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### **Belgian Economy – Financial crisis: causes and initial consequences**

Federal Planning Bureau

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SHORT TERM UPDATE

3-08

Quarterly Newsletter  
October 2008

Headlines Belgian Economy

Special Topic in this issue

Financial crisis: causes and  
initial consequences

# Quarterly Newsletter of the Federal Planning Bureau

*Short Term Update (STU) is the quarterly newsletter of the Belgian Federal Planning Bureau. It contains, in English, 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

*Since mid-September, the financial crisis has entered an exceptionally turbulent new phase. The US and European authorities have had to take extraordinary measures in order to deal with solvency and liquidity problems in the banking sector. As financial conditions are likely to remain difficult, it is obvious that the crisis will have large negative effects on the world economy, although the size of these effects is currently very difficult to grasp due to huge uncertainties concerning the magnitude and the duration of the crisis.*

*This uncertainty explains the volatility of most indicators, which makes it currently very difficult to establish credible economic forecasts. The latest short-term forecasts of the FPB were finalised in the first half of September, i.e. before the aggravation of the financial turbulence. According to these forecasts, Belgian GDP growth should amount to 1.6% in 2008 and slow down to 1.2% in 2009. The 2009 government budget is based on this outlook.*

*In the light of recent financial sector developments, the latest FPB forecasts should be revised downwards, in line with revisions of economic growth by national and international institutions. In fact, the weakening of economic growth in the course of 2008 will probably be stronger than expected, while the subsequent recovery could take longer to materialise and could lack strength. The channels through which the financial crisis is affecting the real economy are discussed in the Special Topic of this Short Term Update.*

*Belgian business and consumer confidence have dropped to their lowest level in more than five years due to weakening economic growth and the financial crisis, which are tending to reinforce one another. Moreover, consumer confidence has suffered from the high number of lay-offs in large Belgian companies. On the other hand, the decline in oil prices and the depreciation of the euro have limited the worsening of sentiment somewhat through their positive effect on households' purchasing power and export competitiveness.*

*Inflation forecasts for 2009 have been revised downwards since September, which is the result of two counteracting factors. In fact, the downward effect of falling oil prices on inflation is partly compensated by the stronger than expected increase in underlying inflation. According to our end-of-October inflation update, the increase in the national index of consumer prices should slow down from 4.6% in 2008 to 1.9% in 2009.*

*STU 3-08 was finalised on 31 October 2008.*

**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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## Financial crisis: causes and initial consequences

During the summer of 2007, the combination of declining house prices in the United States and weakening economic growth made the initial problems in the financial sector surface. Although the costs of the financial crisis were immediately estimated at several hundred billion USD, it was thought that the probability of worldwide contagion in the financial sector, initiating a serious slowdown of the world economy was relatively limited. Since then, the financial crisis has turned out to be the most severe since that of the 1930s and has spread throughout the world. This Special Topic will give an overview of the causes and the consequences of the current financial crisis.

### New financial instruments created over the last decade

During the '90s, financial sector legislation changed profoundly. Financial institutions were allowed to combine activities such as deposit banking and investment banking, which had been required to remain separate before. At the same time, financial institutions started to create new products in order to compensate for the profit squeeze they faced due to disintermediation and increased competition in the banking sector.

The most important innovation in the light of the current financial crisis was the securitisation of mortgage loans. In this process, banks do not keep the mortgage loans on their balance sheet as such, but bundle them in so-called mortgage backed securities (MBS), which are sold to investors. These MBS are often repackaged i.e. split up and merged with other loans to form asset backed securities (ABS). In a next step, ABS can be divided into tranches and regrouped to create collateralised debt obligations (CDO), which can be repackaged further. Hence, financial institutions bought groups of securitised assets of which the quality was particularly difficult to assess as the underlying assets were a mix of subprime loans (loans with a high default risk) and higher quality debt. Generally, however, these financial products were assigned high ratings and were thus not considered as risky investments. In fact, even subprime mortgage loans were not seen as particularly unsafe because the price of the collateral (houses) was expected to continue to rise. Moreover, most CDO were covered by credit default swaps (CDS), allowing the CDO holders to sell their securities at a predetermined price in case of default, which reduced the perceived risk even further.

As a result, balance sheets of financial institutions were filled with assets of which the quality turned out to be lower than was perceived before the financial crisis. This implies that banks granted more loans than they

should have done had they correctly assessed of the risks related to their assets.

### Decline in US house prices initiated the financial crisis

In the second half of 2006, the US business cycle entered a declining phase, an increasing number of households defaulted on their mortgage loans and house prices initiated a downward path. Consequently, institutions that depend heavily on mortgage loans faced serious problems. America's mortgage giants Fannie Mae and Freddie Mac had to be nationalised in September 2008. Moreover, the value of MBS and related derivatives declined rapidly and many CDS had to be honoured, bringing the issuers of CDS into difficulties as their capital base was too low to meet all claims. This caused the bankruptcy of Lehman Brothers and the bail-out of AIG (the world's largest insurance company) by the US government. This sent a shockwave through the international financial sector as a part of the structured products on banks' balance sheets risked becoming worthless in case of default. This forced banks to write down (part of) their investment portfolio, which compelled them to rebuild their capital bases by means of new equity issues.

These events and the difficulty of evaluating the risk exposure of financial institutions due to the complexity of the structured products, generated extreme uncertainty and a loss of confidence between the financial and the non-financial sector as well as between financial institutions. As this has put the foundations of the financial system under stress, the financial sector worldwide is suffering from this crisis.

### Effects on the financial markets

The lack of confidence between banks has seriously disrupted the interbank market. As the supply of funds has been significantly reduced, interbank rates have risen to levels far above the policy rates of central banks. In order to try to restore the functioning of the interbank market, central banks have pumped hundreds of billions of dollars and euros into the interbank markets, national governments have injected capital into banks facing liquidity or solvability problems, and some governments of European countries have guaranteed the refund of all money that banks in their country have borrowed on the interbank market. These interventions have led to some easing of the interbank rate, although it remains very high.

In order to reassure bank clients and to mitigate the risk of a bank run, which would cause serious liquidity

problems in the financial sector, deposit insurance levels have been raised worldwide. In the European Union, the minimum insurance was raised from EUR 20,000 to EUR 50,000. Belgium and some other European countries opted to raise the threshold even further to EUR 100,000.

The pessimism of financial market participants has led to a so-called “flight to quality”, which occurs when equities and corporate debt (commercial paper and corporate bonds) in investment portfolios are massively replaced by safer investments (treasury bills and government bonds). This has triggered a decrease in interest rates on debt issued by governments while rates on corporate debt have gone up, implying a noticeable increase in the corporate bond spread (difference between interest rates on corporate and government bonds). The fact that even very creditworthy corporate borrowers in the US recently found it impossible to sell short-term debt illustrates investors’ risk aversion. Therefore, the Federal Reserve decided to start providing loans to the non-financial sector for the first time ever.

The spreading of the financial crisis to economies outside the US went hand in hand with continuous downgrading of economic growth projections and downward revisions of future oil demand. This brought oil prices down from more than USD 140 per barrel in July to less than USD 70 in the course of October, the lowest level in more than a year.

As contagion by the crisis of the euro area banking sector has recently turned out to be worse than expected, downward revisions of economic growth have been larger in the euro area than in the US. Consequently, the euro has lost more than 15% of its value against the US dollar since mid-July. The euro has witnessed a similar drop against the Japanese yen.

### Effects on the real economy

Although it is clear that the current crisis will generate large negative effects on the real economy, it remains very difficult to grasp the exact magnitude of these effects as it is currently impossible to evaluate how long it will take before the extreme uncertainty related to the financial crisis starts to fade.

The most important channel through which the real economy will be affected is the credit crunch and the associated significant increase in financing costs. Financial institutions have to restore their balances, forcing them to be less willing to lend money. Moreover, due to the problems on the interbank market, they are paying much higher rates to obtain funds. Consequently, banks are becoming more reluctant to grant loans, and if they

do so, they are likely to charge higher rates. This will certainly restrain housing investment, consumption of durable goods and investment by SME’s. Firms that turn to the stock or bond market to finance investments will face the same difficulties because these markets have almost dried up. Self-financing of investment might also become more difficult as firms’ profits are expected to be squeezed due to the economic downturn.

The decline in financial and housing wealth will negatively affect private consumption. It should be stressed, however, that the propensity to consume out of financial and housing wealth is typically higher in Anglo-Saxon economies than in Western Europe. The importance of this wealth effect will also depend heavily on the duration of the financial crisis and the strength of the subsequent recovery of the financial markets.

The turmoil on the financial markets is weighing heavily on confidence indicators in the US as well as in Europe. Consumer and business confidence have reached their lowest level since the beginning of 2002, when indicators plummeted after the 9/11 attacks. This will reinforce the negative effects of the credit channel as it will lead to the postponement of investment projects and purchases of durable consumer goods. The only factor that is currently able to support confidence indicators is the decline in oil prices, which is shoring up households’ purchasing power somewhat and reducing downward pressures on firms’ profit margins.

The combination of these factors will also negatively influence world trade growth and thus exports in most economies. However, the recent depreciation of the euro could help to mitigate this effect in euro area countries.

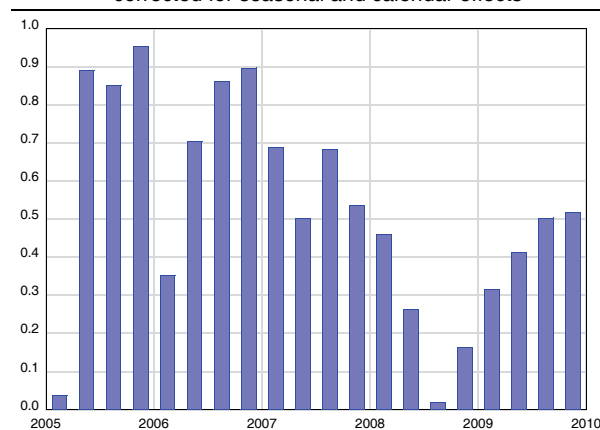
### How have macroeconomic forecasts been influenced?

The current state of the economy is very unstable and difficult to evaluate. Consequently, it is particularly complicated to produce short-term forecasts at present. GDP growth forecasts have generally been revised drastically downwards since the aggravation of the turbulence on the financial markets at the end of 2008Q3. Revisions for 2008 have been rather limited, while 2009 is affected more seriously. The IMF revised its forecasts for 2009 euro area economic growth from 1.2% in April 2008 to 0.2% in October 2008. Consensus forecasts of *The Economist*, which are published monthly, were revised from 1.2% in August 2008 to 0.6% in October. However, further downward revisions cannot be excluded as the above-mentioned forecasts do not seem to have taken the current situation in the financial sector fully into account.

## Economic forecasts 2009

In 2007 the Belgian economy grew by 2.8%. However, from 2007Q4 onwards, weakening exports and domestic demand have led to a slackening of economic growth. In line with the European outlook, the growth of the Belgian economy should almost come to a standstill in 2008Q3 and should gradually recover afterwards to 0.5% in the second half of 2009. GDP volume growth should therefore amount to 1.6% in 2008 and to only 1.2% in 2009 as very weak growth in the second half of 2008 is putting downward pressure on the annual figure. These forecasts were finalised on 10 September 2008 (see also headlines on p. 1)

**Graph 1 - Quarterly GDP growth**  
qoq growth rates,  
corrected for seasonal and calendar effects



### Substantial deceleration of European economic growth in 2008 and 2009

After a surprisingly strong start in 2008, economic activity in the euro zone deteriorated slightly in the second quarter. In line with the evolution of the global economy, moderate economic growth is expected during the second half of 2008 and in 2009, only regaining its trend value by the end of 2009. Economic growth in the euro zone should hence reach 1.3% in 2008 and 1.2% in 2009 (after 2.6% in 2007).

The hypotheses for exchange rates and oil prices are based on futures market quotations at the end of August. On average, the exchange rate of the euro should reach USD 1.51 per EUR in 2008 and USD 1.44 per EUR in 2009. Respectively, the average price of a barrel of Brent crude oil should amount to USD 114 and USD 120.

### Belgian GDP growth drops in 2008 as well as in 2009 as a result of weakening exports and domestic demand

Belgian exports will be affected by the slackening of growth on its foreign markets and will lose strength

from 2008Q2 onwards. In the course of 2009, export growth should pick up again, stimulated by the modest recovery of the international economy. During the period 2008-2009, Belgian exports should keep growing more slowly than export markets, but the loss of export market shares should gradually decrease. In 2008, export growth (2.9%) will still be impeded by the appreciation of the effective exchange rate of the euro in the first half of the year. The recent depreciation of the euro should benefit the export performance of the Belgian economy. In spite of the slowdown in the growth of foreign export markets in 2009 (4.4% against 4.7% in 2008), export growth should end up at 3%.

In 2008, imports will keep growing faster than exports, while terms of trade should deteriorate (-1%) as a result of the high oil prices. These factors should reduce the current account surplus to barely 0.1% of GDP. In 2009, net exports should make a slightly positive contribution to economic growth, but the external surplus should disappear due to a further deterioration in terms of trade.

In line with the evolution of private consumption, corporate investment, and residential investment, growth in domestic demand in 2008 and 2009 should drop to 2.7% and 1.1% respectively, compared to 3.4% in 2007.

This year and next year, the evolution of households' real disposable income will be strongly influenced by the acceleration of inflation in 2008, for two reasons. Firstly, growth of real disposable income will be negatively affected as the recent increase in inflation is mainly due to rising energy prices. As this increase is only partially taken into account in the health index, which serves as the basis for indexing public sector wages and social allowances, the health index will increase much slower than total inflation. Secondly, indexation mechanisms will react with a certain delay to the evolution of the health index, so that wage indexation should be lower this year and higher next year than the increase in the health index. Nevertheless households' real disposable income should still increase slightly in 2008 (0.1%) thanks to strong employment growth. Private consumption should still grow by 1.4% as households are expected to save a smaller part of their income (11.9% against 13.1% in 2007). Supported by wage indexation, which partially reflects the strong inflation rate in 2008, real disposable income growth should amount to 1.8% in 2009. As a result, quarterly growth of private consumption should accelerate slightly. On a yearly basis, private consumption growth will nevertheless remain restricted to 0.8% due to an unfavourable carry-over.

With an increase of more than 8%, business investment (corrected for purchases of public buildings) was the main driving force of the Belgian economy in 2007. This should remain so in 2008 (annual volume growth of 6.6%), even though it is mainly due to a very favourable starting point. In line with the lower rate of capacity utilisation and the deteriorating indicator of business confidence, business investment growth should be strongly reduced from 2008Q2 onwards. In the course of 2009, quarterly business investment growth should gradually recover, but the weak starting point should limit annual growth to 1.7%.

With a volume growth of 5.3% in 2007, housing investment once again put up a strong performance (over the last five years the average annual growth rate has amounted to 7%). Nevertheless, residential building activity was clearly past its peak in the course of 2007 as a result of, amongst other factors, increased financing costs. Indicators from the architects' survey, which provide a good indication of the future evolution of residential building activity, also point to a strong slowdown. Housing investment growth should be limited to 1.3% in 2008 and turn slightly negative in 2009 (-1.1%).

