors in all economic budgets. Therefore several forecasting rounds are distinguished: September of the year t-1 to forecast year t (round 1), February of year t forecasting the current year (round 2) and September of year t for that same year (round 3).

The most intuitive indicator in measuring forecast errors is the mean absolute error (MAE), which provides the average deviation in absolute terms of the forecast from the outcome. Table 1 shows that adjusting for errors on export market growth reduces the MAE by more than 60% for round 1 and by 40% on average for the two following rounds. The decline in the MAE from one round to a subsequent one is significantly reduced with the correction, especially from round 1 to 2. This implies that an essential difference between the initial economic budget (round 1) and that prepared for the budgetary control (round 2) lies in a better assessment of the international business cycle stance. Another frequently used indicator is the root mean square error (RMSE), which penalises more large errors. The RMSE is reduced even more after correction and is much closer to the MAE, indicating that large errors on GDP growth are indeed primarily caused by errors on export market growth.

**Table 1 - Size and mean of the forecast errors before and after correction (1994-2012)**

| | Mean absolute error | | | Root mean square error | | | Mean error | | |
|---|---|---|---|---|---|---|---|---|---|
| | round 1 | round 2 | round 3 | round 1 | round 2 | round 3 | round 1 | round 2 | round 3 |
| GDP | 1.27 | 0.70 | 0.40 | 1.57 | 0.82 | 0.52 | 0.37 | -0.02 | -0.07 |
| GDP corrected | 0.47 | 0.42 | 0.25 | 0.56 | 0.50 | 0.30 | 0.15 | -0.03 | -0.04 |

Another important parameter used to gauge the quality of the forecasts is the mean error, which indicates the average of by how much the projected growth rates were overestimated (positive sign) or underestimated (negative sign). A desirable property of forecasts is unbiasedness, meaning that positive and negative forecast errors should offset each other, on average. The optimistic bias observed for round 1 is more than halved after adjustment for export markets, while the absence of bias is confirmed for the following rounds.

## Conclusion

This article validates the importance of the international scenario and, in particular, the evolution of world trade for forecasting Belgian GDP accurately. This said, the other international exogenous variables (oil prices, interest rates, exchange rates) and national policy variables are important as well, in particular to forecast inflation and the evolution of public finances.

# Economic forecasts 2013-2018

## The expected recovery of economic activity in Europe and Belgium is part of a downwardly-revised growth scenario

World growth continued to slow down in 2012 (3.2% compared to 4.0% in 2011), notably as a result of the European debt crisis. Fears over a euro area breakup, edgy financial markets and restrictive budgetary policies have brought the euro area into recession (-0.6%) and caused a growth slowdown in the emerging economies. Throughout 2013, economic activity in the euro area should pick up very gradually but remain slightly negative on an annual basis (-0.3%).

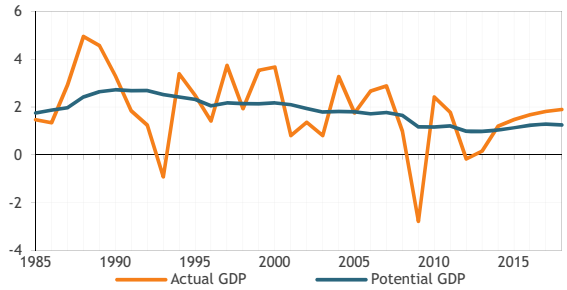
In 2014, euro area growth should approximate 1.1%. World GDP should increase by 4.0%. Over the period 2015-2018, the average annual growth of the global economy should amount to 4.5%, compared to 1.6% in the euro area.

## Belgian economic growth is modest but higher than the euro area average

Although the Belgian economy and the euro area are recovering more or less simultaneously, Belgian economic growth should remain higher than the euro area average. Belgian GDP is estimated to have declined by 0.2% in 2012 and it should grow only slightly in 2013 (0.2%). Assuming unchanged policy and legislation, all the components of domestic demand and export should grow more strongly as from 2014. With merely 1.2% growth, Belgian GDP should register its best performance in three years in 2014. This recovery should be confirmed over the period 2015-2018, leading to average yearly growth of Belgian GDP of 1.7%.

Owing to positive and increasing net exports, the current account balance surplus should increase from 1.4% of GDP in 2013 to 2.8% of GDP at the end of period.

**Graph 1 - Actual and potential GDP growth (annual percentage changes)**




## Inflation cools down markedly

Belgian inflation, as measured by the national consumer price index (NCPI), reached 2.8% in 2012. Inflation should slow down in 2013 and become lower than in the euro area (with an increase limited to only 0.9%). The drop in energy prices, reinforced by a series of measures taken by the federal Government, is the main cause of this slowdown. Subsequently, inflation should remain relatively low (1.2% in 2014 and 1.6% on average during the period 2015-2018).

Given the freeze of wages before indexation and further reductions in social security contributions, nominal hourly labour costs should only grow by 1.4% this year and 1.1% in 2014. However, as a result of very weak productivity gains in 2013 and 2014, unit labour costs should increase by 1.3% and 0.6% respectively.

As from 2015, gross hourly wages before indexation should increase by 0.6% on average and nominal labour costs by 2.1%[1]. With market sector productivity gains approximating 0.9% per year, real unit labour costs should grow by 1.2% per year on average over the period 2015-2018.

## Employment registers near zero growth in 2013 and gradually picks up afterwards

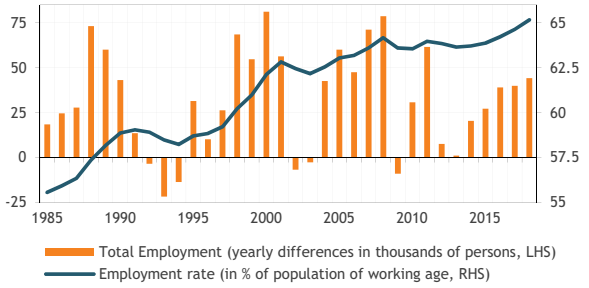
Despite the unfavourable economic climate and the decrease in employment in the public sector, total domestic employment should not shrink this year, as a result of stagnating hourly productivity. In the market sector, manufacturing industry should lose nearly 10 000 jobs while services should gain 17 000 jobs. Subsequently, employment growth in the market sector should accelerate gradually to 1.1% per year on average from 2016 onwards. Over the entire projection period, total domestic employment should grow by 172 000 units. Market services should remain the main driver of that increase (+211 000) while manufacturing industry should lose 36 000 jobs. The employment rate as defined in the context of the EU 2020 strategy should increase from 67% in 2013 to 68.4% in 2018, a figure well below the 73.2% objective for 2020.

Unemployment is expected to rise substantially over the period 2013-2015 (+52 000), as job creation should only

1. This scenario does not take into account additional labour cost reductions that are conditional upon compliance with the fixed wage norm for 2013-2014 and the yet unknown wage norm for 2015-2016.

start to increase slowly, while the labour supply should increase considerably. The unemployment rate (FPB definition based on administrative data) should increase from 12.1% in 2012 to 12.8% in 2015. From 2016 onwards, the acceleration of employment growth and the slowdown of labour force growth should lead to a decline in unemployment (-50 000 over the period 2016-2018) and the unemployment rate (11.7% in 2018). Finally, as measured by the Eurostat definition, which allows international comparisons, the unemployment rate should amount to 7.8% in 2018, compared to 7.6% in 2012.

**Graph 2 - Employment and the rate of employment**




## General government deficit under 3% of GDP in 2013

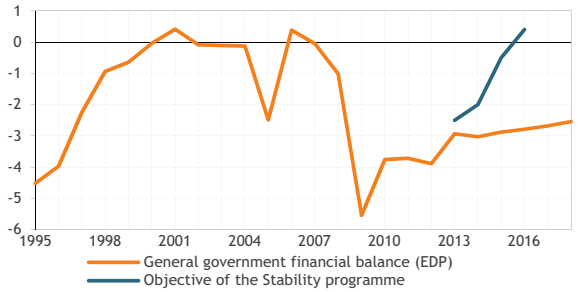
Despite the weak economic growth and based on the information available at the closing date of these forecasts, the general government deficit should drop from 3.9% of GDP in 2012 to 2.9% of GDP this year, owing to the impact of the recapitalisation of the Dexia Group in 2012, the fall in local government investments and the restrictive budgetary stance at the different levels of government.

Assuming unchanged policy and legislation, the general government deficit should increase to 3% of GDP in 2014, mainly as a result of the non-recurrent nature of certain measures taken in 2013. The deficit should then drop from 2.9% of GDP in 2015 to 2.5% of GDP in 2018 and thus still remain within range of the excessive deficit procedure threshold. The structural deficit should even increase at the end of the period, partly cancelling the progress made in 2012 and 2013. Indeed, the growth in pension and health care expenditure clearly exceeds potential GDP growth (contrary to most other public expenditures, which have adopted a rather moderate growth rate since the crisis). Therefore, significant efforts will be necessary to follow the pathway of the stability programme, in particular the 2015 balanced budget objective.

At Entity 1 level, social security should have a balanced budget over the entire projection period, assuming that the special balance transfer from the federal government to social security is maintained. The gradual increase in that transfer keeps the federal government deficit from shrinking. The deficit should, therefore, remain relatively stable around 2.9% of GDP over the entire period. At Entity II level, the communities and regions sub-sector should register a slight deficit in 2013, which should gradually disappear and become a 0.4% of GDP surplus at the end of the period. The local authorities should remain balanced until 2016 and be slightly in deficit in the build-up to the local elections.

Subject to additional debt control measures that could be taken in the course of this year, public debt should continue to rise and amount to 100.9% of GDP in 2013. In the medium term, the debt ratio should slightly decrease and fall below 100% of GDP in 2018.

