

# Economic Review

June 2009



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ISSN 1780-664X



# Contents

ECONOMIC PROJECTIONS FOR BELGIUM – SPRING 2009	7
THE NATIONAL BANK OF BELGIUM’S NEW BUSINESS SURVEY INDICATOR	31
PUBLIC EMPLOYMENT IN BELGIUM	53
THE BELGIAN MIGRATION TO SEPA (SINGLE EURO PAYMENTS AREA)	69
SUMMARIES OF ARTICLES	85
ABSTRACTS OF THE WORKING PAPERS SERIES	89
CONVENTIONAL SIGNS	95
LIST OF ABBREVIATIONS	97

# Economic projections for Belgium – Spring 2009

## Introduction

At the time of compiling these projections for 2009 and 2010, the world economy is going through a recession of unprecedented severity in post-war history. The financial crisis, the first signs of which emerged in the United States in 2007, took a serious turn for the worse during the autumn of 2008. It hit all the markets, with investors' mistrust in banking institutions leading them, just like enterprises and households, to increasingly show their preference for security and liquidity. These developments on the financial markets did not spare the real economy either, since a large proportion of industrial activity and, consequently, of business-related services too, was suddenly paralysed from the fourth quarter of 2008 onwards. Through the channel of international trade, this phenomenon spread very rapidly to all the developed economies – in particular the euro area, which has a high degree of openness – and to the emerging economies.

The release of statistics made it possible to gradually gauge the extent of the drop in GDP at the end of 2008 and in the first quarter of 2009, which was unprecedented in speed and scope. It turned out to be considerably more dramatic than had originally been expected. Consequently, week after week from autumn 2008 onwards, economic forecasts were revised downwards sharply. This was particularly the case for Eurosystem and ECB projections for the euro area, and those of the Bank for Belgium. Departing from its quarterly publication schedule, the Bank presented interim projections in February 2009, which pointed to a fall in GDP of 1.9 p.c. in 2009, as the forecasts that had been published two months earlier in the December 2008 Economic Review were by then already out of date. Now it seems that these interim forecasts further underestimated the extent of the deterioration in the economy.

The authorities swiftly took resolute action on both the monetary and fiscal fronts in order to prevent the financial sector from collapsing and to cushion the effects of the recession. Some signals, notably from the financial markets and from the indicators compiled from business surveys, point more to a stabilisation of the factors that had triggered the crisis than to any clear turnaround in demand prospects. Indeed, at the same time, there is still a great deal of financial tension, and the scale of the recession will necessitate heavy adjustments in the areas of employment, investment and the banking institutions' own positions. According to these projections, these adjustments could delay the economic recovery until 2010 and then further restrain it.

It is against this rather depressed and uncertain backdrop that the 2009-2010 economic projections for Belgium are presented in this article. The first chapter gives a broad overview of recent developments and prospects for the international environment, as well as the results for the euro area of the Eurosystem central banks' projections. The technical assumptions made in the framework of this joint exercise are presented in a box. Chapter 2 sets out the results for economic activity, employment and demand components in Belgium, while chapter 3 deals with inflation and changes in labour costs. Chapter 4 then focuses on general government sector accounts. In this respect, it should be recalled that the public finance figures have been compiled taking account only of measures that have been formally decided by the authorities, in the context of the fiscal stimulus packages, for instance. Besides, they depend on more recent outcomes, on changes in expenditure based on an assessment of historical trends and on the endogenous effect of the macroeconomic environment. Finally, the last chapter analyses the main risk factors likely to affect these projections, and sums up the findings of the other institutions.

The projections were closed on the basis of information available as at 20 May 2009.

## 1. International environment

### 1.1 The global economy

By the end of 2008, the international financial crisis had turned into a widespread economic recession, unprecedented in post-war history in terms of severity and the extent to which it spread. International trade collapsed at the end of last year and at the beginning of this year, causing the economic crisis to spread and giving it a highly synchronised character.

The United States and the euro area had already entered into recession during the course of 2008. The decline in activity was particularly marked in the fourth quarter, reaching respectively 1.6 and 1.8 p.c. compared with the previous quarter. In the United States, the continued correction of the residential property market, negative wealth effects, stricter borrowing conditions and the deterioration of the labour market weighed heavily on domestic demand. In the euro area, private consumption held up better, but investment was badly affected and exports collapsed at the end of the year.

The rest of the world has also been heavily hit by the collapse of international trade, so this is a major channel through which the economic crisis has spread throughout the world. The Japanese economy sank ever deeper into recession at the end of 2008, while the emerging economies and the developing countries were increasingly badly affected by the crisis. In this respect, the growing international integration of production processes observed over the last few decades, which has helped boost the volume of trade much more than the value of final production, amplified the effect of falling demand on export markets. This aggravated the decline in exports from some of the emerging economies in Asia, and in particular in China, a country which plays a vital role in the Asian production chain. Moreover, the growing shortage of trade finance may also have reinforced the downward trend in trade flows.

As well as being adversely hit by the significant decline in international trade, some emerging economies, particularly in central and eastern Europe, were also exposed to the effect of the sudden turnaround in international investor sentiment, which led to financing flows towards these economies largely drying up against a backdrop of increased risk aversion. And countries like Russia whose economy is strongly dependent on exports of oil or other

raw materials, had to cope with the impact of falling commodity prices.

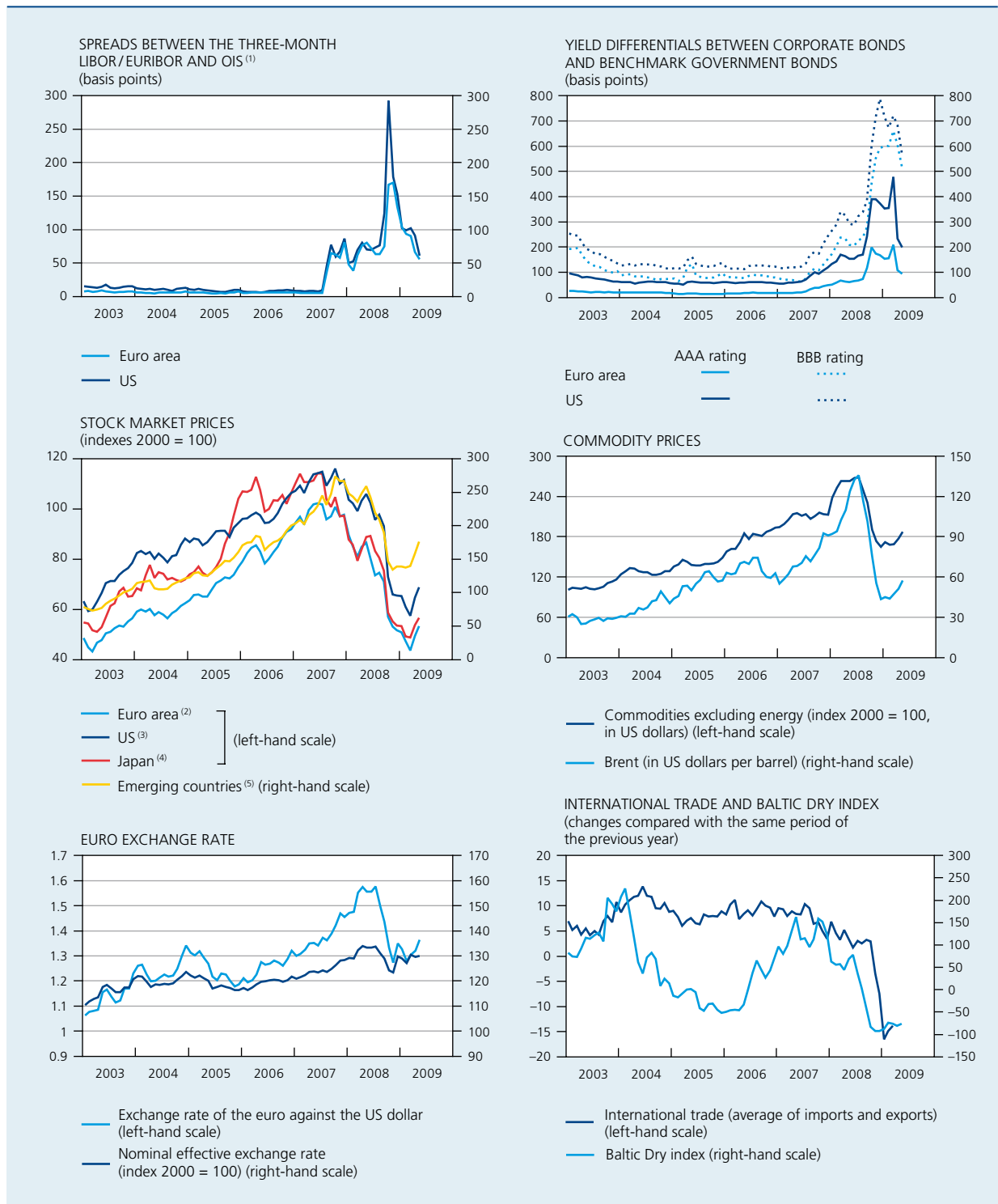
The deterioration of the global economic situation resulted in a significant weakening in demand for commodities in the second half of 2008 and, consequently, a sharp reduction in their prices. Thus, oil prices, which had reached a peak of 145.7 dollars a barrel of *Brent* in July 2008, stood at around 40 dollars at the end of December, corresponding to a drop of around 70 p.c. Prices of other commodities also came down over this period, albeit to a lesser extent with a decline of around 40 p.c. The fall in commodity prices brought with it a positive effect in that inflation came down considerably from mid-2008 onwards, notably in the advanced economies, something which was beneficial for households' purchasing power.

Labour markets have deteriorated significantly in recent months. Job creation in major advanced economies has been affected in construction and in industry, in an environment marked by a decline in trade in goods and by a sharp drop in industrial production.

The international financial crisis, which intensified in the second half of 2008, and the marked deterioration in the economic situation prompted a rapid economic policy response, based on past experience. Thanks to vigorous capital injections, governments were able to prevent the international financial system from collapsing and managed to stabilise the financial markets. Monetary policymakers relaxed their monetary policy considerably. The US Federal Reserve continued its move towards lower interest rates and cut its target for the federal funds rate to within a range from 0 to 0.25 p.c. in December 2008, while the Bank of Japan reduced its key interest rate in stages to 0.1 p.c. The ECB brought its own central rate down to 1 p.c. in May 2009, when it was still as high as 4.25 p.c. at the beginning of October 2008. Furthermore, the central banks took various measures – sometimes non-standard – and resorted to a wide range of policy instruments with a view to ensuring ample supply of liquidity and shore up the financial markets. In addition, governments announced a wave of ambitious fiscal measures to stimulate the economy. In the United States, for instance, the measures that were adopted under the *Emergency Economic Stabilization Act*, the *American Recovery and Reinvestment Act* and the *Financial Stability Plan*, among others, aim to put the financial sector on a sounder footing, stabilise the property market and support the labour market. In line with the European Economic Recovery Plan approved at the December 2008 summit, the Member States of the European Union took important initiatives to boost domestic demand and safeguard jobs. On the international front, the G-20 drew up an extensive action

**CHART 1** DEVELOPMENTS ON THE FINANCIAL AND COMMODITY MARKETS AND IN INTERNATIONAL TRADE

(monthly averages)



Sources: Bloomberg, CPB, HWWI, Thomson Financial Datastream.

- (1) Fixed rate paid by the counterparty of a interest rate swaps receiving the overnight rate for a three months term (Eonia for the euro area, effective federal funds rate for the United States).
- (2) Dow Jones Euro Stoxx Broad index.
- (3) Wilshire 5000 index.
- (4) Topix index.
- (5) MSCI Emerging Markets index.

programme designed to facilitate a sustainable return to financial stability and establish an appropriate framework for the recovery of economic activity worldwide, including by strengthening financial regulation, through better international coordination of economic policies and by rejecting protectionism. It was agreed to triple the International Monetary Fund's lending capacity, by raising it to 750 billion dollars, and to back a new allocation of special drawing rights, of 250 billion dollars, to make it easier for the Fund to help countries to brave the financial crisis.

The financial markets progressively stabilised in the early months of 2009. The extreme risk aversion and the tensions on the interbank market gradually eased – even though the latter is still not functioning normally –, while signs of investor confidence returning appeared from March onwards. However, the situation on the financial markets remains fragile and bank lending to households and enterprises continues to slow down.

Besides the developments observed on the financial markets, global economic activity, international trade and confidence indicators further deteriorated or remained at all-time lows, which shows that the economic recession is continuing. In the United States, provisional estimates point to a drop in GDP of 1.5 p.c. in the first quarter of 2009. In the euro area, the reduction in activity is estimated at 2.5 p.c. Furthermore, in Japan, the economic situation worsened further during the first few months of the year, while, in China, activity has barely expanded on a quarterly basis.

However, some signs of improvement are gradually beginning to emerge, here and there. In this respect, international trade does no longer appear to be shrinking at such a high pace. In the United States, private consumption has picked up somewhat in the first quarter of 2009, and some encouraging signals are emerging on the residential property market. In the euro area, the confidence indicators recovered in April and May from a historically low level. In China, faltering signs suggest that economic activity could regain momentum over the next few quarters. Commodity prices also started to rise at the end of the first quarter, although partly on account of a reduction in oil production. Overall, these positive signals nevertheless remain patchy and hardly alter the global picture depicting persistent sluggishness of activity, which shows up widely through the economic indicators.

Consequently, the forecasts for the year 2009 as a whole remain bleak. The sharp reduction in activity in the final quarter of 2008 and the first three months of 2009 will already be weighing heavily on the year-on-year economic growth rate in 2009. Moreover, the prospect of

a prolonged weakness of demand, excess production capacity throughout the world, the continued correction on the residential property markets, persistently strict borrowing conditions and the continued vulnerability of the financial system are all factors that will keep economic activity in check during the course of 2009.

On the other hand, the rapid decline in inflation over the year 2009 and the subsequent improvement in real disposable income of households should bolster private consumption. In addition, the wide-ranging economic stimulus measures should have an effect on production. But the situation on the labour market, which usually follows trends in economic activity with a certain time lag, is likely to get considerably worse, and this in turn will dampen private consumption.

Overall, global GDP is expected to drop by almost 1.5 p.c. in 2009, according to the latest forecasts drawn up by various international organisations. Trade in goods and services is projected to fall back dramatically, by around 11 p.c. compared with 2008, and is therefore likely to remain the principal channel via which the economic crisis is spreading throughout the world.

Negative GDP growth of almost 3 p.c. is forecast in the United States. Despite some signs of improvement, the situation is still worrying in the residential building sector. Private consumption is expected to remain sluggish, not only because of the impact of heavy losses of wealth incurred in 2008, but also because of the sharp deterioration of the situation on the labour market predicted for 2009. Investment and exports are also projected to drop substantially. In Japan, economic activity is expected to slow down even more markedly, falling by just over 5 p.c. according to the EC's Spring forecasts. In 2009, this country is expected to be faced once again with a situation of deflation, in a context of steeply declining exports and investment. For China, on the other hand, projections point to a continued rise in GDP, of a little more than 6 p.c. The expansion of economic activity in China, as well as in India, thus, is a major exception to the general trend of declining activity. Growth projections for China nevertheless also imply a marked slowdown compared with the previous years, exports from this countries being to a large extent penalised by the weakening of international trade.

Overall, the economic slowdown is gradually expected to decelerate during the course of 2009 and global economic growth should pick up in 2010. On account of a supportive macroeconomic policy, progressively less strict financial conditions, stabilisation of residential property markets and a recovery of international trade, especially in the emerging economies, world GDP should expand

**TABLE 1** PROJECTIONS FOR THE MAIN ECONOMIC REGIONS EXCLUDING THE EURO AREA  
(percentage changes compared to the previous year, unless otherwise stated)

	2008	2009	2010
	Actual	Projections	
<b>GDP in volume</b>			
World .....	3.1	-1.4	1.9
of which:			
United States .....	1.1	-2.9	0.9
Japan .....	-0.7	-5.3	0.1
United Kingdom .....	0.7	-3.8	0.1
China .....	9.0	6.1	7.8
India .....	7.2	4.3	5.0
Russia .....	5.6	-3.8	1.5
Brazil .....	5.1	-1.4	2.2
<i>p.m. Global imports</i> .....	2.7	-10.6	0.9
<b>Inflation<sup>(1)</sup></b>			
United States .....	3.8	-0.7	0.3
Japan .....	1.4	-1.0	-0.5
United Kingdom .....	3.6	1.0	1.3
<b>Unemployment rate<sup>(2)</sup></b>			
United States .....	5.8	8.9	10.2
Japan .....	3.9	5.8	6.3
United Kingdom .....	5.6	8.2	9.4

Source: EC (Spring forecasts, May 2009).

(1) Consumer price index.

(2) Percentages of the labour force.

once again by nearly 2 p.c. in 2010. Nevertheless, developments on the financial markets and general economic conditions remain highly uncertain.

## 1.2 Eurosystem projections for the euro area

Already substantially weakened by the financial tensions and, in some countries, by the marked deterioration of the property market, the euro area was hit directly by the repercussions of the synchronised collapse in demand from most of its trading partners, at the end of 2008 and at the beginning of 2009. After having slipped back slightly during the two previous quarters, GDP fell by 1.8 p.c. in the fourth quarter of 2008 and by 2.5 p.c. in the first three months of 2009. At the same time, inflation has fallen back from 4 p.c. in July 2008 to 0.6 p.c. in April 2009, mainly on account of the drop in commodity prices<sup>(1)</sup>.

The unexpected magnitude of these movements led to a major revision of growth and inflation forecasts, not only in comparison with the Eurosystem projection exercise published in December 2008, but also, as far as economic activity is concerned, with the ECB's interim projections issued in March 2009. Overall, after having shown a small increase of 0.6 p.c. in 2008, real GDP is expected to fall by between 5.1 and 4.1 p.c. in 2009. In 2010, growth is likely to range between -1 and 0.4 p.c. Inflation is forecast to drop from 3.3 p.c. on average in 2008 to a rate between 0.1 and 0.5 p.c. in 2009 and between 0.6 and 1.4 p.c. in 2010.

Against the backdrop of generalised recession, persistently tight borrowing conditions and low levels of business and consumer confidence, the euro area is thus confronted

(1) According to Eurostat's flash estimate, inflation stood at 0 p.c. in May



**TABLE 2** EUROSYSTEM PROJECTIONS  
(percentage changes compared to the previous year)

	Euro area			<i>p.m. Belgium</i>		
	2008	2009	2010	2008	2009	2010
Inflation (HICP) .....	3.3	0.1 / 0.5	0.6 / 1.4	4.5	0.1	1.3
GDP in volume .....	0.6	-5.1 / -4.1	-1.0 / 0.4	1.0	-3.5	-0.2
of which:						
Private consumption .....	0.3	-1.3 / -0.5	-1.1 / 0.3	0.8	-0.9	0.2
Public consumption .....	2.0	1.4 / 2.0	0.9 / 1.7	2.1	1.2	1.8
Investment .....	-0.3	-12.3 / -10.1	-6.1 / -2.1	5.1	-5.2	-2.7
Exports .....	0.8	-16.6 / -14.0	-2.0 / 1.0	2.1	-16.0	-2.3
Imports .....	0.9	-13.8 / -11.2	-3.0 / 1.4	3.3	-14.9	-2.0

Sources: ECB, NBB.

with the prospect of an extended period of economic sluggishness. On the demand side, exports – and along with them investment too – should decline sharply in 2009. Private consumption is also expected to drop in 2009 and is likely to remain weak in 2010. Purchasing power should of course be boosted temporarily by the slowdown in inflation, but increasingly bleak income prospects and capital losses sustained on both financial and property assets are likely to encourage households to rein in their expenditure. In particular, adjustments that companies are having to make in terms of jobs are likely to continue in 2010, leading to an increase in the

unemployment rate over the whole period covered by the projections.

The recent slowdown in inflation is also expected to continue in the short run. Inflation is even likely to be negative for a few months, on account of significant base effects related to the high oil prices a year before. Since this only has a temporary impact, inflation is expected to return to positive figures at the end of 2009 and in 2010. It is nevertheless likely to remain low, in the absence of wage pressure, against a backdrop of persistently weak economic activity and the worsening employment market.

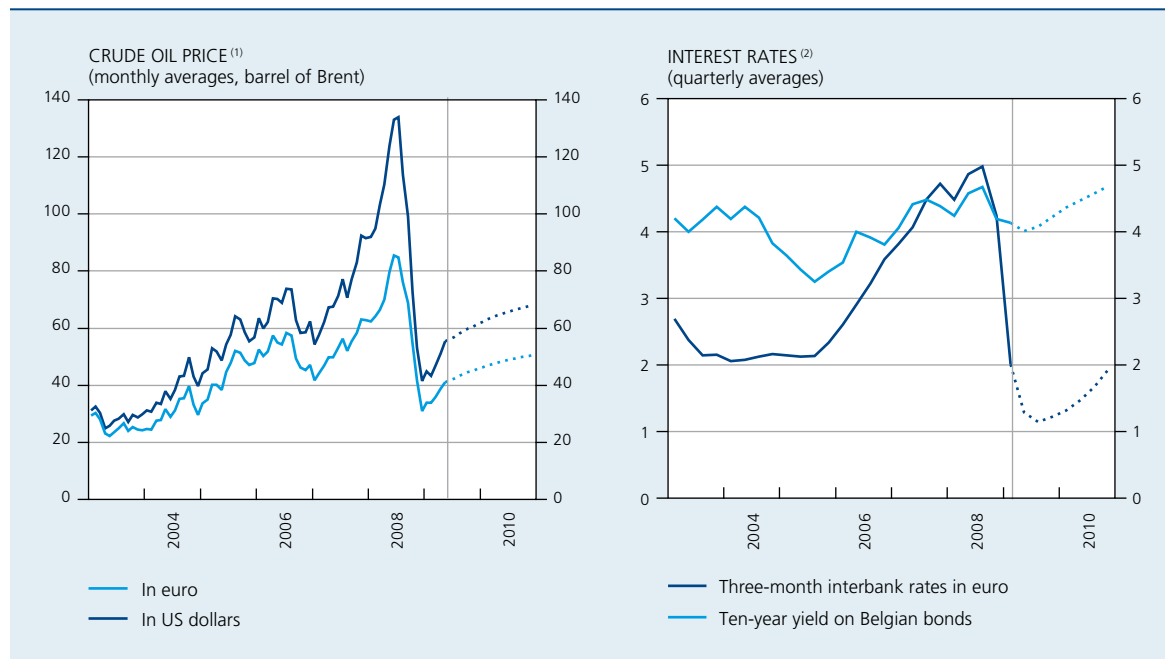
## Box 1 – Eurosystem assumptions

The Eurosystem's economic projections for the euro area, and the Bank's corresponding forecasts for Belgium are based on the following technical assumptions:

- the interest rates are based on market expectations. As an annual average, three-month interbank deposit rates in euro are expected to come down from 4.6 p.c. in 2008 to 1.4 p.c. in 2009, and then rise again to 1.6 p.c. in 2010. This trend assumes a normalisation of spreads in relation to the ECB's key interest rate and the overnight money market rate, which had emerged on account of the financial tensions. Rates on ten-year Belgian government bonds are estimated at 4.4 p.c. in 2008, 4.1 p.c. in 2009 and expected to rise to 4.5 p.c. in 2010. Compared to these reference rates, the assumptions also include a supplementary increase in the cost of financing corporate and household investment of respectively some 10 and 30 basis points;
- the bilateral euro exchange rates are kept constant at their value as at mid-May 2009, namely 1.34 US dollar to the euro;
- in accordance with the movement in implicit prices reflected in forward contracts, international market prices for a barrel of Brent are expected to average 54.5 dollars in 2009 and 65.5 dollars in 2010, against 97.7 dollars in 2008;



ASSUMPTIONS WITH REGARD TO CRUDE OIL PRICE AND INTEREST RATE



Source: ECB.

(1) Actual figures up to April 2009, assumption from May 2009.

(2) Actual figures up to the first quarter of 2009, assumption from the second quarter of 2009.

- in 2008, Belgium’s export markets, measured as the weighted total of the volume of imports of the trading partners, including those in the euro area, only expanded by 2.3 p.c., while they had posted an annual average growth rate of close to 7 p.c. over the five previous years. They are likely to shrink by 11.3 p.c. in 2009, owing to the collapse in world trade observed at the end of 2008 and at the beginning of 2009, and should only rise by 0.2 p.c. in 2010;

ASSUMPTIONS FOR THE EUROSISTEM PROJECTIONS

	2008	2009	2010
	(annual averages)		
Three-month interbank rates in euro .....	4.6	1.4	1.6
Ten-year Belgian government bond yields .....	4.4	4.1	4.5
Euro exchange rate against the US dollar .....	1.47	1.33	1.34
Oil price (US dollar per barrel) .....	97.7	54.5	65.5
	(percentage changes)		
Export markets relevant to Belgium .....	2.3	-11.3	0.2
Export competitors’ prices .....	2.2	-2.6	-0.3

Source: ECB.



- the export prices of competitors are forecast to fall by 2.6 p.c. in 2009 and by 0.3 p.c. in 2009;
- as is usual according to Eurosystem conventions, the figures for public finances are calculated taking account of the macroeconomic environment and measures which have already been announced and are specified in sufficient detail.

## 2. Activity, employment and demand in Belgium

### 2.1 Activity and employment trends

The slump in the euro area at the end of 2008 and at beginning of 2009 hit economic activity in Belgium head on. Both industrial production and foreign trade in goods plummeted from October 2008 onwards, their year-on-year decline reaching around 15 p.c. in February 2009. Industrial production had by then fallen back to its level of 2002. More broadly speaking, the downswing in the economy also affected the transport and business-related services branches of activity, in the wake of the deteriorating business climate and efforts undertaken by enterprises to cut back their operating costs, as well as trade and hotels and restaurants, reflecting consumer restraint in a highly uncertain economic outlook.

Overall, real GDP fell back by 1.7 p.c. in the fourth quarter of 2008, then by a further 1.6 p.c. in the first quarter of 2009, a pace of economic contraction not seen since the Second World War. The extent of the fall in the the Bank's synthetic business indicator between September 2008 and March 2009 and the decline in the rate of production capacity utilisation in the manufacturing industry – from 82.4 p.c. in October 2008 to 70.1 p.c. in April 2009 – also bear witness to the unprecedented abruptness of the drop in economic activity. While the business indicators have been showing some signs of stabilisation of in Belgium since April, as in other countries, the level of these indicators points to more negative growth in the short term, albeit less marked than in the two previous quarters.

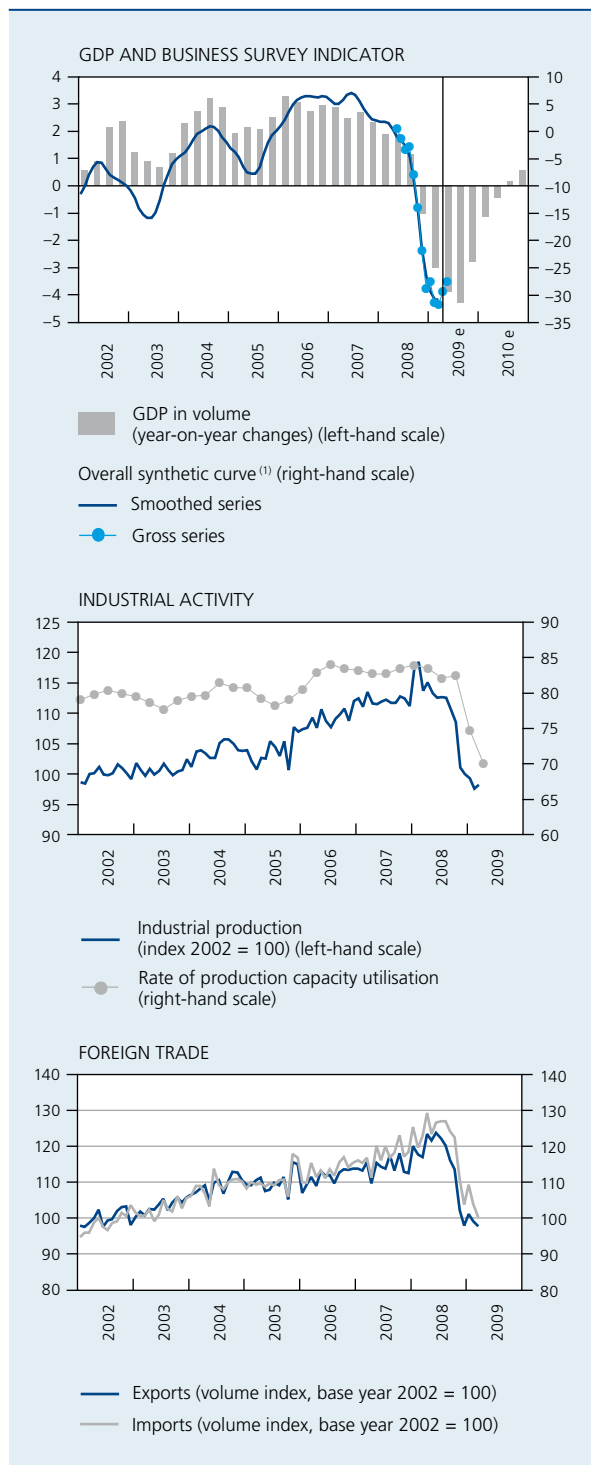
Even though these projections tend to be based on the assumption of a gradual easing of the financial tensions and strengthening of the global economy, the changes that still need to be made by financial institutions to get back on a firm footing and, more generally, the adjustments in terms of investment and employment that the economic recession will trigger within enterprises should

continue to restrain the upturn in economic growth. This recovery is not expected until the beginning of 2010, and then only on a limited scale. In annual average terms, after having grown by 1 p.c. in 2008, GDP is expected to contract by 3.5 p.c. in 2009 and by 0.2 p.c. in 2010.

In the face of the sudden drastic cutback in a large part of economic activity at the turn of this year, enterprises reacted first and foremost by activating the flexibility levers in the use of labour. In 2008, they cut back on temporary work, among both white-collar and blue-collar staff, although to a larger extent for the latter. For this category of workers, they also resorted much more widely to temporary lay-offs for economic reasons. In March 2009, the NEO – the public office responsible for paying out the allowance compensating for the loss of income during the period of inactivity – recorded around 313,000 persons concerned by this scheme, out of a potential total of 1.3 million bluecollar workers in Belgium. In April, the number of temporary unemployed fell by almost 100,000 units from the previous month's peak, largely for seasonal reasons. However, the year-on-year rise still comes to more than 75 p.c.