#### **Strong fall in the unemployment rate in 2008, followed by a slight increase in 2009**

Between the beginning of 2006 and mid-2008, domestic employment increased considerably. During the second half of 2008, employment growth should fall substantially due to the economic slowdown. Thanks to a favourable starting point, employment should rise by 68,500 persons on average this year (compared to 72,600 persons in 2007). In 2009, net job creation is expected to be limited to 27,900 persons.

Cumulated over the period 2008-2009, net job creation should thus remain relatively high, due to, among other factors, the further extension of the government-subsidised voucher system for domestic-type services and the increasing number of self-employed workers (cumulated increases of 32,000 and 24,000 units, respectively). As a result, the employment rate will rise from 62.9% in 2007 to 63.4% in 2008 and 63.5% in 2009.

As employment will increase faster than the labour force in 2008, the number of the unemployed will diminish. In 2009, unemployment should slightly increase. The harmonised Eurostat unemployment rate (which is calculated by means of labour force surveys) is expected to reach 6.8% in 2008 and 6.9% in 2009, compared to 7.5% in 2007.

#### **Mid-2008, inflation seems to be past its peak and should ease to 2.7% on average in 2009<sup>1</sup>**

Between August 2007 and July 2008, inflation, as measured by the yoy increase in the national index of consumer prices (NICP), rose from 1.1% to 5.9%. This was mainly the result of price increases for energy and food commodities on the international markets, higher transport and distribution tariffs for gas and electricity in January 2008, and additional price increases by most of the gas suppliers. Future market rates point to a slight increase in the price of a barrel of crude oil (both in USD and in EUR) until mid-2009. Nevertheless, yoy growth rates in the oil price should decline until July 2009. As a consequence, inflation should cool down. On a yearly basis, inflation should amount to 4.7% in 2008 and ease to 2.7% in 2009.

During recent months, a slight acceleration in underlying inflation has been registered. This acceleration is due to the passing through of higher prices of commodities and higher nominal wages to the prices of other goods and services. This movement should continue until the end of 2009 and therefore slightly curb the downward movement of overall inflation.

The health index should, both this year and next year, grow at a slower pace than the NICP, as the health index is not affected by developments in petrol and diesel prices. According to the monthly forecasts for the health index, the pivotal index (currently 112.72) should be exceeded in July 2009.

#### **Wage cost growth exceeds the norm in the period 2007-2008**

During the period 2007-2008 the cumulated rise in nominal hourly wage costs should amount to 7.5% in the market sector. This implies that the norm of 5% stipulated in the wage agreement of February 2007 will be largely exceeded. This deviation from the norm is due to both higher-than-expected wage indexation, related to higher food and energy prices, and a stronger-than-expected increase in gross hourly wages before indexation.

Growth in hourly wage costs in 2009 (3.7%) is to a large extent determined by indexation (3.2%), which will respond with a certain delay to price increases in 2008. However, the development of wages next year remains difficult to forecast as it depends to a large extent on the result of the wage negotiations for the period 2009-2010, which start at the end of this year.

*“Economische begroting 2009 - Budget économique 2009”, INR/ICN, September 2008.*

1. Inflation forecasts for 2009 were recently revised downwards. See page 15 for more information.



## Summary of Economic Forecasts

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

Changes in volume (unless otherwise specified) (cut-off date of forecasts: 10 September 2008)

	2006	2007	2008	2009
Private consumption	2.0	2.6	1.4	0.8
Public consumption	0.0	2.1	2.6	1.8
Gross fixed capital formation	4.2	5.9	4.6	1.3
Final national demand	3.0	3.4	2.7	1.1
Exports of goods and services	2.6	3.8	2.9	3.0
Imports of goods and services	2.7	4.6	4.2	2.9
Net-exports (contribution to growth)	0.0	-0.5	-1.0	0.2
Gross domestic product	2.8	2.8	1.6	1.2
p.m. Gross domestic product - in current prices (bn euro)	316.62	330.80	345.62	360.37
National consumer price index	1.8	1.8	4.7	2.7
Consumer prices: health index	1.8	1.8	4.2	2.6
Real disposable income households	2.6	3.3	0.1	1.8
Household savings ratio (as % of disposable income)	12.5	13.1	11.9	12.7
Domestic employment (change in '000, yearly average)	52.7	72.6	68.5	27.9
Unemployment (Eurostat standardised rate, yearly average) [1]	8.3	7.5	6.8	6.9
Current account balance (BoP definition, as % of GDP)	2.7	2.1	0.1	0.0
Short term interbank interest rate (3 m.)	3.1	4.3	4.8	4.5
Long term interest rate (10 y.)	3.8	4.3	4.5	4.4

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

### Economic forecasts for Belgium by different institutions

	GDP-growth		Inflation		Government balance		Date of update
	2008	2009	2008	2009	2008	2009	
Federal Planning Bureau [1]	1.6	1.2	4.7	2.7 <sup>1</sup>	.	.	09/08
INR/ICN [1]	1.6	1.2	4.7	2.7	.	.	09/08
National Bank of Belgium [2]	1.6	1.5	4.1	2.3	-0.3	-0.8	06/08
European Commission [2]	1.7	1.5	3.6	2.3	-0.4	-0.6	04/08
OECD [2]	1.7	1.7	3.7	2.0	-0.3	-0.9	06/08
IMF [2]	1.4	0.2	4.6	2.8	-0.4	-1.3	10/08
ING [1]	1.4	0.6	4.7	2.4	-0.3	-0.8	10/08
Fortis Bank [2]	1.5	1.2	4.5	2.5	-0.4	-0.9	09/08
Dexia [1]	1.1	0.8	4.6	2.1	-0.5	-1.1	10/08
KBC Bank [1]	1.5	0.8	4.6	2.1	-0.3	-0.9	09/08
Deutsche Bank [2]	1.5	0.4	4.8	2.7	-0.6	-1.2	10/08
IRES [1]	1.5	0.8	4.6	2.4	-0.4	-1.1	10/08
Consensus Belgian Prime News [2]	1.6	1.3	4.5	2.4	-0.4	-0.7	09/08
Consensus Economics [2]	1.5	1.0	4.3	3.0	.	.	10/08
Consensus The Economist [2]	1.5	0.9	4.5	2.6	.	.	10/08
Consensus Wirtschaftsinstitute [2]	1.5	0.3	4.8	3.4	-0.6	-0.9	10/08
<b>Averages</b>							
All institutions	1.5	0.9	4.5	2.5	-0.4	-1.0	
International public institutions	1.6	1.1	4.0	2.4	-0.4	-0.9	
Credit institutions	1.5	0.8	4.6	2.4	-0.4	-1.0	

[1] Inflation forecasts based on the evolution of the national index of consumer prices

[2] Inflation forecasts based on the evolution of the harmonised index of consumer prices

1. Inflation forecasts for 2009 were recently revised downwards. See page 15 for more information.

## General economic activity

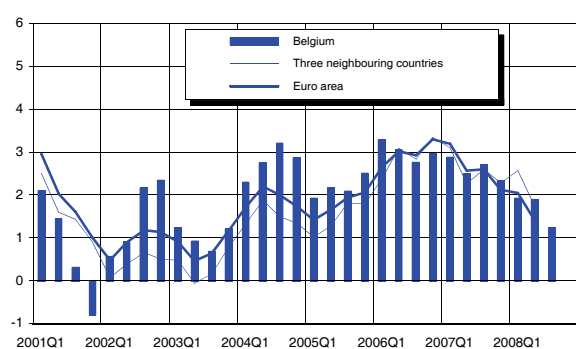
**Table 1 - GDP growth rates, in % [1]**

	2006		2007		YoY growth rates, in %					QoQ growth rates, in %				
	2006	2007	2007Q3	2007Q4	2008Q1	2008Q2	2008Q3	2007Q3	2007Q4	2008Q1	2008Q2	2008Q3		
Germany	3.2	2.6	2.4	1.7	2.6	1.7	.	0.6	0.3	1.3	-0.5	.		
France	2.4	2.1	2.4	2.2	2.1	1.1	.	0.7	0.4	0.4	-0.3	.		
Netherlands	3.4	3.5	3.5	4.1	3.7	3.0	.	1.1	1.3	0.4	0.1	.		
Belgium	3.0	2.6	2.7	2.3	1.9	1.9	1.2	0.7	0.4	0.4	0.3	0.1		
Euro area	3.0	2.6	2.6	2.1	2.0	1.4	.	0.5	0.4	0.7	-0.2	.		
United States	2.8	2.0	2.8	2.3	2.5	2.1	0.8	1.2	0.0	0.2	0.7	-0.1		
Japan	2.4	2.0	1.8	1.4	1.2	0.8	.	0.2	0.6	0.7	-0.7	.		

[1] Adjusted for seasonal and calendar effects

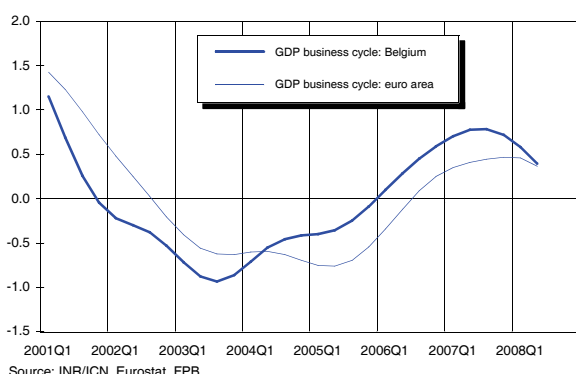
Source: INR/ICN, National sources, Eurostat

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



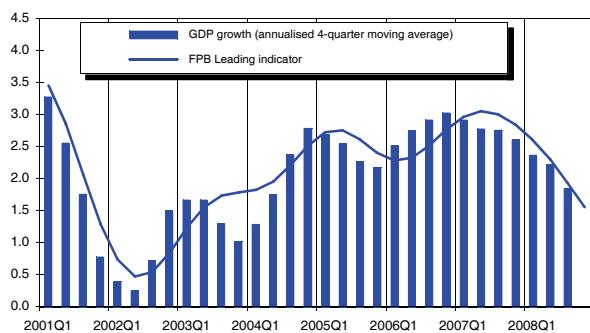
Source: INR/ICN, National sources, Eurostat

**Graph 2 - GDP business cycle**



Source: INR/ICN, Eurostat, FPB

**Graph 3 - GDP growth and leading indicator**

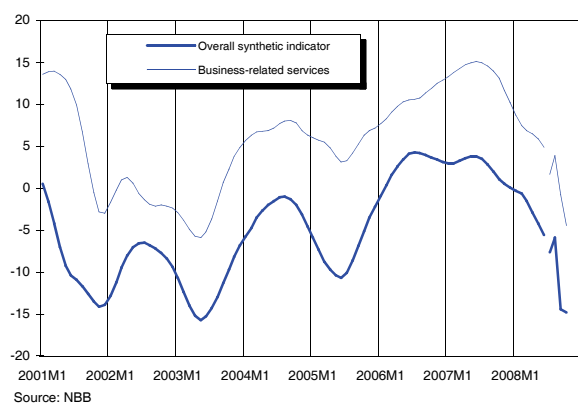
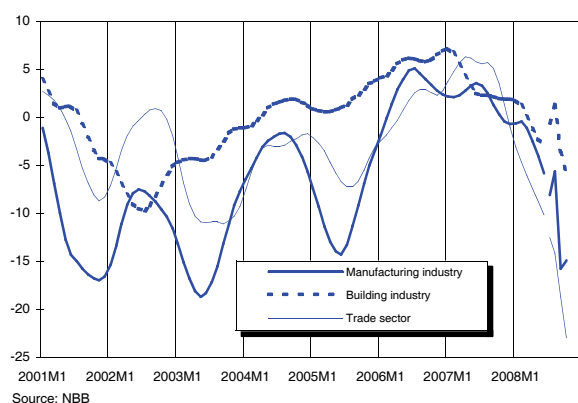
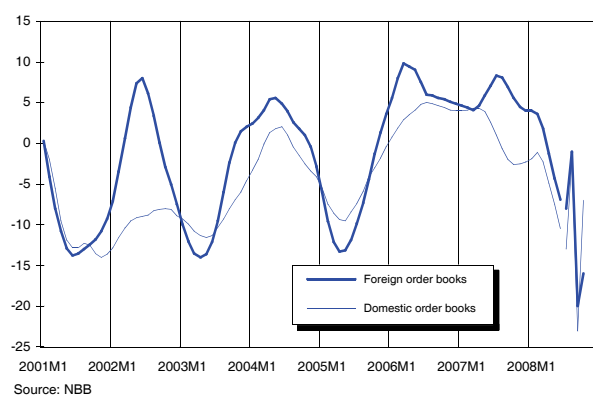
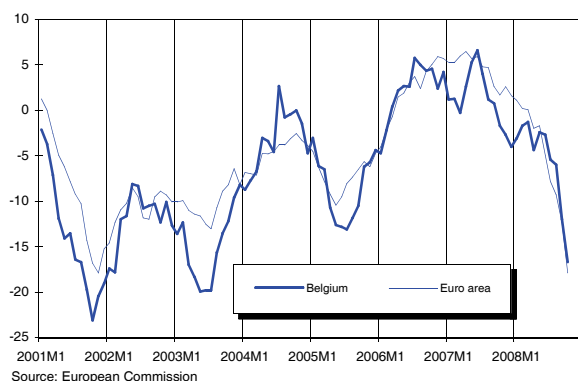


Source: INR/ICN, FPB

In contrast with the euro area and Japan, US economic growth accelerated (even more strongly than expected) in 2008Q2 to 0.7% qoq. Private consumption, which accounts for 70% of GDP, was stimulated by a tax rebate programme that started at the end of April. Net exports surged, helped by strong overseas growth and the depreciation of the dollar. The resilience of the US economy has been transitory, as it shrank by 0.1% (qoq) in 2008Q3 due to sharp cutbacks in private consumption and gross fixed capital formation. This was partially offset by a positive contribution of net exports to GDP growth. Given the historically low level of consumer confidence, it is unlikely that economic growth will resume in the very near future.

After two quarters of strong economic expansion, the Japanese economy shrank in 2008Q2. Exports and private consumption, which had been the mainstay of economic growth in recent years, both declined, resulting in a contraction of 0.7% qoq.

After exceptionally robust qoq growth in 2008Q1 (0.7%), the euro area economy contracted during the spring for the first time since the launch of the euro in 1999 (-0.2%). This deterioration was led by Germany (-0.5%), France and Italy (both -0.3%). Consumer and business confidence tumbled due to the soaring commodity prices, the past appreciation of the euro (deteriorating price competitiveness) and a slowdown in international trade. As a result, both private consumption and gross fixed capital formation contracted, whereas exports slowed. Since mid-July the oil price has fallen substantially, while the euro has weakened against the dollar. This reduces the risk of a deep European recession, but the economic situation remains very fragile. In contrast with the sharp turnaround in the euro area, Belgian qoq growth slowed down gradually in 2008H1. Belgian GDP growth weakened further in 2008Q3 (a flash estimate of 0.1%). Taking the current international context into account, Belgian economic growth is likely to become negative in 2008Q4.