**Graph 3 - General governement financial balance (as a percentage of GPD)**




**Key figures for the medium-term economic outlook**

Period averages, changes in volume unless otherwise stated

| | 2001-2006 | 2007-2012 | 2013-2018 |
|---|---|---|---|
| Potential export market | 5.6 | 2.7 | 4.1 |
| Private consumption | 1.2 | 1.1 | 1.0 |
| Public consumption | 1.5 | 1.5 | 0.9 |
| Gross fixed capital formation | 2.2 | 0.4 | 1.6 |
| Stock building (contribution to GDP growth) | 0.0 | 0.0 | 0.0 |
| Final domestic demand | 1.5 | 1.0 | 1.1 |
| Exports | 3.2 | 2.0 | 2.8 |
| Imports | 2.9 | 2.2 | 2.6 |
| Net exports (contribution to GDP growth) | 0.4 | -0.1 | 0.3 |
| GDP | 1.8 | 0.9 | 1.4 |
| Real national gross income | 1.4 | 0.6 | 1.4 |
| Private consumption prices | 2.1 | 2.2 | 1.5 |
| Real disposable income - households | 1.0 | 1.0 | 1.3 |
| Domestic employment (annual changes in thousands) | 32.9 | 40.2 | 28.7 |
| Unemployment, FPB definition[a] | | | |
| - thousands | 695.3 | 636.3 | 638.5 |
| - % of labour force | 13.7 | 12.1 | 11.7 |
| Current account balance (% of GDP)[a] | 3.4 | 1.1 | 2.8 |
| General government financing capacity, EDP def. (% of GDP)[a] | 0.4 | -3.9 | -2.5 |
| Public indebtedness (% of GDP)[a] | 88.0 | 99.6 | 99.0 |

a. End of period

*"Perspectives économiques 2013-2018 / Economische vooruitzichten 2013-2018", FPB, May 2013.*

# Summary of economic forecasts

## Economic forecasts for Belgium by the Federal Planning Bureau

Changes in volume (unless otherwise specified) (cut-off date of forecasts: 22 April 2013)

| | 2011 | 2012 | 2013 | 2014 |
|---|---|---|---|---|
| Private consumption | 0.2 | -0.7 | 0.3 | 0.7 |
| Public consumption | 0.8 | 0.9 | 0.6 | 0.7 |
| Gross fixed capital formation | 4.1 | -0.4 | -1.0 | 1.5 |
| Final national demand | 1.8 | -0.4 | 0.1 | 0.9 |
| Exports of goods and services | 5.5 | 0.6 | 0.6 | 2.0 |
| Imports of goods and services | 5.6 | 0.1 | 0.5 | 1.6 |
| Net-exports (contribution to growth) | 0.1 | 0.5 | 0.1 | 0.4 |
| Gross domestic product | 1.8 | -0.2 | 0.2 | 1.2 |
| p.m. Gross domestic product - in current prices (bn euro) | 369.84 | 376.98 | 384.36 | 394.62 |
| National consumer price index | 3.5 | 2.8 | 0.9 | 1.2 |
| Consumer prices: health index | 3.1 | 2.6 | 1.1 | 1.4 |
| Real disposable income households | -0.8 | 0.3 | 0.4 | 0.9 |
| Household savings ratio (as % of disposable income) | 14.4 | 15.0 | 15.1 | 15.2 |
| Domestic employment (change in '000, yearly average) | 61.6 | 7.7 | 1.2 | 20.5 |
| Unemployment (Eurostat standardised rate, yearly average) [1] | 7.2 | 7.6 | 8.3 | 8.5 |
| Current account balance (BoP definition, as % of GDP) | -1.1 | -1.4 | -1.0 | -0.5 |
| Short term interbank interest rate (3 m.) | 1.4 | 0.6 | 0.2 | 0.3 |
| Long term interest rate (10 y.) | 4.2 | 3.0 | 2.1 | 2.3 |

[1] Other unemployment definitions can be found on page 14.

## Economic forecasts for the euro area by different institutions

| | GDP growth | | Inflation | | Government balance | | Date of update |
|---|---|---|---|---|---|---|---|
| | 2013 | 2014 | 2013 | 2014 | 2013 | 2014 | |
| Federal Planning Bureau | 0.2 | 1.2 | 0.9 | 1.2 | -2.9 | -3.0 | 05/13 |
| INR/ICN | 0.2 | . | 1.0 | . | . | . | 02/13 |
| National Bank of Belgium | 0.0 | . | 1.6 | . | . | . | 12/12 |
| European Commission | 0.0 | 1.2 | 1.3 | 1.6 | -2.9 | -3.1 | 05/13 |
| OECD | 0.5 | 1.6 | 1.8 | 1.6 | -2.3 | -1.7 | 11/12 |
| IMF | 0.2 | 1.2 | 1.7 | 1.4 | -2.6 | -2.1 | 04/13 |
| ING | 0.0 | 0.9 | 1.4 | 1.9 | -2.6 | -1.6 | 05/13 |
| BNP Paribas Fortis | 0.0 | 1.0 | 1.3 | 1.3 | -2.5 | -1.6 | 03/13 |
| Belfius | 0.5 | 1.2 | 1.5 | 1.5 | -2.2 | -1.5 | 04/13 |
| KBC | 0.2 | 1.4 | 1.0 | 1.7 | . | . | 04/13 |
| Deutsche Bank | -0.3 | 1.0 | 1.4 | 1.6 | -3.0 | -3.0 | 05/13 |
| Oxford Economics | -0.4 | 0.7 | 1.4 | 2.1 | -3.3 | -2.2 | 05/13 |
| IRES | 0.2 | . | 1.2 | . | -2.6 | . | 04/13 |
| Belgian Prime News | 0.3 | 1.2 | 1.5 | 1.7 | -2.4 | -1.8 | 04/13 |
| Consensus Economics | 0.1 | 1.0 | 1.5 | 1.8 | . | . | 05/13 |
| Consensus The Economist | 0.1 | 1.2 | 1.5 | 1.8 | . | . | 05/13 |
| Consensus Wirtschaftsinstitute | 0.2 | 1.2 | 1.3 | 1.5 | -3.1 | -2.9 | 04/13 |
| Averages | | | | | | | |
| All institutions | 0.1 | 1.1 | 1.4 | 1.6 | -2.7 | -2.2 | |
| International public institutions | 0.2 | 1.3 | 1.6 | 1.5 | -2.6 | -2.3 | |
| Credit institutions | 0.1 | 1.1 | 1.4 | 1.6 | -2.5 | -1.9 | |

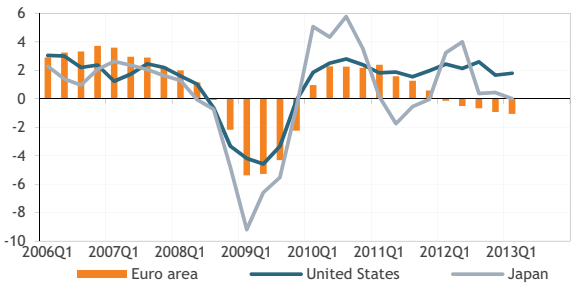
## General economic activity

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

| | | | YoY growth rates, in % | | | | | QoQ growth rates, in % | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2011 | 2012 | 2012Q1 | 2012Q2 | 2012Q3 | 2012Q4 | 2013Q1 | 2012Q1 | 2012Q2 | 2012Q3 | 2012Q4 | 2013Q1 |
| Germany | 3.1 | 0.9 | 1.3 | 1.0 | 0.9 | 0.3 | -0.3 | 0.6 | 0.2 | 0.2 | -0.7 | 0.1 |
| France | 2.0 | 0.0 | 0.3 | 0.1 | 0.0 | -0.3 | -0.4 | 0.0 | -0.2 | 0.1 | -0.2 | -0.2 |
| Netherlands | 1.1 | -1.0 | -0.9 | -0.5 | -1.3 | -1.2 | -1.3 | 0.1 | 0.2 | -1.0 | -0.4 | -0.1 |
| Belgium | 1.9 | -0.3 | 0.2 | -0.4 | -0.4 | -0.5 | -0.5 | 0.1 | -0.4 | 0.0 | -0.1 | 0.1 |
| Euro area | 1.5 | -0.6 | -0.1 | -0.5 | -0.7 | -0.9 | -1.1 | -0.1 | -0.2 | -0.1 | -0.6 | -0.2 |
| United States | 1.8 | 2.2 | 2.4 | 2.1 | 2.6 | 1.7 | 1.8 | 0.5 | 0.3 | 0.8 | 0.1 | 0.6 |
| Japan | -0.5 | 2.0 | 3.2 | 4.0 | 0.4 | 0.4 | 0.0 | 1.3 | -0.2 | -0.9 | 0.3 | 0.9 |

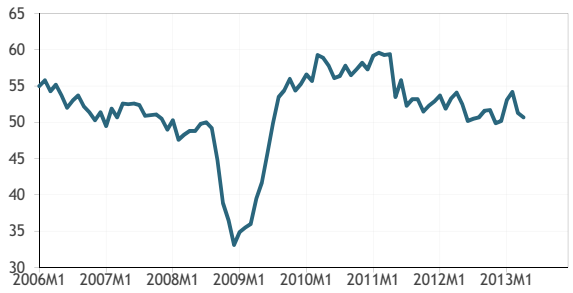
[1] Adjusted for seasonal and calendar effects
Source: INR/ICN, National sources, Eurostat

**Graph 1 - GDP-growth (YoY growth rates, in %)**



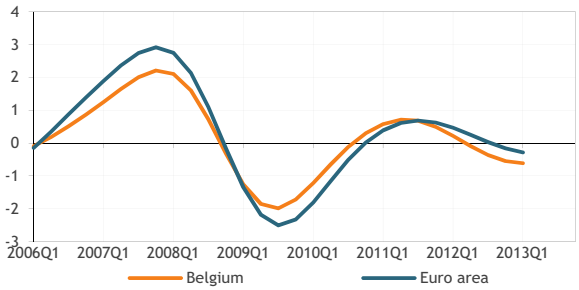

Source: Eurostat, National sources

**Graph 2 - US business confidence (ISM-indicator) (index, manufacturing industry)**




Source: Institute for Supply Management

**Graph 3 - GDP business cycle (deviation from trend in %)**




Source: INR/ICN, Eurostat, FPB

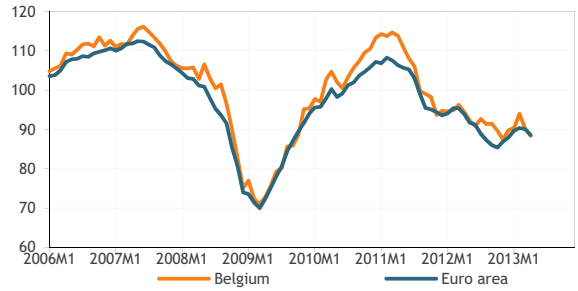
The US economy expanded at a rate of 0.6% qoq in 2013Q1, following growth rates of 0.1% and 0.8% in the previous quarters. Growth was mainly driven by private consumption (+0.8%), investment and an acceleration in stock building, while government spending constituted the main drag. The figures suggest that the sequestration (across-the-board cuts in public spending), which began at the start of March, impacted economic activity earlier than expected. Especially the cuts in defence spending proved to be deep. Furthermore, the manufacturing sector is showing new signs of weakness as the ISM indicator dropped for two consecutive months, leaving it just above the level signalling a contraction of the economy. International institutes expect US GDP growth to be close to 2% on average this year.