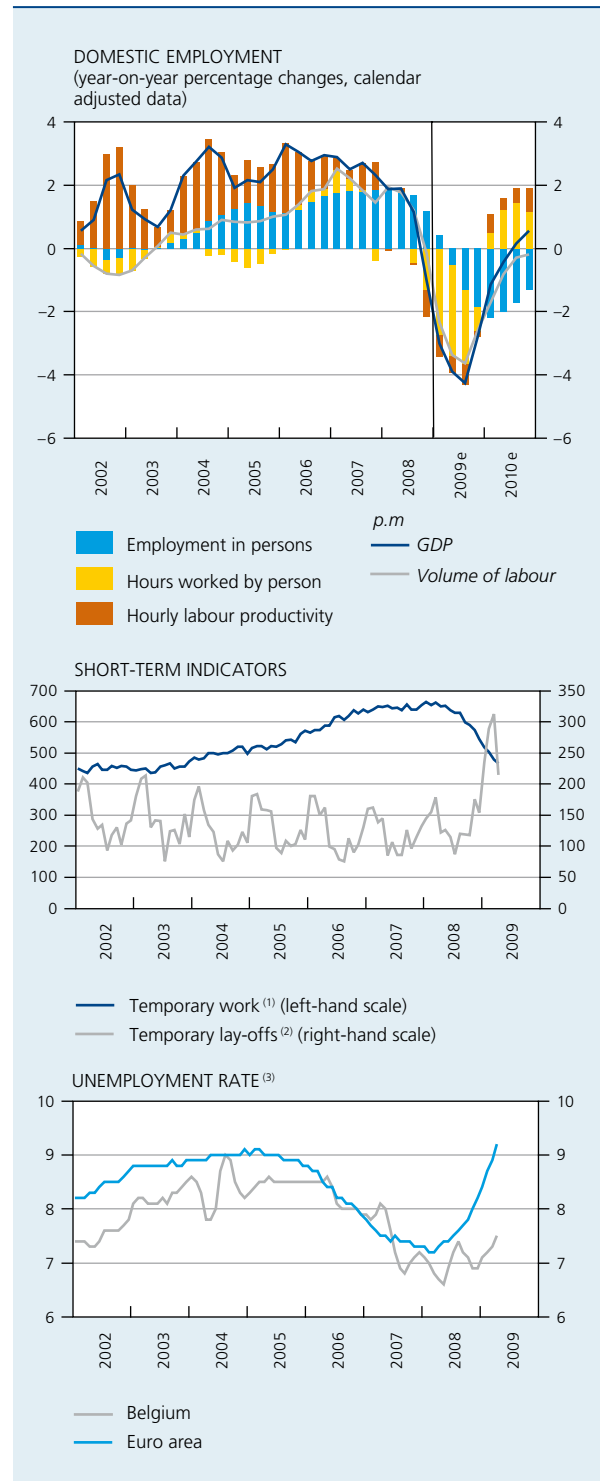
By reducing the volume of labour while preserving staffing levels in enterprises, this measure implicitly cuts the average number of hours worked per employee. Initially, it enables hourly productivity to be maintained within firms and helps curb the rise in unemployment. Thus, in Belgium, the harmonised unemployment rate remained stable, hovering around 7 p.c., until the first quarter of 2009, whereas there was already an upward trend in the number of jobless within the euro area as a whole. As part of the wider economic stimulus measures, the government decided in late April 2009 to set up a temporary scheme for suspending execution of the employment contract for white-collar workers. This measure will run from 1 July to 31 December 2009, although this period may be extended until mid-2010 following an opinion from the National Employment Council. Its implementation at firm level is subject to conditions, notably as regards the extent of the drop in activity justifying the measure.

**CHART 2** CYCLICAL DEVELOPMENTS IN ACTIVITY  
(seasonally and calendar adjusted data, unless otherwise stated)



Sources: DGSEI, NAI, NBB.  
(1) Seasonally adjusted data.

**CHART 3** LABOUR MARKET DEVELOPMENTS  
(seasonally adjusted data, unless otherwise stated)



Sources: EC, FEDERGON, NAI, NEO, NBB.  
(1) Thousands of hours worked by temporary agency workers.  
(2) Thousands of persons (concept of physical units), non-seasonally adjusted data.  
(3) Harmonised, percentages of the labour force.

**TABLE 3** LABOUR SUPPLY AND DEMAND  
(calendar adjusted data, annual averages)

	2006	2007	2008	2009 e	2010 e
	(percentage changes)				
GDP .....	3.0	2.6	1.0	-3.5	-0.2
Volume of labour .....	1.5	2.0	1.2	-3.0	-0.8
Domestic employment (persons) .....	1.4	1.8	1.6	-0.8	-1.8
	(changes in thousands of persons)				
Domestic employment .....	58.1	77.4	71.2	-36.5	-79.6
Employees .....	50.8	69.4	64.1	-33.4	-74.0
of which: branches sensitive to the business cycle .....	35.4	53.7	44.7	-44.8	-85.2
Self-employed .....	7.3	8.0	7.1	-3.1	-5.5
Frontier workers .....	2.5	1.0	0.7	0.3	0.1
Total employment .....	60.6	78.4	71.8	-36.2	-79.5
Unemployed job-seekers .....	-8.1	-55.4	-27.6	67.8	111.1
Labour force .....	55.2	25.1	46.0	33.3	33.2
<i>p.m. Harmonised activity rate</i> <sup>(1)</sup> .....	66.5	67.1	67.1	66.7	66.8
<i>Harmonised employment rate</i> <sup>(1)</sup> .....	61.0	62.0	62.4	61.2	59.8
<i>Harmonised unemployment rate</i> <sup>(2)</sup> .....	8.3	7.5	7.0	7.7	9.2

Sources: EC, NAI, NEO, NBB.

(1) Percentages of the population of working age (15-64 years).

(2) Percentages of the labour force.

Despite this recent extension to white-collar workers, these schemes only enable fluctuations in production to be cushioned temporarily. In view of the deep-seated and lasting nature of the downturn in activity, there is likely to be increasing evidence of a reduction in the number of people in employment over the course of 2009 and again in 2010. In parallel with the forecast 3.5 p.c. decline in GDP in 2009, the volume of employment, measured by the total number of hours worked in the economy, is projected to fall by 3 p.c. this year, and then by 0.8 p.c. in 2010. In turn, the drop in the number of persons in paid employment is expected to be no more than 0.8 p.c. in 2009, before rising to 1.8 p.c. the following year, giving net losses of respectively 36,000 and 80,000 jobs as an annual average. While the number of persons employed

continued to grow until the end of 2008, job losses are now likely to exceed, for the first time in more than five years, new job creations from the first quarter of 2009 onwards. The bulk of the job losses are nevertheless expected later in the year and at the beginning of 2010. All in all, 140,000 jobs are likely to be lost between the end of 2008 and the end of 2010.

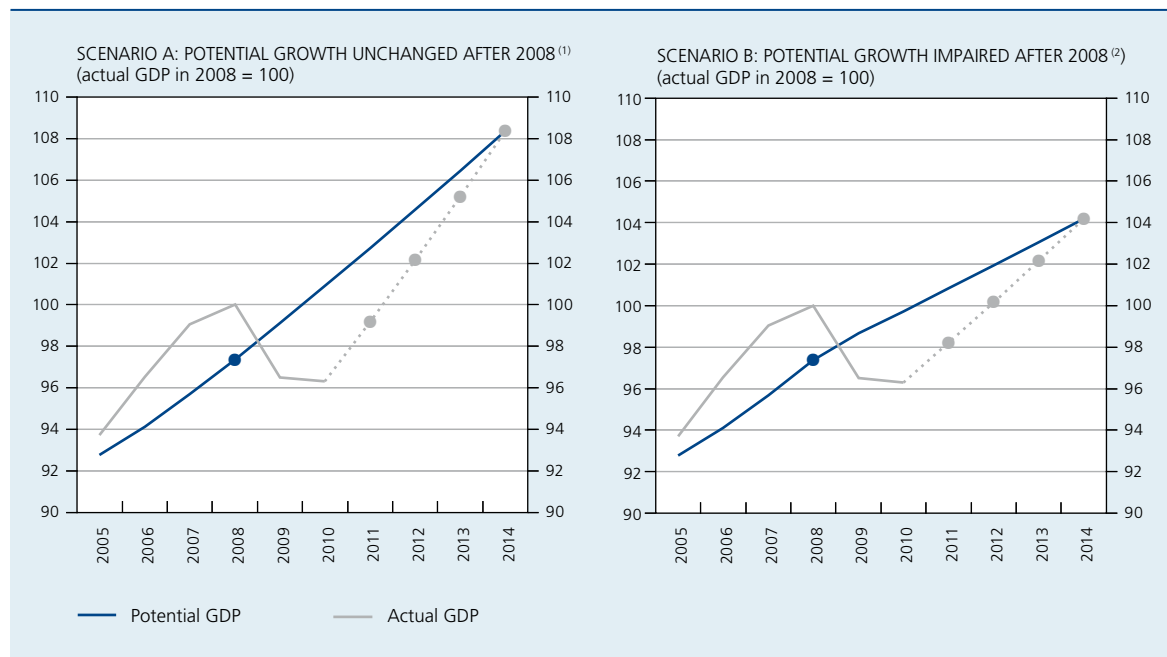
The reduction in employment, together with an estimated growth of the labour force by 33,000 persons each year, will lead to a cumulative increase in the number of unemployed job-seekers of 179,000 units over the two years covered by the projections. The average unemployment rate is forecast to rise from 7 p.c. in 2008 to 9.2 p.c. in 2010. It is expected to reach 9.7 p.c. by the end of 2010.

## Box 2 – Could the recession affect the economy's potential growth path ?

Whether the current crisis may or may not have a permanent impact on economic growth is a crucial question for future prosperity. The present projections indicate a hesitant growth revival during 2010, though growth will be well below its average rate, and nowhere nearly strong enough to compensate for the contraction in economic activity recorded in 2009. Such a slow recovery suggests that the crisis could also depress economic growth in the longer term.

The long-term growth projections are based on potential growth, i.e. the maximum growth attainable using the available production factors – capital and labour – and the total productivity of those factors in the production process, without generating tensions on the product and labour markets. In the short term, there might be a discrepancy between potential growth and the figure actually recorded, constituting the output gap. At present that gap is decidedly negative. On the basis of that situation, two scenarios are possible: either the economy regains the potential growth path prevailing prior to the crisis, a scenario which would require an economic boom lasting several years (scenario A), or the crisis depresses potential growth (scenario B), thus putting a permanent brake on the rise in the standard of living.

### POTENTIAL AND ACTUAL GDP GROWTH SCENARIOS IN BELGIUM IN THE CONTEXT OF THE MARKED DECLINE IN ACTIVITY



Source: NBB.

- (1) This chart shows the growth of actual GDP needed in order to close, over a four-year period, the negative output gap which emerged in 2009-2010, assuming that potential growth remains unchanged at 1.8 p.c. after 2008. In that case, actual annual GDP growth would have to average 3 p.c. from 2011.
- (2) This chart shows the growth of actual GDP needed in order to close, over a four-year period, the negative output gap which emerged in 2009-2010, assuming that potential growth drops to 1.1 p.c. from 2010. In that case, actual annual GDP growth would have to average 2 p.c. from 2011.

Previous episodes have indicated that recessions often tend to impair the economy's potential growth as a result of the indirect effects which the fall in demand exerts on total supply via various channels: via the production factor labour, by generating higher structural unemployment, via a slower accumulation of capital, and finally via weaker productivity growth. Potential growth may be curbed just for a few years, but also in the longer term,



witness the example of Japan since the early 1990s. The effect on potential growth depends on the scale of the recession and its characteristics. In that regard, the current recession calls for particular attention: first, it is the most severe recession since the end of World War II, and second, it is accompanied by a financial crisis which could have a direct effect on the supply side of the economy. Moreover, it should be noted that potential growth is also determined by factors unconnected with the crisis, such as the expansion of the labour force (labour supply), which is already likely in itself to act as a brake in the coming years, owing to population ageing.

The present projections forecast a marked rise in unemployment, which is likely to come close to the peak seen in the early 1980s. In the past, strong increases in unemployment, particularly during the 1970s, were largely structural in character: thus, the unemployment rate hardly declined at all, or only very gradually, when activity picked up, and exerted downward pressure on potential growth. Although the current rise in unemployment is smaller and the risk of such hysteresis effects may have diminished in Europe, owing to slower growth of the available labour supply and a more active labour market policy, the current crisis will pose a decisive test for the operation of the labour market. The labour supply will probably be less in line with demand, in view of the fairly marked decline in activity in certain branches, such as financial services and some industrial sectors. That situation could reinforce the structural character of unemployment. In that regard, a number of studies have indicated that Belgium is particularly vulnerable: the percentage of job seekers who have still not found suitable employment after one year is in fact significantly higher in Belgium than in the euro area (Hobijn and Sahin, 2007).<sup>(1)</sup> The labour market policy has a key role to play here, particularly in regard to placement and training services.

It also seems that the current recession could affect potential growth via a slowdown in investment and hence weaker growth of the capital stock.

The sudden, sharp downturn in activity has depressed the capacity utilisation rate in manufacturing industry, taking it to a record low of 70.1 p.c. in April 2009. That decline suggests that, even given a significant rise in activity, firms will show little readiness to increase their capital stock. In some ways, that situation might correspond to a correction of possible excess investment in the past. The financial crisis could augment the downward pressure on investment via increased risk premiums or by financial institutions tightening the other lending conditions which drive up the cost of capital. Existing investments would then be less swiftly replaced by new ones, or part of the capital stock could become obsolete and therefore less productive. In particular, that scenario is plausible in branches of activity experiencing a substantial decline in the capacity utilisation rate.

Past observations indicate that the impact of the recession on total factor productivity (TFP) is uncertain. Thus, if the allocation process is disrupted in both the labour and capital markets, in an economy facing structural shifts, both between certain branches of activity and between the private and public sectors, that would have an adverse influence on productivity. Moreover, given the liquidity problems and the resulting rise in the debt ratio, the recession could inhibit corporate investment in R&D and government investment in education and infrastructure, a phenomenon which could in turn be amplified by tighter financing conditions. Conversely, the example of the three Nordic countries shows an increase in productivity following the financial crisis of the early 1990s (Haugh et al., 2009).<sup>(2)</sup> That increase could be triggered by a creative destruction process, as the least productive firms disappear from the market, or by the implementation of essential structural reforms, a route more readily accepted in times of crisis.

The potential growth projections are subject to a margin of uncertainty: not only is short-term GDP growth still unknown, potential growth – which cannot be directly measured – also has to be calculated on the basis of statistical models. Therefore, bearing these points in mind and being guided by notable episodes from the past, it

(1) Hobijn B. and A. Sahin (2007), *Job finding and separation rates in the OECD*, Federal Reserve Bank of New York Staff Paper, n° 298.

(2) Haugh D., P. Ollivaud and D. Turner (2009), *The macroeconomic consequences of banking crises in OECD countries*, OECD, Working Paper 683.



## POTENTIAL GROWTH

	Belgium (NBB)			Euro area (EC)		
	2006-2008	2009	2010	2006-2008	2009	2010
Actual GDP growth <sup>(1)</sup> .....	2.2	-3.5	-0.2	2.1	-4.0	-0.1
Contribution to potential growth <sup>(2)</sup> .....	1.6	1.3	1.1	1.5	0.7	0.7
Labour .....	0.4	0.0	0.0	0.2	-0.2	-0.1
Capital .....	0.9	1.0	0.7	0.8	0.5	0.4
TFP .....	0.4	0.4	0.4	0.4	0.4	0.4
<i>p.m. Potential growth</i>						
<i>Federal Planning Bureau</i> .....	1.8	1.2	1.2			
<i>EC</i> .....	1.8	1.0	1.0			

Sources: EC, Federal Planning Bureau, NBB.

(1) Percentage annual changes.

(2) In percentage points.

is unlikely that we shall see a return to pre-crisis potential growth. Thus, the Bank's projections, estimated on the basis of a production function, indicate a deceleration of potential growth, down from around 1.8 p.c. in 2008 to 1.1 p.c. in 2010. These percentages are very similar to those published by the Federal Planning Bureau and the EC, which expect potential GDP growth to decline to 1.2 and 1 p.c. respectively in 2010. According to the EC, potential growth is actually set to fall to 0.7 p.c. in the euro area, essentially because the volume of labour and the capital stock will be harder hit than in Belgium. Productivity growth there is expected to stabilise, as in Belgium, at around 0.4 p.c. However, since productivity is derived as a residual figure following estimation of a model, the figures must be treated with caution.

Although these estimates are open to question, they are vital for macroeconomic policy, which aims to encourage a return to potential growth, and for structural policy, which aims to stimulate that growth. The estimate of potential growth also influences the calculation of the public sector's structural financing balance.

The indications that the current crisis could cause a permanent reduction in the growth potential of the Belgian economy reinforce the importance and urgency of instituting structural reforms, in accordance with the Lisbon agenda, with the aim of increasing productivity and achieving efficient, flexible product and labour markets, so as to be able to respond as flexibly as possible to the consequences of the crisis and the in-depth restructuring facing certain branches of activity and the financial markets. The initiatives aimed at expanding the use of labour must also continue, because permanently weaker growth would compromise the already impaired sustainability of public finances, and more generally, in the longer term, would herald a significantly attenuated rise in the standard of living.

## 2.2 Main expenditure categories

The slump in global demand and the effects of the financial crisis have a major direct or indirect impact on the principal factors driving demand. Thus, the contribution of domestic demand excluding stocks to GDP growth is

expected to decline from 2 percentage points in 2008 to -1.4 percentage point in 2009. The changes in stocks and in net exports are also set to depress growth, by 1.1 and 1 percentage point respectively. In 2010, the contribution of net exports is projected at -0.3 percentage point, and that of the other components should be close to zero.



In Belgium, as in neighbouring countries, producers were hit by the sudden and unprecedentedly steep decline in foreign demand in late 2008 and early 2009. That trend should moderate so that foreign markets will begin expanding again during 2010, albeit far more slowly than before the crisis. Overall, the volume of Belgium's exports of goods and services is expected to contract by 16 p.c. in 2009 and 2.3 p.c. in 2010. At the same time, the volume of imports is set to decline to a similar extent, by almost 15 and 2 p.c. respectively. Actually, in the absence of support from domestic demand, the pattern of imports is largely dependent on the trend in exports, owing to the close international integration of the production chains.

The marked deterioration in global economic activity and in the demand outlook explains for a large part the sharp fall in business investment in 2009. According to the quarterly survey of manufacturing industry, the capacity utilisation rate declined steeply, causing many firms to postpone their investment spending. Moreover, firms which nevertheless wish to invest face adverse developments affecting the financing of their projects. The fall in demand indeed has a negative impact on the capacity of firms to generate sufficient financial resources. Thus, after six years of sustained growth, the gross operating surplus of companies was 0.7 p.c. down in 2008 and is set to contract by a further 5.5 p.c. in 2009. Although firms could take advantage of the fall in import prices to increase their gross operating margin per unit of sales, that would not be sufficient in itself to offset the negative effect of the

decline in the volume of sales of around 10 p.c. Moreover, external funding became much more expensive in 2008, and that situation will only improve gradually during 2009. Although the banks are largely passing on to their customers the interest rate cuts introduced by the ECB, thus reducing the interest rates on bank loans to the low level recorded during the period 2003-2005, at the same time they are tightening the other credit conditions. The Eurosystem's bank lending survey shows that the banks are demanding more collateral and granting smaller loans. The reason for this tightening is that the banks are taking account of an increased risk of default in the context of the current economic crisis. The banks have also tried to restrain their lending in response to their own balance sheet and liquidity problems. Issuance of listed shares and corporate bonds is also expected to remain considerably more expensive in 2009 than before the outbreak of the financial crisis, although some slight improvement is expected for these financing channels compared to the situation in 2008. The weighted average overall cost of external financing will therefore remain relatively high in 2009. All these negative factors should gradually disappear during 2010. Thus, both foreign and domestic demand are expected to pick up little by little, the gross operating surplus of enterprises should increase, and the availability and cost of external financing are expected to return towards normal. Nonetheless, though these movements could sustain corporate investment from mid-2010, the annual growth of that investment is expected to remain negative at 3.3 p.c.

**TABLE 4** GDP AND THE MAIN EXPENDITURE CATEGORIES

(calendar-adjusted volume data, percentage changes compared to the previous year, unless otherwise stated)

	2006	2007	2008	2009 e	2010 e
Final consumption expenditure of individuals .....	2.1	2.0	0.8	-0.9	0.2
Final consumption expenditure of general government .....	0.1	2.3	2.1	1.2	1.8
Gross fixed capital formation .....	4.8	6.1	5.1	-5.2	-2.7
Housing .....	7.9	1.3	1.0	-3.4	-2.7
General government .....	-10.6	3.4	1.5	6.2	2.1
Enterprises .....	5.6	8.5	7.1	-7.1	-3.3
<i>p.m.</i> Total final domestic expenditure <sup>(1)</sup> .....	2.1	2.8	2.0	-1.4	0.0
Change in stocks <sup>(1)</sup> .....	0.9	0.1	0.0	-1.1	0.1
Net exports of goods and services <sup>(1)</sup> .....	0.1	-0.3	-1.0	-1.0	-0.3
Exports of goods and services .....	2.7	3.9	2.1	-16.0	-2.3
Imports of goods and services .....	2.7	4.4	3.3	-14.9	-2.0
GDP .....	3.0	2.6	1.0	-3.5	-0.2

Sources: NAI, NBB.

(1) Contribution to the change in GDP.

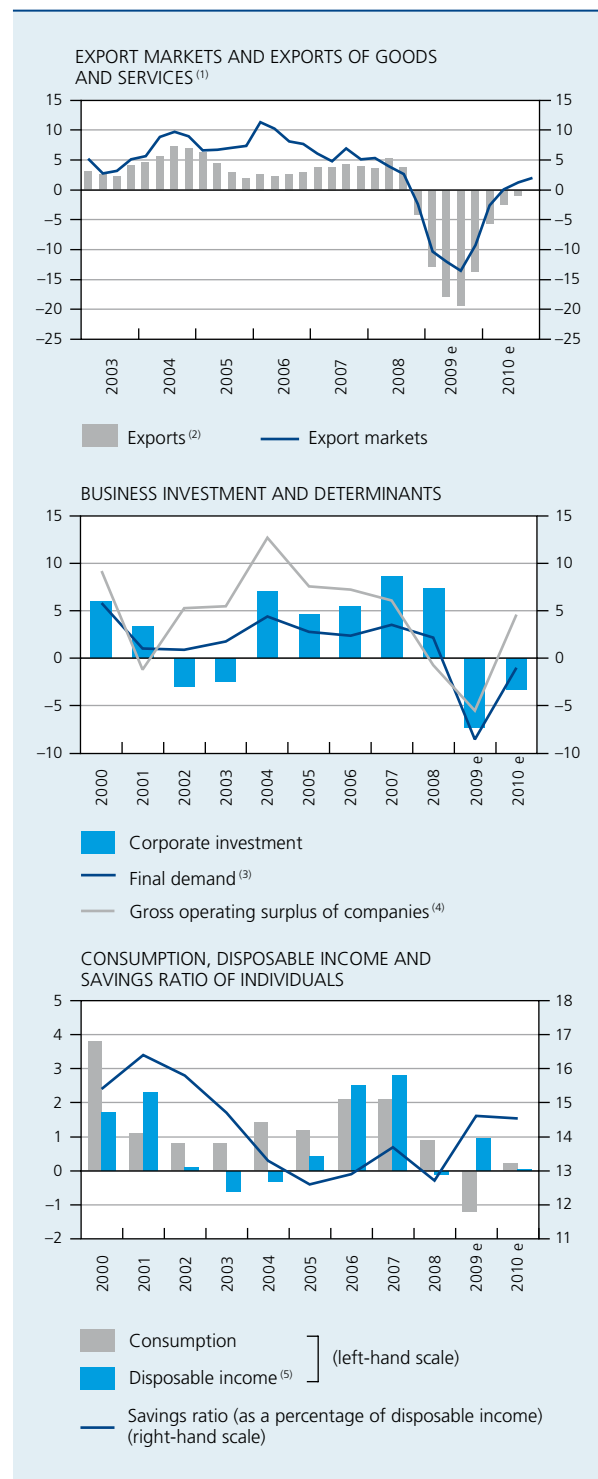
Although the contraction of investment in housing is less marked than the fall in corporate investment, the growth profile is broadly comparable. Notwithstanding the lower mortgage interest rates – due to rate cuts by the ECB and smaller margins applied by the banks – investment in housing this year is expected to be 3.4 p.c. below the 2008 figure. That fall is due mainly to the limited growth in the nominal disposable income of households, the adverse employment outlook and the – albeit small – reductions in prices expected on the secondary housing market. In 2010, the stagnation of the disposable income of households and higher mortgage interest rates are likely to continue curbing investment in housing, leading to a negative growth figure of around 2.7 p.c.

The movement in private consumption expenditure also partly reflects the limited growth of household purchasing power. During the period 2008-2010, the real disposable income of individuals is expected to rise by only 0.3 p.c. as an annual average, compared to growth of 1.1 p.c. per annum during 1995-2007. That limited increase is actually largely due to the exceptionally low level of inflation in 2009. In nominal terms, primary incomes will fall by 1.7 p.c. in 2009, as all the various components are affected by the deterioration in the economy. While the gross mixed incomes of self-employed persons will feel the effects of the downturn in activity, property incomes will be eroded mainly by the sharp fall in interest rates. Finally, the decline in workers' remuneration will be due to the sharp reduction in the number of hours worked in 2009, since hourly labour costs will rise by a further 2.6 p.c. However, the decline in primary incomes will be largely neutralised by the fact that individuals will pay less tax – thanks to a series of tax cuts approved at federal and regional level – and will receive more social benefits following the increase in the numbers of unemployed or temporarily laid off. Thus, by allowing the automatic stabilisers to operate in full, the government cushions the impact of the economic crisis on individuals. In conjunction with overall inflation well below the level of income indexation – particularly the indexation of wages and social benefits – the real disposable income of individuals should increase by 1 p.c. in 2009. However, it will not rise further in 2010. In particular, the deterioration in the labour market is likely to continue depressing earned incomes owing to both the decline in the volume of labour and a limited rise in hourly compensation. Property incomes will probably be underpinned by rising interest rates, and current net transfers to other sectors will continue to fall.

Generally speaking, the outlook for household incomes is uncertain in the medium term. In that context, consumers are likely to view the increase in their real disposable

**CHART 4** MAIN EXPENDITURE CATEGORIES

(non calendar-adjusted volume data, percentage changes compared to the previous year, unless otherwise stated)



Sources: ECB, NAI, NBB.

(1) Seasonally adjusted data; percentage changes compared to the corresponding quarter of the previous year.

(2) Calendar-adjusted data.

(3) Excluding changes in stocks.

(4) At current prices.

(5) Data deflated by the private final consumption expenditure deflator.

**TABLE 5** GROSS DISPOSABLE INCOME OF INDIVIDUALS, AT CURRENT PRICES  
(percentage changes compared to the previous year, unless otherwise stated)

	2006	2007	2008 e	2009 e	2010 e
Gross primary income .....	4.5	5.8	4.7	-1.7	0.5
of which:					
Wages and salaries .....	4.8	5.8	5.0	-0.6	-0.4
Remuneration per hour .....	3.1	3.6	3.7	2.6	0.6
Number of hours worked .....	1.6	2.1	1.2	-3.1	-1.0
Non-wage incomes .....	3.8	5.8	4.0	-4.4	2.9
Current transfers to other sectors <sup>(1)</sup> .....	0.8	6.6	7.0	-14.1	-3.9
of which:					
Current taxes on property incomes .....	-0.1	3.9	7.4	-5.5	1.2
Gross disposable income .....	5.4	5.6	4.2	1.1	1.3
<i>p.m. In real terms</i> <sup>(2)</sup> .....	2.5	2.8	-0.1	1.0	0.0
Consumption expenditure .....	4.9	4.9	5.2	-1.1	1.5
Savings ratio <sup>(3)</sup> .....	12.9	13.7	12.7	14.6	14.5

Sources: NAI, NBB.

(1) These are net amounts, i.e. the difference between incomes or transfers received from other sectors and those paid to other sectors, excluding transfers in kind.

(2) Data deflated by the private final consumption expenditure deflator.

(3) Gross savings, as a percentage of gross disposable income, these two aggregates being taken inclusive of the change in the net claims of households on pension funds.

income in 2009 as a temporary windfall, and will take advantage of it to boost their savings. This increased propensity to save is also due to the fall in share prices since the summer of 2007. Although wealth effects have been relatively limited so far in Belgium, the decline in the net financial assets of individuals, caused by share prices plunging by around 60 p.c. between October 2007 and March 2009, will probably continue to exert substantial downward pressure on consumption in 2009, because individuals will try to make up part of their losses by saving more and therefore consuming less. The savings ratio is therefore estimated to increase from 12.7 p.c. of disposable income in 2008 to 14.6 p.c. in 2009 and 14.5 p.c. in 2010.

The growth of public consumption expenditure is expected to slow in real terms, to 1.2 p.c. in 2009, before regaining momentum in 2010 to reach 1.8 p.c. However, the recovery projected for 2010 is due exclusively to a more favourable movement in prices. In nominal terms, the growth of public consumption is likely to continue to slow down. Public investment is predicted to increase substantially in 2009, growing by 6.2 p.c. in real terms, before expanding by a further 2.1 p.c. in 2010. That pattern is entirely in line with the electoral cycle of public investment.

### 3. Prices and costs

After having peaked at 5.9 p.c. in July 2008, inflation in Belgium rapidly subsided, dropping to 0.7 p.c. in April 2009. It had thus reverted more or less to the level recorded for the euro area as a whole, whereas in mid-2008 it had exceeded that figure by 1.9 percentage points.<sup>(1)</sup>

The recent moderation in the rate of consumer price rises, like the strong acceleration in the preceding twelve months, is largely due to the "energy" and "food" components of the HICP. According to the projections, inflation should continue to fall in the short term, thus becoming negative for a time. This situation, likely to last for only a few months, is due mainly to base effects related with the record prices of petroleum products during the summer of 2008. According to the assumption adopted for the purpose of this exercise, the oil price will continue to increase gradually from its lowest level of 41.6 dollars per barrel of Brent, recorded in December 2008, since it stood at 55 dollars in May 2009 and is expected to reach 68 dollars by the end of 2010, but these levels are still well below the peak of more than 140 dollars, recorded in July 2008.

(1) In May, inflation was running at -0.2 p.c. in Belgium.

Once these base effects have faded away, inflation is expected to return to positive figures at the end of 2009, though remaining low up to the end of the projection period. In all, as an annual average, inflation is forecast at 0.1 p.c. in 2009 and 1.3 p.c. in 2010, having reached 4.5 p.c. in 2008. The health index, used as the reference for the indexation of wages and social benefits, in particular, is projected to rise by 0.8 p.c. in 2009 and 1.1 p.c. in 2010.

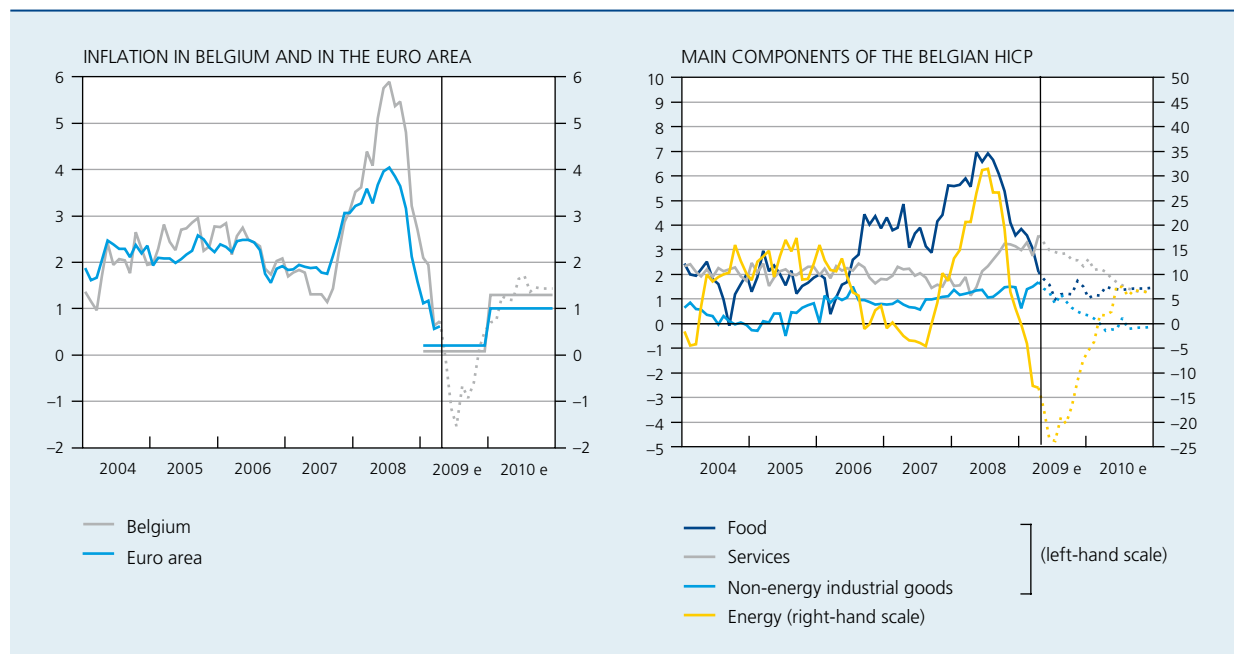
The low inflation predicted up to the end of the projection period is mirrored in the expected movement in the prices of each of the two main components of the HICP, namely non-energy industrial goods and services, even though inflation in these two product categories will initially be higher in Belgium than in the euro area as a whole. In general, the easing of underlying inflation is due to the rapid attenuation of inflationary pressure resulting from the widespread weakness of demand. That effect is exerted both via import prices, from 2009 onwards, and via domestic labour costs, principally in 2010. In particular, the import deflator is projected to fall by 3.1 p.c. in 2009, before rising by 1 p.c. in 2010, driven mainly by the expected increase in commodity prices. Unit labour costs in the private sector are set to continue rising at a sustained pace of 2.9 p.c. in 2009, but should decline by 0.1 p.c. in 2010.