**Graph 4 - Business cycle: global evolution****Graph 5 - Business cycle: sectoral evolution****Graph 6 - Manufacturing industry: order books****Graph 7 - Industrial confidence: international comparison**

Belgian business confidence started to deteriorate in the second half of last year, but the downturn intensified in the course of this year. Firms are being hammered by a combination of high commodity prices, a still strong euro, a strong slowdown in worldwide economic growth and a crisis on the financial markets. The latter is leading to a significant rise in financing costs as it is becoming more difficult (i.e. expensive) to raise capital on the stock market, to issue bonds or to turn to banks for financing. Furthermore, in contrast to the last two years, firms can draw less from their own financial means, as profit growth is decelerating rapidly. Consequently, business sentiment reached a five-year low during recent months. Due to the decrease in oil prices and the depreciation of the euro, the weakening of sentiment in October remained relatively limited in view of the problems in the financial sector.

The development of business confidence is usually driven by manufacturing sentiment. Sentiment in the trade sector registered a more pronounced deterioration, while confidence in the building industry has been relatively resilient over the last few months.

The recent worsening of sentiment in the manufacturing industry was mainly driven by company directors' assessment of the current situation, while their assessment of prospects deteriorated to a lesser extent. Note that both domestic and export orders have slumped this year. This should not come as a surprise in view of the current slowdown that is being seen in Belgium in both domestic demand and exports. However, the pronounced depreciation of the euro and the decline in oil prices reduced pessimism with respect to order books somewhat.

Although the recent softening of building industry was mainly due to a deterioration in current activity, the worsening of prospects clearly contributed to the decline in October.

The decline in the trade sector was the strongest of all and was led by a hefty deterioration in turnover. Sentiment in business-related services, which is not taken into account in the overall synthetic indicator, registered roughly the same evolution as the overall indicator.

Graph 7 shows that the decline in industrial confidence in the course of this year has been considerably stronger in the euro area overall than in Belgium. This is consistent with the evolution of economic growth. Euro area GDP contracted by 0.2% in 2008Q2, while Belgian economic growth moderated, but remained positive (+0.2%). However, the plunge in Belgian industrial confidence in September brought it more in line with its European counterpart.

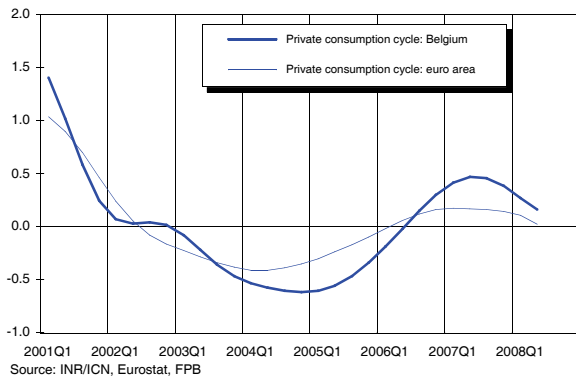
Private consumption

**Table 2 - Private consumption indicators**

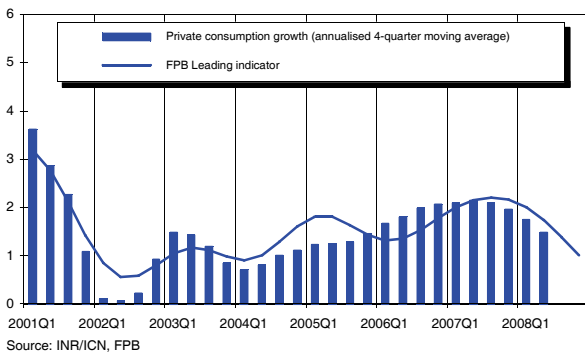
	2006	2007	2007Q4	2008Q1	2008Q2	2008Q3	2008M5	2008M6	2008M7	2008M8	2008M9	2008M10
Turnover (VAT) - retail trade [1]	3.2	4.9	6.2	6.7	6.8	.	11.1	1.5	11.0	6.0	.	.
New car registrations [1]	9.6	-0.3	9.3	3.7	11.2	-0.1	3.1	1.4	-0.9	-2.7	3.4	.
Consumer confidence indicator [2]	-2.6	-1.2	-4.3	-4.0	-9.0	-11.0	-9.0	-11.0	-13.0	-11.0	-9.0	-17.0

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

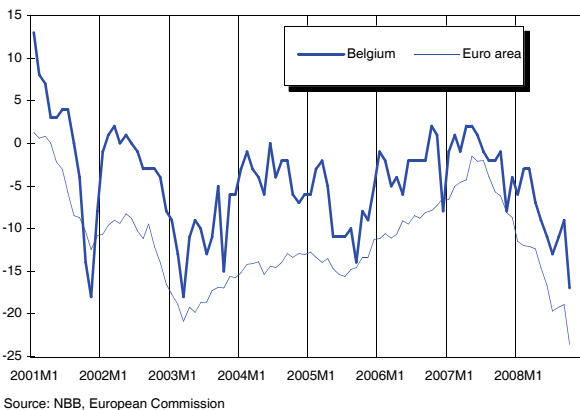
**Graph 8 - Private consumption cycle**



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



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



During the first half of 2008, both the Belgian and the euro area private consumption cycles declined. Both cycles had already lost some ground in the course of 2007. Belgian private consumption was still higher than its trend level in 2008Q2, while private consumption touched its trend level in the euro area.

Although consumer confidence in both Belgium and the euro area has been on a declining path since mid-2007, this evolution has been more pronounced in the euro area than in Belgium (especially during recent months). As consumers' opinion about the general economic situation developed roughly in the same way in both areas, the discrepancy between the two indicators was mainly due to their sentiment regarding their own financial situation. Inflation accelerated faster in Belgium than in the euro area (see page 15), but it seems to have affected the financial situation of Belgian consumers to a lesser extent. After a temporary improvement in August and September, Belgian consumer confidence dropped considerably in October due to fears caused by financial market turbulence and large lay-offs in some large companies.

The solid performance of Belgian private consumption in 2006 and 2007 (average annual growth rate of 2.1%, compared to 1.5% during the period 2000-2005) went hand in hand with an even stronger increase in real disposable income (2.6% on average). Consequently, the savings rate went up from 12.6% in 2005 to 13.7% in 2007. During the first quarter of this year, qoq private consumption growth (0.5%) remained rather robust, despite the acceleration in inflation. From the second quarter of 2008 onwards, however, private consumption is expected to suffer from the meagre performance of disposable income and the recent loss of confidence.

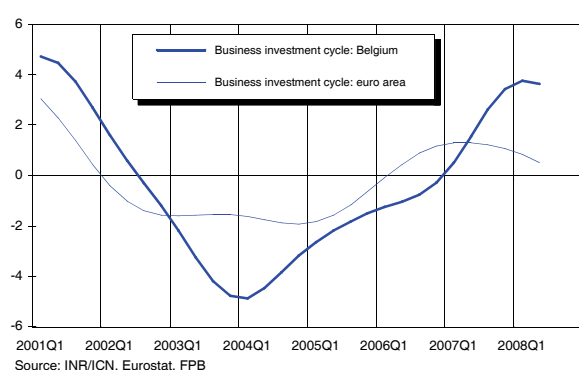
## Business investment

**Table 3 - Business investment indicators**

	2006	2007	2008	2007Q4	2008Q1	2008Q2	2008Q3	2008M4	2008M5	2008M6	2008M7	2008M8
Investment (VAT) [1]												
Industrial companies	6.6	12.2	.	13.2	5.2	5.7	.	18.3	8.0	-5.5	1.8	-6.9
Non-industrial companies	1.6	12.4	.	11.2	12.6	20.0	.	35.6	16.7	11.5	14.2	0.6
Total companies	3.6	12.7	.	12.2	10.3	15.8	.	29.8	14.7	6.4	11.1	-1.6
Investment survey [1]	3.3	12.1	12.0									
Capacity utilisation rate (s.a.) (%)	83.4	83.2	.	83.9	83.5	82.1	82.4					

[1] Change (%) compared to same period previous year  
Source: DGGSB, NBB

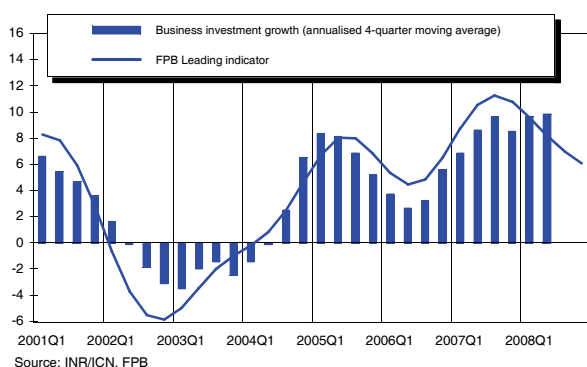
**Graph 11 - Business investment cycle**



Contrary to the euro area investment cycle, which initiated a declining path in mid-2007, the Belgian investment cycle rose throughout 2007. While the investment cycle generally tends to follow the business cycle rather closely, this has not been the case in Belgium in the last two years. Nevertheless, during the first half of 2008, the downturn in economic growth started to affect the Belgian investment cycle.

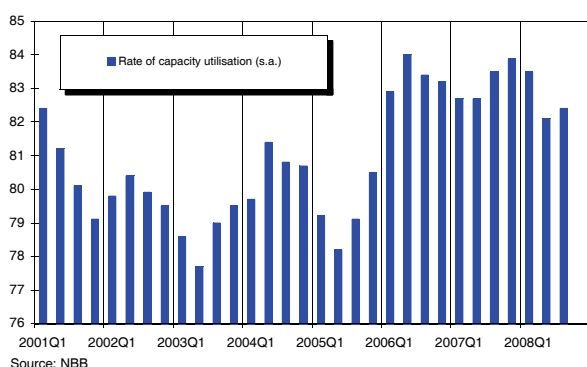
From 2004 to 2007, average annual Belgian business investment volume growth (6.4%) was substantially higher than GDP growth (2.6%). Consequently, the business investment rate (calculated as the part of business investment in GDP at current prices) rose from 12.6% in 2003 to 14.3% in 2007. This mainly stems from steady demand growth, a rise in business profitability and high capacity utilisation rates (especially in 2006 and 2007).

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



During the first two quarters of this year, qoq business investment volume growth slowed down (from 2.9% in 2007Q4 to 1.5% in 2008Q2), but remained relatively robust in view of the deceleration in economic growth. VAT-based investment statistics indicate that the slowdown was mainly due to industrial investment activity. Yoy investment growth in non-industrial companies even tended to accelerate during the first five months of 2008.

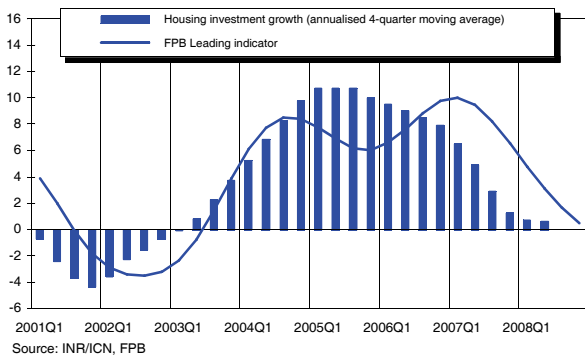
**Graph 13 - Capacity utilisation in manufacturing industry**



The FPB business investment indicator had already peaked in 2007Q3 and signs of a pronounced downturn have become more prominent recently. For about a year, business confidence in the capital goods industry has been on a downward-oriented path. Due to the problems in the financial markets, it has become more difficult and more expensive to raise capital. The results of the investment survey held in spring point to a stabilisation of investment at current prices in the manufacturing industry. However, it should be kept in mind that investment prospects are generally revised downwards in subsequent surveys and that a stabilisation of yearly investment growth in 2008 implies zero qoq growth during the second half of the year.

Housing investment

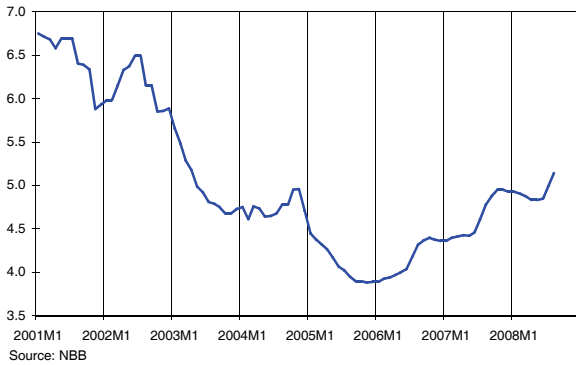
Graph 14 - Housing investment growth and leading indicator



Housing construction has boomed in recent years, which resulted in a peak in housing investment as a share of GDP (5.8% in 2006 and 2007, relative to 4.3% on average over the period 1980-2005). However, according to the latest quarterly accounts, housing activity has slowed considerably in the course of 2007. In 2008Q2 housing investment growth stagnated.

Mortgage rates have increased from a historically low 3.9% at the end of 2005 to 5% in July 2008. Together with weak real disposable income growth in 2008, this will put additional downward pressure on housing investment. In 2009, we expect, for the first time since 2002, a negative average annual growth rate. Despite this decline, housing investment will still represent a considerable share of GDP.

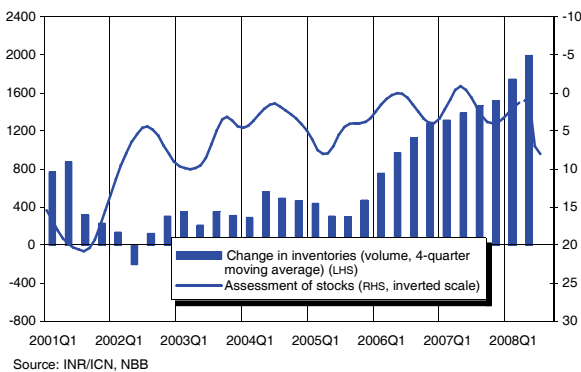
Graph 15 - Mortgage rate (%)



The downturn in housing investment is largely confirmed by the FPB leading indicator, which correctly predicted that the turning point in housing investment growth would be in the beginning of 2007. Most of the housing investment indicators, such as the total amount of mortgage applications and indicators from the architects' survey, have gone down since mid-2006. They all lead the development of housing investment by about four quarters.

Stock building

Graph 16 - Stock building indicators



According to the quarterly accounts for 2007, the acceleration in stock building during the second half of the year more than compensated the deceleration during the first half. As a result, the contribution of stocks to economic growth amounted to 0.3% in 2007. In 2008Q2 this contribution turned negative. We expect this to remain so throughout the rest of the year due to the weakening of economic growth, which decreases the probability of unexpected rises in demand. This forecast is in line with the increasing number of entrepreneurs (since mid-2007) considering their stock levels as excessive.