Japanese economic growth amounted to 0.9% qoq in 2013Q1, following a rise of 0.3% in the previous quarter. The surge was driven by exports and private consumption, while investment declined as companies remained reluctant to invest in new plant and equipment. Going forward, the strong depreciation of the yen will continue to be a boon for exports, the traditional mainstay of economic growth in Japan. Together with the projected fiscal stimulus, this should allow for fairly strong economic growth during the rest of the year.

Although the pace of decline of euro area GDP slowed to -0.2% in 2013Q1 from -0.6% in 2012Q4, economic activity fell for the sixth consecutive quarter in the euro area. It was weighed down by fiscal consolidation, rising unemployment, tight bank lending conditions in the problem countries and lacklustre global demand. Divergences in the growth performance of the different countries continue unabatedly.

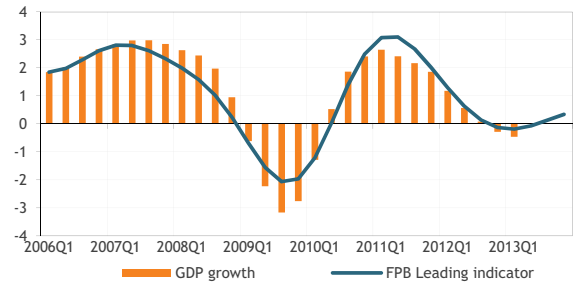
The German economy managed a weak swing back to growth in 2013Q1 (0.1%), following a hefty export-related contraction in the previous quarter (-0.7%).

**Graph 4 - Economic sentiment indicator: international comparison**



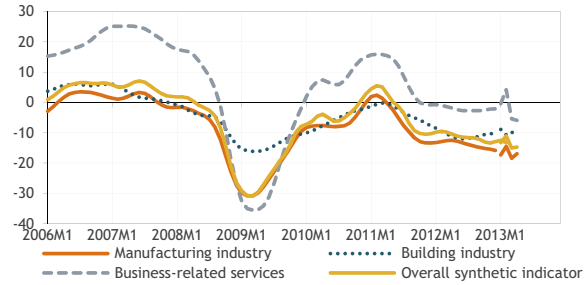

Source: European Commission

**Graph 5 - Belgian GDP growth and leading indicator**



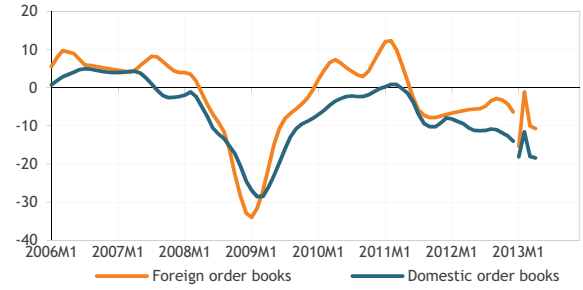

Source: INR/ICN, FPB

**Graph 6 - Belgian business cycle indicator**




Source: NBB

**Graph 7 - Manufacturing industry: order books**




Source: NBB

The (temporary) drag on Q1 GDP growth from extremely poor weather conditions, strong labour market performances and an acceleration in wage increases augur for a stronger growth figure in Q2. French growth faltered in 2013Q1 (-0.2%) as rising unemployment and budgetary austerity undermine consumer and business confidence. Economic activity in Italy and Spain declined by 0.5%, while the economy of the Netherlands shrank by 0.1% on the back of rising unemployment and declining house prices.

The Belgian economy managed to eke out a small rise in 2013Q1 (0.1%) after a 0.1% decline in the previous quarter. Belgium along with Germany and Austria are the sole countries which have succeeded in recovering the ground lost since the beginning of the financial crisis (2007Q4). GDP figures for Spain, Italy, Portugal and Ireland are between 6 to 9% below their pre-crisis levels, but these losses are dwarfed by the Greek economy, which contracted by about 25%.

The Economic Sentiment Indicator (ESI, Graph 4) summarises the development of the confidence indicators for consumers and several business sectors. After a gradual decline over almost two years, economic sentiment recovered somewhat in Belgium and the euro area in the final quarter of 2012 and the first two months of 2013. This led to the expectation that the long-awaited recovery in economic activity was finally materialising. However, sentiment in most euro area countries has gone down again in the last two months. The new downturn seems to be related to higher political and financial sector uncertainty in some member countries. Moreover, worse-than-expected data from emerging economies weighed on demand prospects in most industries.

The Belgian business cycle indicator (Graph 6) has now been bottoming out for more than a year without showing any clear signs of improvement. Some optimism surfaced in the beginning of 2013, but disappeared quickly after the decline of the synthetic indicator in March and April. Differences between the indicators covered by the survey are very small: indicators for business-related services and the trade sector have remained virtually stable since mid-2012, while the limited deterioration in the manufacturing industry was compensated by a slight improvement in the building industry. The manufacturing industry indicator has been mainly pulled down by employment prospects, for which an improvement can only be expected under the influence of better-filled order books. The recent deterioration in foreign order books is not encouraging from this point of view as the assessment of domestic order books has already been worsening for more than a year (see Graph 7).

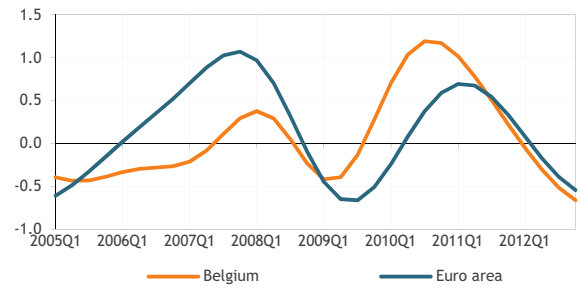
## Private consumption

**Table 2 - Private consumption indicators**

| | 2011 | 2012 | 2012Q2 | 2012Q3 | 2012Q4 | 2013Q1 | 2012M11 | 2012M12 | 2013M1 | 2013M2 | 2013M3 | 2013M4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| New car registrations [1] | 4.5 | -14.9 | -12.6 | -10.9 | -24.0 | 0.5 | -11.4 | -54.2 | 13.3 | 3.9 | -11.4 | 9.7 |
| Consumer confidence indicator [2] | -5.2 | -15.8 | -10.7 | -14.3 | -22.0 | -21.3 | -24.0 | -25.0 | -23.0 | -17.0 | -24.0 | -20.0 |

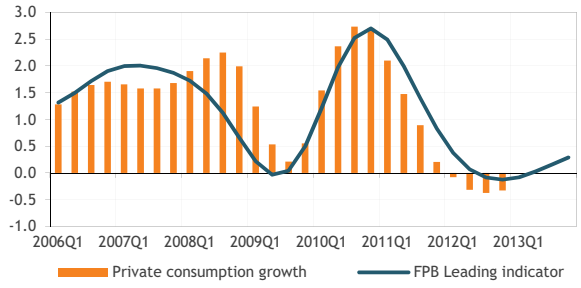
[1] Change (%) compared to same period previous year; [2] Qualitative data
Source: NBB, Febiac

**Graph 8 - Private consumption cycle**



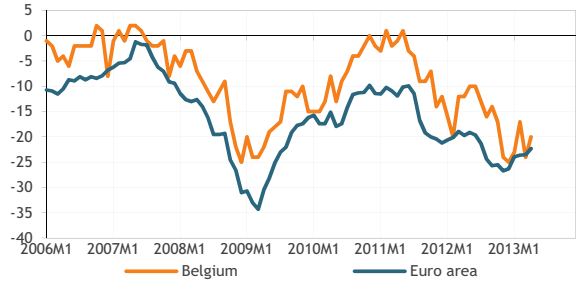

Source: INR/ICN, Eurostat, FPB

**Graph 9 - Private consumption growth and leading indicator**




Source: INR/ICN, FPB

**Graph 10 - Consumer confidence: international comparison**




Source: NBB, European Commission

According to the latest national accounts, published on 3 May, Belgian private consumption did not recover in the course of 2012. By the end of last year, private consumption was 1% below its level of 2010Q4. Real disposable income registered a significant decline in 2011, while it recovered rather slowly in 2012. Annual average consumption growth was close to zero in both years (+0.2% in 2011 and -0.3% in 2012), which means that households' savings smoothed the impact of disposable income developments on private consumption. Consequently, the saving rate of households declined by more than 1 %-point in 2011 and registered an increase of the same magnitude in 2012.

The private consumption cycles in Graph 8 show that private consumption in Belgium suffered less from the financial crisis than in the euro area: the downturn in Belgium was less pronounced and the following upturn started earlier and was more marked. Both cycles are currently on a downward path and the latest peak in the private consumption cycle was reached earlier in Belgium (2010Q3) than in the euro area (2011Q1). Consequently, private consumption in Belgium as well as in the euro area was more than 0.5% below its trend value in 2012Q4.