This marked deceleration in unit labour costs between 2009 and 2010 is partly linked to the cyclical profile of labour productivity. As in the previous year, the sudden decline in activity will depress productivity in 2009, but the adjustment in the volume of labour mobilised by firms should gradually take effect in 2010. However, at 0.5 p.c. the growth of hourly productivity is likely to remain modest, in line with the hesitant revival of output.

The increase in hourly labour costs is projected to decline from 2.3 p.c. in 2009 to 0.4 p.c. in 2010, compared to an average annual rise of 3.6 p.c. in the preceding two years. In accordance with the provisions of the central agreement for 2009-2010 concluded in December 2008, the expected movement in labour costs in the private sector takes account of indexation and the possibility of granting, in the context of negotiations at joint sectoral committee level, non-recurring bonuses of 250 euros per worker over the two-year period, of which 125 euros can be paid in 2009. The decision to allow the granting of such a bonus, which will attract favourable tax treatment, rather than setting an indicative norm for a permanent rise, is due to the need for wage negotiations to take account of the sharp decline in competitiveness and the deterioration in the labour market. Moreover, that deterioration is likely to increase the level of redundancy payments and to lead to an endogenous reduction in

**CHART 5 INFLATION**

(HICP, percentage changes compared to the corresponding period of the previous year)



Sources: EC, NBB.

**TABLE 6** PRICE AND COST INDICATORS

(percentage changes compared to the previous year, unless otherwise stated)

	2006	2007	2008	2009 e	2010 e
HICP .....	2.3	1.8	4.5	0.1	1.3
Health index .....	1.8	1.8	4.2	0.8	1.1
Underlying inflation <sup>(1)</sup> .....	1.6	1.9	2.7	2.0	1.0
Labour costs in the private sector:					
Labour costs per hour worked .....	3.1	3.7	3.5	2.3	0.4
<i>p.m. Including the effects of the reductions in payroll tax<sup>(2)</sup> . .</i>	2.8	3.4	3.2	2.0	0.0
Employers' social contributions <sup>(3)</sup> .....	-0.3	0.4	-0.2	0.2	0.1
Gross wages per hour worked .....	3.4	3.4	3.7	2.1	0.3
of which: indexation .....	1.8	1.7	2.9	2.4	0.5
<i>p.m. Labour productivity<sup>(4)</sup></i>	1.6	0.6	-0.4	-0.5	0.5
Unit labour costs .....	1.5	3.1	3.9	2.9	-0.1

Sources: EC; FPS Employment, Labour and Social Dialogue; NAI; NBB.

(1) Measured by the HICP excluding unprocessed food and energy.

(2) This refers to payroll tax reductions granted to firms in the private sector. According to the national accounts methodology, they should be recorded as a subsidy and not as a direct reduction in charges. They therefore cannot be taken into account for calculating labour costs.

(3) Contribution to the change in labour costs resulting from changes in the implicit contribution rates, percentage points.

(4) Value added in volume per hour worked by employees and self-employed persons.

average individual wages, particularly via lower bonuses or the departure of highly-paid staff. In order to offset part of the wage handicap, the payroll tax reductions granted to firms have been extended. Although they help to reduce labour costs, these measures are considered as subsidies rather than as reductions in charges according to the conventions of the national accounts; in that sense, they do not influence the labour costs considered here.

## 4. Public finances

### 4.1 Overall balance

According to the provisional figures published by the NAI in March 2009, Belgium's public finances recorded a deficit of 1.2 p.c. of GDP in 2008. That deficit is expected to reach 5.5 p.c. of GDP in 2009 and 6 p.c. in 2010.

The sharp deterioration in the public deficit and the upward revision of the figure compared to the Bank's previous projections are due to the macroeconomic environment described above, which is now being seen as far more adverse. In order to avoid exacerbating the deterioration in the economy, the federal government decided to allow the automatic stabilisers to respond to the repercussions of the crisis. In other words, neither the negative

effects of the current severe recession on public revenues nor the upward pressure on unemployment expenditure are being neutralised.

Moreover, the federal government and the regional governments have drawn up economic recovery plans in line with the European Economic Recovery Plan, approved by the European Council on 11 and 12 December 2008. They comprise measures intended essentially to counteract the fall in demand. In Belgium, the scale of the recovery measures is relatively modest, as the high level of the tax burden and the public debt and a clearly increasing deficit narrow the available scope for action. The measures designed to safeguard corporate financing and investment are additional components of the recovery plans.

The interest charges of general government are projected to increase slightly in 2009, for the first time since 1990. That situation is due solely to the strong expansion of public debt in 2008, which will probably continue to rise over the next two years. However, the effect of the rise in public debt is attenuated to some extent by the fall in the average implicit interest rate applicable to it, caused mainly by the extremely low level of short-term market interest rates.

In regard to non-recurrent factors, two court decisions calling on the Belgian government to refund certain taxes are likely to increase the budget deficit in 2009. According

**TABLE 7** GENERAL GOVERNMENT ACCOUNTS<sup>(1)</sup>  
(percentages of GDP)

	2006	2007	2008	2009 e	2010 e
Revenues .....	48.7	48.1	48.7	48.4	48.6
of which: fiscal and parafiscal revenues .....	43.8	43.3	43.7	43.0	43.0
Primary expenditure .....	44.5	44.5	46.2	50.0	50.7
Primary balance .....	4.2	3.6	2.5	-1.6	-2.1
Interest charges .....	3.9	3.8	3.7	3.9	3.9
Overall balance .....	0.3	-0.2	-1.2	-5.5	-6.0
<i>p.m. Stability programme targets</i> .....	<i>0.0</i>	<i>0.3</i>	<i>0.0</i>	<i>-3.4</i>	<i>-4.0</i>

Sources: FPS Finance, NAI, NBB.

(1) According to the methodology used in the excessive deficit procedure (EDP).

to the ESA 95 methodology, these refunds, which concern corporation tax and personal income tax and amount to around 0.5 p.c. of GDP, are recorded as capital transfers. In 2009 there will also be a one-off reduction in public revenues owing to the small, temporary cut in the rate of VAT on new housing construction, specified in the federal recovery plan. The projections do not include any major non-recurrent factors in relation to 2010.

It should be noted that the projections only take account of budget measures which have already been announced and specified in sufficient detail. They disregard the effect

of decisions yet to be taken, e.g. when the 2010 budget will be drawn up. The April 2009 stability programme assumes a return to a balanced budget in 2015. The present projections show that a major consolidation programme will be needed to achieve that aim.

#### 4.2 Revenues

Expressed as a percentage of GDP, public revenues are set to fall by 0.3 p.c. of GDP in 2009 and to increase slightly by 0.2 p.c. of GDP in 2010.

**TABLE 8** STRUCTURAL MEASURES RELATING TO PUBLIC REVENUES  
(millions of euro, unless otherwise stated; changes compared to the previous year)

	2009 e	2010 e
Taxes .....	-1,236	-116
of which:		
Tax reduction granted by the Flemish Region .....	-553	0
Increase in the tax-free allowance for workers .....	-150	75
Increased allowance for energy-saving investments .....	-273	0
Introduction of the housing bonus .....	-154	0
Tax-favorable wage increases .....	-113	-113
Increases in excise duty on petrol and diesel .....	82	0
Other .....	-75	-78
Social security contributions .....	-170	-100
<b>Total</b> .....	<b>-1,406</b>	<b>-216</b>
<i>p.m. Percentages of GDP</i> .....	<i>-0.4</i>	<i>-0.1</i>

Sources: Budget documents, FPS Finance, NSSO.

The decline in revenues expected in 2009 is due mainly to structural measures, the effects of which should amount to 0.4 p.c. of GDP. Thus, levies on earned incomes will be reduced by the introduction in 2009 of a general lump sum reduction in personal income tax granted by the Flemish Region to its residents, the increase – effective from 1 July 2008 – in the tax-free allowance for low and medium incomes, and the raising of the percentages and the ceiling of the standard allowance for professional expenses. In addition, in 2009 the impact of the increase in the tax allowance for energy-saving investments and the introduction of the housing bonus system is reflected in the personal income tax assessments. Conversely, the revenues generated by excise duties on mineral oils should rise following the reintroduction of the ratchet system for diesel and petrol.

Overall, the impact of the economic recovery plans on revenues is fairly modest. For the government, the decline in revenues is due partly to the award of pay increases in a tax-favourable way, amounting to a maximum of 250 euros per person over 2009 and 2010 as a whole, including a maximum of 125 euros in the first year, laid down in the central agreement, and partly – during the whole of 2009 – to a temporary reduction in the VAT rate from 21 to 6 p.c. for new housing construction, applicable to the first 50,000 euros.

The federal government has also adopted a series of measures aimed at improving the liquidity position of firms and self-employed persons. Thus, employers have an additional three months in which to hand over the payroll tax normally due in March to August 2009. In addition, in 2009, it will be easier for firms and self-employed persons facing liquidity problems to obtain more time to pay their social contributions and VAT. The system whereby the government pays VAT refunds monthly has also been extended. Since these measures simply lead to postponement of the levy or payment, they have no direct effect on the government's budget balance.

### 4.3 Primary expenditure

Primary expenditure which, as a percentage of GDP, had already risen sharply in 2008 to 46.2 p.c., should expand very significantly in 2009 and 2010, to 50 and 50.7 p.c. respectively. This surge is due partly to the fall in the level of nominal GDP compared to 2008, and partly to the sustained growth of primary expenditure.

Part of the reason for that growth lies in non-recurrent or cyclical factors, relating to the effects of the crisis, for instance, and the economic recovery objectives. Thus,

unemployment expenditure acts as an automatic stabiliser. Its cyclical component will have an impact on the growth of real primary expenditure amounting to 0.2 percentage point in 2009 and 0.5 point in 2010. Other factors, such as the temporary scheme for suspending execution of the employment contract, enabling employees to qualify for an allowance, apply for a limited time. Also, the delayed effect of inflation – i.e. the effect in a full year which the indexation of 2008 wages and social benefits will exert on expenditure in 2009 – is also likely to fuel the increase in real expenditure.

Deflated by the HICP and adjusted for the influence of the economic cycle, non-recurrent factors and indexation effects, primary expenditure is projected to increase by 2.8 p.c. in 2009 and 2.4 p.c. in 2010, rates comparable to the average for the past ten years but well above the trend growth of GDP.

The increase in expenditure – adjusted for these various factors – projected for 2009 is the outcome of divergent developments in the subsectors which make up general government. At federal government level, the increase will be considerably smaller than in recent years. A new wave of employment-creating measures, such as the general reduction in payroll tax, recorded as subsidies in accordance with the ESA 95, will affect the growth of primary expenditure to a greater extent than in 2008. However, that effect is likely to be more than offset by the decline in the growth of purchases of goods and services. At the same time, the already sustained expansion of social security expenditure is set to accelerate further owing to the expected rise in expenditure under the service voucher system, and the rise in spending on health care, pensions and unemployment benefits. These last two expenditure categories are likely to be influenced in particular by a set of measures adjusting benefits in line with prosperity. In contrast, in the case of the communities and regions and the local authorities, the increase in expenditure should be fairly moderate.

Since no budget is available at present, it is difficult to estimate the rate of increase in primary expenditure in 2010. However, the projections already take account of a set of measures aimed at increasing social benefits: these will drive up social security expenditure to a lesser extent than in 2009. The growth of federal government expenditure is likely to be particularly strong, one reason being the arrival at maturity of the measures approved so far concerning the reduction in payroll tax. In the case of the communities and regions, these projections are largely based on movements seen in the past, adjusted to take account of the influence of the electoral cycle at this level of power on investments, which are likely to decline. Local

authority expenditure is expected to revert to growth close to its trend rate, owing to a relatively strong investment revival.

#### 4.4 Debt

Between 1993 – the year when public debt peaked at 133.5 p.c. of GDP – and 2007, the general government debt ratio declined steadily by an average of 3.5 percentage points per annum, mainly as a result of endogenous factors such as the primary surplus, the reduction in the implicit interest rate on public debt, and the growth rate of the economy. At the end of 2007, it represented 84 p.c. of GDP. The gap between Belgium's debt ratio and that of the euro area thus contracted from 68 percentage points in 1993 to 18 points in 2007.

Since then, the trend has been reversed, and public debt has begun rising again. In 2008, it increased by 5.7 percentage points, owing to exogenous factors, mainly the capital injections and credit granted to financial institutions in the context of the crisis afflicting the sector. Since the financial crisis affected Belgium more severely, and sooner, than the euro area as a whole, the surge in the public debt ratio was more marked here.

In 2009 and 2010, the general government debt is projected to record a further strong increase, albeit slightly below the average for the euro area. The main factors behind that increase will be endogenous changes, due to the expected budget deficits and – especially in

2009 – to the contraction of GDP. At the end of 2009, the debt ratio is projected at 97.4 p.c. of GDP. In 2010, it is likely to increase further to 103 p.c. of GDP.

## 5. Assessment of the risk factors

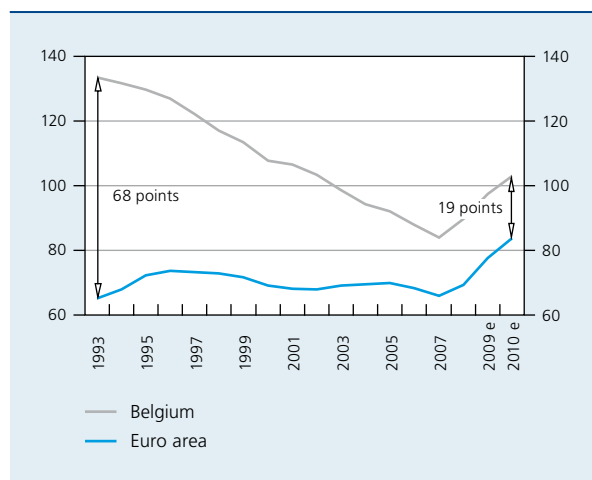
In all respects, not only the global economy but also the economy of the euro area and that of Belgium are experiencing a period of particular uncertainty. The economic agents, governments and monetary authorities face an unprecedented situation in which the effects of their actions are difficult to predict. For them and for the forecasters, too, it is mainly a question of monitoring developments day by day and adjusting their assessment accordingly.

Despite the great uncertainty surrounding the current economic situation, the Bank's figures are similar to recent forecasts issued by other institutions, in terms of both activity growth and inflation. However, it is vital to be aware of the risk factors which could affect those projections.

Thus, the risk of the financial tensions spreading to the real economy, mentioned when the previous projections were published, has materialised in dramatic form in the past six months, with totally unexpected speed and severity. One might hope that the worst is over in terms of the rate of the contraction in demand, that hope being based in particular on the stabilisation of certain indicators which usually act as early signals. However, it remains to be seen whether that early indication will also prove correct in the current context, or whether this time those positive signs will prove false, as owing to its depth and synchronisation in the main economies, the recession will induce a lasting adjustment of employment and investment, which will restrain the revival of domestic demand. Also, financial institutions are generally still under stress, and the direct effects of the financial crisis are now being compounded by the effects of the deteriorating economic situation, as is evident from the rising number of bankruptcies. These factors were included in the projections, but it is particularly hard to quantify the scale and duration of their effects.

According to past observations, beyond the temporary effect resulting from the recent movement in prices of petroleum products, the Bank's projections for Belgium, like those produced by the Eurosystem for the euro area, show a degree of persistence in inflation and wage growth. The widespread weakness of demand is therefore not likely to lead to deflation. That conclusion is based in particular on the expected favourable effect of the cuts

**CHART 6** CONSOLIDATED GROSS DEBT  
(percentages of GDP)



Sources: EC, NAI, NBB.



**TABLE 9** COMPARISON OF THE FORECASTS FOR BELGIUM  
(percentage changes compared to the previous year)

	GDP in volume		Inflation <sup>(1)</sup>		Budget balance <sup>(2)</sup>		Date of publication
	2009	2010	2009	2010	2009	2010	
NBB – Spring 2009 .....	-3.5	-0.2	0.1	1.3	-5.5	-6.0	June 2009
<i>p.m. February 2009</i> .....	-1.9	-	0.5	-	-3.3	-	<i>February 2009</i>
Federal Planning Bureau (FPB) .....	-3.8	-0.0	0.5	1.7	-4.3	-5.6	May 2009
IMF .....	-3.8	0.3	0.5	1.0	-4.7	-5.6	April 2009
EC .....	-3.5	-0.2	0.3	1.2	-4.5	-6.1	May 2009
Belgian Prime News .....	-2.4	0.8	0.7	1.4	-3.3	-3.9	March 2009
Consensus Economics .....	-3.0	0.1	0.6	1.4	-	-	May 2009
Economist's Poll .....	-3.0	0.2	0.6	1.4	-	-	May 2009
<i>p.m. Actual figures 2008</i> .....		1.0		4.5		-1.2	

(1) HICP, except FPB: private final consumption deflator.

(2) Percentages of GDP.

in the central rates and the extension of the granting of liquidity to prevent inflation expectations from sinking too low.

The scale of the recession also raises questions regarding the long-term outlook. Thus, the measures introduced by the monetary authorities and governments are essential at this stage to restore the financial system and cushion

the decline in activity, but they will have to be reassessed when the economic situation starts to improve, in order to avoid causing unwelcome levels of inflation and to retain control over public finances. In addition, the potentially adverse effects of the recession on long-term growth must be minimised by measures designed to restore productivity and ensure that a group of the population is not permanently excluded from the labour market.

## Annex

## PROJECTIONS FOR THE BELGIAN ECONOMY: SUMMARY OF THE MAIN RESULTS

(percentage changes compared to the previous year, unless otherwise stated)

	2006	2007	2008	2009 e	2010 e
<b>Growth</b> (calendar-adjusted data)					
GDP in volume .....	3.0	2.6	1.0	-3.5	-0.2
Contributions to growth:					
Domestic expenditure, excluding change in stocks .....	2.1	2.8	2.0	-1.4	0.0
Net exports of goods and services .....	0.1	-0.3	-1.0	-1.0	-0.3
Change in stocks .....	0.9	0.1	0.0	-1.1	0.1
<b>Prices and costs</b>					
Harmonised index of consumer prices .....	2.3	1.8	4.5	0.1	1.3
Health index .....	1.8	1.8	4.2	0.8	1.1
GDP deflator .....	2.3	2.4	1.7	1.1	1.1
Terms of trade .....	-0.7	0.5	-2.8	1.0	0.1
Unit labour costs in the private sector .....	1.5	3.1	3.9	2.9	-0.1
Hourly labour costs in the private sector .....	3.1	3.7	3.5	2.3	0.4
Hourly productivity in the private sector .....	1.6	0.6	-0.4	-0.5	0.5
<b>Labour market</b>					
Domestic employment (annual average change in thousands of units) .....	58.1	77.4	71.2	-36.5	-79.6
Total volume of labour <sup>(1)</sup> .....	1.5	2.0	1.2	-3.0	-0.8
Harmonised unemployment rate <sup>(2)</sup> (p.c. of the labour force) ...	8.3	7.5	7.0	7.7	9.2
<b>Incomes</b>					
Real disposable income of individuals .....	2.5	2.8	-0.1	1.0	0.0
Savings ratio of individuals (p.c. of disposable income) .....	12.9	13.7	12.7	14.6	14.5
<b>Public finances<sup>(3)</sup></b>					
Overall balance (p.c. of GDP) .....	0.3	-0.2	-1.2	-5.5	-6.0
Primary balance (p.c. of GDP) .....	4.2	3.6	2.5	-1.6	-2.1
Public debt (p.c. of GDP) .....	87.9	84.0	89.7	97.4	103.0
<b>Current account</b> (p.c. of GDP according to the balance of payments) .....					
	2.0	1.7	-2.5	-2.4	-2.5

Sources: EC, DGSEI, NAI, NBB.

(1) Total number of hours worked in the economy.

(2) Adjusted series (Eurostat).

(3) According to the methodology used in the excessive deficit procedure (EDP).

# The National Bank of Belgium's new business survey indicator

I. De Greef  
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## Introduction

The business survey indicator is one of the most valuable statistics, published each month by the National Bank of Belgium. It owes its reputation to the reliable way in which, for several decades, it has reflected cyclical movements in economic activity in Belgium. That reputation even extends far beyond the country's borders, as it is considered to be an accurate leading indicator of economic growth in the euro area. Every month, many analysts await with interest the publication of the Belgian business survey indicator, which is one of the first indicators on economic activity to be published in the euro area.

The indicator is compiled on the basis of the responses to the business survey which the Bank conducts each month among firms in Belgium. Although the survey was launched in 1954, it was not until 1972 that the results were published in the form of a synthetic business survey indicator, for the purpose of economic analysis. This methodology was revised in 1983 and in 1990.<sup>(1)</sup> It needs to be reconsidered periodically to maintain the indicator's quality. Thus, the changing nature of the economic environment or imperfections exposed by usage may necessitate an update. The Bank therefore considered it desirable to revise the 1990 methodology, which proved to be extremely robust.

This article describes the new method of calculating the business survey indicator, which took effect in April 2009. This revision gradually became necessary owing to the extension of the survey in 1994 to include the business-related services branch, the results of which had not hitherto been included in the business survey indicator. Moreover, in the recent past the indicator has exhibited some erratic short-term movements. The adjustments to the 1990 methodology were minor and concern only the calculation of the synthetic curves, by modifying the selection of questions included in the synthetic curves per branch of activity and by incorporating the services curve in the overall indicator. The aim of these changes was to strengthen the indicator's correlation with the growth of gross domestic product (GDP), to reduce its short-term erratic volatility and to preserve its quality as a leading indicator. The new indicator thus meets the requirements of the various users, and the time lag to publish the smoothed overall synthetic indicator has been cut from four months to two, with no loss of quality.

Before discussing the reform of the indicator, the article describes its general framework and, more broadly, that of the business surveys. Thus, section 1 describes the history, general methodology and scope of the surveys. On the basis of the experience gained during their use, it is possible to determine a series of quality criteria which a good economic indicator should satisfy. Those criteria formed the basis for this methodological revision which is recounted in detail in section 2. The final section of the article compares the profile presented by the new business survey indicator with that of the old one. The business cycle information in this article covers the period up to March 2009.

\* The authors would like to thank Pierre Crevits, Luc Dresse and Jean-Paul Vonck for their valuable contribution.

(1) The original methodology and successive revisions were published in the NBB Economic Reviews dated October 1972, September 1983 and August-September 1990 respectively.

# 1. General framework

## 1.1 History of the business surveys and metadata

### HISTORY

In 1954, Belgium became one of the first countries to conduct business surveys, following their introduction in the United States in the 1930s, and in West Germany in 1949.

Various professional federations, represented by the Federation of Enterprises in Belgium (FEB/VBO), had asked the Bank to organise this type of business survey to provide timely information on the economic situation to supplement the information based on quantitative data. The practical arrangements were determined in close collaboration with the various professional federations. With their knowledge of the business sectors and their close contact with business leaders, these federations provided valuable assistance in choosing the branches of activity and composing a representative sample of businesses.

From 1970 the number of participants increased steadily and the business surveys were extended to cover virtually all sub-branches of activity in manufacturing industry, trade and building. In 1994, the surveys were also extended to the service sector, with a survey of the hotel and restaurant branch and tourism sector being launched in 2004.

Although the surveys were launched in 1954, it was not until 1972 that their results were synthesised for the purpose of economic analysis in an overall business survey indicator. The methodology used to calculate this indicator was revised in 1983 and in 1990. From 1962 onwards, the surveys were harmonised by the European Union (EU). That harmonisation concerns the type of questions,<sup>(1)</sup> the possible responses, and the processing of the qualitative responses into a balance result per question, but not the methodology underlying the production of confidence indicators. However, on its own account, the European Commission (EC) calculates harmonised confidence indicators for the various countries on the basis of the data from the national surveys (EC, 2007).<sup>(2)</sup>

The Bank's indicator has gained an international reputation, beyond what might be expected from the size of the Belgian economy, since the publication of an article<sup>(3)</sup> in *The Wall Street Journal* in 1999 stating that it is a good indicator of economic growth in the euro area. It is regularly included in the economic information analysed by the ECB Governing Council in its discussions on euro

area monetary policy. Moreover, it is often used by the economic organisations of the European Union.

### METADATA

The quality of the Bank's business survey is largely due to the representativeness of the sample of participants. Thanks to close collaboration with the various professional associations, the survey now has just over 5,000 participants, representing between 22 and 33 p.c. of total turnover or employment in their sectors, a proportion which can be considered very satisfactory by international standards.

Furthermore, the Bank's survey is very detailed in terms of the questions asked, and especially from the point of view of the branches of activity polled. Thus, summary indicators – known as synthetic curves – are produced not only for the four main branches of activity but also for 88 sub-branches. Every month the survey can count on a very high response rate, over 90 p.c., encouraged by sending the participants detailed results for the branch in which they operate: that information is valuable to them. Other factors which foster this high response rate are the simple wording of the questions, geared to the firms' activities, and a qualitative response format not requiring any onerous research.

## 1.2 Objective and methodology

### 1.2.1 Objective: a mirror of economic activity

The business surveys aim to collect qualitative information providing a picture of the business cycle.

On the basis of the definition offered by Burns and Mitchell (1946): *"Business cycles are a type of fluctuation found in the aggregate economic activity of nations that organize their work mainly in business enterprises: a cycle consists of expansions occurring at about the same time in many economic activities, followed by similarly general recessions, contractions, and revivals which merge into the expansion phase of the next cycle; this sequence of changes is recurrent but not periodic"*, the business cycle can be described as a more or less regular, recurrent fluctuation affecting macroeconomic variables. However, that definition is open to interpretation.

(1) However, the Member States are free to add extra questions to the survey.

(2) These indicators are deemed to permit international comparison. They are calculated by the European Commission services (DG-ECFIN) and made available on their websites at the end of the month, that is 5 to 10 days after the national institutions have published their own confidence indicators.

(3) The Wall Street Journal (1999), *Euroland discovers a surprise indicator: Belgian confidence*.

**TABLE 1** BUSINESS SURVEY METADATA  
(2006)

	Manufacturing industry	Trade	Building	Business-related services
Launch year .....	1954	1954	1956	1994
Population <sup>(1)</sup> .....	22,936	33,100	29,831	27,888
Sample <sup>(2)</sup> .....	1,950	1,300	1,050	1,100
Sample coverage rate (p.c.) <sup>(3)</sup> .....	33	23	22	28
Response rate (p.c.) .....	96	94	96	90
Number of questions <sup>(4)</sup> .....	13	10	13	12
Number of sub-branches of activity <sup>(5)</sup> .....	60	15	8	5

Source: NBB.

(1) Number of enterprises filing annual accounts according to the Central Balance Sheet Office.

(2) Number of enterprises participating in the monthly business survey.

(3) As a percentage of the sector's turnover (manufacturing industry, trade) or employment (building, business-related services).

(4) Total number of questions in the monthly survey.

(5) Number of sub-branches of activity for which a synthetic curve is calculated.

Thus, the term *"many economic activities"* is deliberately vague in order to stress the fact that it concerns a movement common to a large number of variables (output, employment, consumption, prices, interest rates, etc.). In practice, the business cycle is measured by a small number of variables or a carefully chosen reference variable, such as gross domestic product, which offers an exhaustive and reliable synthesis of economic fluctuations.

The distinction between classic cycles and growth cycles is also important. The Burns and Mitchell definition originally concerned variations in the level of economic activity (classic cycles). That interpretation is still used by the National Bureau of Economic Research (NBER) in the United States. Since absolute falls in the level of output have become less common in the post-war years, the emphasis has tended to be on growth cycles. These are the oscillations in economic activity around a trend. There are techniques which can be used to extract the trend from a series, permitting a breakdown between trend and cycle, but they do have their drawbacks. In practice, therefore, the analysis is often confined to variations in the growth rate of economic activity (also called the growth cycle or growth rate cycle).<sup>(1)</sup>

A third discussion point is the duration of a cycle. Although it is certainly not fixed, and differs from one episode to another, the duration of growth cycles is assumed to be between 1.5 and 8 years,<sup>(2)</sup> so that all other movements must be regarded as short-term fluctuations (seasonal variations and irregular factors) and long-term changes. Nonetheless, in view of the complexity of

using methods which can separate these various sources of fluctuations, the business cycle is often represented in practice by year-on-year GDP growth, where seasonal fluctuations are largely eliminated and the irregular component is contained, and therefore is largely determined by cyclical variations.

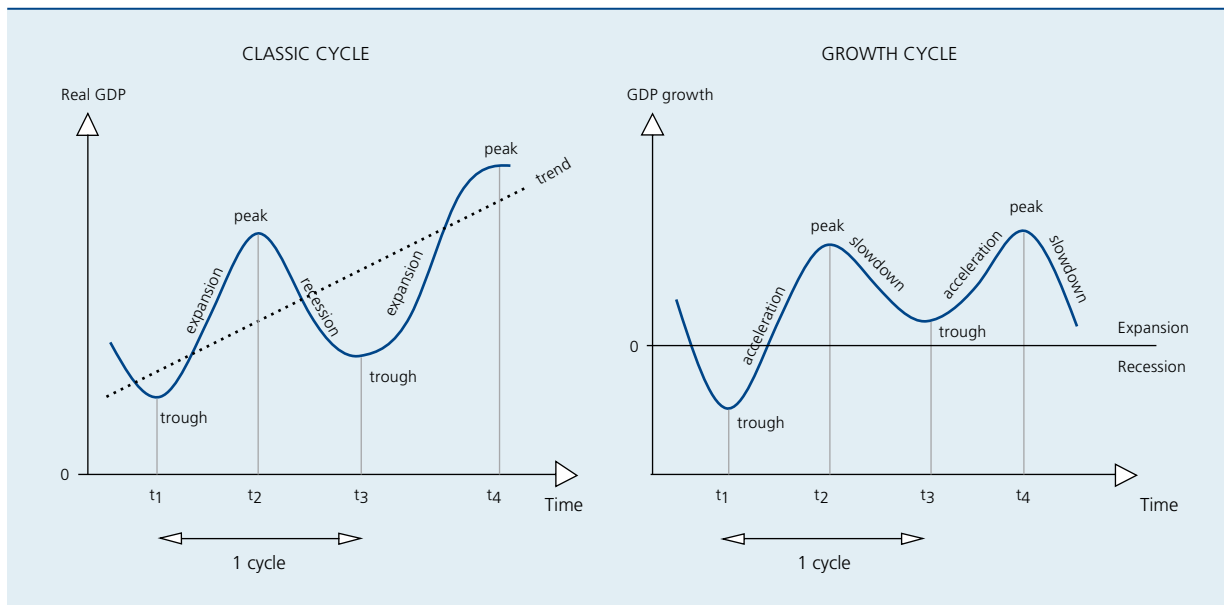
Just as there is no absolute consensus on the concept of the business cycle, given the specific character of each business cycle there, is also no complete explanatory theory, and the business cycle remains primarily an empirical datum (*"measurement without theory"*, Koopmans, 1947).