## Foreign Trade

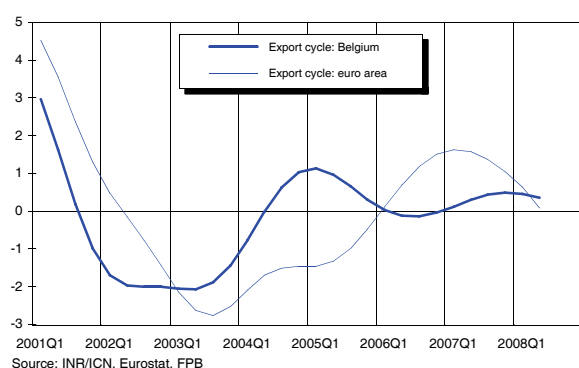
**Table 4 - Belgium - Trade statistics (goods, intra/extrastat, national concept)**

	2006	2007	2007Q3	2007Q4	2008Q1	2008Q2	2008M2	2008M3	2008M4	2008M5	2008M6	2008M7
Exports - value [1]	5.9	5.8	7.5	6.1	10.3	10.2	17.4	0.3	23.6	3.0	5.0	11.8
Imports - value [1]	7.1	6.1	8.5	11.6	19.9	18.4	23.1	11.3	33.6	9.8	13.0	19.6
Exports - volume [1]	0.8	2.8	4.3	1.7	6.7	6.0	12.8	-2.8	20.8	-1.2	-0.3	6.7
Imports - volume [1]	2.2	4.4	5.8	4.6	9.6	8.6	12.3	2.3	26.5	-0.7	1.7	8.1
Exports - price [1]	5.1	2.9	3.0	4.4	3.4	4.0	4.0	3.2	2.3	4.3	5.4	4.7
Imports - price [1]	4.7	1.6	2.5	6.8	9.4	9.1	9.6	8.8	5.6	10.6	11.1	10.7

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

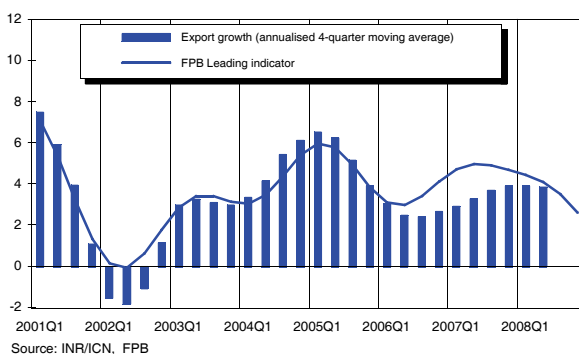
Source: INR/ICN

**Graph 17 - Export cycle**



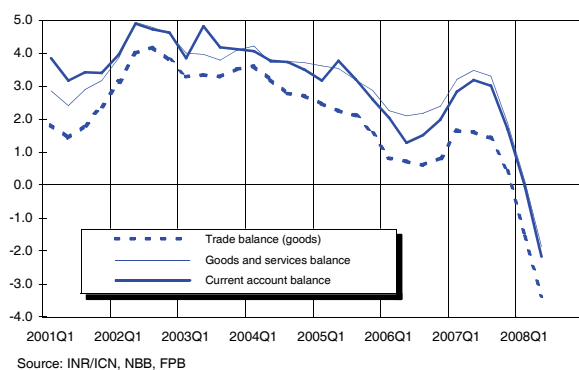
The Belgian export cycle reached a peak in 2007Q4 and has softened since then. All in all, Belgian export growth has been close to its trend growth rate over the last four years. The euro area export cycle, which rose faster in 2006, levelled off somewhat earlier than in Belgium and is now declining at a rapid pace. Euro area export growth is mainly supported by German exports, which slowed down significantly between the second half of 2007 and the first half of 2008 but still outperform the export growth of the other main euro area member countries. Average quarterly export growth in the first half of the year amounted to 1% in Germany versus merely 0.2% in France and 0.3% in Italy.

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



Belgian quarterly export growth has been somewhat erratic over the last few quarters, but a clear pattern of deceleration is visible. Average quarterly growth slowed down from 1.2% in the second half of 2007 to 0.5% in the first half of 2008. This was due to the sharp slowdown in economic growth in both the US and the euro area and the appreciation of the euro, which weighed on price competitiveness. As world trade growth is expected to decelerate further, Belgian export growth should remain subdued in the second half of this year. This is confirmed by the FPB leading indicator and the deterioration of sentiment in the export-oriented manufacturing sector. Next year, the depreciation of the euro and the gradual acceleration of global economic growth should allow for a recovery of export growth.

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



Monthly trade statistics in Table 4 show that the surge in oil and other commodity prices in the first half of this year kept import price growth at a very high level in spite of the appreciation of the euro exchange rate. As export price growth remains relatively moderate, a significant deterioration in the terms of trade is inevitable. Furthermore, since import volume growth has outpaced export volume growth in every month so far observed, the current account surplus evaporated (on a four quarter moving average basis) for the first time since the eighties.

## Labour market

**Table 5 - Labour market indicators**

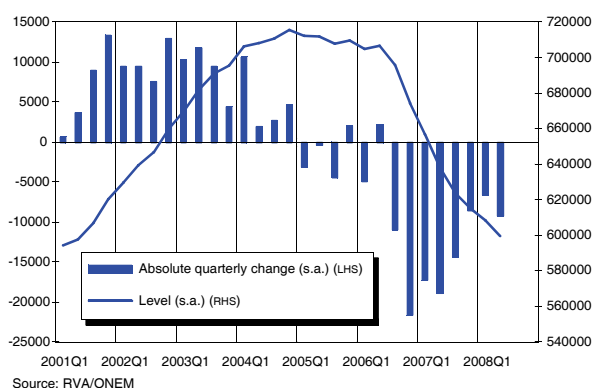
	2006	2007	2007Q3	2007Q4	2008Q1	2008Q2	2008M3	2008M4	2008M5	2008M6	2008M7	2008M8
Unemployment [1][2]	695.4	633.5	623.7	615.1	608.6	599.4	604.8	603.0	595.5	599.7	597.2	593.2
Unemployment rate [2][3]	13.8	12.6	12.4	12.2	12.0	11.8	11.9	11.9	11.7	11.8	11.8	11.7
Unemployment rate-Eurostat [3][4]	8.3	7.5	7.2	7.1	7.0	7.0	6.8	6.7	6.6	6.6	6.6	6.6

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

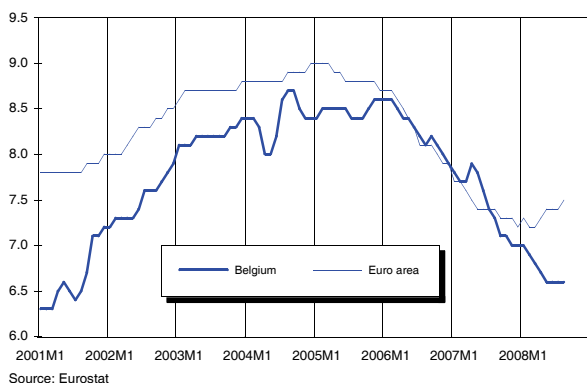
[4] Recent figures are based on administrative data and may be subject to revision

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

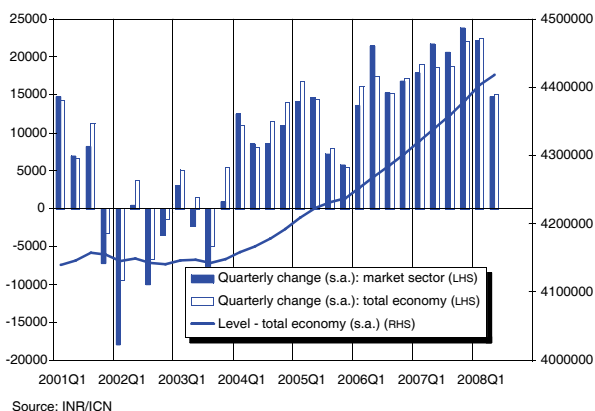
**Graph 20 - Evolution of unemployment (incl. older)**



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



**Graph 22 - Evolution of domestic employment**



Qoq activity growth in the market sector dropped from 0.8% on average in 2006 to 0.55% on average last year. It was relatively robust during 2008Q1 (0.65%), but came almost to a standstill (growth of 0.15%) during 2008Q2. Nonetheless, quarterly employment growth accelerated slightly last year (reaching 0.6% on average), implying negative labour productivity growth throughout the year. The data for 2008Q1 suggest further sustained job creation (0.65% on a quarterly basis). In most sectors of activity, hardly any negative impact from the slowdown in activity on job creation was as yet perceptible. If anything, the pace at which jobs were lost in manufacturing seemed to diminish slightly, whereas job growth in construction and in market services remained very robust. Only the considerable deceleration of job growth in temporary employment agencies may be considered the harbinger of an imminent decrease in employment growth.

Even more strikingly, social security records indicate that average hours worked per person also increased considerably in 2008Q1 (0.45% growth, seasonally adjusted), after slight qoq decreases during the whole of last year. The strong increase in average hours worked in the construction industry, which benefited from favourable weather conditions during 2008Q1, only accounts for part of this increase (its contribution may be estimated at roughly 0.15 %-points).

A third piece of information with respect to recent labour market developments is given by the evolution in broad administrative unemployment. Its decrease had slowed down somewhat since 2007Q4, bringing the observed qoq increase in the labour force more in line with the underlying sociodemographic trends. However, the data for 2008Q2 show no signs of a further deceleration, with the unemployment rate dropping from 12.2% at the end of last year to 12.0% and 11.8%, respectively, during the first two quarters of this year. Summing up, although quite a lot of incidental evidence suggests that the cyclical downturn is beginning to negatively affect the situation on the labour market, confirmation by way of hard data is still extremely scarce.



## Prices

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

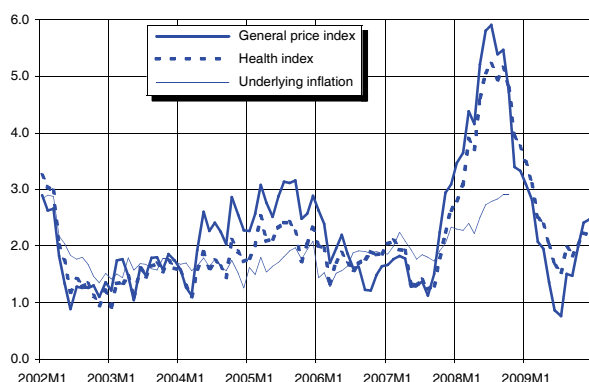
	2006	2007	2007Q4	2008Q1	2008Q2	2008Q3	2008M5	2008M6	2008M7	2008M8	2008M9	2008M10
Consumer prices: all items	1.79	1.82	2.76	3.83	5.05	5.59	5.21	5.80	5.91	5.39	5.46	4.72
Food prices	2.21	3.62	4.35	5.48	6.58	6.80	7.25	6.83	7.17	6.91	6.32	5.56
Non food prices	1.56	1.01	2.99	5.07	7.41	7.78	7.50	8.65	8.55	7.31	7.50	5.93
Services	1.47	1.89	1.60	1.36	1.25	2.36	1.21	1.79	2.08	2.34	2.66	3.00
Rent	3.50	1.79	1.77	1.79	1.91	1.90	1.89	1.87	1.81	1.97	1.92	1.84
Health index	1.77	1.77	2.23	3.25	4.46	5.10	4.61	5.07	5.22	4.93	5.15	4.80
Brent oil price in USD (level)	65.2	72.5	88.8	96.8	121.5	114.7	123.0	132.4	133.1	113.0	98.1	71.9

Source: FPS Economy, Datastream

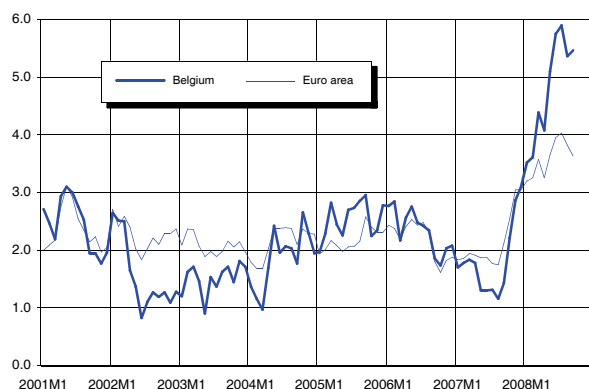
**Table 7 - Monthly inflation forecasts**

	2008M1	2008M2	2008M3	2008M4	2008M5	2008M6	2008M7	2008M8	2008M9	2008M10	2008M11	2008M12
Consumer prices: all items	108.84	109.62	110.42	110.67	111.66	112.28	112.87	112.18	112.36	112.16	111.77	112.01
Consumer prices: health index	107.85	108.71	109.32	109.49	110.20	110.62	111.22	110.88	111.15	111.29	111.13	111.48
Moving average health index	107.10	107.73	108.33	108.84	109.43	109.91	110.38	110.73	110.97	111.13	111.11	111.26
	2009M1	2009M2	2009M3	2009M4	2009M5	2009M6	2009M7	2009M8	2009M9	2009M10	2009M11	2009M12
Consumer prices: all items	112.20	112.70	112.71	112.83	113.18	113.24	113.72	113.87	114.01	114.38	114.47	114.78
Consumer prices: health index	111.61	112.07	112.03	112.09	112.42	112.44	112.92	113.05	113.17	113.54	113.61	113.92
Moving average health index	111.38	111.57	111.80	111.95	112.15	112.24	112.47	112.71	112.89	113.17	113.34	113.56

Source: Observations (up to 08M10): FPS Economy; forecasts: FPB

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

Source: FPS Economy, from 08M11 on: forecasts FPB

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

Source: Eurostat

The recent rally in Belgian inflation (from 1.1% in August 2007 to 5.9% in July 2008) was mainly due to the contemporaneous rise in prices of food and energy products on international markets. Brent prices, for example, rose from USD 71 to USD 133 per barrel during this period. Although part of the effect of this increase on consumer prices in euro area countries was compensated by a simultaneous appreciation of the euro against the dollar, yoy growth of the Brent price expressed in euro amounted to 56% on average from May to July 2008. Since mid-July, however, international oil prices have dropped considerably, which made inflation ease to 4.7% in October. Consumer price inflation has been clearly higher in Belgium than in the euro area since the beginning of 2008. This is, in part, explained by the rise in distribution and transport tariffs for gas and electricity in January 2008 and by additional tariff increases by most gas suppliers. The inflation differential is expected to narrow during the coming months. The rise in underlying inflation since 2007Q4 is mainly due to the acceleration in (processed) food prices, although so-called 'second round effects' of high raw material prices also surfaced during recent months.

Belgian headline inflation is expected to amount to 4.6% this year and 1.9% next year. The increase in the health index should register a somewhat less pronounced development (4.2% in 2008 and 2.2% in 2009) as it is not influenced by the price evolution of motor fuels. The current pivotal index for public wages and social benefits (112.72) should be exceeded in September 2009.