The FPB leading indicator for Belgian private consumption (Graph 9) indicates that private consumption should register a (limited) increase in the course of this year. Signals from individual indicators are rather mixed. On the one hand, the decline in car sales seen in 2012 seems to have come to an end in 2013. Car sales in 2013Q1 were roughly stable as compared to 2012Q1, while a yoy increase of almost 10% was seen in April 2013. On the other hand, Belgian consumer confidence seems to have bottomed out during recent months, but is still close to the very low level seen during the financial crisis by the end of 2008. The current weakness is mainly related to consumers' assessment of the labour market situation. As unemployment is not expected to decline in the near future, this situation could persist for some time.

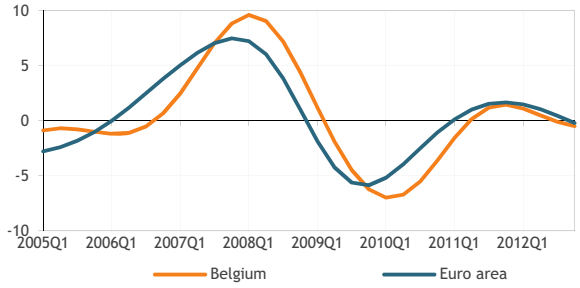
## Business investment

**Table 3 - Business investment indicators**

| | 2011 | 2012 | 2013 | 2012Q2 | 2012Q3 | 2012Q4 | 2013Q1 | 2012M12 | 2013M1 | 2013M2 | 2013M3 | 2013M4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Business survey, capital goods [2] | | | | | | | | | | | | |
| Synthetic indicator | -2.5 | -8.7 | . | -4.4 | -9.4 | -15.3 | -11.8 | -12.2 | -13.4 | -11.3 | -10.7 | -12.0 |
| Order book appraisal | -13.2 | -23.5 | . | -24.3 | -19.7 | -29.7 | -25.0 | -25.0 | -24.0 | -27.0 | -24.0 | -24.0 |
| Demand forecasts | -1.8 | -9.8 | . | -5.0 | -10.0 | -14.0 | 1.0 | -8.0 | -1.0 | 6.0 | -2.0 | -1.0 |
| Investment survey [1] | 10.1 | 1.2 | 19.2 | | | | | | | | | |
| Capacity utilisation rate (s.a.) (%) | 79.3 | 76.7 | . | 77.3 | 75.9 | 75.6 | 75.2 | | | | | |

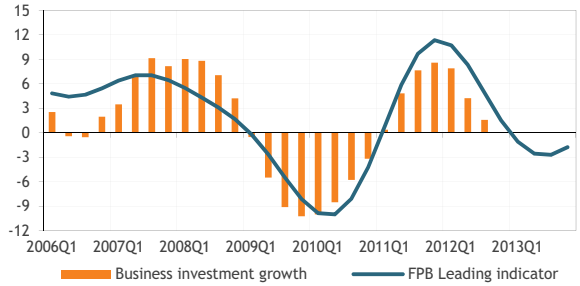
[1] Change (%) compared to same period previous year; [2] Qualitative data
Source: NBB

**Graph 11 - Business investment cycle**



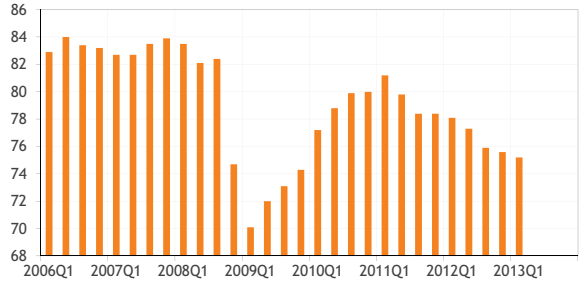

Source: INR/ICN, Eurostat, FPB

**Graph 12 - Business investment growth and leading indicator**




Source: INR/ICN, FPB

**Graph 13 - Capacity utilisation in manufacturing industry**




Source: NBB

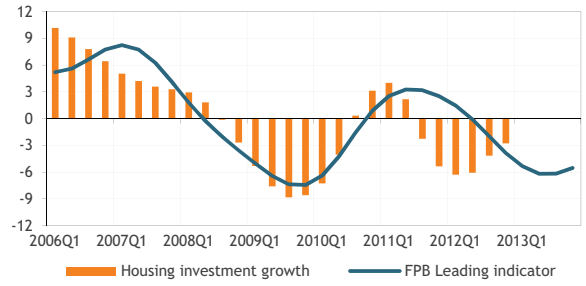
Belgian business investment was hit hard during the financial crisis (-10.2% in 2009 and -3.2% in 2010), but recovered swiftly in 2011 (+8.6%). In line with these developments, the investment rate (share of business investment in GDP at current prices) declined from 14.4% in 2008 to 12.4% in 2010, followed by a pick-up to 13.3% in 2011, which is close to its long-term average. In fact, rates of more than 14% are rather exceptional and generally only occur in the years preceding a recession (such as in the beginning of the nineties and in 2000). Due to a lack of dynamism in economic activity in the course of 2012, business investment almost stabilised on a yearly basis (+0.1%).

The Belgian as well as the euro area investment cycle declined gradually in the course of 2012 (Graph 11), which is in line with the development of the overall business cycle (Graph 3). However, the similar development of both cycles hides a rather different performance of investment: while Belgian business investment stabilised in 2012, euro area investment declined by almost 4%. The Belgian investment cycle should not start to improve during the first quarters of this year as investment is expected to register a (limited) decline this year, which is confirmed by the FPB leading indicator.

Available indicators in Table 3 point to limited dynamism in investment in the short run, but there seems to be some hope for a gradual recovery during the second half of 2013. Indicators appropriate for the assessment of the current investment climate, such as the order book appraisal in the capital goods industry and the capacity utilisation rate in the manufacturing industry, are at very low levels and have not yet shown any signs of improvement. However, indicators that are instead forward looking, such as demand forecasts in the capital goods industry, which are gradually improving, and figures from the investment survey draw a somewhat more optimistic picture.

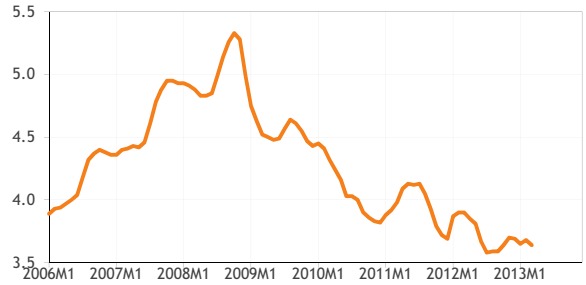
## Housing investment

**Graph 14 - Housing investment growth and leading indicator**




Source: INR/ICN, FPB

**Graph 15 - Mortgage rate (in %)**



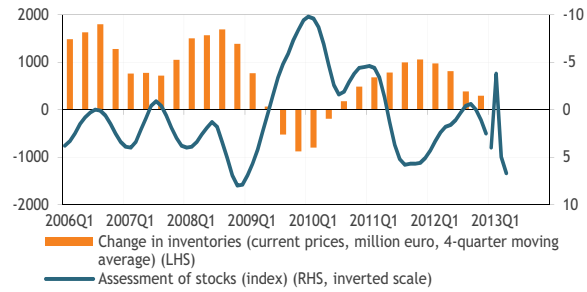

Source: NBB

Belgian residential investment contracted substantially in the course of 2008 and the first half of 2009. This resulted in annual growth rates of -2.7% in 2008 and -8.6% in 2009. Residential investment growth rebounded in 2010 (3.1%), supported by a declining mortgage rate and by a temporary VAT rate reduction for new buildings and renovation projects. However, real housing investment declined again in 2011 (-5.3%) and 2012 (-2.8%), adding to the weakness in GDP growth. In 2012 housing investment was nearly 16% below its 2007 level.

The decline pushed down the (nominal) residential investment-to-GDP ratio from 6.3% on average in 2007-2008 to 5.6% in 2012, which is close to its average of the preceding 20 years (5.5%). A pick-up in the residential investment growth cycle during 2013 is unlikely, as the FPB leading indicator continues its decline until mid-2013. Its components (information from the architects' survey and the total value of mortgage applications) lead the development of housing investment by three to four quarters and started to pick up only recently.

## 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, changes in inventories are only shown at current prices in Graph 16. However, their contribution to real GDP growth can be derived as a residual, taking the contribution of other demand components into account.

Stock building contributed positively to economic growth in 2010 (0.3 %-point) and in 2011 (0.6 %-point). Against the background of weak demand, changes in inventories dragged down economic growth by 0.2 %-point in 2012. In recent months, the number of company directors willing to reduce their stock levels appears to have increased again, which, combined with relatively low business confidence, could put further downward pressure to GDP growth in the near future.