Exogenous factors, such as wars, climatic phenomena, political factors, oil prices, etc., may do service as theoretical explanations. Numerous economic theories tend to be built around the importance of endogenous factors and mechanisms to explain fluctuations in economic activity, such as changes in the money supply, lending (monetary theories), spontaneous investment dynamism, known as *"animal spirits"*, and the accelerator-multiplier principle (Keynesian theories) of the rate of technological progress, preferences and tastes (neo-classical theories such as the real business cycle theory), rational expectations

(1) Mintz (1969) compared the growth rate of numerous economic series and their deviation from their trend, and concluded that the cycles obtained were not fundamentally different from one another. For that reason, and as use of the growth rate can be seen as a simple way of eliminating the trend, both are called growth cycle methods.

(2) Cf., for example, Baxter and King (1999), King and Plosser (1994), Stock and Watson (1998) and Christiano and Fitzgerald (2003). In this connection it must be stressed that Burns and Mitchell already mentioned a minimum period (16-22 months) and a maximum period (100-106 months) while indicating that this period could vary over time. However, the conclusion of Burns and Mitchell was only valid for the duration of classic cycles, which are generally longer and less symmetrical.

**CHART 1** DIAGRAM OF THE BUSINESS CYCLE



Source : NBB.

(neo-classical theories) or market imperfections (neo-Keynesian theories). Less well-known theories place the emphasis on psychological factors, access to information, etc.

### 1.2.2 From the business survey to the business survey indicator: general methodology

The Bank's business survey aims to offer a picture of the business cycle by asking business leaders specific questions on, for example, the rate of production, employment, stocks, etc., for a particular product.<sup>(1)</sup> The questions, which are listed in Annex 1, can be divided into three categories:

- questions about recent developments;
- questions about the opinions of business leaders;
- questions about the outlook.

In most cases, the respondent can choose from three possible responses corresponding respectively to an improvement; stabilisation or a deterioration in the economic situation. The responses received are therefore qualitative.

(1) A firm may therefore be sent several survey forms. Given the very detailed level available in the surveys, the term 'product' is used rather than branch of activity for the most detailed results.

(2) This general scheme is also used by other institutions producing confidence indicators such as the IFO or the EC. However, within this general framework each institution makes specific choices so that the methodologies are far from being harmonised.

Apart from these qualitative responses, quantitative data may be obtained in some cases, such as the number of months for which activity is assured in manufacturing industry and building.

The qualitative data form the basis of the business survey indicator. It is important to note that, although the indicator is also referred to as the "business confidence indicator", that 'confidence' is based mainly on real economic developments (movement in orders, demand, etc.). The construction of the Bank's business survey indicator can be subdivided into four stages (cf. also Annex 2).<sup>(2)</sup>

In phase 1, for each question relating to a given sub-branch of activity, simple qualitative data are converted into quantitative values; these are obtained by establishing the difference (balance) between the percentage of positive responses and the percentage of negative responses to a given question, while taking account of the firm's weight in its branch of activity, measured on the basis of turnover or employment.

In phase 2, all factors which might distort the cyclical information are eliminated. There are many complicated breakdown methods as well as straightforward seasonal adjustment. Up to now, the Bank has confined itself to conventional seasonal adjustment using the Census X-11 program.

In phase 3 the seasonally adjusted balances are aggregated into composite confidence indicators per branch of activity – “synthetic curves” or “synthetic indicators” in the Bank’s terminology – and finally into an overall composite indicator called the “overall synthetic (business survey) curve” or the “business survey indicator” for short. The respective aims of these indicators are to reflect the business cycle in the various branches of activity and in the economy as a whole. The process of aggregation may involve the use of weighted or unweighted averages, or complex methods, such as analysis into principal components. For simplicity and to avoid having to revise historical data every month, the Bank prefers to use averages (cf. box).

This is the step that was revised in April 2009. According to the 1990 methodology, the curves were calculated in the form of an average of all the questions except those concerning prices and impediments to production, and those added to the survey after 1985; in contrast, the new synthetic curves represent the average of a smaller number of questions. According to the 1990 methodology, the overall business indicator represented a weighted average of the synthetic curves of manufacturing industry, trade and building. Under the new methodology, the synthetic business-related services curve has also been included in that average.

The last phase concerns the final form that the result may take. There are various options here, which is one of the reasons why the indicators vary from one country to another. In Belgium, the result at the end of the third phase is not converted to an index but is presented in the form of a balance (“gross indicator”). In addition to this gross indicator, the Bank also publishes a “smoothed indicator”, intended to reflect the underlying business cycle trend in economic activity by eliminating extreme values in the gross indicator by means of a statistical smoothing method. That method was also revised in April 2009, though only for the overall indicator, and the time lag to publish the smoothed global indicator was cut from four months to two.

### 1.3 Use

In order to guarantee the quality of the business indicator, it is important to update the methodology periodically. To assess whether a methodological revision is necessary, it may be useful to consider applications of the business surveys and on that basis define some quality criteria which a good business indicator should satisfy. Those criteria held a central position in the preparation of the new methodology.

#### 1.3.1 Advantages of business surveys as opposed to quantitative data

The widespread use of qualitative business indicators, including the one produced by the Bank, is due to their advantages over quantitative data.

Thanks to the simplicity of the qualitative questions and the calculations, the survey results become available quickly, namely – in Belgium’s case – about 10 days before the end of the month to which they relate. They are therefore the first source of information on activity relating to a given quarter. In Belgium, the other activity indicators, such as industrial output and foreign trade, are not complete until 55 and 75 days after the end of the quarter. Although the GDP figure is already published 30 days after the end of the quarter, a more detailed and accurate estimate is available only 70 and 120 days after the end of the quarter.

In contrast to GDP, the survey results are not subject to revisions, and they also have the advantage of being available on a monthly basis. In addition, they offer a broad view of economic trends, including the trend in employment and prices. Moreover, they comprise information on variables which are difficult or impossible to measure with the aid of quantitative data, such as expectations, the use of production capacity, etc.

Finally, the correlation between the business survey indicators and the quantitative reference variables is usually high, and in some cases the former give a purer signal, since their movement is less erratic because, for example, they are unaffected – or less affected – by strikes.

Unlike quantitative statistics, however, the business indicators have the disadvantage of not providing exhaustive coverage of all economic activities, and they are expressed as a rather intangible unit (points versus growth rates or euros). Moreover, it is their sole purpose to measure cyclical fluctuations in economic variables, so that they cannot be used to analyse structural relationships in an economy.

#### 1.3.2 Scope of the business surveys

Much use is made of the business surveys for the purpose of analyses and economic reports aimed at monitoring business cycle developments. In addition, the survey results are also used to produce projections for given reference variables, such as GDP growth, often on the basis of charts but also of models. The information which they contain about the variables that cannot be measured by quantitative statistics also lends itself to specific macro-economic research. Furthermore, the surveys can be used

to estimate economic trends at a detailed level, e.g. by branch of activity or by region.

The business surveys are the key instrument for monitoring the economic situation in real time. Their findings indicate whether economic growth is accelerating or slowing down. The business surveys also permit early identification of turning points in the business cycle. That capability is due primarily to the fact that they are available sooner than quantitative data, but it is also due to their reliability, as illustrated, for example, by their close correlation with annual GDP growth, a correlation which stands at 0.8 in the case of the overall synthetic business survey indicator. The turning points are identified more easily and quickly than by using quantitative data, since the surveys usually display lower volatility, whereas the quantitative data are subject to measurement errors.

On the basis of developments concerning certain questions, the business surveys may also provide information on the causes and determinants of the business situation, such as a deterioration in the external environment which would essentially depress export orders.

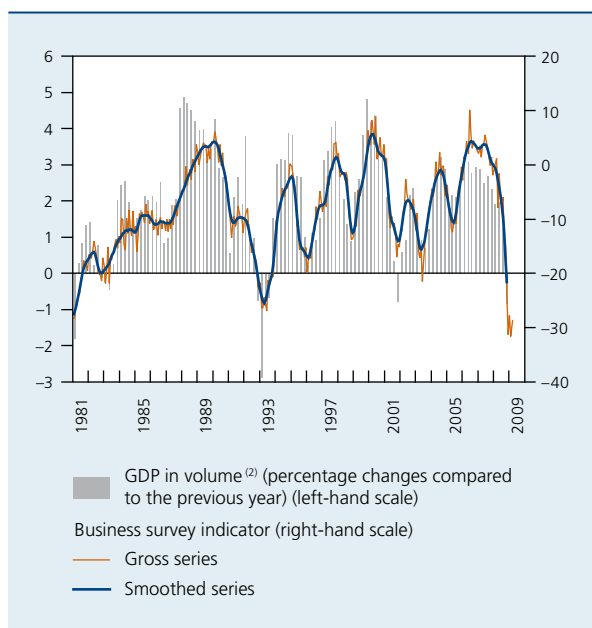
Given the importance of having access to indicators in good time to assess the economic situation, the survey results – which, owing to their publication date, already

have an advantage over quantitative data from the information angle – are studied in depth in order to construct indicators which anticipate the reference economic cycle. Owing to the international synchronisation of business cycles, that reference cycle may also be the cycle for neighbouring countries or the euro area, for example. Thus, the Bank's indicator anticipates the economic situation in the euro area ("leading indicator").<sup>(1)</sup> Conversely, at the national level, the overall indicator and most of the sub-indicators tend to coincide with one another and with the economic situation ("coincident indicator").

The survey results can also be used to produce projections for certain quantitative reference variables. The commonest application concerns short-term GDP growth forecasts (one to two quarters ahead), but the survey results may also prove useful for estimating the future development of certain variables, such as exports, consumption, etc. These estimates may be produced informally, on the basis of charts, or with models in which they are used individually (univariate regressions) or in combination with quantitative data (e.g. factor models). Compared to models using purely quantitative data, those based on the survey results tend to be better at prediction thanks to the link of the

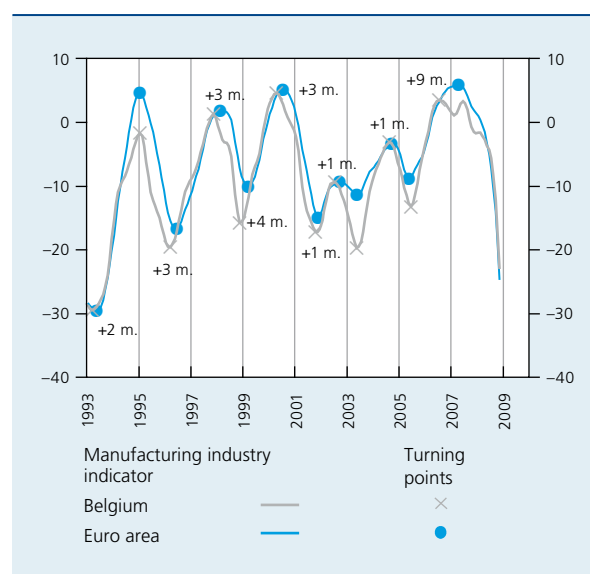
(1) More specifically, the manufacturing industry confidence indicator has a "lead" over the manufacturing industry confidence indicator for the euro area as a whole (Vanhaelen et al., 2000 and Bodier et al., 2005). That lead emerged in 1993 and has since been confirmed to varying degrees. To explain that lead, reference is often made to the importance of exports for the Belgian economy and the fact that Belgian manufacturing industry specialises in semi-finished products.

**CHART 2** OVERALL BUSINESS SURVEY INDICATOR <sup>(1)</sup> AND GDP



Sources: NAI, NBB.  
 (1) According to the old methodology (1990).  
 (2) Data adjusted for seasonal and calendar effects.

**CHART 3** LEADING INDICATOR FOR THE EURO AREA <sup>(1)</sup>



Sources: EC, NBB.  
 (1) Cf. Vanhaelen et al. (NBB, 2000), NBB manufacturing industry indicator for Belgium based on the new calculation method (2009). To identify the turning points, the indicators were smoothed according to the NBB's smoothing method.



latter with the reference variables and their speedy availability.<sup>(1)</sup>

The business surveys are also widely used because they supply information on variables which cannot be measured by means of quantitative statistics, such as expectations, the factors hampering production, and the capacity utilisation rate, etc. Various economic theories highlight the role of expectations in the business cycle. The importance of these factors and the difference between actual economic developments and expectations can be illustrated with the aid of the “business cycle clock”, which can identify several phases in a cycle. Thus, a typical business cycle can be viewed as a sequence of periods: a recovery, in which expectations are already picking up but the current situation does not yet show any progress, a boom, in which both expectations and the actual situation are improving, a slowdown, when expectations decline while the actual situation remains buoyant, and a recession, when both factors are weakening. Perceived inflation is another example of this kind of variable. Business surveys, in this case the consumer surveys, give an indication of perceived inflation by means of questions concerning prices. Perceived inflation as measured by the question in the consumer survey was found to deviate significantly from actual inflation in 2002-2003 (Aucremanne et al., 2007). The survey data are therefore a source of information on variables (inflation expectations) which may have a significant impact on other economic variables (e.g. via wage negotiations).

Finally, the survey details also provide valuable information for assessing the economic situation at regional and meso-economic level (the level of the branch of activity). That is particularly useful for business leaders wishing to gain an idea of the economic situation and the outlook for their branch of activity. It gives them a better basis for their decisions (investment, etc.) and for determining their relative position within their sector. For that purpose, quantitative data are often insufficient since they are usually lacking in detail and published after a considerable period of time. Access to this confidential information is a real incentive for business leaders to participate in the survey, and therefore plays a major role in the practical organisation of the survey.

#### 1.4 Quality criteria

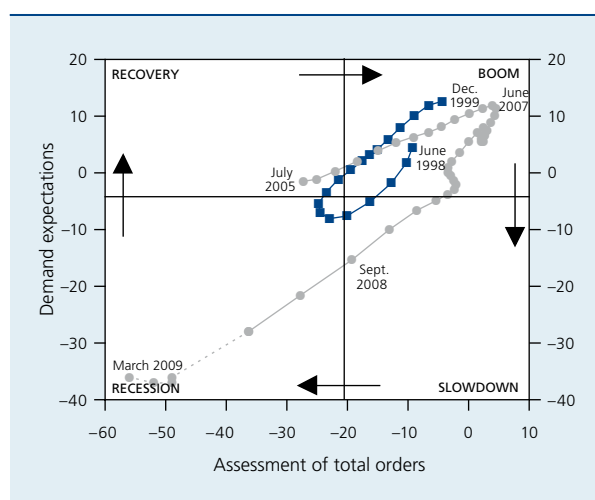
Since the survey results are used essentially to assess the economic situation and to produce a short-term GDP growth forecast, it is possible to define a number of statistical criteria which a good business indicator should preferably satisfy:

- a high correlation with annual GDP growth, which can be regarded as the reference cycle for the overall business survey indicator;
- a variation which is determined essentially by cyclical fluctuations (between 1.5 and 8 years) and therefore not by irregular factors or trend components;
- a high informative value, namely as a leading indicator.<sup>(2)</sup>

The first and third criteria can be calculated relatively easily using respectively the correlation and the cross-correlation between the indicator and GDP growth. The latter measures the correlation between these two variables, shifting one of them in time. If the cross-correlation reaches a maximum when the value of the indicator for a given period is compared with GDP growth of a later period, this means that the indicator anticipates the movement in GDP.

The second criterion can be measured via the smoothed indicator used by the Bank.<sup>(3)</sup> That smoothed indicator in fact reflects the underlying business cycle trend

CHART 4 MANUFACTURING INDUSTRY BUSINESS CYCLE CLOCK<sup>(1)</sup>



Source: NBB.

(1) The data points are based on the smoothed series relating to the questions “demand expectations” and “assessment of total orders” for manufacturing industry. The vertical and horizontal black lines represent the average values of these series since 1980. Since December 2008, the data points have been obtained by means of the gross series.

(1) Cf. in particular Barbur and Rünstler (2007). Owing to its ability to predict GDP growth, the Bank’s business survey indicator is also included in the explanatory variables of a number of models, such as the EuroSTING model for the euro area (Comacho and Perez-Quiros, 2008).

(2) However, a leading indicator will generally have a weaker correlation with GDP growth than a “coincident” indicator. Whether a business indicator should preferably be a leading indicator therefore depends on the purpose for which it is used. If what is needed is an indicator which has the optimum correlation with GDP growth and reflects the current situation, a coincident indicator is more useful. It should be noted that such an indicator may possibly have a lead over other reference variables (such as employment, or the economic situation abroad). Thus, the Bank’s indicator is coincident with Belgium’s annual GDP growth but has a lead over confidence indicators for the euro area.

(3) Centred weighted moving average of the centred moving median of the gross indicator over five months, with weights 1/8, 1/4, 1/4, 1/4, 1/8.

and is almost immune to the influence of short-term erratic movements, whereas such movements (known as the zigzag pattern) do appear in the gross indicator. The smoothed indicator is therefore less volatile than the gross indicator. A high ratio between the variance of the smoothed indicator and that of the gross indicator therefore reflects the fact that the latter displays relatively few short-term irregular fluctuations. By maximising that ratio it is therefore possible to limit the erratic volatility of the gross indicator.

This yardstick can be used to assess the gross indicator's undesirable short-term volatility. In contrast, direct consideration of the standard deviation or the variance of the gross indicator does not allow to identify whether the volatility is due to cyclical movements – which the indicator should properly reflect – or irregular variations which need to be minimised.

These statistical criteria held a central position in the assessment of the new business survey indicator. However, a multitude of other factors also have a role in the assessment of the quality of a business survey indicator, such as the indicator's track record, its simplicity (the indicator must be understood by a large number of diverse users), and the absence of monthly revisions of historical data.

## 2. The new business survey indicator

The methodological reform only concerns the calculation of the synthetic curves. The other methodological elements, such as seasonal adjustment or the presentation of the indicator in the form of a balance, are unchanged. The new methodology differs from the previous one in three respects:

- first, the composition of the synthetic curves is based on only a small number of questions, ranging from

- three to four depending on the branch of activity, whereas in the 1990 methodology all questions were included, except those concerning prices;
- second, the synthetic business-related services curve was incorporated in the overall indicator by revising the weights assigned to the branches of activity;
- third, taking account of the decline in the short-term volatility of the gross indicator following those revisions, it was possible to simplify the method of smoothing the overall indicator, cutting the time lag to publish the smoothed overall business indicator from four months to two.

The methodological changes are limited to avoid calling into question the principles underlying the previous revision. The 1990 methodology was based on simplicity and stability. The principle of simplicity was intended to ensure that the result would be comprehensible to a broad public, while the principle of stability indicated the preference for a result which does not need to be revised in the ensuing months, in contrast to what generally is the case with quantitative statistics. These two principles favoured the use of averages, weighted or not, for calculating the synthetic curves. More complicated methods, such as principal components analysis, have the disadvantage of being less readily understood and entail revisions of historical data. Moreover, in the case of the Bank's business survey, they do not produce better results than simple methods (cf. box).

By basing the calculation of the synthetic curves on a new and smaller selection of questions from the survey, and by incorporating business-related services in the synthetic business survey indicator, the aim was to improve the correlation between the business indicator and GDP growth, to reduce its erratic short-term volatility and to preserve its leading character. The new indicator thus meets the requirements stipulated by the various users.

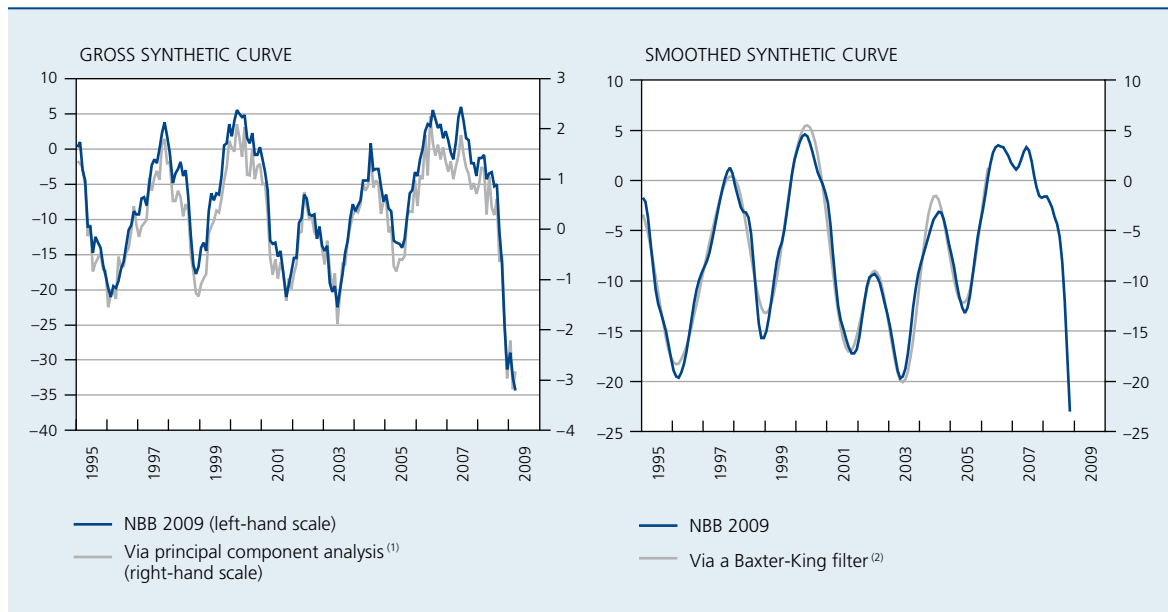
### Box – Method of calculating business cycle indicators: simplicity versus complexity

With the present revision the Bank remains faithful to the most important principle governing the previous methodology, namely simplicity. That simplicity concerns both the calculation of the synthetic curves by using averages and the application of a statistical smoothing filter intended to reveal the underlying business cycle trend in the economy.

Various methods can be used for these two issues, such as principal component analysis, as an aggregation technique, or the Baxter-King filter (1999), as a breakdown method for extracting the cyclical component of the series.



MANUFACTURING INDUSTRY : METHODOLOGY USED BY THE NBB VERSUS COMPLEX METHODS



Source : NBB.

(1) Based on the first principal component of the 10 qualitative questions in the manufacturing industry survey, standardised data.

(2) Curve obtained by applying to the gross series a "low-pass" Baxter-King filter which removes frequencies lasting less than 18 months from the gross series. The Baxter-King filter is a constant symmetrical filter over 73 observations.

However, these more complicated methods have the disadvantage of entailing revision of the historical series data, since they are based on statistics, such as the standard deviation, the covariance matrices, etc. relating to a given reference period which has to be updated over time. Moreover, they do not make it easier for the general public to understand the results. These drawbacks should be viewed in the light of a possible improvement in quality which may result. In the case of the Bank's survey, analysis shows that these more complex methods do not improve on the results obtained by the new method of calculating the business survey indicator.

The principal components summarise the overall variance of the series in a small number of independent factors. The first factor generally explains a large part of the variance, and can be used as a business indicator. Applied to manufacturing industry, the analysis shows that the synthetic curve thus obtained is comparable to the one resulting from a simple average<sup>(1)</sup> of the selected questions. However, the principal component, which is based solely on the correlation patterns between the series, does not succeed in substantially reducing the short-term volatility, unlike the Bank's methodology.

Apart from the aggregation technique, the Bank uses a simple method to isolate cyclical fluctuations in the gross indicators by means of a statistical smoothing filter with constant parameters, resulting in the smoothed indicator. The latter largely corresponds to the result obtained by the Baxter-King filter which can completely eliminate short-term volatility (cf. Dresse and Van Nieuwenhuyze, 2008). However, this accurate breakdown by the Baxter-King filter has the inherent drawback that it is not available for the last three years of observations, while other similar methods, such as the Christiano-Fitzgerald filter (2003), involve revisions. The Bank's statistical smoothing method

(1) The reason may be that the principal components analysis is based on a small number of variables which are closely correlated, as is usual the case in the business survey. The European Commission's business climate indicator is a good example here. The profile of that indicator, which is based on a principal components analysis of the questions, is not fundamentally different from that of the manufacturing industry confidence indicator published by the European Commission, which is calculated as an average of the questions.



– which is not subject to revisions and for which the loss of observations has been cut from four to two months for the overall indicator – is therefore a simple and effective method of reflecting cyclical fluctuations and plays a role in the quality criteria set for the gross indicator under the current methodology.

These findings justify the Bank’s decision to retain a simple methodology while attempting, by means of an optimisation exercise,<sup>(1)</sup> to find the best composition of the synthetic curves and the business survey indicator in terms of the correlation with GDP growth, short-term volatility and leading behaviour.

(1) In Jonsson and Lindén (2009), a comparable optimisation technique is applied to the EC’s consumer confidence indicator. However, the only criterion which it considers is the correlation with GDP, and not the short-term volatility or the advance character of the indicator.

## 2.1 Revision of the gross indicator

### 2.1.1 Selection of the questions

While under the 1990 methodology the synthetic curves were based on all the questions, with the main exception of the questions on prices,<sup>(1)</sup> the new indicator is composed of a smaller number of questions.

The 1990 methodology aimed to give the broadest possible picture of the business survey results, but without paying attention to the movement of the final indicator and the information it provided for a reference variable such as GDP.

The new methodology opts for a different approach. It tries to improve the statistical properties of the indicator,

including the correlation with GDP growth, by selecting the questions that are included in the synthetic curves. For each branch of activity, the combination of questions selected is the one which yields the best results in regard to the three quality criteria adopted. The new synthetic curves of the branches of activity are thus calculated as the average of the following questions:

- for manufacturing industry: assessment of total order book, assessment of the level of stocks of finished products,<sup>(2)</sup> employment expectations and demand expectations;
- for trade: demand expectations, intentions of placing orders and employment expectations;

(1) The curve also took no account of the questions added to the survey after 1985, or any questions for which no balance of responses can be obtained (e.g. factors hampering production or the number of months of assured activity).

(2) Taken into account with a negative sign in view of the negative correlation between this variable and the economic situation.

**TABLE 2** SYNTHETIC CURVES: STATISTICAL PROPERTIES  
(1996-2008)

	Correlation with GDP growth in Belgium <sup>(1)</sup>		Variance of the smoothed series / variance of the gross series <sup>(2)</sup>		Lead (+) or lag (-) in relation to GDP growth in Belgium <sup>(3)</sup>	
	Old	New	Old	New	Old	New
Manufacturing industry . . . . .	0.83	0.83	0.79	0.89	0	0
Trade . . . . .	0.53	0.57	0.68	0.79	0	0
Building . . . . .	0.61	0.67	0.86	0.90	-1	0
Business-related services . . . . .	0.72	0.72	0.88	0.93	0	0
<b>Overall business survey indicator . . . . .</b>	<b>0.82</b>	<b>0.84</b>	<b>0.83</b>	<b>0.91</b>	<b>0</b>	<b>0</b>

Source: NBB.

(1) Coefficient of correlation between the level of the gross series and year-on-year GDP growth (quarterly data).

(2) Ratio between the variance of the smoothed series and that of the gross series. The higher this ratio, the lower the short-term volatility of the gross series.

(3) Number of months by which the gross series leads (+) or lags (-) year-on-year GDP growth. Determined by the moment when the cross-correlation between the indicator and year-on-year GDP growth reaches a maximum (monthly GDP growth figures obtained by linear interpolation).

- for building: trend in orders, trend in equipment, assessment of order book and demand expectations;
- for business-related services:<sup>(1)</sup> assessment of activity, activity expectations and general demand expectations.

For each of the four main branches of activity, the new selection of questions improves the performance of the synthetic business indicator in regard to three quality criteria. Compared to the old synthetic curves:

- the correlation with GDP growth is slightly higher in building and trade, and unchanged in manufacturing industry and business-related services;
- short-term volatility is considerably lower since the variance of the gross curve is much closer to that of the smoothed curve; this applies mainly in manufacturing industry and trade;

(1) For the business-related services branch, a weighting of individual responses is now also applied when calculating the balance of responses for each question, as was already done in the case of the other branches of activity.

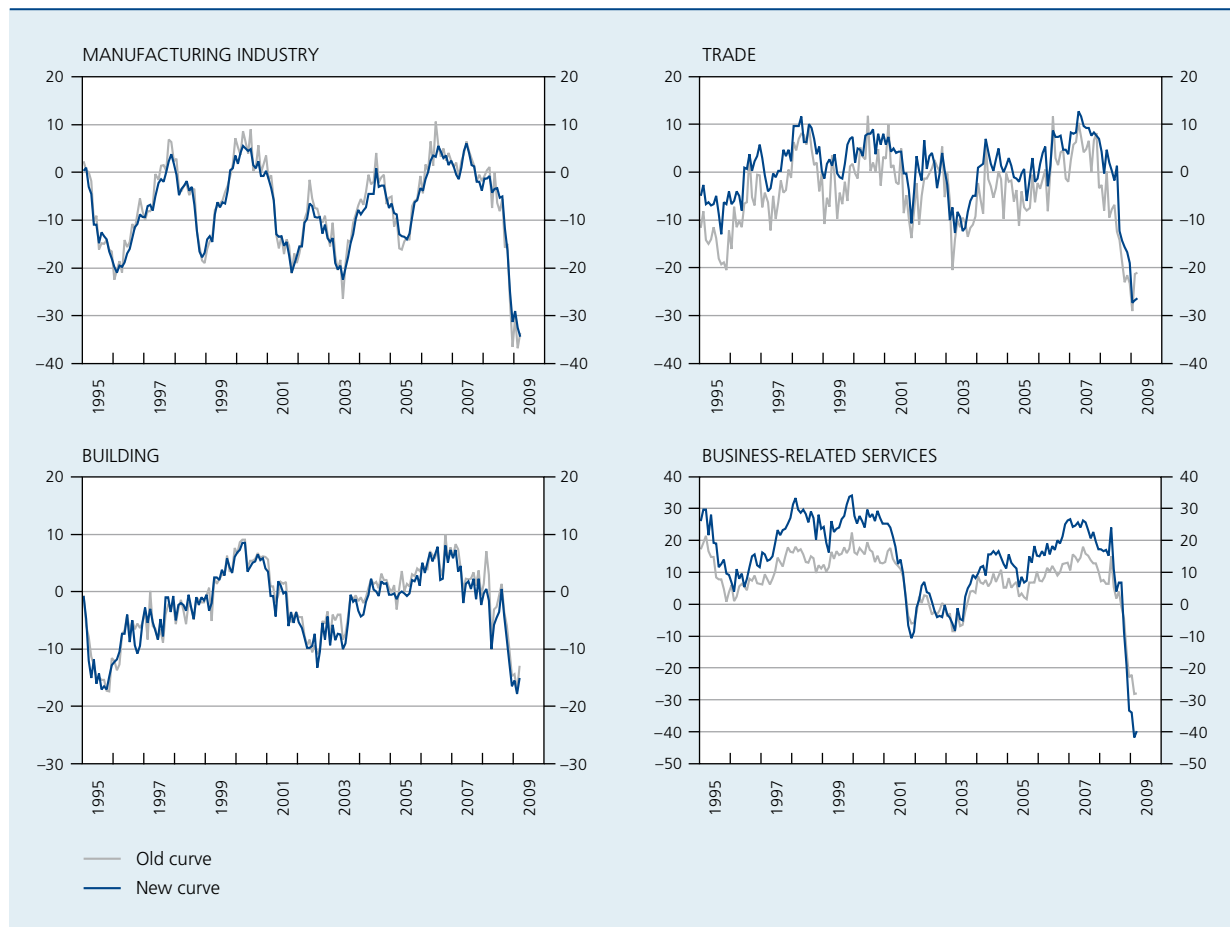
- the lead in relation to GDP growth has remained practically unchanged and even increased slightly in the building industry.