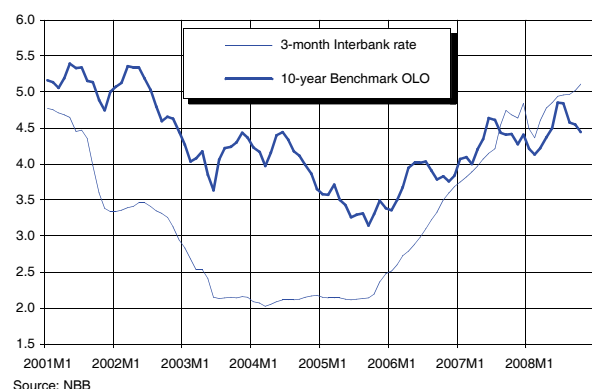
## Interest rates

**Table 8 - Interest rates**

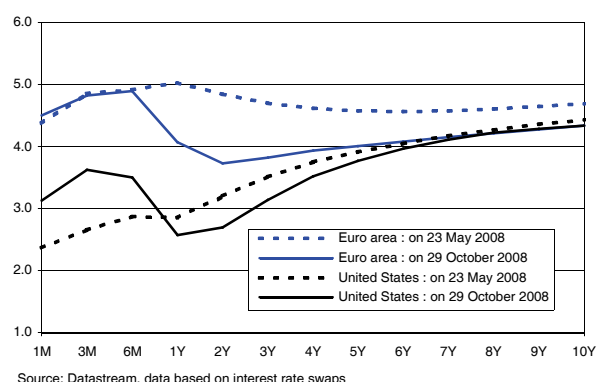
	2006	2007	2007Q4	2008Q1	2008Q2	2008Q3	2008M5	2008M6	2008M7	2008M8	2008M9	2008M10
<b>Short-term money market rates (3 months)</b>												
Euro area (Euribor)	3.08	4.28	4.72	4.49	4.86	4.98	4.86	4.94	4.96	4.96	5.02	5.11
United States	5.15	5.27	5.02	3.23	2.76	3.06	2.66	2.76	2.79	2.79	3.59	4.48
Japan	0.27	0.76	0.93	0.90	0.95	0.91	0.96	0.95	0.94	0.86	0.92	1.48
<b>Long-term government bond rates (10 years)</b>												
Belgium	3.81	4.32	4.37	4.19	4.58	4.66	4.50	4.85	4.84	4.57	4.55	4.44
Germany	3.78	4.23	4.22	3.93	4.26	4.27	4.20	4.53	4.50	4.21	4.10	3.89
Euro area	3.83	4.31	4.32	4.08	4.44	4.52	4.36	4.73	4.71	4.45	4.40	4.25
United States	4.79	4.63	4.25	3.65	3.87	3.84	3.87	4.08	3.98	3.87	3.66	3.78
Japan	1.73	1.67	1.56	1.39	1.61	1.51	1.67	1.75	1.60	1.46	1.49	1.50

Source: Datastream

**Graph 25 - Interest rate levels in Belgium, %**



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



The Federal Reserve cut interest rates by 225 basis points in the first four months of this year. As the intensification of the financial crisis in September and October augmented the downside risks to growth and diminished the upward risks to price stability, the Fed cut interest rates twice by 50 basis points in the course of October, bringing its policy rate to 1%.

As inflation rose above 3% and concerns about second-round effects were rising, the ECB raised its policy rate by 25 base points to 4.25% in June. It did not pursue its tightening policy as economic growth in the second quarter proved to be disappointing and as leading indicators were pessimistic. Moreover, the inflation peak has passed as oil and other commodity prices have declined considerably from their mid-July peak. The ECB participated in the worldwide concerted interest rate cut (50 basis points) on 8 October, bringing the policy rate to 3.75%.

Both in the US and the euro area, long term interest rates rose in May and June as the fear of an economic recession and/or a systemic financial crisis receded and as oil prices surged and pushed inflation to levels not seen since the beginning of the '90s. The subsequent decline in oil prices and renewed tensions on financial markets pushed long-term interest rates significantly lower again in the third quarter because investors flock to the safe haven of government bonds in times of uncertainty and risk aversion.

The relatively high level of interest rates at the short end of the yield curve in the US and the euro area is related to the high risk premium paid on the interbank market due to a lack of confidence between financial institutions.

## Exchange rates

**Table 9 - Bilateral exchange rates**

	2006	2007	2007Q4	2008Q1	2008Q2	2008Q3	2008M5	2008M6	2008M7	2008M8	2008M9	2008M10
USD per EUR	1.256	1.371	1.448	1.499	1.562	1.503	1.556	1.556	1.576	1.496	1.435	1.329
UKP per EUR	0.682	0.685	0.709	0.758	0.793	0.795	0.792	0.791	0.793	0.793	0.798	0.787
JPY per EUR	146.1	161.3	163.8	157.7	163.5	161.7	162.3	166.3	168.4	163.6	153.1	133.1

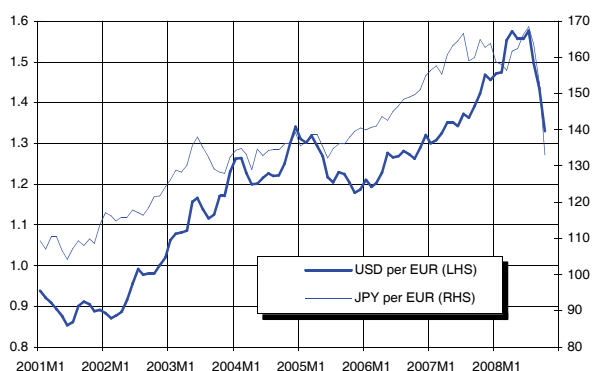
**Table 10 - Nominal effective exchange rates (2000=100)**

	2006	2007	2007Q4	2008Q1	2008Q2	2008Q3	2008M4	2008M5	2008M6	2008M7	2008M8	2008M9
Euro	121.7	128.1	132.1	135.2	140.0	138.5	140.1	139.8	140.3	141.4	138.3	135.9
Growth rate [1]	0.8	5.3	3.1	2.3	3.6	-1.1	1.8	-0.2	0.3	0.8	-2.2	-1.8
US dollar	83.9	79.9	75.9	74.5	73.6	76.2	73.0	73.5	74.2	73.6	76.6	78.3
Growth rate [1]	-1.2	-4.7	-4.3	-1.9	-1.2	3.5	0.2	0.8	0.9	-0.7	4.0	2.2
Japanese yen	80.3	76.3	77.4	82.4	82.1	81.9	83.2	82.6	80.6	80.1	80.6	85.0
Growth rate [1]	-6.6	-5.0	1.7	6.5	-0.4	-0.3	-2.0	-0.7	-2.4	-0.6	0.6	5.5

[1] Change (%) compared to previous period

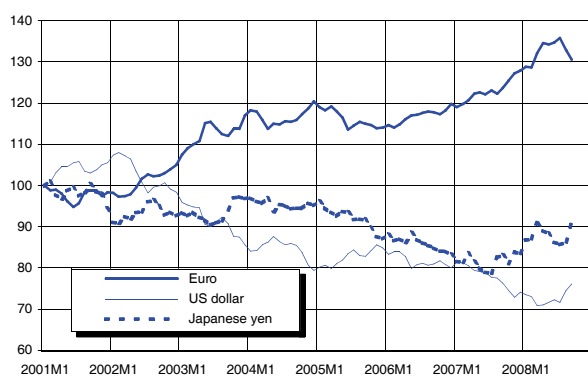
Source: BIS, NBB

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



Source: NBB

**Graph 28 - Nominal effective exchange rates (2001M1=100)**



Source: NBB, BIS

The euro appreciated considerably against the dollar in the first half of the year due to mounting concerns about the US economic and financial situation and the corresponding monetary easing by the Federal Reserve. The interest rate differential between US and euro area policy rates hence declined from a level of +0.25% to -2.25%. The appreciation of the euro against the dollar was halted in July as economic growth in the US proved to be stronger than expected in 2008Q2, while it unexpectedly turned negative in the euro area. Furthermore, leading indicators for the euro area plunged, pointing to further weakness in economic activity ahead and reducing the probability of a new rate hike by the ECB. The downward move of the euro (and many other currencies) against the dollar has intensified with the panic in financial markets in September and October. This has caused massive deleveraging of hedge funds, which, in the past, borrowed cheap in dollars and yens to invest them in higher yielding currencies such as the euro. This movement is now being reversed, leading to a strong appreciation of both the dollar and the yen against almost all other currencies.

The financial crisis is also turning into a currency crisis as emerging countries' currencies are plunging against the dollar as investors are repatriating money from these countries. The countries that have faced the largest currency depreciations are Iceland, Hungary, Korea, Brazil, Australia and Turkey. These countries are seen as vulnerable because of their strong dependence on foreign capital or because of plummeting raw materials prices.

## Tax indicators

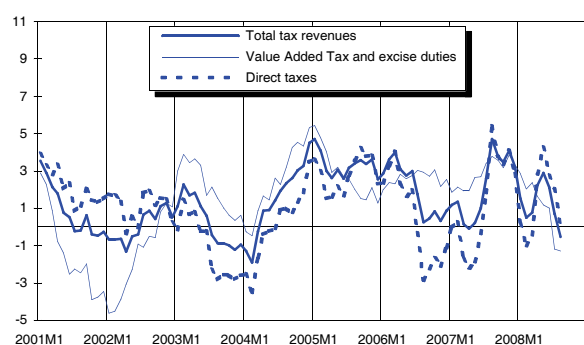
**Table 11 - Tax revenues (1)**

	2006	2007	2007Q3	2007Q4	2008Q1	2008Q2	2008M3	2008M4	2008M5	2008M6	2008M7	2008M8
Total [2], of which:	2.6	5.1	9.5	4.3	-5.6	11.6	-7.7	11.6	19.2	5.9	2.8	4.2
Direct taxes, of which:	0.6	4.8	11.5	3.7	-10.2	16.6	-24.4	18.8	31.3	5.2	8.5	1.1
Withholding earned income tax (PAYE)	3.7	4.4	2.3	3.7	5.7	0.5	12.8	-0.4	-1.8	3.2	15.3	0.8
Prepayments	5.5	6.5	12.4	12.4	.	11.5	.	13.5	.	.	-1.2	.
Value Added Tax and excise duties	4.3	5.3	6.2	4.7	1.1	4.1	8.6	1.1	8.6	3.9	-5.2	9.3

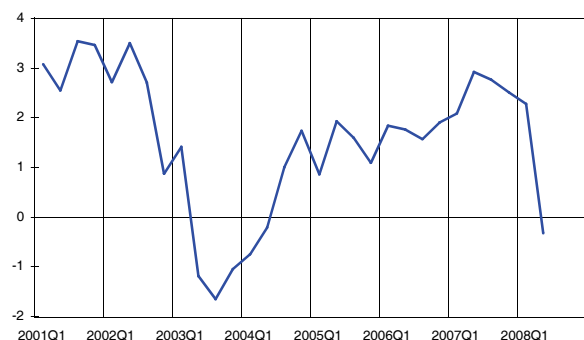
[1] Change (%) compared to same period previous year; [2] Total received by federal government, excl. of death-duties

Source: FPS Finance

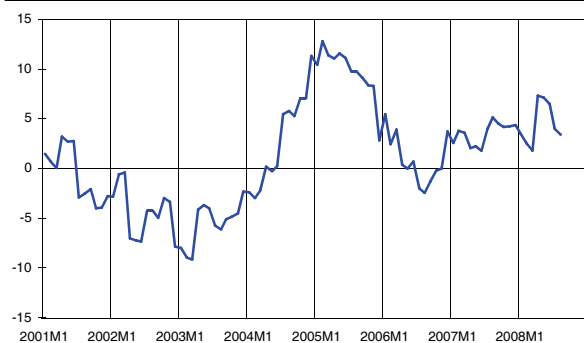
**Graph 29 - Real tax revenues (3)**



**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

The decline in total tax revenues in 2008Q1 (Table 11) was due to large changes in the seasonality of taxes collected by means of assessment. The same reason partly explains the rebound in direct taxation in 2008Q2 as compared to 2007Q2. Moreover, the rise in inflation supports, to a certain extent, the nominal increase in both direct and indirect taxes. The picture is different when expressed in real terms, as shown in Graph 29. On a yoy 12-month moving average bases (Graph 29), growth in real tax revenue has been declining since 2007Q4 (indirect taxes) or since 2008Q2 (direct taxation).

The deceleration in VAT receipts is related to the business cycle downturn, notably affecting private consumption and housing investment. Real growth in excise duty income is still negative due to sluggish tobacco and gasoline consumption. Moreover, ad quantum duty rates are not indexed to price inflation and have even been reduced on gasoline.

The slowdown in housing investment, both in volume and prices, also explains the downward evolution of registration duties.

In the last quarters, pay as you earn (PAYE) personal income tax revenue has been decelerating in terms of the 4-quarter moving average real growth rate (Graph 30). PAYE revenue has been affected by the slowdown in net job creation and also by an increase in tax relief (relating to wage subsidies). PAYE revenue may possibly accelerate by the end of the year owing to the timing of wage indexations.

Real advance payments on a 12-month moving average basis (Graph 31) are still growing at a moderate pace, but could possibly decelerate further by the end of the year due to lower business profitability. Taxes on dividends (concentrated in the period from May to July) have grown sharply this year, and an upsurge is also seen in taxes on interests, due to increased interest rates and shifts in households' portfolios towards fixed income assets.

## Transport Satellite Accounts in 2000

The transport satellite accounts (TSA) present total transport expenses and their structure for Belgium in 2000. TSA have only been calculated for 2000, as for more recent years complete information is not yet available. The publication also provides figures for the year 1995, allowing some evolutions to be calculated. 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 TSA cover six transport modes: road transport, local public transport, rail transport, air transport, inland navigation and maritime transport. For each mode, total expenses are presented for each institutional sector (households, businesses and public authorities) and for the rest of the world. Total expenses are split up into main items: current expenses, gross capital expenses and consumption of fixed capital. Total expenses correspond to the sum of the current and net capital expenses (i.e., gross capital expenses minus consumption of fixed capital). Expenses are also split up according to the purpose of the transport expense: passenger transport, freight transport or infrastructure expenses.

In 2000, total transport expenses amounted to EUR 54 billion, current expenses to EUR 40 billion, gross capital expenses to EUR 16 billion and consumption of fixed capital to EUR 2 billion. Road transport alone accounted for nearly 80% of the total transport expenditure. Between the institutional sectors, the total expense was split up as follows: 42% for businesses, 39% for households and 17% for public authorities. Passenger transport represented 72% of the total transport expense, freight transport, 16%, and infrastructure, 12%.

Taxes and fees, which are an integral part of the total transport expenditure, are covered in a separate chapter. They amounted to EUR 9.6 billion in 2000. Value added tax (VAT) amounted to EUR 3.9 billion, and taxes other than VAT to EUR 5.7 billion. Businesses provided 29% of all taxes from transport, households, 64%, and public administrations, 7%. 78% of these taxes derive from passenger transport, 16% from freight transport, and 7% from infrastructure.

“Comptes satellites des transports en 2000 - Satellietrekeningen Transport in 2000 - Activités de support à la politique fédérale de mobilité et transports - Activiteiten ter ondersteuning van het federale mobiliteits- en vervoersbeleid”, study financed by the convention between the Federal Planning Bureau and the Mobility and Transport Federal Public Service), M. Nautet, *Planning Paper 106, August 2008.*

## A Medium-Term Outlook for the World Economy: 2008-2015

The August 2008 issue of the NIME Outlook for the World Economy presents a 2008-2015 macroeconomic outlook for the major areas of the world. The outlook was produced using NIME, the Federal Planning Bureau's macroeconomic world model.