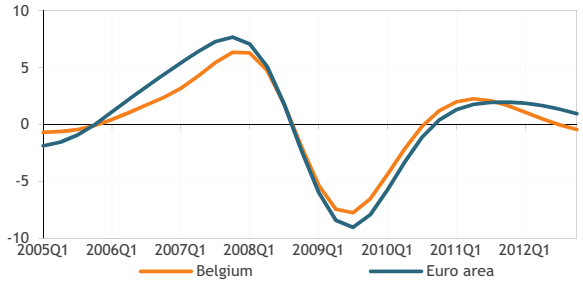
## Foreign trade

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

| | 2011 | 2012 | 2012Q1 | 2012Q2 | 2012Q3 | 2012Q4 | 2012M9 | 2012M10 | 2012M11 | 2012M12 | 2013M1 | 2013M2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Exports - value [1] | 13.4 | 0.9 | 2.5 | -1.2 | 0.3 | 2.1 | -3.4 | 5.8 | 1.1 | -0.8 | 1.5 | -4.8 |
| Imports - value [1] | 15.7 | 0.9 | 3.5 | -0.6 | -1.1 | 1.6 | -5.2 | 7.3 | 2.7 | -5.2 | 0.9 | -5.3 |
| Exports - volume [1] | 3.1 | -2.3 | -2.5 | -4.2 | -2.3 | 0.2 | -6.4 | 3.3 | 0.8 | -4.0 | -0.4 | -3.7 |
| Imports - volume [1] | 3.7 | -4.0 | -4.0 | -5.1 | -5.4 | -1.4 | -8.7 | 4.1 | -0.2 | -7.9 | -2.3 | -5.3 |
| Exports - price [1] | 10.1 | 3.2 | 5.2 | 3.2 | 2.6 | 2.0 | 3.1 | 2.4 | 0.3 | 3.3 | 1.9 | -1.2 |
| Imports - price [1] | 11.7 | 5.0 | 7.8 | 4.8 | 4.5 | 3.0 | 3.8 | 3.1 | 2.9 | 2.9 | 3.3 | 0.0 |

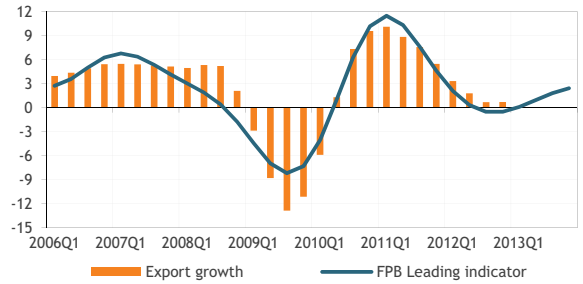
[1] Change (%) compared to same period previous year
Source: INR/ICN

**Graph 17 - Export cycle**



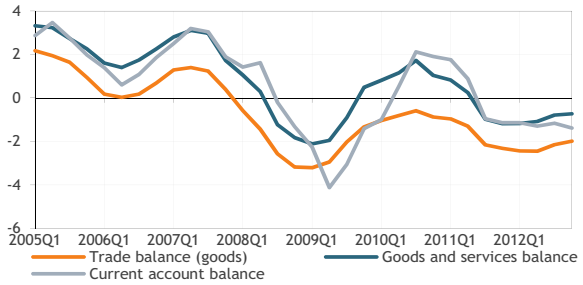

Source: INR/ICN, Eurostat, FPB

**Graph 18 - Export growth and leading indicator**




Source: INR/ICN, FPB

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




Source: INR/ICN, NBB, FPB

The Belgian and the euro area export cycles started to decline in the course of 2011. This evolution continued throughout 2012 as world trade growth slowed down further and as the economy of the euro area entered a recession. However, a gap has opened between the two export cycles. While euro area exports are still slightly above trend, Belgian exports were already below their trend in 2012Q4. Belgian export growth was barely positive last year (0.7%) and fell behind the export growth of its main trading partners: Germany (3.7%), France (3.1%) and the Netherlands (3.3%). Only in Greece and Finland did export growth turn out weaker than in Belgium.

Belgian exports have declined since 2011Q4 under the influence of a deepening recession in the euro area and, more importantly, of a substantial slide in economic activity among our main trading partners. Only in 2012Q1 did exports increase quite heavily (+1.9% qoq), but that was only sufficient to compensate for the strong decline in 2011Q4 (-2.0% qoq). Although export growth is likely to remain weak in 2013Q1, it ought to strengthen moderately in the rest of the year in line with the expected pick-up in economic activity in the euro area. Due to the negative carry-over from last year, annual export growth should, however, remain below 1% in 2013. This scenario is confirmed by our leading indicator (Graph 18).

The combination of higher oil prices and weak exports caused the current account to move into negative territory in 2011. In 2012 this situation subsisted and the current account deficit amounted to 1.4% of GDP. Going forward, this year's decline in oil prices and weak import demand should lead to some improvement in the course of 2013. However, as Belgian cost competitiveness (expressed in terms of unit labour costs) has deteriorated considerably in the last three years, a return to a current account surplus is unlikely in the near term.

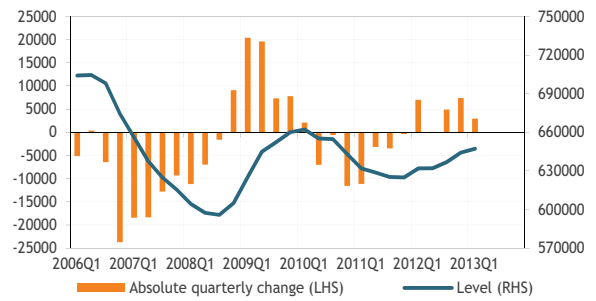
## Labour market

**Table 5 - Labour market indicators**

| | 2011 | 2012 | 2012Q2 | 2012Q3 | 2012Q4 | 2013Q1 | 2012M11 | 2012M12 | 2013M1 | 2013M2 | 2013M3 | 2013M4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unemployment [1][2] | 627.7 | 636.3 | 632.0 | 636.9 | 644.3 | 647.2 | 644.2 | 646.1 | 646.1 | 646.5 | 649.1 | 652.1 |
| Unemployment rate [2][3] | 12.0 | 12.1 | 12.0 | 12.1 | 12.2 | 12.3 | 12.2 | 12.2 | 12.2 | 12.2 | 12.3 | 12.3 |
| Unemployment rate-Eurostat [3][4] | 7.2 | 7.6 | 7.6 | 7.6 | 8.0 | 8.2 | 8.0 | 8.1 | 8.1 | 8.2 | 8.2 | . |

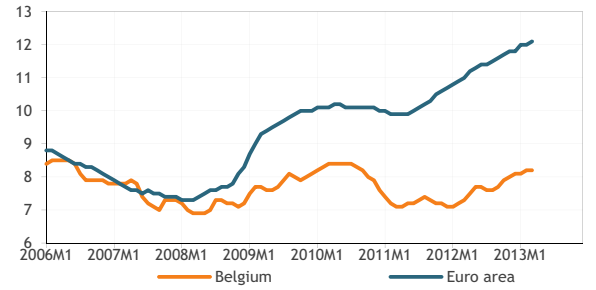
[1] Level in thousands, s.a.; [2] Broad administrative definition; [3] In % of labour force, s.a.; [4] Recent figures are based on administrative data and may be subject to revision
Source: RVA/ONEM, FPS Employment, Eurostat, FPB

**Graph 20 - Evolution of unemployment (incl. older)**



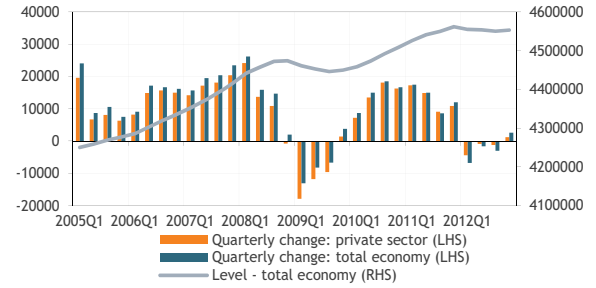

Source: RVA/ONEM

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




Source: Eurostat

**Graph 22 - Evolution of domestic employment**




Source: INR/ICN

Private sector employment shrank by 0.1% in 2012Q1, but stabilized during the three following quarters. Nevertheless it grew by a yearly average of 0.3%, benefiting from a positive carry-over from 2011. Yet again, Belgian private sector employment has shown remarkable resilience in the face of a deteriorating macroeconomic environment, considering that private sector activity actually decreased slightly last year. Thus, the entire post financial crisis period has been characterized by persistently low productivity growth, which permitted job losses to be limited when conditions worsened and allowed robust job growth at times when activity picked up.

Not surprisingly, the renewed slowdown of the economy affects employment growth most in cyclical industries, such as the interim services industry and certain manufacturing industries. However, it should be noted that job losses in the manufacturing industry as a whole should have amounted to 'merely' 1.2% last year, against considerable losses of 4.3% (2009) and 3.2% (2010) in the aftermath of the financial crisis. Indeed, the current downturn is more evenly spread among all components of final demand, whereas the negative shock to activity that followed the financial crisis was concentrated on investments and exports, hitting the manufacturing industry relatively harder. However, fiscal consolidation measures are currently affecting public sector employment, in sharp contrast to the period immediately following the financial crisis.

The surge in measured (broad administrative) unemployment in 2012Q1 is entirely attributable to a change in the registration procedures that took effect in January. Underlying unemployment remained stable in the first half of last year. Apart from the resilience of employment, the rise in unemployment has been kept in check by slower than expected labour force growth. The latter is partly due to less vigorous net migration and partly to renewed negative shocks on participation rates in the younger and middle age bands. However, unemployment has been clearly on the rise since 2012Q3, except for a pause around the turn of the year.

## Prices

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

| | 2011 | 2012 | 2012Q2 | 2012Q3 | 2012Q4 | 2013Q1 | 2012M12 | 2012M12 | 2013M1 | 2013M2 | 2013M3 | 2013M4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Consumer prices: all items | 3.53 | 2.84 | 2.75 | 2.64 | 2.42 | 1.25 | 2.26 | 2.23 | 1.46 | 1.19 | 1.11 | 1.00 |
| Food prices | 2.43 | 2.98 | 2.64 | 2.85 | 3.36 | 3.69 | 3.18 | 3.16 | 3.74 | 3.52 | 3.81 | 4.49 |
| Non food prices | 5.26 | 2.74 | 2.67 | 2.21 | 1.64 | -0.37 | 1.39 | 1.33 | 0.16 | -0.34 | -0.94 | -1.17 |
| Services | 2.23 | 3.17 | 3.19 | 3.38 | 3.17 | 2.10 | 3.11 | 3.12 | 1.91 | 1.98 | 2.41 | 1.93 |
| Rent | 1.08 | 1.52 | 1.50 | 1.60 | 1.54 | 1.27 | 1.55 | 1.55 | 1.44 | 1.12 | 1.26 | 1.38 |
| Health index | 3.06 | 2.65 | 2.63 | 2.39 | 2.27 | 1.27 | 2.17 | 2.16 | 1.48 | 1.09 | 1.25 | 1.26 |
| Brent oil price in USD (level) | 111.3 | 111.7 | 108.4 | 109.7 | 110.1 | 112.5 | 109.2 | 109.4 | 112.9 | 116.3 | 108.4 | 102.3 |