These combinations are stable over time in that, in regard to the three quality criteria adopted, their results improve on, or at least equal, those obtained by the old methodology regardless of the sub-period considered.

The main improvement resulting from the selection of questions is the marked reduction in the short-term volatility of the synthetic curve, primarily in manufacturing industry and trade. In these branches of activity, the erratic movements which sometimes used to make it difficult to interpret the gross indicator, especially around turning points in the cycle, have been largely eliminated.

The short-term volatility of the business-related services indicator has also been reduced. Conversely, the overall volatility of the indicator has increased. However, such an

CHART 5 NEW AND OLD GROSS SYNTHETIC CURVES PER BRANCH OF ACTIVITY



Source : NBB.

increase is desirable since the overall indicator reflects to a greater extent than in the past the cyclical movements seen in the service sector.

Conversely, the improvement in terms of the correlation with GDP growth and the leading character is less marked, possibly because the various questions in the business survey present a fairly similar profile in terms of correlation with GDP growth. On the other hand, they produce different results in regard to short-term volatility.

### 2.1.2 Inclusion of services

The second part of the reform concerns the inclusion of the service sector in the overall business indicator. Although the survey was extended to business-related services in 1994, the results were not previously included in the overall indicator, mainly because the time series was too short. On the one hand, it is vital to have a sufficiently long series so that the statistical properties can be determined with a satisfactory degree of certainty. It is also important for the business indicator to be based on a sufficiently long history in order to be able to compare the current business cycle with previous cycles. That argument is less important now that observations are available for the past fifteen years.

It also seemed desirable from an analytical point of view to include services, as the indicator would give a more general and complete picture of economic activity, no longer being confined to manufacturing industry, trade and building. In addition, the services indicator has some favourable statistical properties such as a relatively high correlation and low short-term volatility, which could improve the performance of the overall business survey indicator measured on the basis of the three quality criteria applied.

Since the business survey indicator is calculated as a weighted average of the various sub-branches, if services are to be included, they have to be accorded a weighting

coefficient, and the weightings of the other branches of activity have to be revised. Like the selection of questions, the weightings chosen are the ones which result in the business barometer which performs best in terms of the three criteria. While the old indicator was a weighted average of the synthetic curve for manufacturing industry (70 p.c.), trade (15 p.c.) and building (15 p.c.), the weightings were revised and are now 65 p.c. for manufacturing industry, 15 p.c. for building, 5 p.c. for trade and 15 p.c. for services.

The weightings of the branches of activity differ from their relative weight in the value added of the Belgian economy. The high weighting accorded to industry in the indicator is due to the notable statistical properties of its synthetic curve in terms of the correlation with GDP growth and its leading character. Conversely, trade has a relatively low weighting, as it scores less well in regard to the three quality criteria applied.

### 2.1.3 Gross indicator results

The two methodological adjustments mentioned lead to the emergence of a new overall gross business survey indicator. According to the three quality criteria applied, the new indicator performs better than the old one, even though their profile is visually similar.

The main advantage of the new indicator lies in the reduction of the erratic movements (the zigzag pattern) in the gross indicator. The variance of the gross curve is now closer to that of the smoothed curve, which is itself determined mainly by cyclical variations. The new indicator also has a slightly higher correlation with GDP growth than the previous indicator. The lead is unchanged in that the new indicator, like the old one, moves in parallel with GDP growth in Belgium.

Apart from the measurable statistical advantages, the new indicator includes services, providing the user with a more coherent and complete picture of the economy. The first

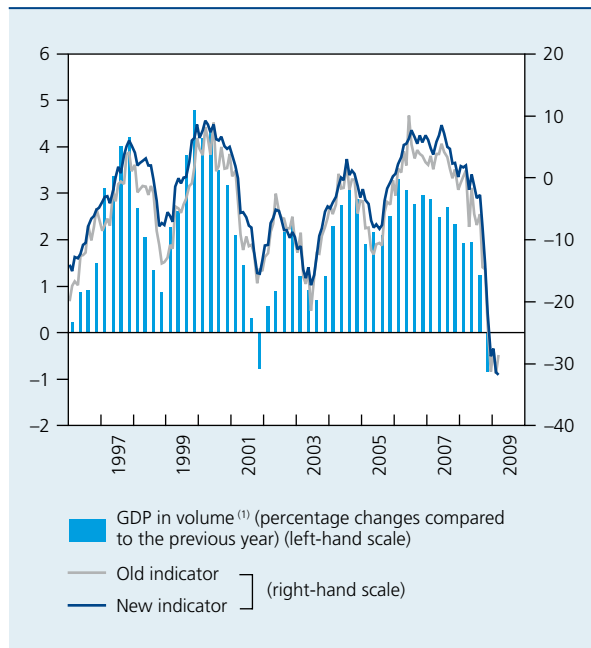
**TABLE 3** WEIGHTS APPLIED TO THE BRANCHES OF ACTIVITY WHEN CALCULATING THE OVERALL BUSINESS SURVEY INDICATOR (percentages)

	Manufacturing industry	Trade	Building	Business-related services
Old indicator .....	70	15	15	0
New indicator .....	65	5	15	15
<i>p.m. Value added</i> <sup>(1)</sup> .....	31	24	9	36

Sources: NAI, NBB.

(1) Share of each branch in the total value added of the branches covered by the survey, data for 2007.

**CHART 6** NEW AND OLD OVERALL GROSS BUSINESS SURVEY INDICATOR AND GDP



Sources: NAI, NBB.  
(1) Data adjusted for seasonal and calendar effects.

reliable results obtained from the business-related services survey date from January 1995, so the new indicator does not begin until 1995. To remedy this drawback, however, the new series was extended to cover the period from 1980 to 1995 on the basis of the new methodology in terms of questions, but using the old weighting structure. Thus, the business survey indicator and the synthetic curves for manufacturing industry, trade and building are available in their new composition<sup>(1)</sup> from 1980 onwards.

## 2.2 Revision of the smoothed indicator

The reduction in the volatility of the gross indicator has direct consequences for the smoothed indicator. Introduced in the 1990 methodology, the latter was obtained by applying to the gross indicator a statistical smoothing filter, and was intended to reflect the “underlying” business cycle trend in the economy. In view of the high volatility of the gross indicator, a fairly powerful double symmetrical filter was chosen at the time, covering five observations on each occasion. Although this method efficiently eliminated the volatility from the gross

(1) Between 1980 and 1985, however, the synthetic curve for trade was based on two questions, since the question on the “employment expectations” was not included in the survey until after 1985.

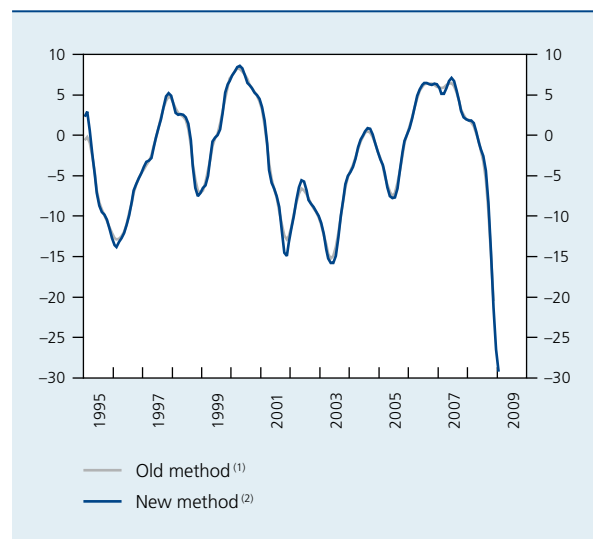
indicator without resulting in revisions, the disadvantage of the smoothed curve was that it only became available after four months. However, owing to the lower volatility of the gross indicator, it is possible to use a less powerful smoothing filter so that the delay in publishing the smoothed curve has been cut from four months to two without any significant loss of quality.

Thus, the methodology of the smoothed overall indicator was revised, and the indicator is now obtained on completion of the following two steps:

- (i) calculation of the centred moving median over three months of the gross series;
- (ii) calculation of the centred weighted moving average over three observations of the obtained series, with the weightings 1/4, 1/2, 1/4.

In fact, the smoothed curves obtained by applying the old and new smoothing method to the new gross indicator are virtually identical. The less powerful smoothing does not seem to give rise to the appearance of new cycles, and the amplitude and turning points of the cycles are practically unchanged. The differences vis-à-vis the previous smoothing method, be it in terms of scale or bias in relation to the actual situation, appear to be minimal compared to the advantage of reducing the delay in publication.

**CHART 7** NEW AND OLD METHOD OF SMOOTHING APPLIED TO THE NEW GROSS OVERALL BUSINESS SURVEY INDICATOR



Source: NBB.

- (1) The old smoothing method is based on calculation of the five-month centred weighted moving average of the five-month centred moving median of the gross series, with the weightings 1/8, 1/4, 1/4, 1/4, 1/8.
- (2) The new smoothing method is based on calculation of the three-month centred weighted moving average of the three-month centred moving median of the gross series, with the weightings 1/4, 1/2, 1/4.

As the volatility of the gross indicator is higher at the level of the branches of activity and the individual questions than at the level of the economy as a whole, the old smoothing filter has been retained for the purpose of calculating the synthetic curves for the branches of activity and the questions. The new method would in fact increase the number of turning points and hence the number of cycles, and would introduce erratic movements into the smoothed curves for the various branches of activity.

The old method was therefore retained to calculate the smoothed series of the various sub-branches and questions. Remember: that method comprises the following two steps:

- (i) calculation of the centred moving median over five months of the gross series;
- (ii) calculation of the centred weighted moving average over five observations of that series, with the weightings 1/8, 1/4, 1/4, 1/4, 1/8.

The smoothed series relating to the various branches of activity and questions will therefore still be published with a four-month delay. However, that does not cause any particular aggregation problem since the smoothed indicator for the economy as a whole is not calculated in the form of an average of the smoothed curves of the sub-branches, but by applying the smoothing filter to the overall gross indicator.

(1) Number of cases since 1995 for which the sign of the month-on-month change in the gross indicator corresponds to that of the month-on-month change in the smoothed indicator for a particular month.

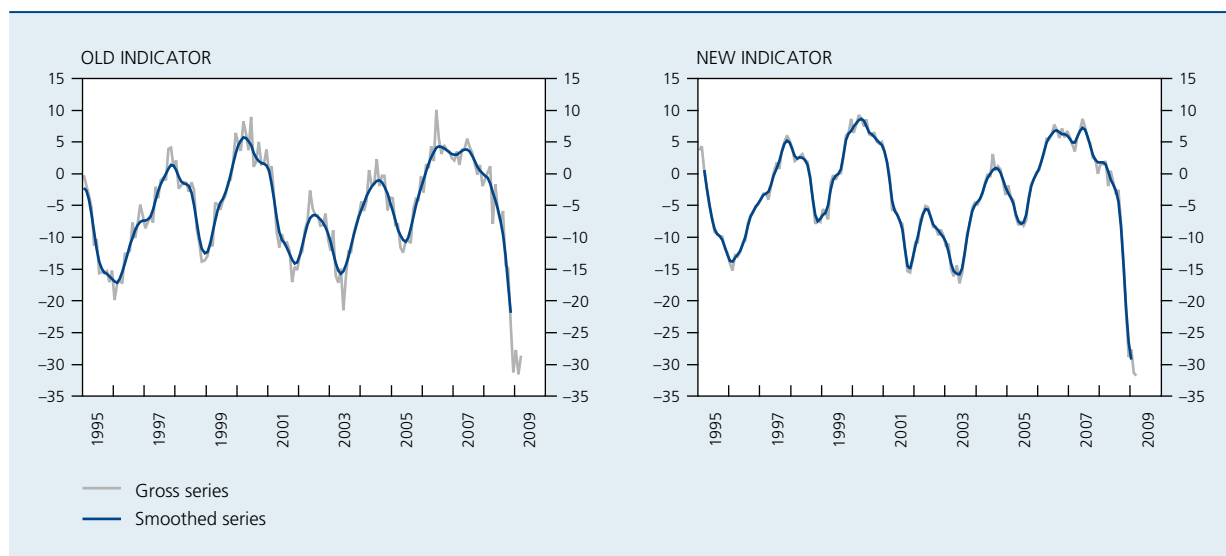
### 3. Characteristics of the new business survey indicator

The methodological changes have improved the performance of the business survey indicator: thus, short-term volatility is noticeably lower, the correlation with GDP growth is slightly higher and the leading character is unchanged. The lower volatility has made it possible for the delay in publication of the smoothed indicator – which reflects the underlying business cycle trend – to be cut from four months to two.

At first sight, the new business survey indicator is very similar to the old one, since the correlation between the two series is 0.96. Nevertheless, the methodological adjustments made have a significant influence on the monthly fluctuations in the gross indicator. Thus, in 28 p.c. of cases the monthly variations in the new indicator have a different sign from those in the old indicator. The important point here is that the erratic short-term volatility, or zigzag pattern, of the gross indicator has been largely eliminated. The month-on-month movements in the gross indicator are therefore much more a reflection of the business cycle trend: while the gross indicator used to give an accurate business cycle signal in 61 p.c. of cases, that figure has risen to 76 p.c. with the new indicator.<sup>(1)</sup>

This improvement is perceptible over the entire period. Thus, the wide fluctuations seen around the turning points, e.g. in 2000 and 2006, are considerably smaller. Moreover, the phases in the cycle, be they upward as

**CHART 8** COMPARISON BETWEEN THE OLD AND NEW BUSINESS SURVEY INDICATOR



Source : NBB.



in 2005, or downward as in 2000, are much smoother. That is also true for the most recent period. The new indicator shows a much more marked downward trend which is less frequently interrupted by rises. In March 2009 the new indicator reached an absolute low point.

The close link between the new business survey indicator and GDP growth can be demonstrated not only by the correlation coefficient but also via a regression. The simplest classic ordinary least squares (OLS) regression thus links annual GDP growth to the new business survey indicator. The equation, calculated on a quarterly basis between the first quarter of 1996 and the 4th quarter of 2008, is as follows:

$$\text{Year-on-year GDP growth} = 2.5 + 0.15 \times \text{indicator}$$

(25.2) (10.9) (t-values)

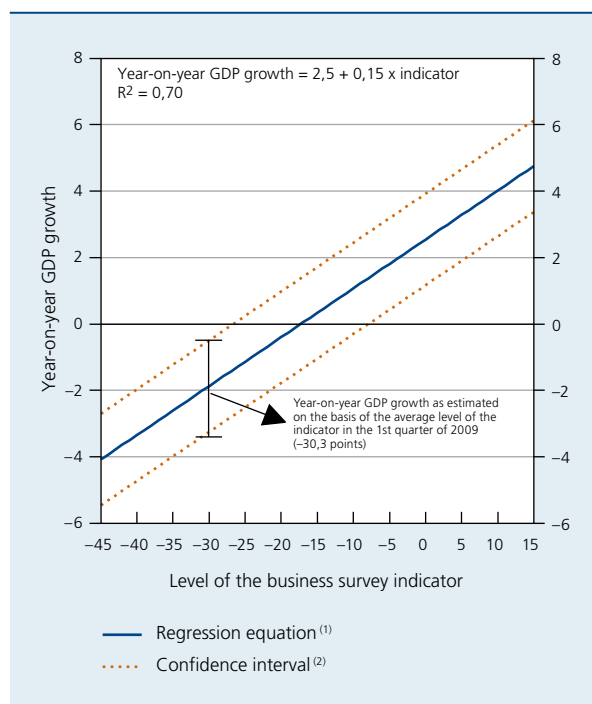
The coefficients are statistically very significant (t-value > 1.96) and the explanatory power of the regression is 70 p.c., which is very high.<sup>(1)</sup>

The regression equation obtained allows to link the level of the gross indicator with a value for year-on-year GDP growth. However, the regression may vary over time and is subject to a margin of error, reflected by the confidence interval. The latter represents the interval which, on the basis of historical data, is 95 p.c. likely to contain the year-on-year GDP growth for a given level of the business indicator.

The regression can thus be used as a guide for converting a given level of the business survey indicator into a year-on-year GDP growth. It should be stressed that a value close to -5 corresponds to a "normal" GDP growth of around 2 p.c. The average level of the indicator in the 1st quarter of 2009 (-30.3 points) translates into a year-on-year GDP growth in that quarter of between -0.5 and -3.3 p.c., with 1.9 p.c. as the central value.

As well as assessing the economic situation via the business survey indicator, it can be useful to analyse the signals given out by individual questions in the survey, e.g. about the trend in export orders or the turnover figure. Although these questions are no longer included in the composition of the business indicator, they still appear in the monthly press release. Some questions may have a lead over others, although this lead is likely not to be stable over time. Thus, during the recent period the business survey questions relating to the demand outlook, which are included in the new synthetic curves, gave an accurate, advance signal regarding the business cycle stance (NBB, 2009).

**CHART 9** REGRESSION EQUATION OF YEAR-ON-YEAR GDP GROWTH ON THE LEVEL OF THE BUSINESS SURVEY INDICATOR



Sources: NAI, NBB.

- (1) Regression of year-on-year GDP growth on the level of the business survey indicator and a constant (quarterly observations, 1996 Q1 - 2008 Q4).
- (2) Determined by the estimate ± twice the standard error. The confidence interval reflects the interval which, on the basis of historical data, is 95 p.c. likely to contain the year-on-year GDP growth for a given level of the business indicator.

## Conclusion

The business survey indicator is one of the most valuable statistics, published each month by the Bank. It owes its reputation to the reliable way in which, for several decades, it has reflected cyclical movements in economic activity in Belgium. That reputation even extends far beyond the country's borders, as it is considered to be an accurate leading indicator of economic growth in the euro area.

Although the survey was launched in 1954, it was not until 1972 that the results were published in the form of a synthetic business survey indicator. The Bank's survey covers a representative sample of participants and provides detailed information at the level of the branches of activity: those factors are part of the reason for the

(1) However, the residuals show some autocorrelation, caused by the simplicity of the specification used here, by way of illustration. That autocorrelation can be avoided by introducing, for example, a delayed value for year-on-year GDP growth into the regression.

success of the business survey indicator. The indicator also owes its popularity to the fact that it is based on qualitative data, such as the reporting of an increase, stabilisation or a decline in orders, which means that it is available quickly, in contrast to quantitative data. Finally, the success of the business survey indicator is also due to its methodology, which makes it possible to summarise the information obtained from the survey in a single figure.

To safeguard the quality of the business indicator, the method of calculating it has been revised several times, most recently in 1990. The Bank considered that it was now time to undertake a new methodological reform. That reform gradually became necessary owing to the 1994 extension of the survey to the business-related services branch, the results of which were not previously included in the business survey indicator. Moreover, in the recent past the indicator has exhibited some erratic short-term fluctuations. The present reform aims to improve the indicator's performance in terms of correlation with GDP growth, short-term volatility and lead, while paying particular attention to the substantial weight of services in the Belgian economy. Thus, the indicator could provide an even broader picture of economic activity.

The methodological changes were minor and concern only the calculation of the synthetic curves per branch of activity and the overall business survey indicator, by

calculating the synthetic curves as the average of a smaller number of questions and by incorporating the services curve in the overall indicator.

These methodological adjustments have improved the business survey indicator's performance: thus, the correlation with GDP growth is slightly higher, the leading character is preserved and the erratic short-term volatility is significantly lower. The month-on-month fluctuations in the gross indicator are therefore much more a reflection of the business cycle trend: while the gross indicator used to give a business cycle signal which was correct in 61 p.c. of cases, that figure has risen to 76 p.c. with the new indicator.

The reduction in the short-term volatility of the gross indicator meant that the method of smoothing the overall indicator could be simplified, cutting from four months to two the delay in publishing the smoothed overall synthetic indicator which reflects the underlying business cycle trend. This has increased its relevance.

Finally, it must be said that the business survey indicator's performance can only be improved on the basis of statistical properties, which necessarily relate to a particular observation period. Those properties may be impaired, particularly as a result of structural changes affecting the economy, so that this methodology too will need to be reconsidered periodically.

## Annex 1

### QUESTIONS INCLUDED IN THE MONTHLY BUSINESS SURVEY: STATISTICAL PROPERTIES

(1996-2008)

	Correlation with GDP growth in Belgium <sup>(1)</sup>	Variance of the smoothed series / variance of the gross series <sup>(2)</sup>	Lead (+) or lag (-) in relation to GDP growth in Belgium <sup>(3)</sup>	Composition of the old business survey indicator	Composition of the new business survey indicator
<b>Manufacturing industry</b>					
Trend in the production rate	0.79	0.53	0	X	
Trend in orders from the domestic market	0.75	0.54	0	X	
Trend in export orders	0.77	0.57	1	X	
Trend in prices	0.61	0.76	-2		
Assessment of total order book	0.73	0.90	-1	X	X
Assessment of export order book	0.76	0.85	-1	X	
Assessment of the level of stocks of finished products	-0.45	0.79	2	X	X
Employment expectations	0.76	0.87	0	X	X
Demand expectations	0.85	0.83	1	X	X
Price expectations	0.68	0.82	-1		
<b>Trade</b>					
Trend in sales	0.29	0.32	-2	X	
Trend in prices	0.18	0.63	-5		
Assessment of sales	0.41	0.56	-2	X	
Assessment of the level of stocks	-0.29	0.57	0	X	
Demand expectations	0.52	0.71	0	X	X
Intentions of placing orders <sup>(4)</sup>	0.59	0.74	0	X	X
Employment expectations <sup>(5)</sup>	0.32	0.65	-3		X
Price expectations	0.21	0.70	-3		
<b>Building</b>					
Trend in activity	0.43	0.27	0	X	
Trend in orders	0.66	0.68	0	X	X
Trend in equipment	0.32	0.62	-8	X	X
Trend in employment	0.39	0.53	-5	X	
Trend in prices	0.37	0.93	-6		
Assessment of order book	0.36	0.94	-4	X	X
Employment expectations	0.46	0.91	-5	X	
Demand expectations	0.59	0.79	1	X	X
Price expectations	0.44	0.87	-3		

Source: NBB.

(1) Coefficient of correlation between the level of the gross series and year-on-year GDP growth (quarterly data).

(2) Ratio between the variance of the smoothed series and that of the gross series. The higher this ratio, the lower the short-term volatility of the gross series.

(3) Number of months by which the gross series leads (+) or lags (-) year-on-year GDP growth. Determined by the moment when the cross-correlation between the indicator and year-on-year GDP growth reaches a maximum (monthly GDP growth figures obtained by linear interpolation).

(4) Formerly broken down into orders concerning foreign or Belgian suppliers.

(5) Not previously included in the monthly press release.

QUESTIONS INCLUDED IN THE MONTHLY BUSINESS SURVEY : STATISTICAL PROPERTIES (continued)

(1996-2008)

	Correlation with GDP growth in Belgium <sup>(1)</sup>	Variance of the smoothed series / variance of the gross series <sup>(2)</sup>	Lead (+) or lag (-) in relation to GDP growth in Belgium <sup>(3)</sup>	Composition of the old business survey indicator	Composition of the new business survey indicator
<b>Business-related services</b>					
Trend in activity .....	0.65	0.68	0	X	
Trend in employment .....	0.48	0.88	-2	X	
Trend in prices .....	0.49	0.74	-3		
Assessment of activity .....	0.64	0.91	-1	X	X
Activity expectations .....	0.70	0.85	0	X	X
Employment expectations .....	0.61	0.90	-1	X	
General demand expectations .....	0.76	0.89	0	X	X
Price expectations .....	0.42	0.75	-6		

Source : NBB.

(1) Coefficient of correlation between the level of the gross series and year-on-year GDP growth (quarterly data).

(2) Ratio between the variance of the smoothed series and that of the gross series. The higher this ratio, the lower the short-term volatility of the gross series.

(3) Number of months by which the gross series leads (+) or lags (-) year-on-year GDP growth. Determined by the moment when the cross-correlation between the indicator and year-on-year GDP growth reaches a maximum (monthly GDP growth figures obtained by linear interpolation).

## Annex 2

### OUTLINE OF THE GENERAL METHODOLOGY OF THE BUSINESS SURVEY INDICATOR

Step	Options	NBB	
		1990	2009
Conversion of qualitative responses into quantitative values for each question	Balance <sup>(1)</sup> Diffusion index <sup>(2)</sup>	Balance	Balance
Elimination of fluctuations other than cyclical variations	Elimination of seasonal fluctuations Complex breakdowns (e.g. Baxter-King filter)	Seasonal adjustment using the Census X-11 program	Seasonal adjustment using the Census X-11 program
Aggregation of the values per question	Number of questions	a) <i>branches of activity</i> : average of all questions, except those concerning prices <sup>(3)</sup>	a) <i>branches of activity</i> : average of a small number of questions <sup>(3)</sup>
a) in the synthetic curve specific to the branch of activity	Number of branches of activity		
b) in the business survey indicator	Aggregation method: (weighted) averages, principal component analysis	b) <i>business survey indicator</i> : weighted average of the synthetic curve of manufacturing industry, trade and building <sup>(4)</sup>	b) <i>business survey indicator</i> : weighted average of the synthetic curve of manufacturing industry, trade, building and business-related services <sup>(4)</sup>
Presentation of the end result	Balance Diffusion index Index of the balance or diffusion index result Standardisation Statistical smoothing	Balance    Statistical smoothing <sup>(5)</sup>	Balance    Statistical smoothing <sup>(5)</sup>

Source: NBB.

(1) Difference between the percentage of positive responses and the percentage of negative responses to a given question, ranging from -100 to 100.

(2) Sum of the percentage of positive responses plus half the percentage of responses not reporting any change, ranging between 0 and 100. Conversion from a balance result to a diffusion index can be made by means of a simple mathematical transformation.

(3) 1990: Total number of questions included in the composition of the synthetic curve specific to the branch of activity: manufacturing industry (8), trade (6), building (7), business-related services (6).

2009: Total number of questions included in the composition of the synthetic curve specific to the branch of activity: manufacturing industry (4), trade (3), building (4), business-related services (3).

(4) Weightings:

1990: manufacturing industry (70 p.c.), building (15 p.c.) and trade (15 p.c.).

2009: manufacturing industry (65 p.c.), building (15 p.c.), trade (5 p.c.) and business-related services (15 p.c.).

(5) 1990: Smoothed series obtained from the five-month centred moving average of the five-month centred moving median of the gross series, with the weightings 1/8, 1/4, 1/4, 1/4, 1/8.

2009: Same as in 1990, except for the smoothed overall indicator, obtained from the three-month centred weighted moving average of the three-month centred weighted moving median of the gross series, with the weightings 1/4, 1/2, 1/4.

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# Public employment in Belgium

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## Introduction

Public employment forms the subject of debate concerning such matters as the size of the public sector in Belgium in relation to other comparable countries, how it has varied over the years, and whether the ageing of the workforce may present an opportunity for adjusting the volume of employment in this sector. More generally, the underlying question concerns the extent to which public employment is a potential source of structural savings. That question is particularly relevant today as the budget position has worsened and the budgetary cost relating to population ageing is being felt more keenly. Yet the answer to this question is not simple, as it needs to take account of factors other than the wage bill, particularly the services performed for society and the operation of the administration.

This article is intended to contribute to the debate on public employment by analysing the most coherent possible set of statistics on its development and characteristics. The article comprises three sections. The first describes the general framework, including an overview of the situation in 2007 and a brief international comparison. The second section goes into more detail on employment trends in the general government sector, while the third section discusses some of the characteristics of public employment.

## 1. Overview of public sector employment

### 1.1 Employment in the general government sector

In all, just over 800,000 persons were employed in the general government sector in 2007, according to the national accounts data compiled in conformity with the ESA 95 rules (see box 1).

The federal government and social security together account for only one-fifth of employment in the general government sector. The federal government employs only 17.6 p.c. of general government sector workers, almost one-third of whom are military personnel, the others coming mainly under administration. Apart from civil servants, this includes magistrates, prison warders and federal police officers. Social security employs 3.7 p.c. of workers in the general government sector. Mutual organisations' staff assigned to compulsory health insurance account for half of the employment in this sub-sector.

The Communities and Regions represent the bulk of employment in the general government sector, accounting for 43.2 p.c. This high percentage is attributable to education, since employment in this sub-sector, namely schools run by the Communities and subsidised privately run schools, corresponds to 32.6 p.c. of total public employment. Administration and transport, together with related services, also employ many people – 6.9 and 3 p.c. respectively of employment in the sector. In the case of transport, this mainly concerns the staff of De Lijn, TEC and STIB/MIVB, which – unlike BNRC – are regarded as

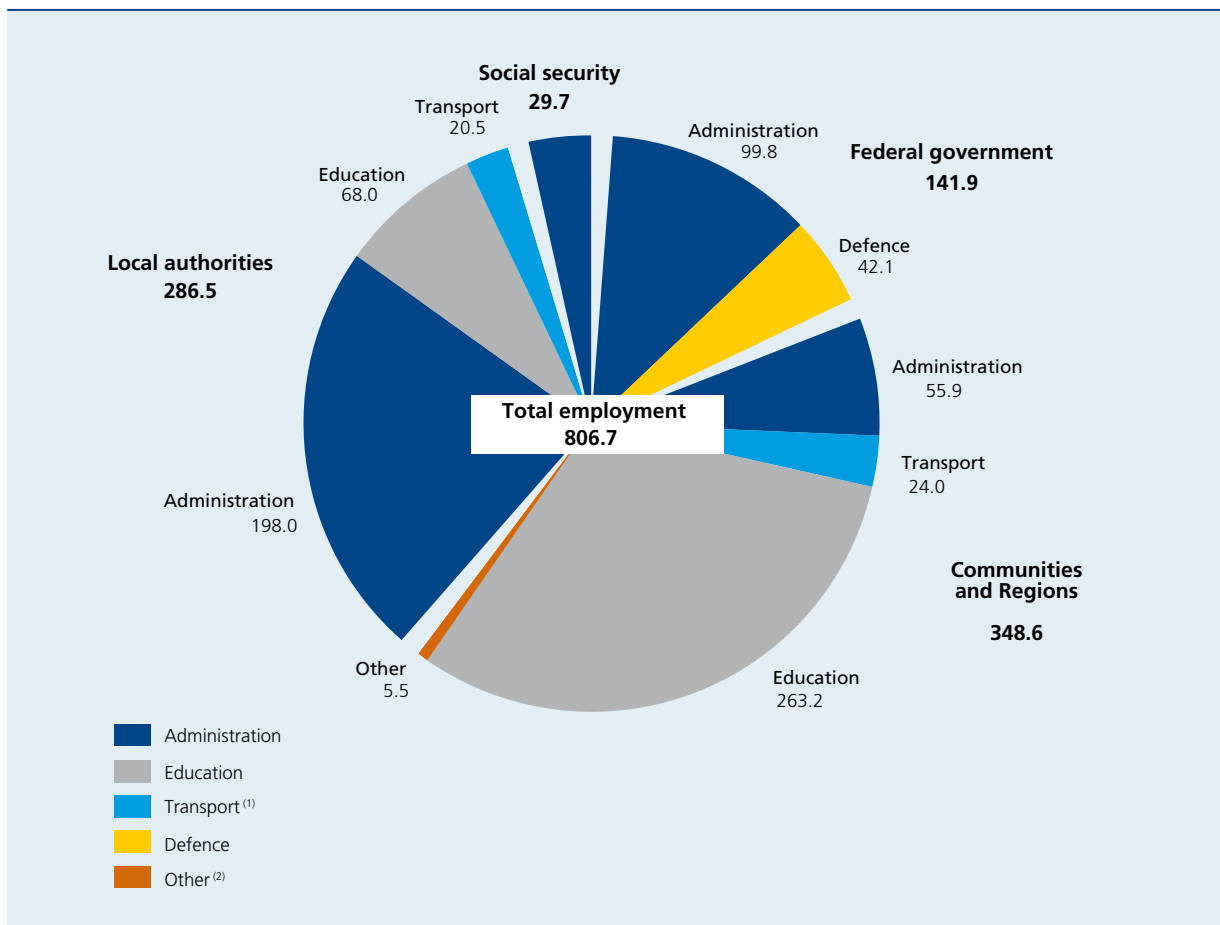
(1) The data used in this study were supplied by the General Statistics Department. The authors would particularly like to express their thanks to Isabelle Brumagne, Eric Fagnoul and Claude Modart.