In 2008, economic growth outside the US should not be significantly affected by the US housing market slump and financial crisis; rather, the downturn in world growth should result mainly from normal movements in domestic business cycles and from the negative terms-of-trade effects of the sharply rising prices of oil and other raw materials. In the euro area, GDP growth in 2008 should hold up, skirting recession despite sagging consumer confidence, thanks to job and income growth. In the US, consumer spending in 2008 should weaken, but any significant downturn should be averted thanks to the government's massive fiscal stimulus package. Overall GDP growth should also be propped up by ro-

bust export growth, despite the sharply negative growth that continues in real residential investment. Japan's economy should be negatively affected by the yen's appreciation against the dollar, by the rise in energy and food prices, by slower expansion in its foreign markets and by a new, sharp, policy-driven reduction in residential investment. Finally, major emerging-market countries such as China and India are expected to continue to grow steadily, leading to a fairly resilient rise in output in the Rest of the World area. Oil prices were on the rise throughout 2007 and in the first half of 2008. They are currently expected to level out in December 2008, leading to a yearly average level of USD 114.1 per barrel of Brent crude. If real output growth continues to hold up and major central banks continue to hold their main policy rates close to zero in real terms, the sharp and continued rise in world oil prices and the parallel increases in the prices of other major commodities such as food staples and metals threaten to stoke inflation

worldwide and spill over into so-called "second-round" wage-price spirals.

Over the period 2008-2015, worldwide output growth is likely to be primarily supported by rising private consumption expenditure, coming on the back of rising employment and wage growth based on a continued rise in trend labour productivity. Trend labour productivity growth is projected to average 2.3% in Japan, 1.3% in the US and 1.2% in the euro area over the period 2008-2015. Inflation is projected to remain tame in the US and Japan, but is expected to be contained in Europe only through significant increases in interest rates. The fiscal position of the euro area should show some slight improvement throughout 2011 but should deteriorate slightly thereafter. The US budget deficit should shrink markedly in 2011, thanks to the expiration of significant tax cut provisions, but should begin to rise again thereafter. Barring any new measures aimed at rapid and lasting fiscal consolidation, Japan should see its fiscal deficit balloon to unmanageable heights by 2015. The projection further indicates that the euro area's current account should swing back into deficit in 2008 and that the shortfall should persist throughout the projection period. The US current account deficit should tend to shrink

over the medium term, while Japan's current account surplus should decline significantly between 2008 and 2015. The projection also indicates that demographic developments will cramp growth prospects in both the EU and Japan due to a trend decline in working-age populations.

A short-term downside uncertainty surrounds the effects of the North Atlantic credit market crisis, which could prove to be more protracted, deeper and more widespread than we currently assume. This would lead to less resilient US GDP growth than we are currently forecasting for 2008 and 2009. A second short- and medium-term downside uncertainty stems from a possible continued increase in world energy prices. A lasting rise in world oil prices would reduce world potential output growth. Finally, a medium-term upside uncertainty stems from a possible underestimation of trend productivity growth, especially in the European Union and Japan.

*"Medium-Term Prospects for the World Economy, Period 2008-2015. Focus: The US housing market crisis",  
P. Van Brusselen,  
The NIME Outlook for the World Economy, August 2008.*

## New Regional Economic Outlook

In September 2008, the results of an exercise aimed at breaking down the national economic projections for the period 2008-2013 into regional projections were published. This new study is the result of the collaboration between the Federal Planning Bureau, the Brussels Institute for Analysis and Statistics (IBSA), the Research Centre of the Flemish Government (SVR), and the Walloon Institute for Evaluation, Prospects and Statistics (IWEPS).

These four institutions developed a macroeconomic, multisectoral and multiregional model (HERMREG) that allows the results of a national economic projection to be disaggregated into projections for the three Belgian regions. In this top-down approach, regionalisation keys are established by combining a shift-share method and multivariate regressions. The model contains about 2,700 equations, of which about 230 are estimated. As compared to the initial version of January 2008, this version of HERMREG has been fully re-estimated on the basis of the new Regional Accounts published in March 2008 by the National Accounts Institute. It also takes into account the updates last May to the national and regional demographic projections. Moreover, the model has been enriched by using interregional commuting (gross) flows equations instead of commuting balances equa-

tions. It also contains a new module that regionalises national projections for both energy consumption and greenhouse gas emissions.

This new exercise starts from the national economic outlook for 2008-2013, published in May 2008. Since the publication of this national forecast, both the international environment and the national short-term situation - already weakened by the subprime crisis and the raw materials prices surge - have worsened. This has led to a recent non-negligible modification of national GDP growth for the year 2009 (from 1.7% to 1.2%), whilst the forecast for 2008 remains practically unaffected by the new context. These recent changes in the economic prospects are not included in the new regional economic outlook.

The resulting projection performed with HERMREG notably shows that, following a slowdown in 2008-2009 affecting the three Belgian regions, GDP growth would average 2.3% per year in Flanders in the period 2010-2013 and about 2.1% in Brussels and Wallonia. This means that, as compared to 2000-2006, economic growth would be slightly higher in Flanders (from 2.1% to 2.2% in the period 2007-2013) and Wallonia (from 1.9% to 2.0%) in the medium term whilst in Brussels it would tend to re-

vert to its long-run mean (from 2.3% to 1.9%). More generally, this would confirm the declining trend in the regional economic growth differences in Belgium.

As observed in recent years, employment over the projection period 2007-2013 should increase more substantially in Flanders (1.2% per year) than in Wallonia (1%) and Brussels (0.6%). In the latter region, economic growth would again translate into high productivity gains rather than into job creation.

Although substantial, the projected increase in regional employment in Wallonia would be insufficient to decrease the unemployment rate in this region over the projection period. That is to say, given the projected stagnation of the net commuter outflow (out-commuters minus in-commuters) to Flanders and Brussels, the progression in the number of employed Walloons from 2009 onwards (+ 0.8% per year between 2009 and 2013) would be insufficient to absorb the rather substantial increase in the labour force in that region (+1% per year over the same period). After a sharp decline in 2007-2008, broad administrative unemployment in Wallonia would then surge again from 2009 onwards and

stabilise at around 18.5% of the labour force by 2013. At that time horizon, on the other hand, the rate of unemployment would have decreased to 19.4% in Brussels (from a level of 21.3% in 2007) and 6.5% in Flanders (from 8.1% in 2007). In particular, the fall in unemployment in the Brussels Capital region would mainly result from a continuation of the trend of recent years toward a smaller and smaller net inflow of commuters (from a balance of 304,000 persons in 2007 to 290,000 persons in 2013).

Other projected variables for each region concern value added by industry, sectoral investments and real wage costs per head, and regional energy consumptions - i.e., energy consumption per sector (Energy, Industry, Transport, Tertiary-Domestic) and per product - and greenhouse gas emissions.

*" Perspectives économiques régionales 2007-2013 - Regionale economische vooruitzichten 2007-2013 ",*  
D. Bassilière (FPB), D. Baudewyns (FPB), F. Bossier (FPB),  
I. Bracke (FPB), F. Caruso (IWEPS), K. Hendrickx (FPB),  
D. Hoorelbeke (SVR).

## Determinants of Innovation in a Small Open Economy: The Case of Belgium

Using dynamic panel data on 20 Belgian market sectors over 1987-2005, this Working Paper analyses the link between multifactor productivity growth (MFP) and three frequently cited determinants: business R&D, labour skills and ICT use. The theoretical framework of the analysis is given by the Aghion-Howitt model which explains the rate of MFP growth by the distance to the world technology frontier.

The paper shows, using an equilibrium correction model, that the technological gap, measured by the difference in MFP levels, influences the growth of all Belgian sectors. The further the industry is behind the technology frontier, the faster its MFP grows. This catching-up process, based on imitation, is more pronounced in manufacturing than in other industries, probably due to the high degree of the international openness of manufacturing. This process was also more active during the most recent period, 1995-2005, for both the whole economy and manufacturing. This might be linked to the downgrading of the relative technological position of Belgium over the period considered. Belgian industries are more able to imitate foreign new technologies than to generate by themselves innovations that lead to the moving-up of the world technology frontier.

The results do not sustain the presence of contempora-

neous spillover effects from the MFP growth of a foreign industry at the technology frontier on the same Belgian industry.

Concerning the three determinants of MFP growth, the results show that the use of high skilled labour improves productive efficiency in Belgian companies. The positive impact of human capital has increased over time as it has been higher during the most recent period, 1995-2005, than during the whole period. The continuous availability of sufficient high skilled workers is therefore a crucial condition for sustaining long-term economic growth.

By contrast, ICT capital integration in production functions has different effects, according to the industry taken into consideration. In manufacturing, ICT increases productive efficiency. Like human capital, the positive effect of ICT capital has increased over time and is higher over the most recent period. In contrast, for the whole economy, ICT intensity had a slightly negative impact on MFP growth over 1987-2005 and had no significant impact over the most recent period. As underlined by some recent studies, productivity gains associated with ICT capital appear only progressively and are conditioned to the presence of complementary intangible investments. As the non-manufacturing industries invest-

ed later in ICT, they could still be, particularly at the beginning of the period, in a stage of adaptation of their production processes to these new technologies.

R&D intensity had no significant effect on MFP growth over the period 1987-2005. The results for the most recent period even show a negative effect of R&D intensity on MFP growth. These - at first sight - counterintuitive results could be explained by the concentration of Belgian R&D in a limited number of industries, dominated by multinationals. Research carried out in Belgium promotes the productive efficiency of the countries where it is implemented. By contrast, foreign R&D, measured as the average R&D intensity of the three neighbouring countries, has a positive impact on the productive efficiency of Belgian manufacturing. These two opposite

impacts of R&D could be interpreted as a consequence of the small size of the Belgian economy and the strong European integration of its production functions. These results also underline the importance, for a small open country, of the implementation of an innovation strategy at the European level. This coordination of national efforts allows all countries, including the smallest ones, to take advantage of these efforts to improve their productive efficiency and therefore to improve their competitiveness.

*"Determinants of innovation in a small open economy: the case of Belgium",  
B. Biatour and C. Kegels,  
Working paper 11-08, June 2008.*

## Spring of the Environment

The Federal Planning Bureau (FPB) has made two contributions within the framework of the "Spring of the Environment", an initiative launched by the Minister of Climate and Energy. The first report presents a summary of the two sustainable development scenarios presented in the fourth Federal Report on Sustainable Development (see STU 2-08). The second report presents long term projections for transport in Belgium and analyses two policy options for mitigating the problems caused by transport.

### Transition scenarios towards a sustainable development in 2050

In the fourth Federal Report on Sustainable Development (see STU 2-08), the Task Force Sustainable Development (TFSD) of the FPB presented two sustainable development scenarios. Following a backcasting approach, these two scenarios are assumed to reach a situation of sustainable development in 2050. They propose two different development paths - changes in living conditions and policies - that could contribute to the transition between the current situation and a world in sustainable development in 2050.

As a first step, to define concretely what a world in sustainable development would be, a set of 21 sustainable development objectives (SDOs) were defined. SDOs share several characteristics: they are quantitative; they relate to the protection and the recovery of the human, environmental and economic capital; they are also largely accepted, as they were built on the basis of widely accepted international agreements, such as the Universal Declaration of Human Rights (1948) or the Millennium Development Goals (2003).

Taken together, these 21 SDOs are the goal that must be reached in 2050 in the two scenarios presented in this working paper. Examples of SDOs are: a human development index of at least 0.8 in all countries, the eradication of poverty, the limitation of global warming to 2°C above pre-industrial temperatures, and public debt below 60% of GDP.

As a second step, following a backcasting approach, two sustainable development scenarios that reach these SDOs in 2050 were built. These scenarios each present changes in the living conditions of society between the present and 2050, and examples of policies that would accelerate the transition to a sustainable development.

The first scenario, named Pyramid, assumes reinforcement of the degree of international coordination of policies, whereas it remains stable in the second scenario, named Mosaic. Another difference is the balance between the progress in the state of technology and the progress in social organisation. Progress leans more towards technology in Pyramid and more towards social organisation in Mosaic. Simultaneously, the engine of change and of a rising standard of living lies in production patterns in Pyramid and in consumption patterns in Mosaic.

Two systems have been detailed in the two scenarios: food (including agriculture and the agri-food industry) and settlement (including housing, office and industrial buildings, land use and the implications for transport). Let us briefly review here the example of the food system in these two scenarios.

In Pyramid, in 2050, agricultural techniques using biotechnologies and nanotechnologies are widespread, al-



lowing the intensive use of fertilisers, pesticides, etc. Thanks to strong and transparent international regulations, land and water pollution are reduced and biodiversity protected. Organic agriculture continues over a limited part of the arable land in Belgium. The agri-food industry produces ready-made meals with high nutritional content and quality, as well as functional foods. This diet contributes to a good level of public health. Consumption of fruit and vegetables rises to 400 g/day/person in 2020 and 500 g/day/person in 2050. At the same time, consumption of meat falls from 160 g/day/person in 2004 to 100 g/day/person in 2020 and 50 g/day/person in 2050.

In Mosaic, in 2050, consumers demand fresh products, grown or raised locally, preferably using organic agriculture. They increase their fruit and vegetable intake to 400 g/day/person in 2020 and 700 g/day/person in 2050, while meat consumption falls from 160 g/day/person in 2004 to 100g g/day/person in 2020 and 75 g/day/person in 2050. This contributes to a good level of public health. Following consumer demand, organic agriculture is widespread. This helps protect the environment and supports better biodiversity. Agriculture becomes intensive in knowledge, in particular in knowledge on how local circumstances can be used to increase productivity.

For these two sustainable development scenarios, examples of policies that support those changes in living conditions are given in the working paper, as well as a development of the settlement system.

*“Scénarios de transition vers un développement durable à l’horizon 2050. Note de prospective réalisée pour le “Printemps de l’environnement” sur base du 4e Rapport fédéral sur le développement durable - Scenario’s voor transitie naar een duurzame ontwikkeling tegen 2050. Toekomstverkennde nota gerealiseerd voor de ‘Lente van het Leefmilieu’ op basis van het vierde Federaal rapport inzake duurzame ontwikkeling”*,

*TFDD- TFDO (2008),  
Working Paper 16-08.*

### Transport projections for Belgium up to 2030 and two policy options

The Federal Planning Bureau has developed the PLANET model under a convention with the FPS Mobility and Transport. This new model is used to construct long term transport projections up to 2030. It also allows evaluation of the impact of policy measures.

The first part of the report presents the long term evolution up to 2030 of transport in Belgium under a busi-

ness-as-usual scenario. In this reference scenario, freight and passenger transport in Belgium would increase further, leading to a continuous deterioration in traffic conditions in Belgium. In the peak period, average road speed would be 23% lower in 2030 than in 2005. In the off-peak period, average road speed would fall by 15%.

The projected increase in congestion costs is a worrisome evolution, calling for new policy measures. The second part of the report analyses two policy options. The report aims to analyse the potential impacts of these policy options, rather than to make concrete policy proposals.