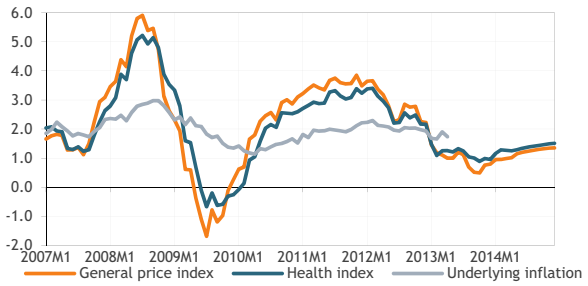
Source: FPS Economy, Datastream

**Table 7 - Monthly inflation forecasts**

| | 2013M1 | 2013M2 | 2013M3 | 2013M4 | 2013M5 | 2013M6 | 2013M7 | 2013M8 | 2013M9 | 2013M10 | 2013M11 | 2013M12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Consumer prices: all items | 121.63 | 122.02 | 122.19 | 122.14 | 122.10 | 122.07 | 122.18 | 122.20 | 122.20 | 122.39 | 122.58 | 122.63 |
| Consumer prices: health index | 120.00 | 120.27 | 120.50 | 120.49 | 120.60 | 120.58 | 120.69 | 120.72 | 120.72 | 120.94 | 121.14 | 121.21 |
| Moving average health index | 119.97 | 120.07 | 120.21 | 120.32 | 120.47 | 120.54 | 120.59 | 120.65 | 120.68 | 120.77 | 120.88 | 121.00 |
| | 2014M1 | 2014M2 | 2014M3 | 2014M4 | 2014M5 | 2014M6 | 2014M7 | 2014M8 | 2014M9 | 2014M10 | 2014M11 | 2014M12 |
| Consumer prices: all items | 122.79 | 123.19 | 123.40 | 123.38 | 123.51 | 123.54 | 123.69 | 123.75 | 123.79 | 124.01 | 124.23 | 124.29 |
| Consumer prices: health index | 121.39 | 121.82 | 122.03 | 122.00 | 122.16 | 122.19 | 122.36 | 122.42 | 122.46 | 122.71 | 122.95 | 123.04 |
| Moving average health index | 121.17 | 121.39 | 121.61 | 121.81 | 122.00 | 122.10 | 122.18 | 122.28 | 122.36 | 122.49 | 122.64 | 122.79 |

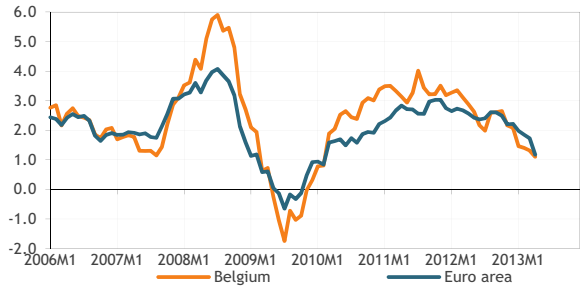
Source: Observations (up to 13M4): FPS Economy; forecasts: FPB

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




Source: FPS Economy, from 13M5 on: forecasts FPB

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




Source: Eurostat

Headline inflation, as measured by the yoy growth rate of the national consumer price index (NCPI), declined from 3.5% in 2011 to 2.8% in 2012. This was mainly due to a decline in the yoy growth rate of oil prices in euro from 33% in 2011 to 9% in 2012. Moreover, prices for electricity and natural gas were legally prohibited from increasing above their March 2012 level until the end of 2012. Simultaneously, consumers were encouraged to compare prices between suppliers in order to enhance competition on the energy market. This further reduced the average consumer price of gas and electricity.

Despite a hike in food prices and an increase of excises on alcoholic beverages and tobacco, inflation has fallen considerably from January 2013 onwards. This is due to several factors. Firstly, yoy growth of oil prices in euro has fallen further and amounted to -15% in April. Secondly, contrary to what was expected, some energy suppliers with a large market share lowered their prices in January 2013 (after the end of the prohibition on raising gas and electricity prices). Finally, it was decided to take price reductions during sales periods into account to calculate the NCPI, which explains the sudden fall in yoy growth of non-food prices in Table 6. This does not lead to a noticeable decline in the NCPI during the sales months (January and July) as their effect is smoothed out over the whole year.

Inflation is forecasted to amount to 0.9% in 2013 and 1.2% in 2014, while health index growth should be 1.1% and 1.4% respectively. The current pivotal threshold for public wages and social benefits (122.01) should be crossed in June 2014.

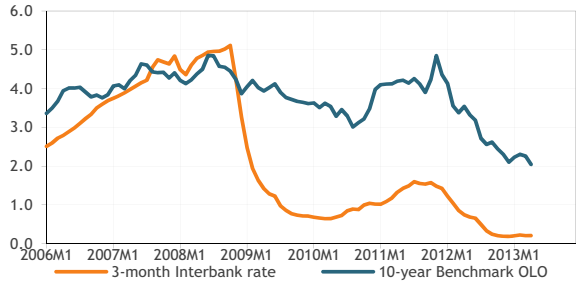
## Interest rates

**Table 8 - Interest rates**

| | 2011 | 2012 | 2012Q2 | 2012Q3 | 2012Q4 | 2013Q1 | 2012M11 | 2012M12 | 2013M1 | 2013M2 | 2013M3 | 2013M4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Short-term money market rates (3 months)** | | | | | | | | | | | | |
| Euro area (Euribor) | 1.39 | 0.57 | 0.70 | 0.36 | 0.20 | 0.21 | 0.19 | 0.19 | 0.20 | 0.22 | 0.21 | 0.21 |
| United States | 0.34 | 0.43 | 0.47 | 0.42 | 0.32 | 0.29 | 0.31 | 0.31 | 0.30 | 0.29 | 0.28 | 0.28 |
| Japan | 0.19 | 0.19 | 0.20 | 0.19 | 0.19 | 0.16 | 0.19 | 0.18 | 0.17 | 0.16 | 0.16 | 0.16 |
| **Long-term government bond rates (10 years)** | | | | | | | | | | | | |
| Belgium | 4.22 | 2.99 | 3.35 | 2.63 | 2.28 | 2.26 | 2.30 | 2.10 | 2.23 | 2.30 | 2.26 | 2.05 |
| Germany | 2.65 | 1.55 | 1.50 | 1.42 | 1.42 | 1.51 | 1.39 | 1.36 | 1.52 | 1.60 | 1.41 | 1.25 |
| Euro area | 3.86 | 3.22 | 3.38 | 3.16 | 2.80 | 2.72 | 2.83 | 2.67 | 2.68 | 2.81 | 2.68 | 2.46 |
| United States | 2.77 | 1.78 | 1.81 | 1.62 | 1.69 | 1.93 | 1.64 | 1.71 | 1.88 | 1.97 | 1.94 | 1.73 |
| Japan | 1.11 | 0.85 | 0.88 | 0.79 | 0.75 | 0.71 | 0.74 | 0.73 | 0.78 | 0.74 | 0.59 | 0.57 |

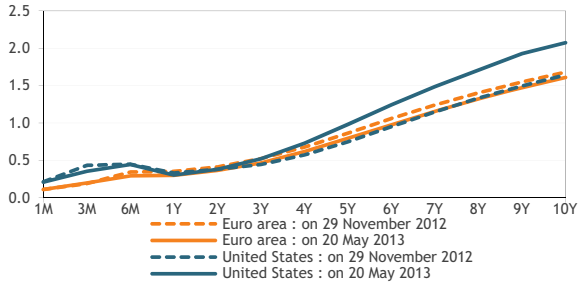
Source: Datastream

**Graph 25 - Interest rate levels in Belgium (in %)**




Source: NBB

**Graph 26 - Yield curves for the euro area and the US (in %)**




Source: Datastream, data based on interest rate swaps

Continuously weak economic activity and a substantial slide in the inflation rate led the ECB to cut its policy rate by 25 basis points to 0.5% in the beginning of May (the first rate change since July 2012). The effectiveness of this cut in stimulating the economies worst-hit by the crisis could be limited as low policy rates are hardly passed on to businesses and households. Hence, pressure is mounting for the ECB to take bolder measures, such as providing credit directly to small businesses in these countries.

The US Federal Reserve has kept its policy rate within a range of 0-0.25% for 4.5 years now and it intends to continue to do so for at least as long as the unemployment rate remains above 6.5% (currently at 7.6%). It furthermore continues to purchase mortgage-backed securities at a pace of USD 40bn per month and longer-term government bonds at a pace of USD 45bn per month to maintain downward pressure on longer-term interest rates and support mortgage markets.

From mid-2012 onwards, US long-term interest rates moved higher as the fading fear of a collapse of the euro area reduced interest in US Treasuries as a safe haven. Recently, new signs of weakness in the US and world economy and the intention of the Bank of Japan to start a new massive quantitative easing program exerted downward pressure on US long-term interest rates. The average European long-term interest rate has been declining since mid-last year as the OMT announcement of the ECB led to a hefty decline in bond yields in the peripheral countries. This suggests that the soaring of peripheral bond yields up to mid-2012 had little to do with solvency concerns and were instead a case of market panic due to the fact that euro area members do not have a lender of last resort and were subject to liquidity crises. For Belgium, the 10Y government bond yield dropped below 2% in the course of April 2013.