**CHART 1**

**EMPLOYMENT IN GENERAL GOVERNMENT BY SUB-SECTOR AND BY BRANCH OF ACTIVITY**

(thousands of persons, 2007)



Sources : NAI, NBB.

(1) Regional public transport companies and other supporting transport activities.

(2) Public broadcasting corporations.

non-market enterprises since their own revenues do not cover half of their costs. The other categories – mainly the public broadcasting corporations – represent only 0.7 p.c. of general government employment.

Local authorities employ just over one-third of workers in the general government sector. Municipal and provincial schools account for 8.4 p.c. of employment in this sector. In all, education therefore represents no less than two-fifths of that employment. Moreover, almost a quarter of the sector’s staff are employed in the administration branch of local government. This activity covers numerous functions, ranging from the local police to social work provided by bodies such as the CPAS/OCMW, and including the municipal and provincial administrations.

**1.2 Public employment in the broad sense**

The definition of employment in the general government sector according to the national accounts does not include either workers in market public enterprises or those in subsidised employment. If these people were included in public employment, that would increase the numbers to around 1.4 million.

Public enterprises comprised a total of almost 120,000 jobs in 2007. Most of them come under non-financial public enterprises, which employ just under 100,000 people, and particularly the BNRC group, the Post Office and Belgacom. In 2006, some 17,300 persons were employed by the market intermunicipal associations active mainly in electricity, gas and water supply, other supporting transport services, and collection and treatment of waste.

## Box 1 – Definition of the general government sector

Distinguishing what does or does not come under the general government sector is a particularly tricky undertaking. In most countries, numerous definitions coexist. The sectoral employment statistics, compiled for the national accounts, have the advantage of being subject to methodologies developed and coordinated by a number of international institutions. In the EU, the implementing rules are determined by the European System of National and Regional Accounts, more commonly known as the ESA 95.

The boundaries of the general government sector are defined in theory by applying three criteria to the various units considered. A unit is recorded as forming part of this sector if it is an institutional, public and non-market unit. A unit is institutional if it has decision-making autonomy in the exercise of its principal function and if it keeps or could obtain a complete set of accounts. A unit is public if it is controlled by a public authority, e.g. if such an authority owns more than half of its shares. A unit is non-market if the proceeds from sales cover less than half of the production costs.

In Belgium, the NAI is responsible for compiling and publishing the annual accounts. In that capacity, the NAI allocates the units to the institutional sectors and publishes the list of units in the general government sector each year<sup>(1)</sup>.

Notable examples of units included in the general government sector are schools, including subsidised privately run schools, mutual health care organisations in respect of their activities relating to compulsory insurance, regional public transport companies (De Lijn, TEC and STIB/MIVB), public broadcasting corporations (VRT, RTBF and BRF) and intermunicipal associations identified as non-market.

Conversely, the NAI considers hospitals and retirement homes to be non-financial corporations since most of their revenue is deemed to come from households, because health care spending, including funding by INAMI/RIZIV which is the same for both private and public institutions, is treated as sales. Similarly, public enterprises such as the BNRC, the Post Office and Belgacom, and market intermunicipal associations are classed as non-financial corporations. The NBB and the CBFA are included under financial corporations, as are all banks and insurance companies, whether or not the majority shareholder is part of general government. At local level, many facilities (such as crèches, cultural centres and sports centres), once they form an entity separate from the local authority, are classified outside the general government sector, either as non-financial corporations if their activity is regarded as market, or as non-profit institutions if their activity is regarded as non-market.

(1) The application "classification of institutional sectors" can be consulted on the Bank's website. It gives the definition and distinguishing criteria of the institutional sectors, plus a list of named examples. The latest version of the list of units for the whole of general government is available in French and Dutch via <http://www.nbb.be>.

There is no statistical definition of subsidised employment. It is approximated here by the jobs derived from the service voucher system and the human health and social work branches. In this way, the categories considered probably also include non-subsidised jobs. Moreover, this approach is not exhaustive. For example, no account is taken of various subsidised activities such as those of many associations which enjoy management autonomy and are present in the social, sporting or cultural sphere. In 2007, around 210,000 jobs were recorded in the health sector, including hospitals, and more than 200,000 in

social work, including retirement homes. The service voucher system introduced in 2003, which is also heavily subsidised, has been a great success and accounted for over 50,000 jobs in 2007.

In all, considered in this broader form, public employment expanded by around 20 p.c. between 1997 and 2007. Its growth outpaced that of the general government sector and domestic employment as a whole, both of which rose by 12 p.c. During this period, half of the increase in domestic employment was attributable

**TABLE 1** EMPLOYMENT IN THE GENERAL GOVERNMENT SECTOR AND OTHER PUBLIC OR SUBSIDISED JOBS

(thousands of persons, unless otherwise stated)

	Number of persons in 2007	Change since 1997	Change since 1997 (in p.c.)
<b>General government sector</b> .....	<b>806.7</b>	<b>+87.9<sup>(1)</sup></b>	<b>+12.2<sup>(1)</sup></b>
Public enterprises .....	118.6	-18.6	-13.6
of which:			
Market intermunicipal associations <sup>(2)</sup> .....	17.3	1.3	7.8
Non-financial public enterprises .....	98.5	-19.5	-16.5
of which:			
Belgacom .....	13.9	-10.4	-42.8
the Post Office .....	36.9	-9.1	-19.8
BNRC group .....	38.5	-3.4 <sup>(3)</sup>	-8.1 <sup>(3)</sup>
NBB .....	2.3	-0.5	-16.8
Subsidised jobs			
of which:			
Social work .....	203.2	+70.0	+52.6
Health .....	210.9	+43.9	+26.3
Service vouchers .....	51.2	+51.2	-
<b>Expanded total</b> .....	<b>1,390.5</b>	<b>+234.4</b>	<b>+20.3</b>
<i>p.m. Total domestic employment</i> .....	<i>4,365.0</i>	<i>+465.5</i>	<i>+11.9</i>

Sources: NAI, NBB.

(1) The increase would be only 82,900 persons (or 11.5 p.c.) excluding the public broadcasting corporations, which have only come under the general government sector since 2002, and Aquafin, which ceased to form part of that sector in 2005.

(2) 2006 data. Including certain autonomous municipal undertakings such as the ports of Antwerp and Ghent. Retirement homes and hospitals come under social work and health respectively.

(3) Change since 2000.

to that of public employment in the broad sense. The dynamism of subsidised and public employment is due above all to the rapid expansion of service vouchers and the big increase in employment in social work and health care. Conversely, employment has fallen in public enterprises.

### 1.3 International comparison

International comparisons of general government sector employment are particularly risky, as the ESA 95 methodology may result in significant differences between countries in the boundaries of this sector. Those variations are due to different methods of organising health care, education, transport, broadcasting, the environment, etc. Thus, in some countries such as Germany and the Netherlands, hospitals form part of the non-financial corporations sector, as they do in Belgium. In other countries, they are included in the general government sector. For the first fifteen EU countries, that applies to all those

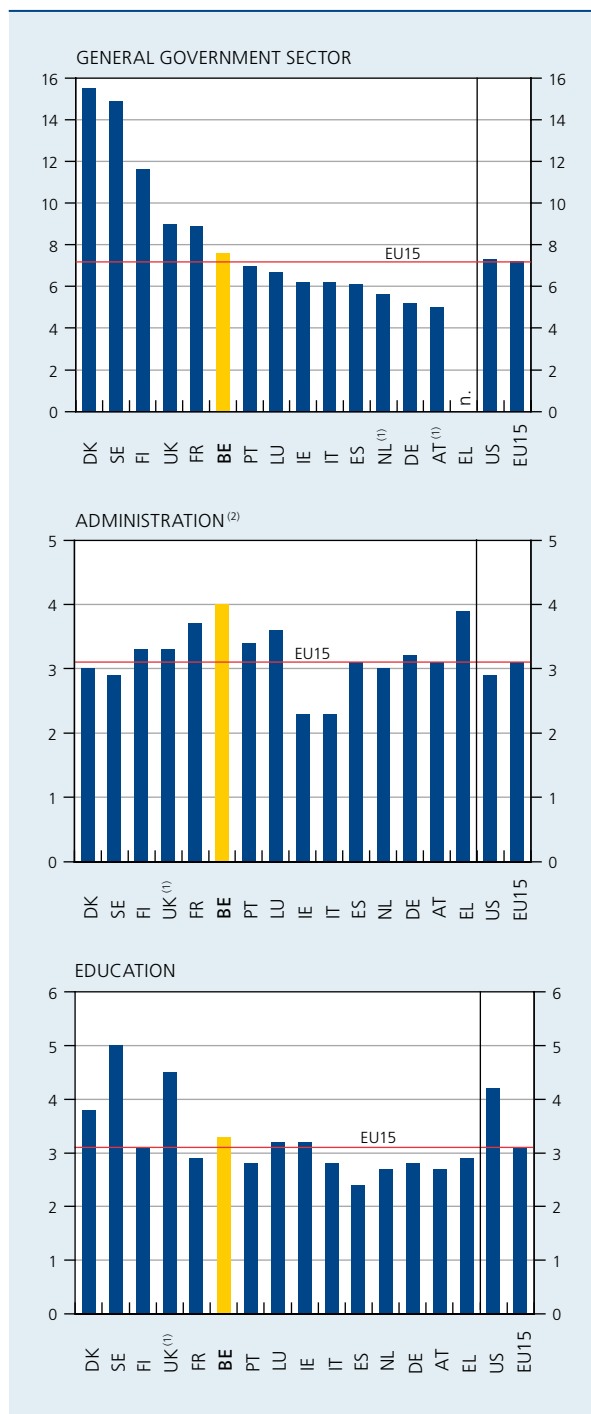
which, in 2006, had a higher ratio of the population in general government sector employment than Belgium, namely Denmark, Sweden, Finland, the United Kingdom and France.

To avoid the problem of variations between countries in the boundaries of the general government sector, some international comparisons focus on employment in a number of branches of activity where the general government sector has a strong presence, such as administration and education.

Belgium has the highest proportion of the population employed in administration. Nonetheless, international comparisons of employment in this branch of activity suffer from significant bias. Thus, while in Belgium the NAI allocates various activities to the administration branch – notably social work excluding retirement homes at local level – that is not the practice in other countries.

**CHART 2** INTERNATIONAL COMPARISON OF PUBLIC EMPLOYMENT

(public employment per 100 inhabitants, 2006)



Sources: DESTATIS, EC, OECD, NBB.

(1) 2005.

(2) Including defence.

Sweden, the United Kingdom and Denmark have more teachers per head of population than Belgium. International comparisons of employment in this branch of activity are also not immune to bias, since there are

private jobs in education. In Belgium, that mainly concerns driving schools. In other countries such as the United States and the United Kingdom, private schools – and particularly universities – come under sectors other than the general government sector.

## 2. Employment trends in the general government sector

### 2.1 Long-term trend

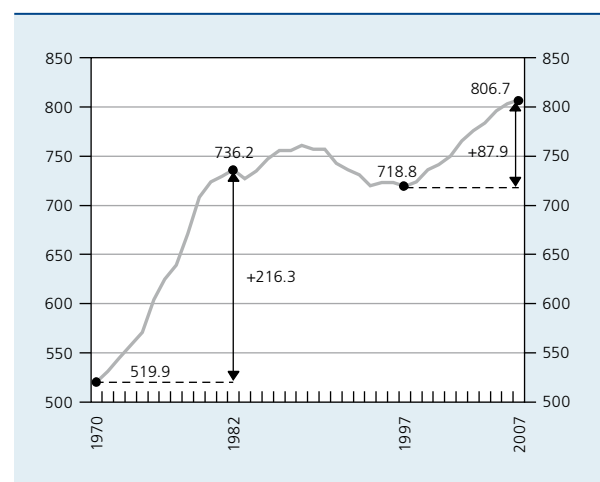
In Belgium, general government sector employment has shown a clear upward trend since 1970. That trend can be divided into three phases corresponding to the main shifts in fiscal policy.

Between 1970 and 1982, over 200,000 public jobs were created. At that time, civil servants and teachers were recruited in large numbers to offset the private sector job losses caused by the economic crisis and the structural decline in competitiveness. In those days, the fiscal policy stance was expansionary.

From 1982 onwards, the consolidation of public finances became the priority for successive governments. This restrictive fiscal policy stance was reinforced during the 1990s, when Belgium tried to meet the convergence criteria for joining the euro area at the start. In that context, the number of workers employed in the general government sector first stabilised and then declined. It reached a

**CHART 3** GENERAL GOVERNMENT SECTOR EMPLOYMENT IN BELGIUM

(thousands of persons)



Sources: NAI, OECD, NBB.

low point in 1997, another reason being the suspension of military service which took effect in 1994. In the space of a few years, the 30,000 or so people doing military service thus disappeared from the general government sector employment statistics.

Finally, between 1997 and 2007, the volume of general government employment expanded by 87,900 jobs. In that period, the fiscal policy stance reverted to expansionary, as the primary surplus of general government diminished over the years.

In the rest of this article, the analysis focuses on the period 1995-2007, which is the period covered by the data published by the NAI. Two adjustments were made to avoid breaks in the series following the transfer of the public broadcasting corporations from the non-financial corporations sector to the general government sector, in 2002, and the transfer of Aquafin, a water treatment company operating in Flanders, from the general government sector to the non-financial corporations sector in 2005. At the time of their reclassification, VRT, RTBF and BRF employed around 5,700 persons, and Aquafin around 700. Disregarding these four companies, the general government sector employed 801,100 workers in 2007, or 78,200 more than in 1995. Over the period as a whole, public employment therefore expanded by 10.8 p.c.

## 2.2 Trend by branch of activity

Between 1995 and 2007, the main rise in general government sector employment occurred in the administration branch of activity. The number of jobs devoted to that function increased by more than 60,000, or 18.6 p.c., over the period as a whole.

In the education branch of activity, growth was more moderate than in the general government sector as a whole, and it is only since 2001 that employment in this branch has risen again. Nonetheless, the total increase came to 21,000 persons between 1995 and 2007. It occurred mainly in the Flemish Region<sup>(1)</sup>.

In the transport-related branches, comprising mainly the regional public transport companies and other supporting transport services, employment has also grown strongly since 1995, by a total of 11 p.c. However, that only represents an extra 4,400 persons.

(1) If the education branch is considered as a whole, including the few jobs which come under other institutional sectors, particularly driving schools, paid employment increased between 1995 and 2006 by 20,316 persons in the Flemish Region (+12.4 p.c.) and 1,492 persons in the Brussels Capital Region (+3.3 p.c.), while it declined by 214 persons in the Walloon Region (-0.2 p.c.).

**TABLE 2** GENERAL GOVERNMENT SECTOR EMPLOYMENT<sup>(1)</sup>  
(thousands of persons, unless otherwise stated)

	1995	2007	Percentage changes 1995-2007
<b>By branch of activity</b>			
Administration <sup>(2)</sup> .....	323.2	383.3	18.6
Education .....	310.3	331.2	6.8
Transport .....	40.0	44.4	11.0
Defence .....	49.5	42.1	-14.8
<b>By sub-sector</b>			
Federal government and social security <sup>(3)</sup> .....	173.5	180.1	3.8
Communities and Regions .....	320.4	343.1	7.1
Local authorities <sup>(3)</sup> .....	229.1	278.0	21.4
<b>Total</b> .....	<b>723.0</b>	<b>801.1</b>	<b>10.8</b>

Sources: NAI, NBB.

(1) In order to avoid a break in the series due to statistical reclassification, the public broadcasting corporations and Aquafin were dropped from the data.

(2) At federal level, jobs which come under education and publishing were reclassified under administration.

(3) Data adjusted for the transfer of 8,500 former gendarmes from the federal government to the local authority police districts in 2002. Without that adjustment, the respective changes in employment at the level of federal government, including social security, and local government come to -1.1 and 25.1 p.c.

Within the general government sector, defence is the only branch of activity to record a fall in employment since 1995. The number of army personnel is down by 7,300, or 14.8 p.c.

## 2.3 Trend by general government sub-sector

### 2.3.1 General view

Between 1995 and 2007, employment increased in each of the government sub-sectors, albeit in very different proportions. It was at local authority level that employment expanded the most. The transfer of around 8,500 gendarmes from the federal government to the local authorities in 2002 is only a minor factor in this increase<sup>(1)</sup>. Disregarding that transfer, local public employment actually expanded by more than one-fifth over the period as a whole, or 48,900 jobs. Employment growth was weaker in the Communities and Regions, where it amounted to 22,700 jobs or 7.1 p.c. Finally, at the federal government and social security level, employment also increased, but the expansion came to only 6,600 units or 3.8 p.c. between 1995 and 2007.

The growth of employment in administration accounts for three-quarters of the increase in general government sector employment between 1995 and 2007. In the administration branch of activity, the expansion was substantial in each of the sub-sectors, especially in local authorities. Education also contributed to the growth of public employment, both in municipal and provincial schools, on the one hand, and in subsidised privately

run schools and schools run by the Communities, on the other.

### 2.3.2 Federal government and social security

In the federal government and social security, public employment expanded in administration between 1995 and 2007, while it declined in defence.

On the basis of data published by FPS Personnel and Organisation, relating to a sub-set<sup>(2)</sup> of the administration branch at the level of the federal government and social security, employment between 2004 and 2008 displays significant variations between functions. The number of federal personnel was boosted mainly by activities relating to justice, where over 2,800 jobs were created in central administration, in penal institutions and in community justice centres, i.e. expansion of 31.8 p.c. in four years. Staffing levels also increased in other functions, notably health – which includes FPS Public Health and the Federal Agency for the Security of the Food Chain. At the same time, other departments reduced the size of their workforce: this applied in particular to FPS Finance, which shed almost 2,000 staff, a reduction of 6 p.c. in four years, something that was partly explained by computerisation.

(1) In the rest of the article, unless otherwise stated, the analyses at sub-sector level exclude this transfer.

(2) The sub-set comprises roughly 82,000 persons of the 129,200 active in the administration branch at the level of the federal government and social security. Unlike the NAI data, the FPS Personnel and Organisation figures (pdata) take no account of the mutual health care organisations or special bodies (civil judiciary and administrative staff of the civil courts, federal police, Council of State and Finance Inspectorate).

**TABLE 3** CONTRIBUTION OF THE SUB-SECTORS AND BRANCHES OF ACTIVITY TO THE GROWTH OF EMPLOYMENT IN THE GENERAL GOVERNMENT SECTOR BETWEEN 1995 AND 2007<sup>(1)</sup>

(thousands of persons)

	Federal government and social security	Communities and Regions	Local authorities	Total
Administration .....	16.2 <sup>(2)</sup>	12.7	33.5	60.1
Education .....	– <sup>(2)</sup>	6.8	14.2	21.0
Transport <sup>(3)</sup> .....	–	3.2	1.2	4.4
Defence .....	–7.3	–	–	–7.3
<b>Total</b> .....	<b>6.6</b>	<b>22.7</b>	<b>48.9</b>	<b>78.2</b>

Sources: NAI, NBB.

(1) Excluding the public broadcasting corporations, Aquafin and the transfer of 8,500 former gendarmes from federal level to the police districts in 2002.

(2) At federal level, jobs coming under education and publishing were reclassified under administration.

(3) Regional public transport companies and other supporting transport services.

### 2.3.3 Communities and Regions

In the Communities and Regions, employment expanded between 1995 and 2007 in the three main branches of activity considered: education, administration and transport.

A specific study was conducted in order to estimate for each entity the change in the number of persons working in administration. Reliable detailed data were only obtainable for the period 1997-2007. These show that employment increased in each of the federated entities, but at varying rates. The biggest increase occurred in the Flemish Community, so that by the end of the period, almost half of the administrative workers in federated entities were employed there. The Walloon Region personnel represented just over a quarter of all administrative jobs in the federated entities in 2007, a proportion more or less unchanged since 1997. The French Community saw the smallest increase in the number of administrative staff.

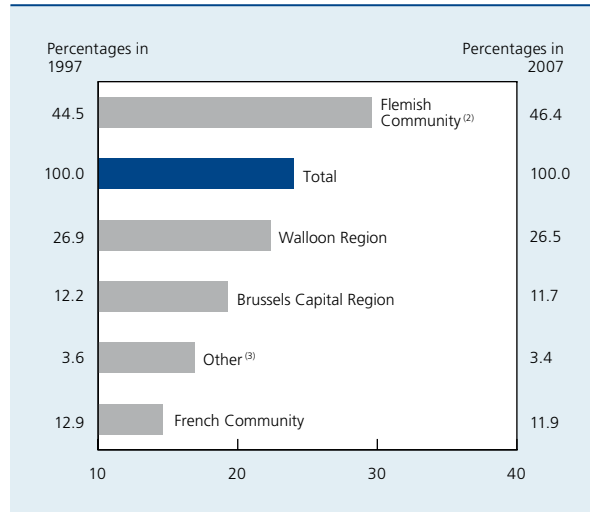
### 2.3.4 Local authorities

In the case of the local authorities, it is possible to offer some explanation for the large rise in employment in the administration branch of activity on the basis of the detailed data supplied by the NSSO-PLA and adjusted to reflect the NAI definitions more closely. However, reliable data were only obtainable for the period 1997-2007. According to these data, the number of jobs in the administration branch at local level increased by 34,900, or 19.2 p.c.

The most rapid employment growth occurred in the Public Social Welfare Centres or CPAS/OCMW. In 2007, they employed just over 50,000 people, or 9,400 more than in 1997, corresponding to an increase of 22.9 p.c. Municipalities and police districts, considered together in order to avoid a break in the series owing to the creation of the police districts in 2002, still account for the bulk of local employment with 149,000 jobs at the end of the period considered. With around 24,000 new jobs, the workforce of the municipalities and the police districts has grown by 19.4 p.c. since 1997. The provinces employed 16,700 people in June 2007, or 1,400 more than ten years earlier. Here, the rise in employment came to only 8.9 p.c. In non-market intermunicipal associations, the workforce barely reached 600 people, and employment dipped slightly over the period considered.

In the case of the CPAS/OCMW, many factors contributed to the dynamism of employment. First, the number of people on income support increased, necessitating

**CHART 4** EMPLOYMENT IN THE ADMINISTRATION<sup>(1)</sup> BRANCH OF ACTIVITY AT THE LEVEL OF THE FEDERATED ENTITIES IN BELGIUM  
(total percentage changes from 1997 to 2007, unless otherwise stated)



Sources: NAI, NSSO, NSSO-PLA, NBB.

(1) The NSSO and NSSO-PLA data were adjusted to reflect the NAI definition of employment in the administration branch at the level of the Communities and Regions sub-sector. Education, public transport companies and public broadcasting corporations, were therefore excluded from the analysis. Vocational training and university research were also disregarded. Employment in other supporting transport services could not be separated and was therefore included.

(2) Including matters falling within the responsibility of the Flemish Region.

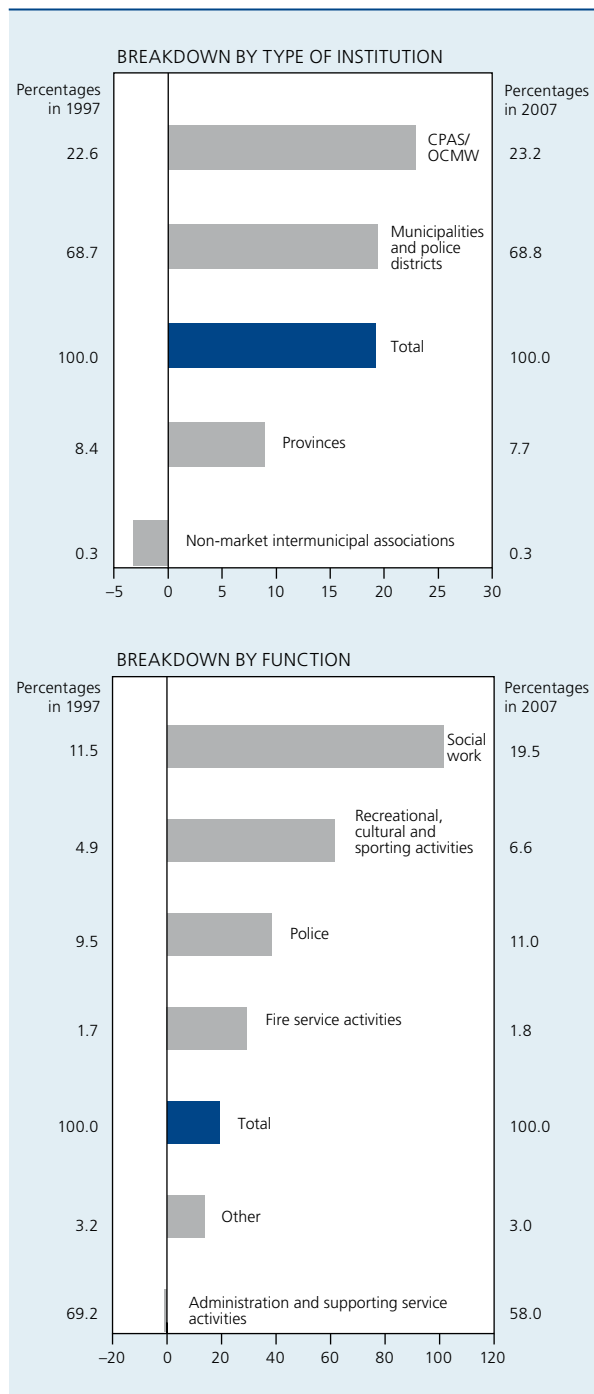
(3) Community Commissions (Cocof, VGC and Cocom) and the German-speaking Community.

more staff to deal with this. Next, the functions of the CPAS/OCMW have been extended and diversified, to include debt mediation and the issue of heating oil vouchers, for example. Finally, and above all, the surge in the 1990s was due to amendments to the law and the desire of the CPAS/OCMW to give priority to integration into society and the world of work, rather than purely providing income. The number of persons getting back into work increased considerably from 1997. The statistics record these persons as CPAS/OCMW workers. The increase here is connected primarily with the rise in the number of persons employed pursuant to Article 60 of the law on the CPAS/OCMW<sup>(1)</sup>. Those persons may either be assigned to the internal needs of the CPAS/OCMW, or made available to third parties. Changes in the law in the late 1990s authorised the latter option, generating over 5,000 jobs.

(1) Organic Law of 8 July 1976 on the CPAS/OCMW.

**CHART 5** EMPLOYMENT IN THE ADMINISTRATION BRANCH OF ACTIVITY AT LOCAL AUTHORITY LEVEL <sup>(1) (2)</sup>

(total percentage changes from 1997 to 2007 <sup>(3)</sup>, unless otherwise stated)



Sources: NAI, NSSO-PLA, NBB.

(1) The NSSO-PLA data were adjusted to reflect the NAI definition of employment in the administration branch in the local authority sub-sector. Hospital activities, retirement homes, education, transport, and market intermunicipal associations were notably excluded.

(2) Disregarding the transfer of 8,500 former gendarmes to the local authorities in 2002.

(3) Data as at 30 June for each of the years considered.

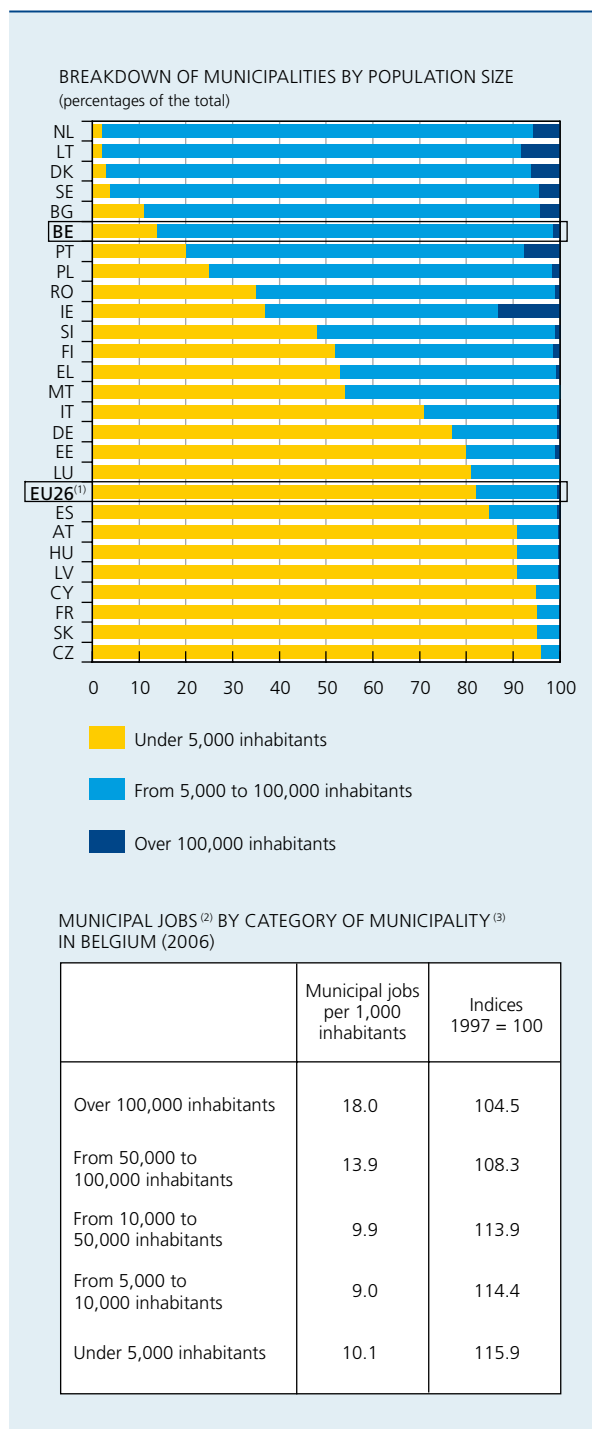
The main point to emerge from the breakdown of public employment according to the principal functions performed by the staff is that the growth of local public employment has not occurred in the civil service functions: in that category, comprising 126,000 persons, employment more or less stagnated over the period as a whole. Of the 34,900 jobs created in local authorities, 21,300 were in social work. Of those, 5,300 new jobs were in crèches and nurseries<sup>(1)</sup>, organised by the municipalities, the CPAS/OCMW or the provinces, and 15,000 other jobs were created for the purpose of social work in the CPAS/OCMW. Around 5,500 persons were recruited between 1997 and 2007 by the municipalities and provinces in connection with recreational, cultural and sporting activities, particularly the cultural and sports centres. Apart from 900 new fire fighters, the municipalities and police districts took on 6,000 police workers, excluding the transfer of 8,500 former gendarmes to the local level. That transfer took place in 2002 in connection with the creation of police districts, usually grouping several municipalities together. The rise in the number of police officers appears to reflect a political will to strengthen public security.

More detailed analysis of the data on the municipalities reveals that widespread mergers among them would not drastically reduce the volume of local public employment. For one thing, the Belgian municipalities are among the biggest in the EU. Only five countries have a lower proportion of small municipalities (under 5,000 inhabitants). Also, in Belgium, the smaller the municipality, the lower the volume of municipal employment per head, except in the case of municipalities with fewer than 5,000 inhabitants. The higher volume of municipal employment in the large municipalities may be due in particular to specific needs, e.g. regarding security and inner city policy, and the running of some activities for which small municipalities use intermunicipal associations. Between 1997 and 2006, the increase in the number of municipal staff per head of population was slower the bigger the municipality. This slower employment growth in the large municipalities is probably connected partly with the requirements imposed on many of them by the supervisory authorities, which may include limits on the increase in the wage bill.