#### *Internalisation of the external environmental and congestion costs*

A first policy option is to internalise the external environmental and congestion costs of transport. Road pricing is introduced gradually (differentiating between the peak and the off-peak periods) and the exploitation subsidies for public transport are abolished. An environmental tax is levied on public passenger transport and on freight transport by rail and inland navigation. The Eurovignette and the purchase and ownership taxes on road vehicles are abolished. The resulting extra budgetary resources are used to reduce labour taxes or general taxes.

For passenger transport, this policy option would lead to a reduction in the number of passenger kilometres travelled and to an important modal shift. Moreover, there would be a shift from the peak to the off-peak period.

For freight transport, the price reform (in the absence of similar reforms in the neighbouring countries) would result first of all in a fall in transit transport compared to the reference scenario. For road freight transport, there would be a shift from vans to trucks, leading to an increase in the average load factor. Because of the higher price of freight rail and inland navigation the share of these two modes would fall.

By 2030 this policy would reduce road traffic flow in the peak period by 15% and would increase average road speed by 32% compared to the reference scenario. The internalisation of the external environmental and congestion costs would lead to a large net benefit for society because of three positive effects. First of all, congestion would be reduced significantly since the transport infrastructure would be used in a more efficient way. Secondly, the environmental costs of transport would fall. The third positive element is related to the impact of the extra budgetary resources that would become available. An optimal use of these is essential for obtaining the net

social benefit of the pricing reform.

#### *Faster "sustainable" transport*

A second policy option aims to make inland navigation, rail transport and public passenger transport more attractive by gradually increasing their speed. Because of the higher speed of trains, buses, trams and metro, there would be a modal shift towards these modes. During the peak period, car use would fall by 5%, while in the off-peak period it would fall by 2%. In the case of freight transport, the higher speed of inland navigation and rail - both in Belgium and abroad - would lead to a small shift from road transport towards these two modes. However, the modal shift would be limited. The change would be larger for international than for national freight transport. The lower costs of transport in Belgium by inland navigation and rail would also attract transit transport.

This policy option would have a small positive impact on road speed, especially in the peak period. However, in comparison with the first policy option, the impact on congestion would be small. The environmental costs would be slightly larger than in the reference scenario. In general the policy option would lead to a small social benefit. This has to be compared with the costs of realising the higher speed of the sustainable transport modes.

*"Langetermijn vooruitzichten van transport in België: Referentiescenario en twee beleidsscenario's - Perspectives à long terme du transport en Belgique : Scénario de référence et deux scénarios alternatifs",*  
Federal Planning Bureau and Mobility and Transport Federal Public Service, I. Mayeres,  
*Working Paper 12-08, June 2008.*

## Foresight and Participation for a Sustainable Development

In December 2007 the Federal Planning Bureau (FPB) published "Accelerating the transition towards a sustainable development, the fourth Federal Report on Sustainable Development" (see STU 4-07, p. 20). These two-yearly reports are drawn up by the Task Force on Sustainable Development (TFSD). They are part of the federal legal framework for sustainable development policy, created by the act of 5 May 1997. The reports serve as a basis for the four-yearly Federal Plans for Sustainable Development. The reports have three missions: to analyse and assess the existing situation as well as the policy conducted, and to describe the expected development.

In order to fulfil its third - forward-looking or foresight - mission, the 2007 report proposed two scenarios for a sustainable development by 2050. The scenarios were constructed using the backcasting technique. This method for exploring the future starts with envisioning a desirable future. In the report that future is visualised by 21 sustainable development goals based on international community commitments. Subsequently, pathways are outlined to link the present day situation with this desired situation. Reaching the goals mostly requires a drastic change in current trends, and policy responses play an important part in that. Moreover, in preparing the report, the TFSD tried to link foresight with participation, which is an important principle in shaping and implementing sustainable development.

Three Working Papers (WPs), underpinning the foresight part of the Federal Report on Sustainable Development 2007, document the preparation of the foresight

chapters of the report. The first one does so by examining the vision of the future of the Federal Council for Sustainable Development. The second WP analyses six Belgian participatory foresight projects in order to identify methods and good practices. The third one presents the participatory exercise organised by the FPB to explore possible developments of our society with a time horizon to 2050.

### Vision of the future in the 2002-2005 FCSD opinions

The Federal Council for Sustainable Development (FCSD) is an advisory body that advises the Belgian federal authorities about the federal sustainable development policy. This institution, which was created by the above-mentioned sustainable development act, expresses opinions on sustainable development policy measures. The council provides for the participation of civil society in the federal sustainable development policy. That participation is representative, as major social groups are represented in the FCSD.

In preparing the 2007 sustainable development report, the TFSD examined the FCSD's vision of the future, more specifically concerning a sustainable development of the world in the long term. The council did not express itself explicitly on that subject. As no specific document exists on the desirable long-term future, elements of the FCSD's vision were sought in the council's opinions.

The analysis was performed in 2006. The 61 FCSD opinions, formulated in the years 2002-2005, were examined.

49 of these opinions appeared to be very useful. Their examination resulted in an inventory of 114 'foresight elements', reflecting the position of civil society. 33 of these elements refer to goals regarding the state of the human, environmental and economic capitals underlying development. 81 elements refer to sustainable development principles, such as long-term focus, worldwide approach, participation, precaution, and integration of the social, environmental and economic components. 12 of the opinions offered only a little information for the analysis.

As appears from the 2002-2005 opinions, the FCSO unanimously endorses the international goals concerning human and environmental capital. As regards the desired state of the economic capital, the council remains rather vague. The FCSO opinions underline the importance of concrete goals, but come forward with only a few themselves. Furthermore, the council subscribes to a worldwide approach. On some issues, the FCSO members do not share the same view. For instance, as regards the application of precaution and peoples' participation, positions diverge between employers' federations and energy producers on the one hand and trade unions, the scientific community and environmental, development and consumers' organisations on the other hand.

### Methods and practices of six Belgian participatory foresight projects

The third Federal Report on Sustainable Development, published in 2005, announced a participatory backcasting exercise to underpin the foresight part of the fourth report. In order to identify good practices and methods for carrying out that exercise, a review of the literature was undertaken, followed by a detailed review of six previously undertaken exercises in Belgium. The research went into the participation aspects as well as into the foresight aspects of the projects. It consisted in an analysis of published documents as well as in conversations with experts involved in the organisation of these exercises.

The six participatory foresight projects reviewed were: (1) *Interbestuurlijk Plattelandsoverleg*, carried out in 2005 to work out rural development scenarios for Flanders; (2) *Wallonie 2020*, carried out in 2001-2003 to take in hand the future of Wallonia and issues at stake by 2020; (3) *Ouderen en ICT*, carried out in 2004 to develop views connecting the elderly and information and communications technologies; (4) *Liège 2020*, carried out in 2002-2004 to work out a shared view on a desirable future for the province of Liège; (5) *Toekomstverkenning energiesystemen Vlaanderen 2050*, carried out in 2005-2007 to identify the most desirable energy future for Flan-

ders; and (6) *Science*, carried out in 2002-2004 to define directions for future research programmes financed by the Belgian Science Policy Office.

The main conclusions of the research were formulated in view of the participatory foresight exercise to be conducted by the TFSD of the FPB, which means taking into account its context and within the limits of the available resources. These conclusions cover several issues. Firstly, regarding the process and the roles of the actors involved, the importance of the terms of reference is underlined. These terms of reference have to describe clearly the context, purpose and course of the exercise. It is equally important to distinguish the roles and contribution of the participants and the scientific secretariat in constructing scenarios. It is also crucial to place clear information on all the issues dealt with in the exercise at the disposal of all the participants as a common knowledge base.

Secondly, regarding the selection of the actors, it is recommended to have a mixed group of participants, offering space for external views that are critical and constructive. To facilitate communication, the involvement of a journalist may be considered. As to the number of participants, 15 is the minimum for an input of ideas that is sufficiently large. Thirdly, regarding the scenario construction method, it is preferable that this method allows for numerous subsystems, each of them with several variables, and for various levels of decision making. It is also useful to split up the scenario construction into different stages.

Finally, regarding the link between foresight and political decision making, it should be emphasised that it is for decision makers to decide on the actions to be taken. So communication with decision makers is essential if one wants them to take into consideration the outcomes of the exercise. To communicate with other actors, such as public services and civil society organisations, is recommended as well. One way to do so is to involve some of them as participants in the exercise.

### Organisation of the FPB 2050 participatory foresight exercise

In the Federal Report on Sustainable Development 2007, the TFSD presented two scenarios for a sustainable development by 2050. The initial version of these scenarios was constructed in a participatory foresight exercise.

The exercise, named "For a sustainable development by 2050", was carried out by the TFSD with 16 experts from outside the FPB. Its purpose was to examine possible futures for our society as input and enrichment for the

2007 sustainable development report. The external experts were selected according to several criteria. As a group, they were chosen as an expert panel. The following points were taken into account: complementarity regarding the expertise in knowledge and experiences; ability to link the issues discussed and to come up with meaningful conclusions; a good balance of positions to avoid biases by overrepresented world views. As individuals, they were selected for their expertise in one or more of the subjects, their ability to communicate and their command of at least French and Dutch, and their openness to the future and to knowledge and experiences other than from their own field. Moreover, a few of the participants were sought out to guarantee some link with two of the other federal sustainable development institutions.

The participation method used combined elements from the expert panel and from the scenario workshop. As in an expert panel, the issues were complex, with data from diverging sources to be synthesised and recommendations on future needs and possibilities to be formulated. As in a scenario workshop, scenarios for an uncertain future had to be constructed; this had to be done from a perspective of preparing decision making. As regards the number of participants, it lay between the larger number of a scenario workshop and the smaller number of an expert panel. The 16 participants in the exercise cooperated, not as representatives of major groups, but as citizens who care about a sustainable development of their society and who have a particular expertise in certain subject areas.

The TFSD functioned as the scientific secretariat of the exercise. The TFSD was charged with the practical organisation, the initial documentation, the intermediate analysis (in between the meetings) and the reporting. Trans-Govern, standing for Transformation of living conditions through Governing, was used as a model for structuring the analysis. That model looks at situations and changes regarding the economic, social and environmental components of development on the one hand, and at policy responses to manage development on the other hand.

Three meetings were organised, from November 2006 to January 2007. Seven days before each meeting, the participants received the documentation - information briefs drafted by the TFSD - needed to prepare for that meeting. In the first meeting the participants focused on the change factors determining the long-term development of our society. They held discussions partly in plenary session, partly in two working groups. The results of the first meeting were grouped by the scientific secretariat into four domains: energy, food, social cohesion,

and technology and knowledge. These four domains are subsystems of society and are interlinked. In each of them major changes are taking place, with substantial long-term impacts.

The second meeting started with considering sustainable development goals that have to be realised by 2050. The participants tried to think up pathways to attain these goals. They applied a morphological analysis in exploring different hypotheses, and traced out one or two coherent pathways for each of the four subsystems. In doing so they constructed micro scenarios describing transformations between now and 2050. After the meeting, and to prepare for the third and final meeting, the scientific secretariat grouped the micro scenarios into two macro scenarios. These were named "Pyramid" and "Mosaic", emphasising a reinforcement of, respectively, international and local relations and developments.

The third meeting went into governance and transition policy. The participants focused on shorter-term policy measures that aim to initiate the long-term changes that are needed for a sustainable development by 2050. The TFSD used the results of the exercise to develop the scenarios for the fourth Federal Report on Sustainable Development. The WP, containing many of the information briefs for the exercise as an annex, increases the transparency of that exercise.

*"Elementen van toekomstverkenning in de adviezen van de Federale Raad voor Duurzame Ontwikkeling van 2002 tot 2005. Analyse ter voorbereiding van het vierde Federaal rapport inzake duurzame ontwikkeling",*  
J. M. Frère,  
Working Paper 13-08, August 2008.

*"Examen des méthodes et analyse de 6 projets de prospective participative. Etude préliminaire au 4<sup>e</sup> Rapport fédéral sur le développement durable",*  
N. Zuinen and P. Delbaere,  
Working Paper 14-08, August 2008.

*"Organisation de l'exercice participatif de prospective à l'horizon 2050 préparatoire au 4<sup>e</sup> Rapport fédéral sur le développement durable - Organisation van de participatieve oefening inzake toekomstverkenning tegen het jaar 2050 ter voorbereiding van het vierde Federaal rapport inzake duurzame ontwikkeling",*  
Task Force on Sustainable Development,  
Working Paper 15-08, August 2008.

## Growth and Productivity in Belgium

This Working Paper provides an overview of the main drivers of economic growth and productivity evolution in Belgium, in comparison with the EU and the US, between 1970 and 2005, based on a consistent long-term data set.

The paper has been developed from the database created by the Federal Planning Bureau for the EUKLEMS project. The aim of this international project, funded by the European Commission as a part of the 6th Framework Programme, is to study productivity in the European Union at the industry level. The dataset is fully compatible with the October 2007 release of National Accounts statistics. It also represents methodological progress as it contains the index of capital and labour services, allowing a better measure of the contribution of these factors to production.

Since 1970, the growth of GDP per capita in Belgium as well as in the EU has been on a declining trend, leading, in 2005, to a level of GDP per capita in Belgium that was 31% below the US level. Since the beginning of the nineties, the slowdown in economic growth was only due to a decline in labour productivity growth, hours worked making a modest but positive contribution to growth. By contrast, since 1990, the US has succeeded in increasing its labour productivity growth and since 1995, it has recorded labour productivity growth rates that are much higher than the Belgian and European growth rates. These divergences in productivity evolution have progressively eroded the Belgian leadership in this field and, in 2005, the US productivity level reached the Belgian level.

Using the growth accounting decomposition, the explanation for the Belgian and European slowdown of productivity growth can be found in the evolution of its three components, namely labour composition effect, capital deepening - especially non-ICT capital deepening - and multi-factor productivity (MFP), which measures the evolution of the overall efficiency of how the factors of production, i.e. labour and capital, are used together in the economy. However, the decline of the MFP contribution has been much more pronounced than the decline of the other contributions. At the same time, the US recorded a strong increase in MFP contribution, particularly since 2000. As a result, the US MFP level was only slightly below the Belgian level in 2005.

Structural evolutions in the economy between 1970 and 2005 also influenced productivity performances. Over

the whole period, the slowdown of labour productivity growth in Belgium was mainly due to a decreasing manufacturing contribution to aggregate labour productivity growth and, to a lesser extent, to a decrease in the contribution of non-market services and "other industries". Since 1990, the only increasing contribution has come from market services, and since 2000, market services have become the largest contributor to aggregate labour productivity growth. By contrast, all the main industries, with the exception of "other industries", recorded an increase in their contribution to aggregate productivity in the US, with the largest contributors being market services, followed by manufacturing.

The origins of labour productivity gains by industry have also differed between Belgium, the EU and the US. MFP contribution accelerated strongly between 1995 and 2005 in US manufacturing, while it decelerated in European and Belgian manufacturing. Over 1970-2005, the main contributor to productivity gains in Belgian manufacturing was capital deepening, while it was MFP in the EU and in the US. The evolution of productivity in market services was mainly driven by the contribution of capital deepening in the EU, in the US and in Belgium, with a particularly large contribution from ICT capital deepening in this latter country. However, since 2000, the largest contributor of productivity gains in US market services has become MFP, while the MFP contribution has become negative in Belgium and close to zero in the EU.