## Exchange rates

**Table 9 - Bilateral exchange rates**

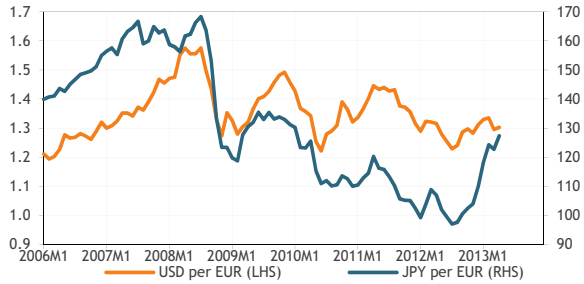
| | 2011 | 2012 | 2012Q2 | 2012Q3 | 2012Q4 | 2013Q1 | 2012M11 | 2012M12 | 2013M1 | 2013M2 | 2013M3 | 2013M4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USD per EUR | 1.392 | 1.286 | 1.283 | 1.252 | 1.298 | 1.320 | 1.283 | 1.312 | 1.330 | 1.335 | 1.295 | 1.303 |
| UKP per EUR | 0.868 | 0.811 | 0.811 | 0.792 | 0.808 | 0.851 | 0.804 | 0.813 | 0.833 | 0.863 | 0.859 | 0.851 |
| JPY per EUR | 111.0 | 102.7 | 102.8 | 98.4 | 105.5 | 121.8 | 104.0 | 110.0 | 118.3 | 124.3 | 122.7 | 127.3 |

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

| | 2011 | 2012 | 2012Q2 | 2012Q3 | 2012Q4 | 2013Q1 | 2012M10 | 2012M11 | 2012M12 | 2013M1 | 2013M2 | 2013M3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Euro | 99.2 | 93.2 | 93.4 | 90.9 | 93.4 | 97.0 | 93.2 | 92.7 | 94.4 | 96.4 | 98.1 | 96.6 |
| Growth rate [1] | -0.8 | -6.1 | -1.5 | -2.7 | 2.8 | 3.8 | 0.9 | -0.6 | 1.8 | 2.1 | 1.8 | -1.5 |
| US dollar | 94.2 | 97.3 | 98.0 | 98.1 | 96.7 | 98.7 | 96.2 | 97.2 | 96.5 | 97.2 | 98.5 | 100.6 |
| Growth rate [1] | -5.8 | 3.3 | 1.3 | 0.1 | -1.4 | 2.2 | -0.1 | 1.0 | -0.7 | 0.7 | 1.4 | 2.1 |
| Japanese yen | 105.7 | 108.4 | 108.5 | 111.0 | 105.5 | 92.7 | 108.6 | 106.0 | 101.8 | 95.2 | 91.5 | 91.0 |
| Growth rate [1] | 5.7 | 2.6 | 0.0 | 2.2 | -5.0 | -12.1 | -1.5 | -2.4 | -4.0 | -6.5 | -3.9 | -0.5 |

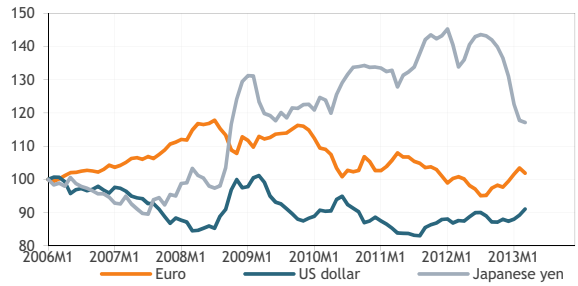
[1] Change (%) compared to previous period
Source: BIS, NBB

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




Source: NBB

**Graph 28 - Nominal effective exchange rates (2006M1=100)**




Source: NBB, BIS

The euro depreciated considerably against the dollar (and most other currencies) in the first seven months of 2012 as the fear of a break-up of the euro area mounted. This downward move was stopped at the end of July, by which time a low of just over USD 1.20/EUR was reached, when ECB president Draghi declared he would do whatever it takes to preserve the single currency. From that moment on, the euro was on an upward trend against the dollar, reinforced by the third round of quantitative easing in the US. The euro lost terrain again in March and April as a weakening in economic indicators led to increasing expectations of an ECB rate cut.

The appreciation of the euro since July 2012 was broad-based as it appreciated against all major currencies. In nominal effective terms, the euro has gained some 8% since then. The biggest appreciations were registered vis-à-vis the British pound and the Japanese yen.

The attractiveness of the British pound for foreign investors was reduced by a combination of weak growth, relatively high inflation (2.8% against 1.8% for the euro area), mounting inflation expectations and a credit downgrade by the Moody's rating agency.

The Japanese yen depreciated under the influence of a new massive monetary easing plan of the Bank of Japan as it seeks to end nearly two decades of deflation. In order to reach its new 2% inflation target, the Bank of Japan announced that it would double its monetary base and government bond holdings in two years' time. This expected flooding of the market with extra yen weighed heavily on the currency.

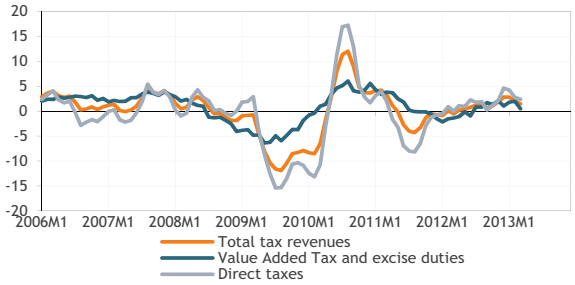
# Tax indicators

**Table 11 - Tax revenues [1]**

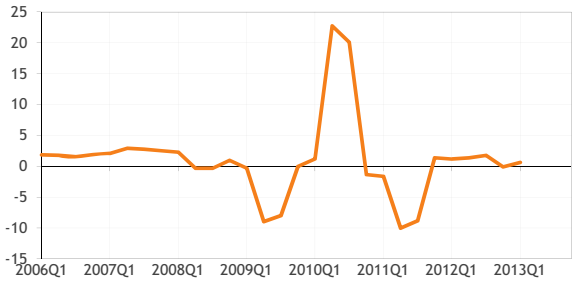
| | 2011 | 2012 | 2012Q2 | 2012Q3 | 2012Q4 | 2013Q1 | 2012M10 | 2012M11 | 2012M12 | 2013M1 | 2013M2 | 2013M3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total [2], of which: | 2.8 | 5.7 | 7.7 | 0.2 | 8.3 | -2.5 | 6.1 | 10.0 | 9.0 | 0.6 | -2.5 | -6.1 |
| Direct taxes, of which: | 2.8 | 7.5 | 10.8 | -3.0 | 13.8 | -4.3 | 7.5 | 15.6 | 18.3 | 1.8 | -5.1 | -13.5 |
| Withholding earned income tax (PAYE) | 5.0 | 2.7 | 3.9 | 6.1 | -1.9 | 3.9 | -0.3 | 13.6 | -12.1 | 6.6 | 6.1 | -2.5 |
| Prepayments | 0.7 | -0.5 | -0.9 | 1.8 | -1.1 | . | -7.3 | . | 5.2 | . | . | . |
| Value Added Tax and excise duties | 1.9 | 3.8 | 4.1 | 5.2 | 2.5 | -1.2 | 3.5 | 7.0 | -0.3 | -0.7 | 3.5 | -4.4 |

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

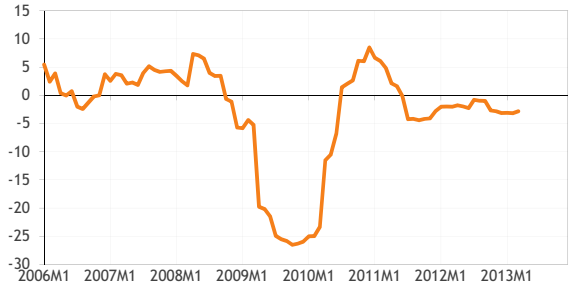
**Graph 29 - Real tax revenues [3]**




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




**Graph 31 - Real prepayments [3]**




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

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

Despite the quasi stabilisation in economic activity since 2012Q3, total tax revenue showed a positive nominal growth rate in 2012. The package of tax measures decided for the 2012 Budget (on: withholding tax on dividends and interest earnings; corporate tax; taxation of company cars; VAT, excise duties and other indirect taxes; and a strengthened fight against tax fraud) contributed to this outcome.

In 2013, tax bases should remain depressed in the context of the persistent economic stagnation.

More specifically, PIT revenue will be affected by the zero growth rate of real wages imposed by the government for 2013-2014, by the stagnation of employment in the private sector and the decrease in employment in the public sector, and by an indexation of the progressive PAYE scales on the basis of the previous year's (2012) higher inflation. Taxation on interest earnings will be adversely affected by the recent fall in interest rates and by the propensity of investors to favour untaxed savings accounts.

According to recent FPB forecasts, indirect tax revenue should suffer from a decrease in energy prices, an increase in the household saving rate and a real estate market that is weak in both volume and price. In 2013Q1, the yoy nominal growth rate for VAT, excise duties, registration duties and customs duties was negative.

Only CIT revenue could benefit from favourable tax base effects, as a result of the wage moderation and an improvement in the terms of trade. However, this does not materialize in the figures for prepayments by businesses in April 2013 (April being the first due date), which show a nominal yoy increase of only 0.5% (+1.5% from incorporated businesses and 1.6% from the self-employed).

The tax measures from the 2013 federal budget should support tax receipts through an increase in the withholding tax rate on dividends and interest (from 21% to 25%), changes to the tax amnesty regulations, adjustments to the corporate tax system (concerning the risk capital deduction and the taxation of capital gains), increased excise duties on tobacco and alcohol and increased taxation on life insurance investment premiums.

## Updated population projections 2012-2060

"Population Projections 2012-2060" confirms the long-term trends identified in the latest demographic projection exercises worked out for Belgium: continuing progress in life expectancy, recovery of fertility rates from the very low level of the nineties and historically high values for international immigration. Nevertheless, the scale of these two last phenomena is revised downwards compared to the 2011 and 2012 population projections.

Since 2008, population projections for Belgium have been prepared jointly by Statistics Belgium and the Federal Planning Bureau and are regularly updated. This current update relies on the official figures of the Belgian population on 1 January 2012 and takes recent developments into account.

Life expectancy at birth for men and women is projected to keep increasing, in line with the trends of the last 20 years, although at a very slowly decreasing pace. It should increase from 78.2 years and 83.4 years in 2011 to 86.7 years (+8.5 years) and 89.1 years (+5.7 years) in 2060 for men and women respectively, confirming the on-going convergence of the life expectancies of men and women.

The fertility rate has been rising nearly continuously, after levelling off in 1995 at a level slightly below 1.6 children per woman on average. It is assumed that it will stabilize around the relatively high level reached in 2010-2011, namely slightly above 1.8 children per woman.

As long as the a sufficient share of the baby-boom generation has not entered the age classes with the highest death probabilities, the natural balance (difference between the number of births and the number of deaths) should remain clearly positive (more than 20 000 per year for the next ten years). This balance should decrease afterwards and become approximately zero from 2045 onwards.