(1) Crèches and nurseries where the employer is a local authority have to be divided into two groups: If the facility is autonomous and identified by the NAI, it is reclassified under non-financial corporations. If it is not autonomous, it remains under the general government sector.



**CHART 6** INFLUENCE OF MUNICIPALITY SIZE ON MUNICIPAL EMPLOYMENT



Sources: Dexia, DGSEI, NSSO-PLA, NBB.

(1) EU excluding United Kingdom.

(2) In order to reflect the NAI definition of employment in the administration branch more closely, municipal teaching staff were disregarded. To avoid problems of temporal consistency relating to the creation of the police districts, police staff were also excluded from the analysis.

(3) Categories of municipalities based on their population at 1 January 2007.

### 3. Characteristics of general government sector employment

The following characteristics of public employment are discussed in succession: employment status, gender and standard of education. Next, the question of the age pyramid of general government sector workers is examined in depth. Since the NAI does not have data on the workers' characteristics, the analysis was based on primary data from the NSSO and the NSSO-PLA. Also, the definition of the general government sector used in this section differs from that adopted by the NAI<sup>(1)</sup>. Nevertheless, the results offer a good approximation of the trends apparent in the general government sector as defined by the NAI.

#### 3.1 Status

The proportion of general government sector workers with civil servant status is steadily declining, and the latter are now only slightly in the majority. On 30 June 2006, they accounted for 54.3 p.c. – a significant fall compared to the 59.8 p.c. statutory civil servants in the sector as at 30 June 1997. Changes are relatively slow, as the reduction in the number of civil servants mainly occurs as they retire.

In education, a substantial majority of the staff are statutory civil servants, representing almost 60 p.c. of the workforce. However, that proportion has fallen sharply since 1997, when it still stood at 68.2 p.c. In the rest of the general government sector, the proportion of statutory civil servants varies considerably according to the level of government. In June 2006, it ranged from 39.4 p.c. in the Communities and Regions to 72.7 p.c. at federal government level, including social security and the army. In the local authorities taken as a whole, statutory employment also amounts to only around 40 p.c. of workers. In this sub-sector, substantial differences between types of institution are also evident: in 2006, 94.6 p.c. of police district workers and 59.1 p.c. of provincial staff were statutory employees, while the proportion was lowest in the CPAS/OCMW (30.1 p.c.) and municipalities (37.9 p.c.).

(1) The general government sector as defined by the NAI is smaller than that arrived at by combining the NSSO and NSSO-PLA data. According to the latter approach, the legal status of the institutions takes precedence. The main differences concern public enterprises, hospitals, retirement homes and market intermunicipal associations which are not included under the general government sector in the national accounts.

### 3.2 Gender

In the public service, female employment is more common than in the rest of the economy. Thus, as at 31 December 2007, women formed the majority in the general government sector, while men still accounted for more than half of private sector employees. The predominance of women is particularly marked in education and in local authorities. Conversely, men still formed the majority elsewhere in administration, including defence.

Men fill the majority of statutory posts, while more women are employed in contract jobs. As at 31 December 2007, 53 p.c. of men held statutory posts, while 63.9 p.c. of contract posts were filled by women.

The predominance of women in the public service is also increasing. There are considerably more women than men in the under 45 age groups, and they actually represent over 60 p.c. of those under the age of 30 years. Conversely, men outnumber women in the higher age groups.

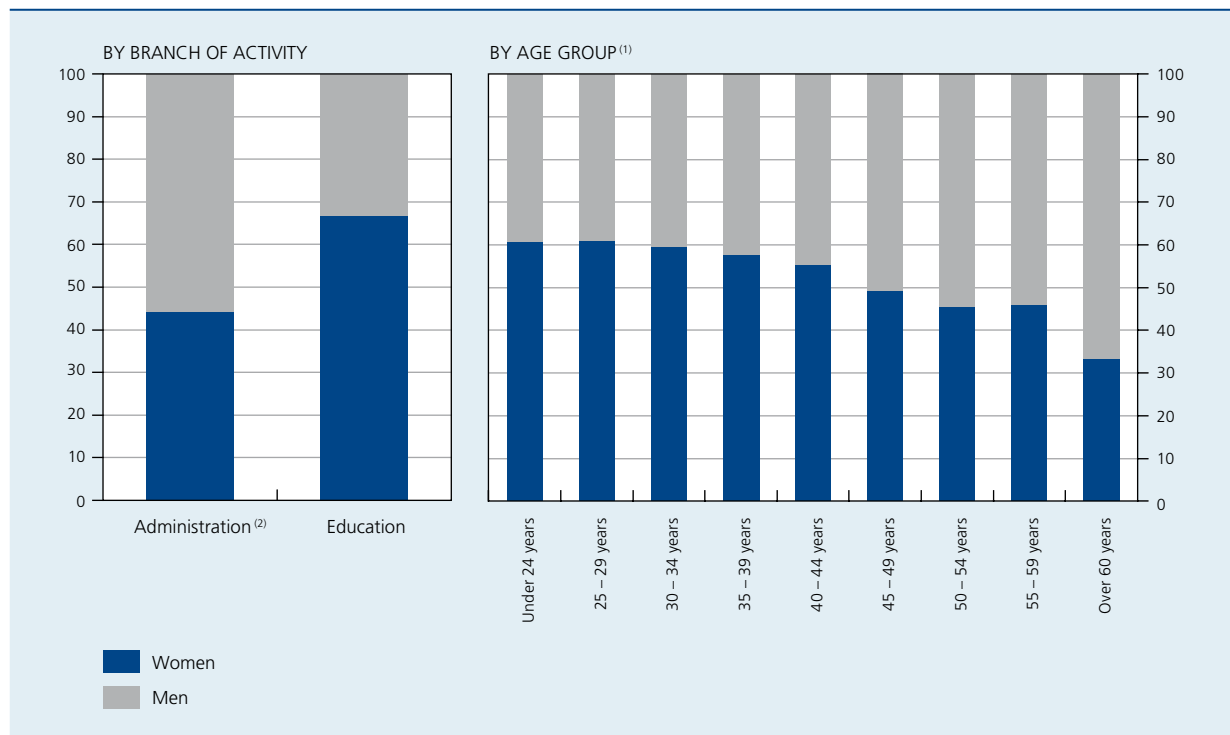
### 3.3 Standard of education

General government sector staff are increasingly well qualified. In the administration branch, the proportion of those with higher education qualifications increased from a quarter to a third between 1995 and 2007. Over the same period, the proportion of low-skilled workers with no more than a certificate of lower secondary education declined from one-third to less than a quarter, while the proportion of moderately skilled workers holding at most a certificate of higher secondary education remained broadly stable, at around 40 p.c.

However, the government still employs large numbers of low-skilled persons. For example, 60 p.c. of federal government employees hold at most a certificate of secondary education (levels C and D), and the proportion of these persons is around 50 p.c. or more for all age groups<sup>(1)</sup>. The proportion of levels A and B (higher education qualifications) is nevertheless rising in the youngest age groups, particularly among persons aged between 25 and 35 years.

(1) According to the FPS Personnel and Organisation data (pdata) as at 30 June 2008.

**CHART 7** BREAKDOWN OF GENERAL GOVERNMENT SECTOR WORKERS BY GENDER  
(percentages, as at 31 December 2007)

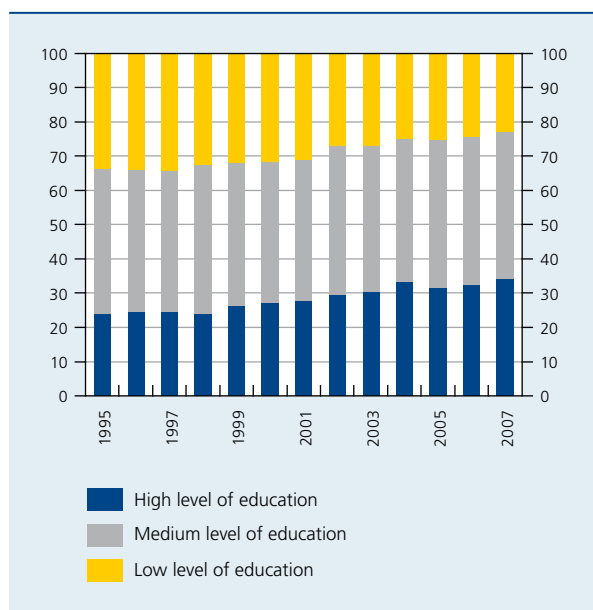


Sources: NSSO, NSSO-PLA, NBB.

(1) Workers who come under the NSSO-PLA are not included in the breakdown by age group.

(2) Including defence.

**CHART 8** BREAKDOWN OF WORKERS IN THE ADMINISTRATION<sup>(1)</sup> BRANCH OF ACTIVITY AGED FROM 25 TO 64 YEARS, BY HIGHEST LEVEL OF EDUCATION COMPLETED  
(percentages of the total in the branch)



Source: DGSEI (Labour Force Survey).  
(1) Including defence.

### 3.4 Age pyramid

In the general government sector, the age pyramid of the workers varies significantly from one branch of activity to another.

The most striking pyramid concerns defence personnel. These people retire earlier than those in other branches. Thus, the proportion of workers aged 60-64 years is negligible, and the 55-59 age group is much smaller than in other branches of activity. Almost 45 p.c. of staff are in the 40-49 age group. If the effective age of retirement remains unchanged, the Belgian army will therefore face mass departures in a few years' time.

Overall, the age pyramid is fairly flat in the education branch, so that there should be hardly any mass departures in this branch of activity on the whole, and it seems that the workforce has so far been replenished by the steady recruitment of young workers.

The age pyramid is more marked in the administration branch. Thus, taking all levels of government together, a peak is apparent for the 45-49 age group and the adjacent groups, while the proportion of young staff is

smaller<sup>(1)</sup>. That must be taken into account in designing a dynamic staffing policy for the public service.

Some people have suggested that the next five to ten years offer a unique opportunity for revising staffing levels. They argue that since general government sector staff are relatively old, a large proportion of them will soon be retiring. This means that the number of public sector workers could be reduced by not replacing all those who leave.

In that regard, it must be said that, in each of the branches of activity considered, the percentage of staff over the age of 60 is small, or even minimal in the case of defence. In fact, most general government sector workers retire before the maximum age, which is usually set at 65 years. A considerable number draw their pension at age 60 in the general government sector as a whole, in both the education branch and in administration. In general, defence personnel retire earlier, often at 56 years. In the administration branch, there are also many police staff who retire before the age of 60.

Only 10 p.c. of general government sector workers retiring between 2002 and 2005 had reached the age limit. In most cases, this concerned military personnel, for whom the limit is lower than for other general government sector workers<sup>(2)</sup>. In the administration and education branches, most of those retiring during that same period took immediate early retirement. This system allows staff still in service to draw their pension from age 60 once they have been in service for at least five years.

Assuming a constant proportion of workers aged over 60, the numbers retiring over the next five years can be estimated on the basis of the number of persons aged between 55 and 59 years in 2009. The numbers leaving in the following five years can be estimated on the basis of the number of persons aged between 50 and 54 years on that same date.

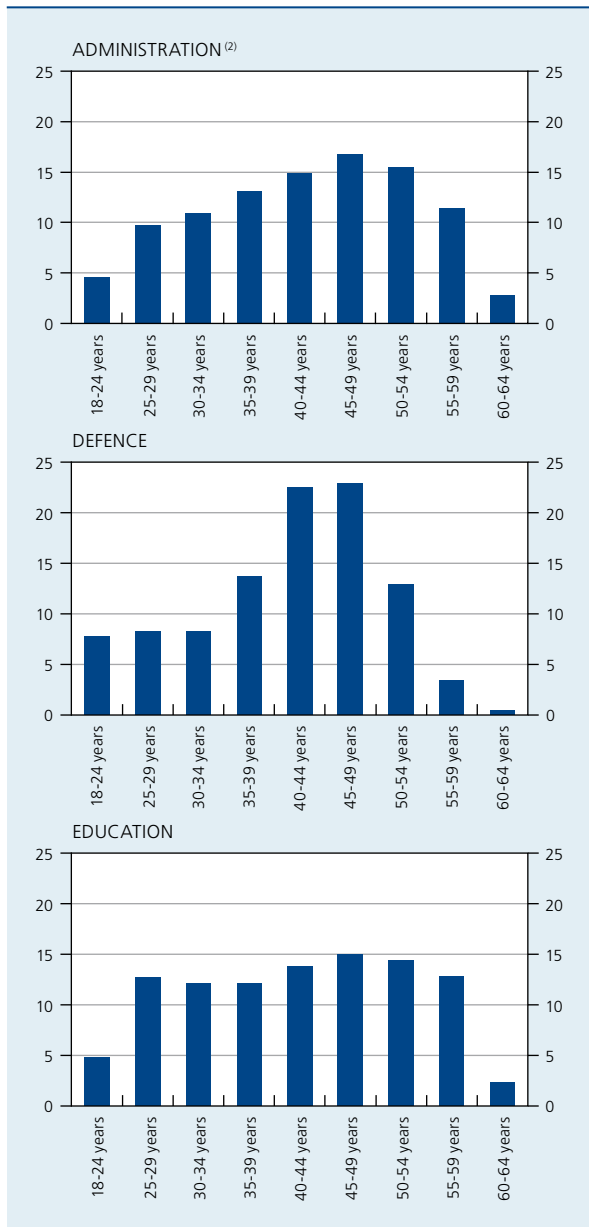
Around 65,000 persons, or only 12 p.c. of staff in the administration branch, are likely to retire in the next five years. In the following five years, 85,000 persons will join them, or 16 p.c. of staff in that branch of activity. Over a period of ten years, the numbers leaving will

(1) The age pyramid varies considerably between sub-sectors or local institutions. Thus, it is flatter in the Communities and Regions, and more marked at federal level, especially in social security. At local level, the age breakdown of staff in the police districts is fairly linear, while the age pyramid is more marked in the provinces, municipalities and CPAS/OCMW.

(2) For military personnel, the maximum age for taking retirement varies between 45 and 61 years, according to grade and appointment (Kluwer, 2008, Mémento des pensions). In most cases, the maximum age is 56 years or less. A limit of less than 65 years also applies to other categories of public sector personnel, such as the police.

**CHART 9** BREAKDOWN BY AGE AND BY BRANCH OF ACTIVITY OF GENERAL GOVERNMENT SECTOR WORKERS<sup>(1)</sup>

(percentages of the total for the branch of activity, 30 June 2007)

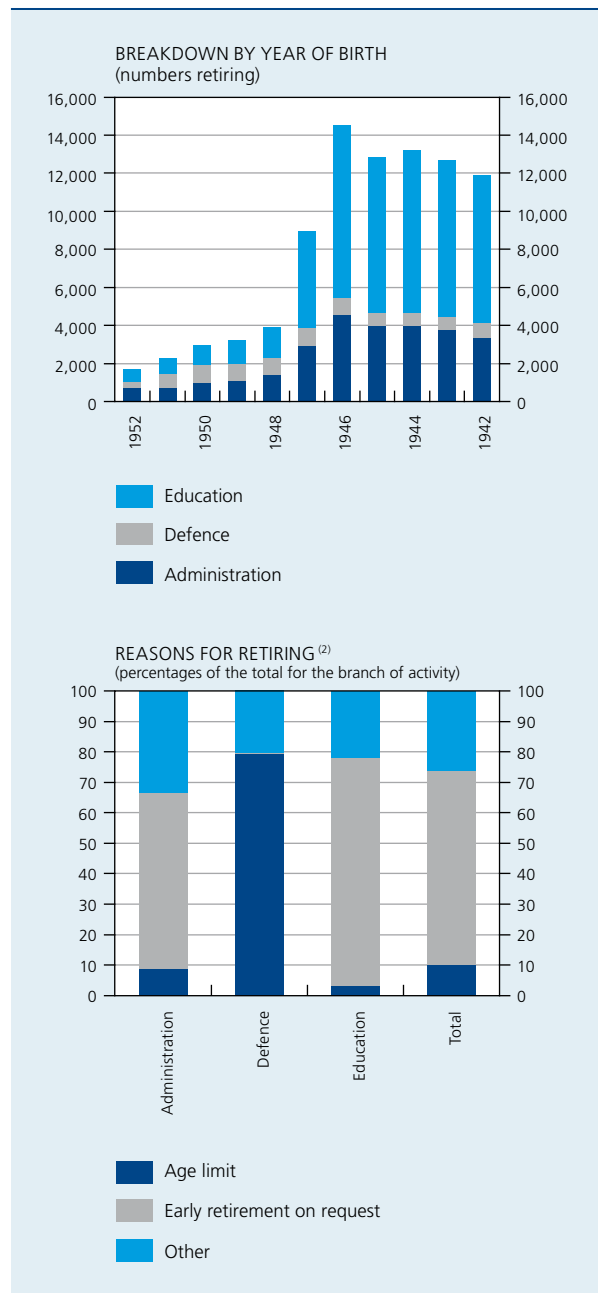


Sources: NSSO, NSSO-PLA, NBB.

- (1) The NSSO and NSSO-PLA data were adjusted to reflect the NAI's definition of the general government sector and the branches illustrated here. For example, workers recorded by the NSSO in various branches of activity were reclassified in the administration branch. In regard to compulsory social security, the staff of mutual health care organisations were taken into account, whereas the NSSO considers them as belonging to the private sector.
- (2) All workers contributing to the NSSO-PLA were allocated to the administration branch, even though some of them do not come under the general government sector.

**CHART 10** NUMBERS RETIRING IN THE GENERAL GOVERNMENT SECTOR<sup>(1)</sup>

(data as at 1 July 2007)



Sources: SDPSP/PDOS, NBB.

- (1) The public pension data have been adjusted to reflect the NAI's definition of the general government sector and the branches illustrated here. The definition used here corresponds to that adopted in the public sector pensions statistics, excluding retirement pensions paid to staff of autonomous public enterprises and intermunicipal associations, and those paid to ministers of religion.
- (2) Based on all new applications submitted between 2002 and 2005.

therefore total 150,000 or 28 p.c. of the staff. That percentage is hardly surprising considering that the average career lasts around 35 years. There is therefore no need to expect mass retirement in the coming five to ten years.

In the subsequent ten years, it is possible that more people will actually be leaving, since 30 p.c. of the staff in the administration branch are estimated to be aged from 40 to 49 years in 2009.

**TABLE 4** NUMBER OF WORKERS IN THE ADMINISTRATION BRANCH OF ACTIVITY ATTAINING THE AGE OF 60 BETWEEN 2010 AND 2019

(estimated situation in 2009 based on data as at 30 June 2007)

	Number of workers (in thousands of persons)		Percentage of the workforce	
	50-54 years	55-59 years	50-54 years	55-59 years
Federal government and social security .....	22	15	18	12
Communities and Regions .....	4	3	14	12
Local authorities <sup>(1)</sup> .....	54	42	16	12
Workers not attributable to a sub-sector <sup>(2)</sup> .....	5	4	14	12
<b>Total</b> .....	<b>85</b>	<b>65</b>	<b>16</b>	<b>12</b>

Sources: NSSO, NSSO-PLA, NBB.

(1) All workers contributing to the NSSO-PLA, even if some of them do not belong to the general government sector (e.g. market intermunicipal associations), the local authority sub-sector (e.g. Cocof and VGC) or the administration branch of activity (e.g. some members of the municipal and provincial teaching staff). In the absence of data by age, an approximation was produced on the assumption of a uniform distribution per year across the five-year age groups (45-49 years, 50-54 years and 55-59 years).

(2) Workers contributing to the NSSO for whom it is not possible to determine whether they come under the federal government or the Communities and Regions.

In the next ten years, the largest absolute number of staff leaving will be in the local authorities, with a total of 96,000. However, the proportion leaving is likely to be higher in the federal government (including social security), as 30 p.c. of staff there are estimated to be aged between 50 and 59 years in 2009.

There are large variations between institutions and departments. Thus, at federal level, over 40 p.c. of the staff of FPS Finance are aged between 50 and 60 years, while fewer than 25 p.c. of staff in FPS Justice are in that age group. At local authority level, the percentage of staff aged between 51 and 60 years is higher in the provinces than in the municipalities and the CPAS/OCMW. Managing these variations in age structure between institutions and departments therefore presents a major challenge for the human resources policy throughout the general government sector.

## Conclusions

In Belgium, the general government sector defined according to the rules of the national accounts employs just over 800,000 workers. The main employers in the sector are the Communities and Regions and the local authorities, while the federal government and social security together represent only one-fifth. If the concept used is broader than general government, and includes public enterprises, market intermunicipal associations and heavily subsidised jobs (health, social work and service

vouchers), there could be 1.4 million persons in public employment.

Over the long term, the variations in public employment correspond to the major fluctuations in budgetary policy. Employment in the general government sector expanded particularly strongly during the 1970s. Following a period of virtual stabilisation from 1982 onwards, employment in the sector increased again between 1997 and 2007. The analysis reveals that this expansion was not uniform across the branches of activity. During the recent period, employment has declined in defence and in some federal government departments, such as FPS Finance. Conversely, growth has been particularly marked in transport and in administration, especially where those services come under the local authorities or certain federal departments such as justice. In a broader context, employment in public enterprises has shown a marked fall, while there has been a big increase in subsidised jobs, be it in health and social work or under the service voucher scheme.

All government sub-sectors have shared in the employment growth recorded since 1995. The Communities and Regions account for almost 30 p.c., and the federal level, including social security, represents 10 p.c. The biggest contribution comes from the local authorities which account for over 60 p.c. of that growth. In the local authorities, the new jobs created in the administration branch of activity did not relate to civil service functions but concerned social work, the police and cultural and sports positions.

An ever diminishing proportion of staff has civil servant status, and women are increasingly in the majority. Moreover, the standard of skills of public sector personnel is constantly improving.

In view of the age pyramid and current retirement and pre-retirement patterns, departures should be staggered without reaching disproportionate levels in the next five to ten years. However, the numbers leaving are expected to be greater in some branches, departments and institutions.

Any discussion on possible staff cuts in the general government sector must form part of a broader debate which takes account of efficiency and performance. Thus, to counterbalance the increase in the tasks delegated to the government in recent years, it would be appropriate to review the social benefits of older functions which may have become obsolete. The adjustments resulting from such an analysis would require human resources management to operate an active mobility policy. That mobility is also necessary in response to the normal retirement or early retirement of cohorts of general government sector workers.

**EMPLOYMENT IN THE GENERAL GOVERNMENT SECTOR**(number of persons, data adjusted for breaks in the series<sup>(1)</sup>)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Federal government and social security .....	173,503	172,042	173,108	174,512	177,269	179,237	180,815	182,599	181,685	179,135	180,682	179,567	180,095
Administration <sup>(2)</sup> .....	124,043	124,326	126,492	127,709	130,837	132,598	135,142	137,746	136,792	135,135	136,422	136,521	137,977
Defence .....	49,460	47,716	46,616	46,803	46,432	46,639	45,673	44,853	44,893	44,000	44,260	43,046	42,118
Communities and Regions .....	320,398	313,951	312,036	314,232	318,254	316,292	316,893	321,477	327,936	334,071	338,515	341,807	343,081
Education .....	256,404	248,302	244,223	245,081	247,091	245,514	245,453	247,901	251,962	256,432	260,421	262,766	263,196
Administration .....	43,199	44,326	45,932	46,214	47,778	47,420	47,935	48,632	49,989	53,692	55,035	55,738	55,910
Transport <sup>(3)</sup> .....	20,795	21,323	21,881	22,937	23,385	23,358	23,505	24,944	25,985	23,947	23,059	23,303	23,975
Local authorities .....	229,057	236,872	233,070	234,930	239,997	245,098	250,790	255,484	259,572	264,328	271,250	276,267	277,969
Administration .....	155,959	158,328	154,616	155,735	160,596	164,736	167,398	172,460	177,153	179,668	184,809	188,081	189,461
Education .....	53,854	58,632	59,186	60,193	60,434	60,796	63,633	64,964	63,811	65,030	67,075	68,035	68,041
Transport <sup>3</sup> .....	19,244	19,912	19,268	19,002	18,967	19,566	19,759	18,060	18,608	19,630	19,366	20,151	20,167
<b>General government sector .....</b>	<b>722,958</b>	<b>722,865</b>	<b>718,214</b>	<b>723,674</b>	<b>735,520</b>	<b>740,627</b>	<b>748,498</b>	<b>759,560</b>	<b>769,193</b>	<b>777,534</b>	<b>790,447</b>	<b>797,641</b>	<b>801,145</b>
<i>p.m. Idem, not adjusted for breaks in the series . . .</i>	<i>723,396</i>	<i>723,359</i>	<i>718,755</i>	<i>724,262</i>	<i>736,142</i>	<i>741,274</i>	<i>749,169</i>	<i>765,987</i>	<i>775,641</i>	<i>783,947</i>	<i>796,144</i>	<i>803,301</i>	<i>806,689</i>

Sources: NAI, NBB for the breakdown by sub-sector and by branch of activity.

(1) In order to avoid breaks in the series due to statistical reclassification, the public broadcasting corporations and Aquafin were dropped from the data. They were also adjusted to neutralise the impact of the transfer, in 2002, of 8,500 former gendarmes from the federal government to the local authorities.

(2) At federal level, jobs which come under education and publishing were reclassified in the administration branch.

(3) Scheduled passenger transport (only for Regions) and other supporting transport activities.

# The Belgian migration to SEPA (Single Euro Payments Area)

J. Vermeulen  
A. Waterkeyn

## 1. Introduction

The signal for the operational launch of SEPA, the “Single Euro Payments Area” was given just over a year ago: since 28 January 2008 it has been possible to use the European transfer to effect payments anywhere in the SEPA area.

The main aim of SEPA is to promote financial integration in Europe, more particularly in the field of cashless payment services and payment systems. The aims of SEPA and its main players are described in detail in the article *The Single Euro Payments Area: SEPA* published in the September 2007 issue of the *Economic Review*. The present article describes the progress made in the SEPA project since then. SEPA is intended to enable all economic players (businesses, consumers and public authorities) to effect payments anywhere in the SEPA zone<sup>(1)</sup> as easily, securely and efficiently as domestic payments. It must also be possible to execute these payments in accordance with a single regulatory framework within which all players have the same rights and obligations. To that end, the European Parliament and the Council adopted

a directive on payment services in the internal market (hereinafter “the Directive”), which has to be transposed into national law by 1 November 2009.<sup>(2)</sup>

The SEPA migration is a process whereby the current national payment instruments are gradually replaced by standardised European instruments.

European instruments have been developed for credit transfers and direct debits, while a general framework has been set up for payment cards. The development of standards for these payment instruments and the organisation of the migration to SEPA were largely decided by the banking sector. For that purpose, interbank consultation bodies were set up at national and European level, and special structures were created to encourage societal dialogue concerning SEPA and its implementation. In Belgium, the organisational structures behind the SEPA migration are the “Steering Committee on the future of means of payment” and the SEPA interbank Forum.<sup>(3)</sup>

The Steering Committee brings together all the economic players (banking sector, businesses, consumers and public authorities). Chaired by the governor of the National Bank of Belgium, it has the task of organising the Belgian migration to SEPA in the optimum way. The SEPA Interbank Forum organises the transition to SEPA within the banking sector, which plays a pre-eminent role in the introduction of the new payment instruments.

The introduction of the European credit transfer, which began last year, has been very gradual, and deliberately so: one reason being to ensure a faultless technical migration.

(1) SEPA consists of the European Union (EU) countries plus Iceland, Liechtenstein, Norway and Switzerland. A number of territories are deemed to form part of the EU (under Article 299 of the Treaty of Rome). They are the French overseas departments (Martinique, Guadeloupe, Guyana and Réunion), Gibraltar (United Kingdom), the Azores and Madeira (Portugal), the Canary Islands (Spain) and the Åland Islands (Finland). Five of these territories have their own ISO country code. Altogether, 36 ISO country codes are therefore possible in SEPA. A transaction is not regarded as a SEPA transaction unless it is effected between two banks whose Bank Identifier Code (BIC) contains one of these 36 ISO country codes.

(2) Directive 2007/64/EC of the European Parliament and of the Council of 13 November 2007 on payment services in the single market, amending directives 97/7/EC, 2002/65/EC, 2005/60/EC and 2006/48/EC and repealing Directive 97/5/EC.

(3) In the course of its work of monitoring and assisting the economic players in their transition to SEPA, the Steering Committee publishes progress reports at regular intervals. This article is based on the “Second progress report on the migration towards SEPA in Belgium”, published at the beginning of March 2009 under the auspices of the “Steering Committee on the future of means of payment”. Second progress report on the migration towards SEPA in Belgium, March 2009, [http://www.nbb.be/doc/ts/Products/PaymentSystems/SEPA/FR\\_MoBmars2009.pdf](http://www.nbb.be/doc/ts/Products/PaymentSystems/SEPA/FR_MoBmars2009.pdf).



Since the economic players are not yet under any obligation to use the new credit transfer forms, this initial phase was practically invisible to end users. The SEPA migration process will be developed further in 2009, as this article will explain.

Chapter 1 describes the launch of SEPA at the beginning of 2008 and the timetable envisaged for the various European payment instruments. Chapter 2 discusses the implementation of SEPA at interbank level, while the subsequent chapters describe the situation for the other key players. Thus, chapter 3 gives an account of the progress so far in public services, which were the first to begin the migration to SEPA by introducing the European credit transfer in their payment systems. Chapter 4 examines the situation and the timetable for businesses. Finally, the last two chapters respectively describe the situation for consumers and communication relating to SEPA.

## 2. Sepa's operational launch in Belgium

### 2.1 Introduction of the European credit transfer (SEPA Credit Transfer or SCT)

On 28 January 2008, SEPA was introduced as planned in the SEPA countries, i.e. the 27 European Union (EU) countries plus Iceland, Liechtenstein, Norway and Switzerland. The first payment instrument conforming to the SEPA standards is the credit transfer: in Belgium, the SEPA credit transfer is known simply as the "European credit transfer". Customers in Belgium can now effect European credit transfers via their bank, using the various traditional channels. There is therefore no longer any difference between a domestic credit transfer (for example, between a person living in Antwerp and a person living in Liège) and a cross-border transfer in euro in the SEPA zone (between a Belgian resident and a resident of one of the other 30 SEPA countries).

This also means that, since 28 January 2008, the term "international credit transfer" has been reserved solely for transfers between a Belgian resident and a country outside SEPA (i.e. outside the 31 countries).

No problems emerged in the launch phase; the European credit transfers presented were correctly processed by banks and by interbank systems.

The bank migration plan provides for a three-year transitional period during which the current domestic credit transfers will be replaced wherever possible by European credit transfers. To achieve that aim, the banks will cease issuing the current domestic paper credit transfer form from the beginning of 2010, and it will be phased out altogether by the end of that year.

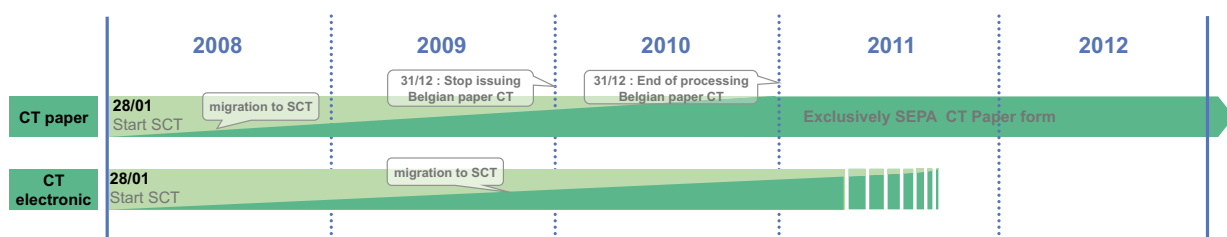
The plan takes account of the fact that all customers must have adopted the European variant of the credit transfer during a three-year period commencing on the SEPA launch date, i.e. by 31 December 2010 at the latest (cf. diagram). In the case of paper credit transfers, the transitional period should be shorter; the new forms must be in use by the end of 2009. Banks will cease issuing Belgian credit transfer forms to their customers from January 2010, but these forms will still be accepted and processed by the banks up to the end of that year.