The divergences in the origins of productivity gains are also linked to the kinds of activities developed in the main groups of industries. Since 1990, the major contributors to labour productivity growth in Belgian manufacturing have been Food, beverages and tobacco, Transport equipment, and Rubber and plastic products. By contrast, the major contributors to US manufacturing productivity growth have to be found in activities linked to ICT production such as Office, accounting and computing machinery or to ICT applications such as Printing and publishing. In market services, the most important contributor in Europe and in the US was Wholesale and retail trade over the whole period, while Financial activities have been the main contributor in Belgium since 1990.

*"Growth and Productivity in Belgium",  
B. Biatour and C. Kegels,  
Working paper 17-08, September 2008.*

## Estimation of a Regional Input-Output System for Belgium

The Flemish regional government is constructing a Flemish environmental input-output model. This model brings together data concerning the environment with a monetary input-output table. This monetary input-output table for Flanders (an industry by industry IOT for the year 2003) has been compiled by the Belgian Federal Planning Bureau. In order to enhance the consistency of this table, a complete interregional input-output system (supply-use and input-output tables) for Belgium (all regions) has been compiled. It is this interregional system that is explained in this paper. It was a limited project, based essentially on non-survey techniques, disaggregating the national input-output system by means of top-down methods and consistent with the Regional Accounts.

After explaining what exactly is meant by an input-output system, the first part of the paper describes the methodology that was developed to calculate these tables. This is done step by step, starting from regional supply tables at basic prices and the regional use tables at purchasers' prices, to finally end up with an interregional input-output table. A short description of the results at the end of the paper, confirms that, due to the methodological choices made in the absence of hard data, interregional trade flows have probably been underestimated and should be interpreted as minimum thresholds.

The second part consists of a simple (inter)regional input-output analysis, based on the relation between the descriptive and the analytical forms of the input-output tables. Descriptive forms give the observed cost structure of the industries: the value created within each industry and the purchases of intermediary products from other industries or foreign producers. The share of domestic output and imports delivered in the components of so-called final demand is also given. The value

added created within all industries situated in one region is its so-called statistical (or apparent) contribution to GDP. Analytical forms of input-output tables reproduce so-called cumulated cost structures of industries. They give the direct and indirect value added created and intermediary imports, by all industries, engendered by deliveries that meet final demand that is addressed at one particular industry. These indirect effects are the result of a chain of intermediary deliveries engendered by the initial final demand. Two different versions for analytical contributions to GDP of a region are considered: total (national) value added engendered by the deliveries to meet final demand of the residents (businesses, households) of one region and total (national) value added engendered by the deliveries to meet the final deliveries (to all regions) for the industries situated in one region.

The particular situation of the Brussels region as a supplier of services to the other regions is accentuated in this way. Nearly one half of the regional GDP of the Brussels region (statistical contribution to Belgian GDP) is directly or indirectly created by final demand originating from the other regions. This results in a considerably lower analytical contribution to GDP for the Brussels region - according to the first version - than the statistical one, and in contrary figures for the other regions. According to the second version of analytical GDP contribution, the same differences remain, although they are much lower.

*"Raming van een regionaal input-output systeem voor België - Evaluation d'un système entrées-sorties régional pour la Belgique",*  
L. Avonds,  
*Working Paper 18-08, September 2008.*

## Other Recent Publications

*Economic Forecasts 2009*, September 2008  
(available in Dutch and in French).

*Economic Outlook 2008-2013*, May 2008  
"Perspectives économiques 2008-2013 - Economische vooruitzichten 2008-2013"

*Planning Paper 105*, May 2008  
"Perspectives de population 2007-2060 - Bevolkingsvoorzichten 2007-2060"

*Planning Paper 104*, April 2008

"Vijventwintig jaar regionale ontwikkelingen: een overzicht op basis van de databank van het HERMREG-model - Vingt-cinq ans d'évolutions régionales: un aperçu au départ de la base de données du modèle HERMREG"  
D. Bassilière, F. Bossier, F. Caruso, D. Hoorelbeke, O. Lohest

**Planning Paper 103, March 2008**

“De administratieve lasten in België voor het jaar 2006 - Les charges administratives en Belgique pour l'année 2006”  
Ch. Kegels

**Working Paper 10-08, April 2008**

“The PLANET Model: Methodological Report, PLANET 1.0”  
R.Desmet, B. Hertveldt, I. Mayeres, P. Mistiaen, S. Sissoko

**Working Paper 9-08, March 2008**

“Trade-based measures of offshoring: an overview for Belgium”  
B. Michel

**Working Paper 8-08, February 2008**

“Welvaartsbinding van de sociale zekerheidsuitkeringen: een overzicht van de recente ontwikkelingen”  
N. Fasquelle, M-J. Festjens, B. Scholtus

**Working Paper 7-08, February 2008**

“Coût budgétaire et effet sur la pension moyenne des mesures récentes dans le régime des travailleurs indépendants - Une analyse réalisée par une version adaptée de MoSES”  
B. Scholtus

**Working Paper 6-08, March 2008**

“Le système d'innovation en Wallonie”  
B. Biatour, Ch. Chatelain, Ch. Kegels

**Working Paper 5-08, February 2008**

“Begrotingsoverschotten opbouwen om de vergrijzing in België aan te pakken: realiteit en verkenningen - Accumuler des surplus budgétaires pour faire face au vieillissement démographique en Belgique : réalités et perspectives”  
M. Saintrain, S.Weemaes

**Working Paper 4-08, February 2008**

“Estimating private health expenditures within a dynamic consumption allocation model”  
P. Willemé

**Working Paper 3-08, January 2008**

“Formation des salaires et chômage régional en Belgique: un regard macro-économique”  
H. Bogaert

**Working Paper 2-08, January 2008**

“Long-term population projections in Europe: How they influence policies and accelerate reforms”  
H. Bogaert

## Research in Progress

**Wage formation**

New approaches based on detailed micro-data are being developed to better understand determinants of wage formation in Belgium and increase accuracy of related forecasts.

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**Macroeconomic, budgetary and GHG emissions prospects**

Using a consistent modelling approach, medium-term macroeconomic - including labour market - and budgetary prospects, as well as the future evolution of greenhouse gas (GHG) emissions, are investigated. Trends in the forces driving economic growth are analyzed. A consistent regional-national version of the model is being developed in collaboration with experts from the regional governments of Brussels, Flanders and Wallonia.

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**Determinants of total factor productivity growth in Belgium**

Research is under way to look into two specific determinants of total factor productivity (TFP) growth

in Belgium: innovation through R&D and market competition.

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**General equilibrium modelling**

A general equilibrium model (GEM) for Belgium is under construction. The model will be a long-term model with a particular emphasis on the link between transport and the economy.

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**Globalisation**

The research on globalisation is aimed at identifying worldwide trends in international trade and foreign direct investment and at measuring the impact of these movements on the Belgian economy at the industry level. Special attention is paid to offshoring and its consequences for the labour market in Belgium.

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#### Input-output tables

The FPB is preparing Input-Output tables for 2005. These are compiled using the Economic System of Accounts ESA95, and will be methodologically comparable to the tables for 1995 and 2000. The National Accounts Institute will transmit the data to Eurostat. The tables should be available in a 60-commodity disaggregation by the summer of 2009.

contact: [inputoutput@plan.be](mailto:inputoutput@plan.be)

#### The long-term budgetary and social challenges of ageing

Different aspects of the long-term dynamics of acute health care, long-term care and pension expenditure are being scrutinized. A long-term model is being used to project the budgetary consequences of ageing in different macroeconomic and demographic scenarios, notably in the framework of policy processes aimed at designing budgetary objectives (at national and European levels). Furthermore, the social dimension of pension benefits is being investigated using micro approaches, in particular a microsimulation model.

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#### Consequences of the financial crisis

Different aspects of the macroeconomic implications of the financial crisis are being investigated, notably by updating the short- to medium-term prospects for the Belgian economy. The implications of the decrease in real estate prices on the US economy - using the international economy model, NIME - are being tentatively assessed.

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#### Employment in the civil service

The question of whether the level and the structure of employment in government bodies in Belgium is appropriate has been raised regularly. A research project at FPB has been initiated to address this question.

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## Recent history of major economic policy measures

#### October 2008

The federal and regional governments injected capital into the following financial institutions in the form of either participation or loans: Fortis (14.9bn EUR), Dexia (2bn EUR), Ethias (1.5bn EUR) and KBC (3.5bn EUR). The federal government also offered the banks, on payment of a fee, a state guarantee for their borrowings on the interbank market.

European countries have decided to raise deposit insurance to a minimum of EUR 50,000, the Belgian government has opted to raise the amount insured from EUR 20,000 to EUR 100,000.

As a result of the rise in consumer prices, the maximum gross wage for which employees' SSC deductions apply, has been raised, as from September, to EUR 2,203.72 per month, up from EUR 2,118.21; the maximum wage for which the flat SSC deduction (standing at EUR 185.00 per month since October 2008) applied has been raised to EUR 1,362.90, up from EUR 1,309.59.

The Flemish "Job rebate", the Flemish Region's rebate on personal-income taxes on income arising from labour, will be gradually raised for revenue earned (taxed) in 2008 (2009) and 2009 (2010). The maximum rebate will be raised and the income ceiling will be lifted.

At the October budget conclave, the federal government announced its objectives for public finances in 2009. These are based on assumptions of 1.2% economic growth (1.6% in 2008) and 2.7% inflation (4.7% in 2008).

The federal government finances are expected to record a deficit in 2009 of 0.5% of GDP, roughly unchanged as compared to the 2008 target (a deficit of 0.6% of GDP). The targeted surplus in the social security budget should fall to 0.2% of GDP in 2009 (0.4% of GDP in 2008). State governments, as well as local governments, are expected to achieve a surplus of 0.2% of GDP. Communities, regions, local authorities and the social security would thus compensate for the deficit of the federal government, keeping the finances of general government balanced (which is also the targeted outcome for 2008).

The 2009 budget diverges from the target for general government of 0.5% of surplus GDP, as defined in the Ageing-fund law (December 2005) and in the Stability Program (April 2008). However, this slippage needs to be understood in the light of the negative output gap arising in 2009 from the economic downturn.

The 2009 budget partly relies on non-structural receipts, among which are the remuneration paid by banks for the state guarantee on their borrowings on the interbank market, dividends from public enterprises and an additional contribution from the energy sector.

The government intends to keep the growth of expenses strictly under control. Retiring civil servants will not be (fully) replaced. Contributions to public enterprises will be restrained (esp. railway investment). A price reduction on medicines will be imposed on the pharmaceutical industry. The purchase price of household vouchers for domestic services will be raised from €7.00 to €7.50 per hour, compensating for an increase in the remuneration at which service providers can redeem the vouchers.



## Recent history of major economic policy measures

October 2008

The budget allows for a rise in development co-operation expenditures, an extension of the heating aid for gas and electricity costs, new initiatives in health care (esp. for chronic diseases) and welfare increases in social allowances (anticipating and supplementing the allocation of the 2009-2010 envelope defined in the 2005 Generation Pact). In June, pensions in the wage-earners' scheme will be raised by 3% (minimum pensions), 2% (pensioners for 15 years and more) or 1.5% (other pensioners). The means-tested minimum and other low benefits will also be raised by 2% in June. Pensions in the self-employed schemes will be raised by EUR 20.00 per month as from May and again by 0.5% or 0.7% in August.

On the income side, the budget introduces a tax on flight tickets and plans to increase excise duties on road fuel, in the event of (and offsetting half of) drops in fuel prices. The fight against tax fraud will be reinforced. The federal "job rebate" will be strengthened through a new rise in the tax-deductible work-related expense allowance targeted at the lower income scale (this measure will be applied through a one-month-a-year decrease in the pay-as-you-earn income tax on wages, in May 2009).

After approval by the European Commission, the Capacity Allocation Service Company for Central Western Europe (CASC-CWE) has been established by the transmission system operators of Germany, France and the countries of Benelux. This marks a major step in electricity market coupling within this region. From November, CASC-CWE will provide cross-border capacity allocation services at the interconnectors. The objective is to offer a one-stop-shop for market players in order to harmonise long-term auctions of transmission capacity.

The European Commission sent a letter to the market regulator for electronic communications, BIPT/IBPT, requesting better enforcement of the regulatory measures for the wholesale market for fixed telephony, and a new market analysis within one year. Behind this letter is the continuing insufficient level of competition. Although many conditions for a competitive market have been fulfilled, regulation seems to be insufficiently enforced to create a real competitive market.

On October 8th, the ECB lowered its main refinancing rate to 3.75%. This move was coordinated with the Federal Reserve and four other central banks. Each institution lowered benchmark rates by 50 basis points.

September 2008

An agreement was concluded between Suez-GdF and the public holding company, Publigaz. The latter company will gradually increase its share in the gas transit system operator, Fluxys, from 33% to 51%. The Zeebrugge gas terminal will be split off from Fluxys and a majority shareholding (60%) will be held by Suez-GdF. However, the majority of seats in the management board of the terminal will be held by the minority shareholder, Publigaz.

July 2008

The Federal Government carried out a provisional budgetary check taking into account, notably, the impact of higher inflation on public spending (social allowances, compensation of public employees) and fiscal revenue. Nonetheless, the budgetary targets remain unchanged. The government even took the following measures to support the purchasing power of households, on top of those decided in March: additional resources for the 'fuel oil fund' set up to help people in need to pay their energy bill; increase in child allowances for single-parent families; 2% increase in wage-earners' pensions that started in 2003; increase of 10 euro per month in the minimum pension for self-employed persons, and of 5 euro per month in the means-tested minimum income guarantee for older people; partial advance of the indexation of the pay-as-you-earn personal income tax scales (to October 2008 instead of January 2009). Concerning public revenue, the government accounts show non-fiscal receipts that are higher than initially expected (among which are dividends from public enterprises and sales of real estate).

The Federal Government approved a bill that will limit to less than 25% the share in the gas transport system operator, Fluxys, held by any other company in the gas value chain. This will ensure more network independence. It also approved a new method of determining prices, income and profit margins of distribution network operators for gas and electricity.

June 2008

New five-year public service agreements were concluded between the Federal Government and the railway incumbent, NMBS/SNCB. Most striking are the objectives of attracting 25% more passengers and increasing train operations by 10%. Some price differentiation between peak and off-peak hours will be introduced, and several billions of euros will be made available for infrastructure and rolling stock.

The ECB raised its main refinancing rate by a quarter of a point to 4.25%.

May 2008

The Italian gas company Eni agreed with Suez to take over Suez's 57% share in the Belgian gas company Distrigas. This sale was a condition set by the European Commission for approving Suez's merger with Gaz de France (GdF). The second largest shareholder in Distrigas is Publigas, a public company owned by local authorities. It has 31% of the shares, which gives it the right to block the take-over. At the moment of printing this edition it is not yet known whether Publigas will make use of this right.

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
DGSD	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)