Concerning international migrations, the external migration balance should be around 60 000 for the next few years, an unprecedented order of magnitude before the end of the decade 2000-2010. Although historically quite high, this figure is 20 000 lower than the 2010 record figure (80 000). This downturn reflects notably some new policy initiatives restricting the recognition of refugees on the grounds of family reunification or on humanitarian grounds. As regards the long run, macroeconomic scenarios for Europe are taken into account to assess the development of the relative attractiveness of the Belgian economy. These scenarios usually assume a slow convergence in living standards across Europe, resulting in a sizeable decrease in the external migration balance (35 000 in 2020; 15-20 000 after 2030).

Nevertheless, the external migration balance should thus remain the main source of population growth and the only one at the end of the projection period.

All in all, the total population in Belgium should climb from 11 million in 2012 to 12.1 million in 2030 and 12.7 million in 2060. Compared with our previous forecast, the growth in the total population has been revised downwards (+9.5% instead of +13% between 2012 and 2030; +16% instead of +25% between 2012 and 2060), due to the downward revision of fertility and immigration assumptions. Not surprisingly, the projection confirms that ageing remains a daunting challenge: the old-age dependency ratio (population aged 65 and over as a percentage of the population aged 15-64) should grow from 26.6% in 2012 to 44.4% in 2060.

Concerning the distribution of the population across the regions, a slow shift from Flanders to Brussels and Wallonia is expected. In 2060, Flanders should account for 56.2% of the total population (57.5% in 2012), Wallonia for 32.8% (32.1% in 2012) and Brussels for 11% (10.3% in 2012).

*"Perspectives de population 2012-2060 / Bevolkingsvooruitzichten 2012-2060",*
*J. Duyck, M. Englert, L. Masure, J.-M. Paul (FPB) and Directorate-general Statistics and Economic information, May 2013.*

## Does Offshoring Contribute to Reducing Air Emissions? Evidence from Belgian Manufacturing

Since the mid-nineties, production-related air emissions in Belgian manufacturing have been reduced substantially and the pace of the reduction has been fastest for domestic intermediates. It is widely debated whether offshoring has played a role in this reduction by replacing domestic intermediates by imported intermediates. This working paper develops a decomposition analysis to measure the contribution of offshoring - the share of imported intermediates in total intermediates - to the fall in air emission intensities for domestic intermediates.

Figures from the Belgian Air Emission Accounts show that between 1995 and 2007 the fall in production-related air emissions in Belgian manufacturing amounts to 14% for greenhouse gas (GHG) emissions, 35% for acidifying (ACID) emissions and 33% for tropospheric precursor (TOFP) emissions. It can be shown that the pace of the reduction has been fastest for the production of goods used as intermediates. As production processes become ever more fragmented internationally, domestic intermediates are replaced by imported intermediates and the share of imported intermediates in total intermediates rises. This is also called offshoring and may have contributed to the reduction in emissions for goods used as intermediates. This may occur regardless of the underlying cause of offshoring. In other words, even if the motivation for offshoring is not related to air pollution, offshoring may still contribute to reducing production-related air emissions in Belgium.

This paper develops a decomposition analysis to measure the reduction in emission intensities in the manufacturing sector that can be attributed to offshoring. Emission intensities are measured as emissions per unit of output. The decomposition splits changes in these intensities into four terms: a technique effect, which measures the contribution of changes in production technologies; an efficiency effect, which accounts for shifts in the product mix of the domestic intermediates used in the production process; an offshoring effect, which measures the contribution of the substitution of imported for domestic intermediates; and an industry composition effect, which accounts for shifts in output between industries. The emission intensities and the terms of the decomposition for the three types of air emissions (GHG, ACID and TOFP) are calculated based on data for 23 manufacturing industries from two datasets compiled at the Federal Planning Bureau: the Air Emission Accounts and a time series of constant price supply-and-use tables. The period covered is 1995-2007. According to the results of the decomposition, changes in technology (the technique effect) make by far the largest contribution to the fall in emission intensities for all three types of air emissions in the Belgian manufacturing sector. The results also show that 27% of the fall in the intensity of greenhouse gas emissions, 20% of the fall in the intensity of acidifying emissions and 20% of the fall in the intensity of tropospheric precursor emissions in Belgian manufacturing between 1995 and 2007 can be attributed to the growing use of imported intermediates (the offshoring effect).

The analysis in this paper thus highlights the specific role played by trade in intermediates in avoiding emissions of air pollutants in the home country. The decomposition that has been developed constitutes the first attempt to measure the size of the contribution of offshoring to this fall. However, this does not imply a reduction in emissions at the global scale: the emissions have simply been displaced as the intermediates are now produced abroad. Depending on the foreign technology, the global level of emissions may be higher than before offshoring. Moreover, the international fragmentation of production and offshoring increase the distance travelled by goods before reaching the final consumer, thereby giving rise to extra air pollution emitted due to transportation.

*"Does Offshoring Contribute to Reducing Air Emissions? Evidence from Belgian Manufacturing",*
*B. Michel,*
*Working Paper 5-13, May 2013.*

## Other Recent Publications

Working Paper 3-13, February 2013

"Mesures prises en 2012 dans les branches chômage et pension : évaluation des effets selon le genre / Maatregelen genomen in 2012 in de takken werkloosheid en pensioenen: evaluatie van de effecten volgens geslacht",

G. Dekkers, R. Desmet, N. Fasquelle, M.-J. Festjens, Ch. Joyeux, B. Scholtus, S. Weemaes

Working Paper 2-13, January 2013

"Machines that go 'ping': medical technology and health expenditures in OECD countries",
P. Willemé, M. Dumont

## Recent history of major economic policy measures

**May 2013**

The ECB lowered its main refinancing rate by 25 basis points to 0.5%.

**April 2013**

In a 2013-2016 update to the Stability Programme, the Belgian authorities committed to reducing the headline deficit to 2.5% of GDP in 2013 by improving the structural balance by 1% of GDP as compared to 2012, and to hold the public debt at 100% of GDP. The MTO (medium term objective), a surplus of 0.75% of GDP in structural terms, should be reached in 2016.

**March 2013**

For the 2013 budget review, considering the downward revision of growth and inflation prospects for 2013 to, respectively, 0.2% and 1.0% (instead of 0.7% and 1.8% as initially forecasted), the federal government decided to relax the deficit target to 2.5% of GDP (instead of the initial 2.15% of GDP target). This applies to Entity I (federal government and social security) since the federal government assumes budgetary balance at Entity II level (sub-federal entities). Some measures complementing those taken in the initial budget were also decided to constrain expenditure growth further and raise tax revenue. For instance, health care expenditure has been reduced by 0.63% yearly. Accordingly, the real growth rate norm for the financing of the health care budget will be limited to 1.37% instead of 2% in 2013 and 2.37% instead of 3% in 2014 (government decision on 26 April 2013).

The federal Parliament approved two bills on product market competition. One reforms competition policy, the other strengthens price monitoring. The institutional structure of the competition authority will be simplified. The three presently separate bodies (for investigation, prosecution and decision, respectively) will be unified into the Belgian Competition Authority, while securing the independence of the three functions. The reform will improve transparency, and shorten and simplify the procedures, while maintaining the current rights of defense. The Price Observatory - established in 2009 - receives the power to notify the new competition authority when it has detected unusual price and/or margin changes or other structural market malfunctioning. The competition authority may then take measures to correct the situation. Both institutions will receive more funding. The approved bills will be inserted into the Code of Economic Law as Books IV and V.

In the domain of pensions, two measures were taken. The pension bonus has been reformed (from 1 January 2014) to take into account the stricter conditions of access to early retirement that came into effect with the 2011 pension reform. The reform will also aim to make the system more incentivizing (progressive bonus). Furthermore, the pension bonus will no longer be transferred to the surviving partner. From 1 April 2013, the minimum pension (household rate) will increase for the self-employed scheme (under the government agreement which provides for the gradual alignment of the minimum pensions of self-employed workers to those of wage earners).

The federal Parliament unanimously ratified the Treaty relating to the establishment of the 'Europe Central' functional airspace block (FABEC) between Germany, Belgium, Luxembourg, the Netherlands and Switzerland. In telecommunications, mobile operators will be charged a non-compliance penalty of EUR 3 per day per customer when they delay the transfer of a number to another operator.

**February 2013**

The government endorsed proposals from the social partners concerning wages. The EUR 400 million budget made available annually (EUR 300 million in 2013) for increasing social security contributions (SSC) cuts will be used mainly to increase the across-the-board EUR 400 employers' SSC cut per full-time equivalent employee in the for-profit sector (to about EUR 440) and to increase employees' SSC cuts marginally. The present 6% discount on the minimum gross wage for employees aged less than 21 relative to the minimum gross wage for 21-year olds will be phased out to 4% in 2013, 2% in 2014, and 0% in 2015. One-off performance-related wage bonuses, linked to performance targets set by firms, will be made largely exempt from personal income taxes and SSCs.

The European authorities have adopted a new set of rules (the so-called "Two-Pack" legislation), in order to further strengthen the surveillance mechanisms in the euro area. These rules add to the "Six-Pack" adopted in September 2011 and the Fiscal Compact of January 2012. The "Two-Pack" consists, first, of a Regulation on the monitoring of draft budgetary plans that complements the preventive arm of the Stability and Growth Package (SGP). Under this regulation, inter alia, euro-area Member States shall submit their draft budgetary plan for the following year to the Commission and the Eurogroup before 15 October. If the Commission assesses that the draft budgetary plan shows serious non-compliance with the SGP, the Commission can require a revised draft budgetary plan. The second Regulation enhances the surveillance of euro-area Member States experiencing or threatened with serious difficulties with respect to their financial stability.

For the calculation of pensions after 1 January 2013, some assimilated (inactivity) periods will no longer be counted as based on the fictional salary but will instead be based on the minimum annual allowance.

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 |
| EC | European Commission |
| ECB | European Central Bank |
| EU | European Union |
| FEBIAC | 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) |