The only differences between the Belgian credit transfer forms for domestic use and the European credit transfer concern the following points:

- the data concerning the payer and the payee are no longer shown side by side but are placed one above the other;
- it is mandatory to state the international bank account number (IBAN<sup>(1)</sup> – International Bank Account Number) of both the payer and the payee;
- it is mandatory to state the payee's name;
- the form is redder in colour.

For the general public, the main difference between the European and Belgian credit transfers concerns the use of the IBAN number.

(1) In Belgium, the International Bank Account Number comprises the code BE (country code) followed by a two-number check digit plus the traditional bank account number. The IBAN account number is therefore four digits longer and appears on all bank account or post office account statements. It is structured in the form of 4 x 4 digits. The public can refer any questions about the IBAN account number to their bank or post office.



In most cases, the general public will notice that the credit transfer form has already been largely completed by the creditor and that consequently, since the payee's name is already shown on the credit transfer, the payer need not worry about this additional mandatory information. The main new feature for citizens is that they have to state their own bank account number using the IBAN format in the box provided for the payer. In the case of "Home banking", there is no need to state the payer's account number; it is only necessary to enter the payee's account number in the IBAN format.

The migration from the domestic credit transfer to the single European standard was phased in very gradually.

In January 2008, the volume of European credit transfers was very small, and it grew slowly during the ensuing months. In the space of a year, the volume of European credit transfers processed in Belgium rose from 0.4 to 2.3 p.c. of total credit transfers. That trend corresponds to what was seen in other countries. The introduction was deliberately slow and gradual, allowing bank customers to choose when they wanted to switch to the European credit transfer. Small initial volumes in fact limit the risk of breakdowns in banking systems, as businesses and public services can make gradual adjustments to their systems in line with the new SEPA standards

Chart 1 compares the volume of European credit transfers processed by the Belgian retail payments system (Centre for Exchange and Clearing – CEC) with the aggregate volumes processed by the main European retail payment systems in the euro area.

In Belgium as in the rest of Europe, use of the European credit transfer began on a very small scale and expanded only very slowly during the ensuing months. The relatively steep rise seen in Belgium in December 2008 was due to the launch of the European credit transfer by public authorities during the final quarter of 2008 (cf. chapter 4).

Since 2 February 2009, a slightly modified version of the European credit transfer has been in use, but that is not expected to have any impact on the volumes processed.

The differences in relation to the first version of the SCT are minor, and concern the addition of a new optional field for the payer and the payee, in cases where they are not the holders of the accounts indicated on the credit transfer form. Citizens, as payers, and businesses or public authorities, as payees, will therefore be able to complete these additional fields. These optional fields will be available only on certain electronic versions of the European

credit transfer, as the paper credit transfer form will not be modified.

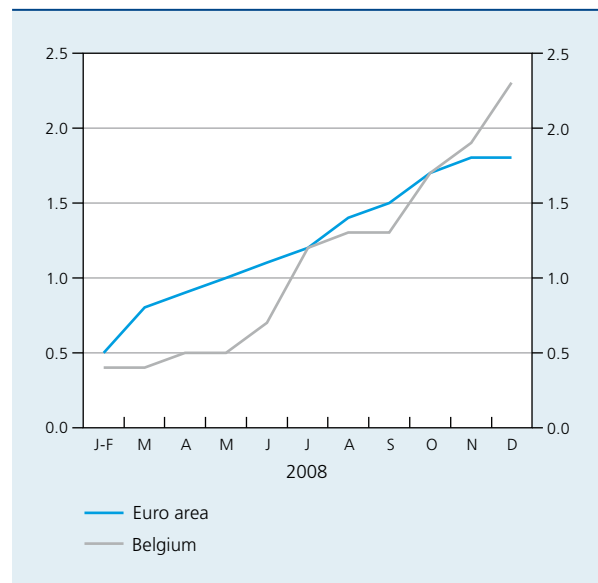
## 2.2 Introduction of the European direct debit (SEPA Direct Debit or SDD)

Unlike the credit transfer, the European direct debit (SEPA Direct Debit or SDD) is not yet in use.

The banking sector set the launch date for the European direct debit at European level: it will coincide with the date on which the payment services directive has to be transposed into national law, namely 1 November 2009. This directive creates a unified legal framework in Europe. It has significant implications for direct debits, since that means of payment is fundamentally different from credit transfers, for example, particularly as regards the rights and obligations of the parties involved (banks, creditors and debtors). The EU directive was approved on 24 April 2007 by the European Parliament; it has to be transposed into the national law of each Member State by no later than 1 November 2009.

The success of the launch of the European direct debit on 1 November 2009 will depend mainly on a number of legal aspects, its adoption by the market, and the time taken to implement it in banks and businesses.

**CHART 1** TRANSACTIONS IN THE SEPA FORMAT (2008)  
(percentages of the total volume of credit transfers)



Sources: ECB, CEC.

## 2.2.1 Legal aspects

### 2.2.1.1 The payment services directive

At the time of publication of this article, there are still a number of legal uncertainties concerning the migration to the European direct debit.

The process of transposing the directive into national law is on-going (cf. also point 4.5), and the European direct debit cannot be launched until the directive has been transposed into the national law of all the European Union countries (and the EEA), namely from 1 November 2009. According to the latest available information, the directive will be transposed into Belgian law by that date.

Regarding content, the directive offers the Member States a range of options enabling them to make some adjustments according to the national context.

Thus, it is for each Member State to decide whether or not "micro-enterprises" will be classed as "consumers". If "micro-enterprises" were regarded as "businesses", they would be able to take part in the "business-to-business" scheme (cf. point 2.2.3) available to businesses and facilitating the efficient collection and payment of their invoices. Consumers, on the other hand, enjoy greater protection under the directive, since it is easier for them to contest a direct debit.

Once a payment has been effected by direct debit, consumers have eight weeks in which to request repayment (unless the framework contract between the consumer and the payment service provider specifies otherwise). Businesses have less need of such protection, in view of their contractual relationship with their financial service provider. It is therefore important to decide on a precise definition of the concept of a "consumer". For example, if self-employed workers or other small enterprises were classed as businesses rather than consumers, they would not be entitled to that eight-week period for reclaiming a payment made by direct debit.

A second example concerns direct debit mandates. Under the Belgian direct debit system, a direct debit mandate is an authorisation which a debtor gives to his bank for the purpose of debiting his account on the basis of a payment instruction presented by the creditor, via the latter's bank. How the mandate should be issued and to whom is a question yet to be examined, and the same applies to the direct debit withdrawal or cancellation procedure.

A number of countries are unsure about the continuing legal validity of local direct debit mandates in the context of the migration to the future SEPA Direct Debit (SDD) scheme. This mainly concerns countries such as Belgium, where the domestic direct debit system provides for the debtor's bank to hold the mandate. That system could encounter legal restrictions connected with the fact that the mandate will have to be retained by the creditor following migration to the SDD scheme. In Belgium the principle of the continuing validity of direct debit mandates is to be specified by law. That will obviate a cumbersome administrative and technical operation whereby all existing Belgian direct debit mandates (around 30 million) would have to be replaced with SDD mandates, and individuals would have to be asked to sign those SDD mandates, without any resulting benefit for any of the parties.<sup>(1)</sup>

One of the aims of the Directive is to harmonise the rules applicable to all payment instruments.

Only certain payment instruments which are falling into disuse, such as cheques, bills of exchange and travellers' cheques, are outside the scope of the Directive. In Belgium, the most important implications of the Directive will concern direct debits. The main change lies in the increased protection for consumers/payers (cf. above), since they will have eight weeks in which to demand the return of a payment already made.

In that case, two conditions must be fulfilled: the payment must not be a fixed amount and it must exceed what the payer could reasonably expect. It is up to the banks to decide whether or not to take account of these conditions, as the Directive allows them to specify in the framework contract concluded with the payer that the latter can claim repayment even if the said two conditions are not satisfied. The payer's bank will have to effect the repayment within ten days following submission of the application.

Conversely, the banks may specify in the framework contract concluded with their customers that no repayment will be possible unless two other conditions are met. First, the direct debit mandate must have been issued directly to the payer's bank, and second, the information on the future payment (such as the amount) must have been notified to the payer at least four weeks before the due date.

The Directive also contains clauses on execution times and value dates. The payer's bank must ensure that the payee's bank will be credited with the amount due on the next working day. Up to 31 December 2011, that period

(1) Conversely, since the B2B scheme is a totally new form of recovery, it requires new mandates to be signed.

may be three working days. However, in so far as the existing Belgian legislation already specifies a single day, that option will not apply to credit transfers except for cross-border payments.

With effect from 1 January 2012, all payment instructions (in euro) to be effected by credit transfer, direct debit or card will be executed within a maximum of one day. Paper transactions may take an extra day. The payee's bank will have to apply the value date and make the amount available on the account of the payee (the creditor) as soon as it is received. The payer's bank will not be able to apply a value date earlier than the date on which the customer's account is debited.

#### 2.2.1.2 Revision or replacement of Regulation (EC) n° 2560/2001 of the European Parliament and of the Council of 19 December 2001 on cross-border payments in euro (hereinafter "the Regulation")

The Regulation aims to align the charges for cross-border payments in euro within the EU with the charges for domestic payments.

Except under certain conditions, banks cannot make additional charges for cross-border transactions (credit transfers and card payments) effected in euro within the European Community (up to a maximum of 50,000 euro) in excess of the charges for domestic transactions. Work is currently in progress on revisions to the Regulation at European level. The principal proposed amendment concerns extending to direct debits the basic principle of equality of charges between domestic and cross-border payments. This means that banks cannot charge higher rates for cross-border direct debits than for domestic direct debits.

In that context, the Multilateral Balancing Payment (MBP) or Multilateral Interchange Fee (MIF) is very important. This is a fee paid by one bank to another bank to enable the latter to debit amounts from customers' accounts. Without such interchange fees, banks (and especially banks which have no creditors among their customers and do not collect direct debits from other banks' customers) would be more reluctant to take part in the direct debit schemes which enable the creditors' banks to effect debits directly from the accounts of their own customers. A compromise is currently under examination at European level, which would allow this MIF/MBP to be charged to cross-border direct debits and permit the launch of this new European payment instrument. On expiry of a launch period, MIF/MBPs would have to disappear at both national and international level.

#### 2.2.2 Adoption by the market

In the light of the legal and other uncertainties, businesses are reluctant to adopt the new direct debit.

Until all the factors which could have an impact on their production processes are known, businesses will hesitate to undertake the developments necessary for switching to the European direct debit. It is clear from the draft legislation mentioned above that the debate over the repayment entitlement is the main stumbling block in some cases. In practice, this rule means that businesses remain uncertain about cash received during the eight week period in which repayment may be demanded.

Businesses also need to make technical preparations. The European Payments Council (EPC) has defined the new business model for direct debits which, in Belgium's case, is fundamentally different from the domestic DOM80 scheme. As creditors, firms will in future have to keep a record of the data concerning their customers' direct debit mandates. It used to be the payer's bank that kept its customer's mandate. Creditors (or their service providers) will have to keep a record of their customers' direct debit data and attach them to every instruction which they send to their bank for the execution of a direct debit.

It is therefore still unclear how businesses will react to this new European direct debit.

#### 2.2.3 Implementation timetable

Banks plan to make the SEPA Direct Debit available from 1 November 2009 in two versions: the core scheme and the Business-to-Business (B2B) scheme.

The core scheme is a variant of the domestic direct debit system used to collect invoices issued by businesses to individuals. Practically all banks will participate in this scheme. The B2B scheme is intended for the automated collection of invoices between businesses, and the banks will offer it as an option.

Both schemes will be supplemented by an electronic circuit in order to implement the SEPA Direct Debit. The mandate whereby the debtor gives his bank prior authorisation to debit his account on the creditor's instructions on presentation of an invoice will be organised in electronic form ("e-mandate"). For that purpose, a debtor will need to be able to sign and submit an electronic mandate from the creditor's website.

All the adjustments which banks and businesses need to make will have to be operational by 1 November 2009, which is a relatively short deadline given the scale of these changes.

It is therefore questionable whether the European direct debit will enter into operation on 1 November 2009. While the banks are actually doing everything possible to be operational by that date, they will need to wait for the final text of the Belgian law before they can launch the final implementation phase (cf. above). After that, businesses will still have to make the necessary modifications to permit the automated collection of invoices.

The original plan was to end the use of the Belgian DOM80 system on the same date as the credit transfers, i.e. 31 December 2010. The transitional period would therefore be much shorter for direct debits (13 months) than for European credit transfers. That period was deemed too short for organising the switch from Belgian to European direct debits.

It was therefore decided that there should also be a three-year transitional period, by analogy with that for European credit transfers (cf. diagram below). However, the banking sector has not yet taken an official decision on this subject.

### 2.3 The European payment card (SEPA Card)

The SEPA Card Framework is ready and has applied since 1 January 2008, but that has had little or no practical impact on the Belgian market in bank cards.

The original plan whereby the Belgian payment card scheme "Bancontact/Mister Cash" would be replaced in a single operation by Maestro (a Mastercard product) was not carried out. This plan received little support from the various market players, principally traders, the distribution sector and consumers' associations. Some payment service users were vehemently opposed to it, fearing that it could lead to a steep rise in costs, among other things.

(1) This concerns around 1 million transactions out of a total of approximately 900 million in 2008.

Although the original plan for switching to a new payment card scheme in a single operation was abandoned, the Belgian market is technically ready for the introduction of new card payment schemes.

Technical modifications have been made to payment terminals and cash dispensers, enabling them to accept payment cards other than Bancontact/Mister Cash for domestic transactions. Before 2008, schemes such as Maestro could only be used by Belgians abroad, or by foreigners via Belgian terminals. Thanks to these modifications, the Belgian payment card market is considered to be ready for SEPA.

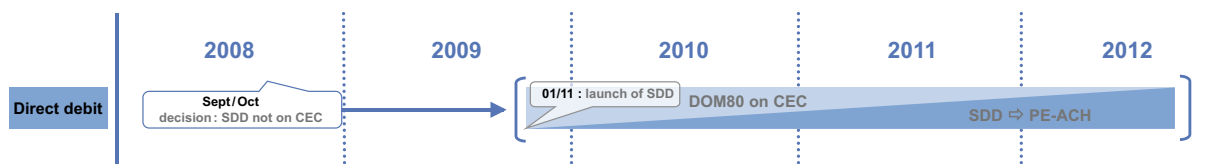
No new payment card scheme offering more advantages for banks and traders has yet been proposed. In practice, the current situation remains unchanged (use of Bancontact/Mister Cash), except that it is now possible to use Maestro for domestic payments. In reality, this additional option is rarely used since there is currently no extra advantage in it for payment service users<sup>(1)</sup>.

The most sensitive points concerning payment cards are the shortcomings in the standardisation process, the new initiatives aimed at a European payment card, which are still at the embryonic stage, and the uncertainty over interchange fees.

Though there will be modifications to payment cards in the future, it is not yet clear when Belgian traders will feel the practical effects. The most important changes are set out below.

- The discussions currently concern functional and technical requirements and standards which will ultimately have to be met by all terminals and cards in SEPA. The parties concerned (traders, terminal vendors, card issuers and processors, etc.) have yet to consult one another on this. It is therefore not yet possible to say when the consequences will become apparent for traders.

The European authorities (European Central Bank (ECB) and the European Commission) are pressing for the establishment of at least one European payment card scheme, in order to ensure a competitive alternative to the solution offered by the only two institutions



currently offering debit card schemes in Europe, namely Mastercard and Visa. There have been various initiatives here, but it is hard to know at this stage whether they will eventually lead to new operational payment card schemes on the market. In Belgium, for instance, an initiative was launched for the creation of a new European payment card scheme designed from the point of view of distributors and traders (PayFair).<sup>(1)</sup> This project is being developed further, and an initial test is due to be launched in May 2009, in collaboration with a major Belgian distributor.

- Doubts still persist regarding interchange fees (fixed rates applied to compensate for the costs of the relationship between the trader's payment service provider and the card holder's bank). The European Commission's Directorate General of Competition condemned the system applied by Mastercard in this connection, and another case is still on-going against Visa. The uncertainty over what can or cannot be done on this subject is inhibiting market players from developing their initiatives, since they cannot yet ascertain whether a real opportunity exists in the card market.

### 3. The launch of SEPA in banks

#### 3.1 The "Customer-to-bank" aspect

Since January 2008, all bank customers in Belgium have been able to present European credit transfers to their bank.

Banks operating in Belgium have undertaken to provide their customers with at least one channel for presenting a European credit transfer. In fact, since the launch, the customers of most banks have had access to several channels for presenting credit transfers in the European format.

Chart 2 shows the number of channels made available by 56 banks operating in Belgium.<sup>(2)</sup> This sample represents over 95 p.c. of the volumes, in terms of capital and

number of transactions, in the exchange of payments in Belgium. Individuals have a choice of four channels for presenting European credit transfers to their bank: the European credit transfer form, the counter at their bank branch, internet banking and the "self-banking" terminal on the premises of their bank.

In Belgium, all banks are SEPA-compliant since they have made available at least one channel through which their customers can present their European credit transfers. Most banks actually offer a number of channels.

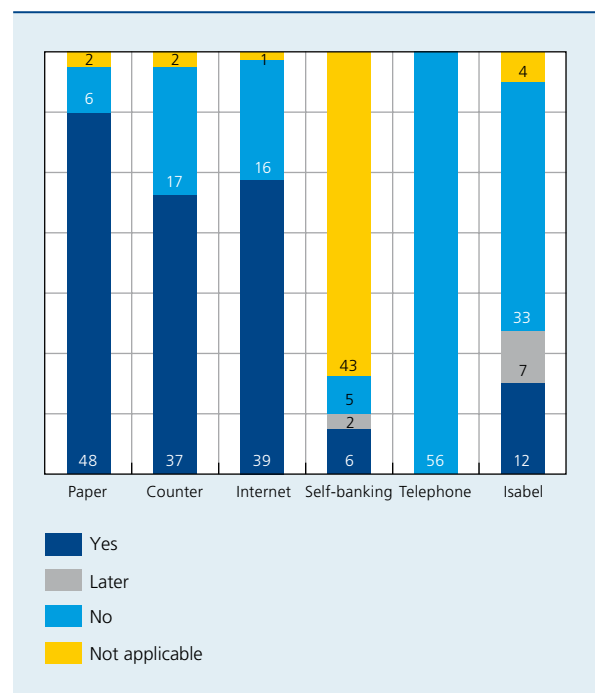
The banks have not adapted the traditional telephone banking service because increasing numbers of customers are abandoning that in favour of internet banking.

Moreover, it is technically complicated to enter letters (necessary for entering the IBAN account number which begins with two letters, such as BE) by using a traditional telephone keypad.

Professional users of payment services (public authorities, businesses, etc.) use Isabel 6, namely the new SEPA version of Isabel services<sup>(3)</sup>, to initiate SEPA payments.

**CHART 2** BANK CHANNELS AVAILABLE FOR CUSTOMERS TO PRESENT EUROPEAN CREDIT TRANSFERS

(situation as at the end of September 2008; numbers; survey of 56 banks operating in Belgium)



(1) The other initiatives are the Euro Alliance of Payment Schemes (EAPS) and the Monnet Group. The EAPS is a cooperative society which aims to create a European payment card scheme by linking up all the existing debit card schemes. The participants are Multibanco (Portugal), PAGO/BANCOMAT (Italy), Vocalink (United Kingdom), EURO 6000 (Spain), EC Electronic Cash (Germany) and EUFISERV (European savings banks group). The Monnet Group is a group of leading German and French banks which aims to create a new European payment card scheme.

(2) The survey results should be interpreted with caution as a negative response may also correspond to the response "not applicable". That is true in particular of the banks which replied that European credit transfers could not be presented at their counters, whereas these are often banks with only a few counters or none at all, as in the case of internet banks.

(3) Isabel provides banking telematics and electronic invoicing services. It offers a multibanking platform for payment service users.

The wide availability of the Isabel platform is essential for multibank institutions, since it is the only channel which permits the presentation of credit transfers (and other information) to different banks. A vital player on the payment services market for businesses and public authorities, Isabel is currently in the process of opening up its new platform on a bigger scale.

Businesses active on the Enterprise Resource Planning (ERP) market are also preparing to introduce the new XML standards for European credit transfers.

### 3.2 The interbank aspect

#### 3.2.1 Interbank processing of European credit transfers

Belgian banks process the great majority of European interbank credit transfers via the Centre for Exchange and Clearing (CEC), the retail payment system in Belgium, and via the European payment system of the Euro Banking Association (EBA), STEP2.

The CEC processes Belgian domestic credit transfers between two holders of accounts with banks established in Belgium. The CEC has also been adapted to cater for European credit transfers between holders of accounts

with banks established in Belgium. For European credit transfers, the banks may also use other systems, in particular the European EBA/STEP2 system. A number of Belgian subsidiaries of foreign banks send and receive European credit transfers which they exchange with other Belgian banks in EBA/STEP2. Cross-border credit transfers for which one of the parties is a customer of a bank established in another SEPA country are processed by EBA/STEP2.

The migration from the current formats to the SEPA formats has taken place very rapidly in the case of cross-border credit transfers.

In contrast to the particularly slow migration of “domestic” European credit transfers, the switch to the SEPA format has been extremely quick in the case of cross-border credit transfers. Table 1 shows the number of cross-border credit transfers which the banks processed via EBA/STEP2 in Belgium, and bears witness to this rapid migration. Within three months, of a total of around 1 million credit transfers per month, most were already being processed as European credit transfers.

In the case of “domestic” European credit transfers, migration from the current format to the SEPA format was much slower.

**TABLE 1** MIGRATION OF EUROPEAN CROSS-BORDER CREDIT TRANSFERS TO THE SEPA FORMAT  
(credit transfers processed in Belgium via EBA/STEP2 by banks established in Belgium)  
(number of transactions, 2008 data)

	Total transactions			Percentage share		
	SEPA	Non-SEPA	Total	SEPA	Non-SEPA	Total
January	n.	1,005,318		0	100	100
February	170,449	811,448	981,897	17	83	100
March	430,344	551,213	981,557	44	56	100
April	590,790	480,207	1,070,997	55	45	100
May	551,993	446,795	998,788	55	45	100
June	522,550	516,136	1,038,686	50	50	100
July	481,331	608,968	1,090,299	44	56	100
August	407,404	497,524	904,928	45	55	100
September	506,629	535,253	1,041,882	49	51	100
October	576,263	563,483	1,139,746	51	49	100
November	505,671	474,732	980,403	52	48	100
December	689,072	507,032	1,196,104	58	42	100

Source : EBA.

**TABLE 2** PROCESSING OF EUROPEAN CREDIT TRANSFERS BY BANKS IN BELGIUM  
(number of transactions, 2008 data)

	EBA/STEP2	CEC
February .....	170,449	181,525
March .....	430,344	192,289
April .....	590,790	230,816
May .....	551,993	207,885
June .....	522,550	321,278
July .....	481,331	552,258
August .....	407,404	513,039
September .....	506,629	574,066
October .....	576,263	796,220
November .....	505,671	777,709
December .....	689,072	1,157,756

Sources: EBA, CEC.

During the months which followed the launch of SEPA (March-June), Belgian banks processed two-thirds of European credit transfers via EBA/STEP2 and one-third via the CEC. That proportion changed after a few months, and since July 2008 the number of European credit transfers processed by the CEC has exceeded the number processed by EBA/STEP2.

In December 2008, around 2.3 p.c. of the number of credit transfers handled by the CEC were in the SEPA format, corresponding to 55,000 European credit transfers per day, out of a total of 2.4 million. In recent months, peaks of 87,000 European credit transfers per day have been recorded. The proportion of SEPA transactions varies greatly from one bank to another. For example, one average bank and two small banks achieved significant figures of respectively 36, 17 and 13 p.c. of European credit transfers in their total traffic.

Table 2 shows the SEPA credit transfers processed by the two payment systems. The European credit transfers processed by EBA/STEP2 are cross-border transfers (between an account holder in Belgium and a second person in another SEPA country) or national transfers (between two account holders in Belgium), whereas the European credit transfers processed by the CEC are "domestic" European credit transfers only.

In 2007, the CEC had already made the modifications which needed to be effected by 28 January 2008 in order to organise the exchange and clearing of SEPA European credit transfers between Belgian banks.

European credit transfers are processed in parallel with the "old" Belgian standards for credit transfers, cheques, payment cards and direct debits. As already mentioned, the aim is to replace almost all "Belgian" credit transfers for national use with European credit transfers between now and the end of 2010.

In the case of intrabank transactions, there are few statistical data available, since the banks use internal applications to process intrabank European credit transfers. However, on the basis of partial data, it is possible to estimate that the proportion of intrabank transactions in the European format in the total number of intrabank transactions corresponds to the proportion of credit transfers in the European format in interbank traffic.

### 3.2.2 Consultation in the SEPA Forum: the Belgian bank migration plan

The Belgian banking sector regularly updates the migration plans. The latest version comprises a number of modifications which concern among other things the termination date for the Belgian standards and the European direct debit.

Meanwhile, the Belgian banking sector is working on preparations for the introduction of the other European payment instruments and adjustments to the Belgian payment infrastructure. In relation to the previous planning phase, the following changes have been made:

- change of date for the termination of Belgian payment instruments;
- decision to extend the Belgian direct debit scheme (DOM80) after 1 November 2009 and adapt it to conform to the requirements of the new European rules (the Directive);
- decision not to implement the European direct debit (SEPA Direct Debit) in the Belgian payment system (CEC). The Belgian payment systems will therefore not handle the technical processing of the European direct debit which will be used by the users of Belgian payment services.



### 3.2.2.1 Termination date for Belgian credit transfers

The intention is no longer to phase out the “Belgian” credit transfers altogether by the end of 2010, at least in the case of electronic transfers. But the end of 2010 is still the deadline for achieving a critical mass of European electronic credit transfers. Belgian paper credit transfers are to be phased out completely by the end of 2010.

Whereas 31 December 2010 used to be regarded as the absolute deadline for the termination of Belgian domestic credit transfers, that date is becoming less and less definite. However, the end of 2010 is still the date on which the banks will cease to process paper credit transfers. No banks will continue to issue paper forms after 2009. Forms still in circulation on the market will continue to be accepted by the banks in 2010. That should allow stocks of old forms to be used up.

To determine an end date for the other Belgian standards, the banking sector has promised that the banks will do everything possible to ensure that a critical mass of credit transfers in the European format is achieved by the end of 2010. The “critical mass” in terms of the volume of transactions has yet to be defined. In practice, it is difficult for the banks to decide unilaterally on a termination date for the “old” products; moreover, this needs to be viewed in a European context.

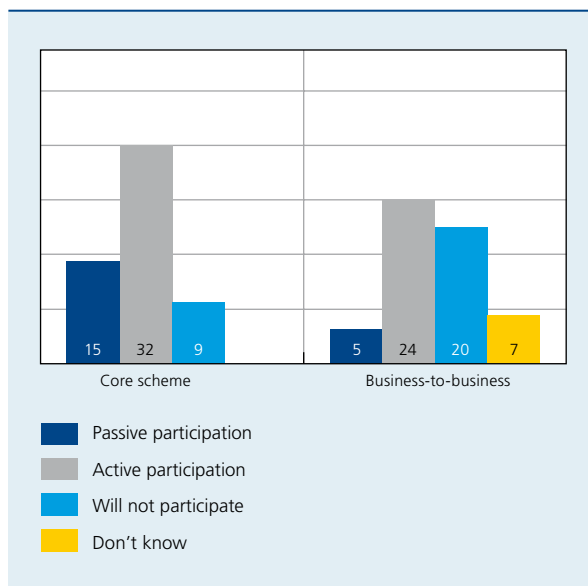
### 3.2.2.2 Retention on 1 November 2009 of the Belgian direct debit scheme (DOM80) in conformity with the new Directive

The current Belgian direct debit scheme (DOM80) will not expire on 1 November 2009.

The banks have decided to adapt the current domestic direct debit scheme, the DOM80, so that it can continue to be used after 1 November 2009 (the date for transposition of the Directive into Belgian law). The necessary adjustments are currently being prepared, and consist, for example, in the addition of a refund channel in the Belgian direct debit system.

**CHART 3** INTENTIONS OF BANKS IN BELGIUM REGARDING PARTICIPATION IN THE SEPA DIRECT DEBIT SCHEMES

(numbers; survey of 56 banks operating in Belgium)

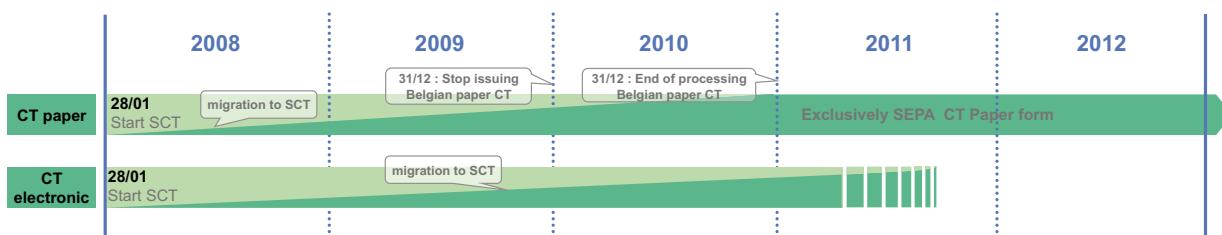


They will facilitate a gradual transition to the European direct debit, with the Belgian direct debit continuing in parallel. In fact, as already mentioned in point 2.2, the transition to the European direct debit is likely to be very gradual. That will probably result in a migration period of 2 to 3 years, during which the Belgian and European direct debits will exist side by side.

### 3.2.2.3 Processing of European direct debits on a European platform

In Belgium, most banks intend to take part in the European direct debit schemes, though these will not be installed on the CEC's technical platform.

In Belgium, banks will offer the European version of the direct debit from 1 November 2009. They have undertaken to participate, at least passively, in the basic SEPA



direct debit scheme of the European Payments Council (EPC). This means that they will need to be able to process the collection requests presented by other banks.

A review of the situation in the banking sector was conducted to check on compliance with this obligation essential to the European scheme, (cf. chart 3). The great majority of the banks (47 out of 56) stated that they were prepared to participate in this core scheme. Of these, 32 will play an active part, which means that they will offer European direct debits to businesses, to enable them to collect their invoices automatically. The other 15 banks will participate passively, and will only prepare their customer accounts to cater for incoming direct debits. In most cases, the banks which do not intend to participate are those which do not currently offer their customers direct debit products, and which therefore do not need to migrate to a European variant.

Apart from the core scheme, the EPC has also developed an optional direct debit scheme reserved for businesses to use between themselves. This is the Business-to-Business (B2B) model. According to the survey, about half of the banks currently intend to participate in this optional scheme.

To meet the EPC's requirements, banks must at least participate passively (i.e. as transaction recipients) in a Pan-European Automated Clearing House (PE-ACH) for European direct debits under the core scheme. The Belgian retail payment system, CEC, will not be used as an interbank exchange channel for European direct debits.

## 4. Migration to SEPA by public authorities

In Belgium, the public authorities are well into the SEPA conversion phase and are setting an excellent example, as requested.

### 4.1 Introduction of European payment instruments by the federal government

The Belgian federal government launched the operational migration phase in September 2008 and had almost completed it on 1 January 2009.

On 27 June 2008, the Council of Ministers approved the proposal for gradual introduction of the new European credit transfer forms in public services, so that the latter would be ready to comply with the new SEPA standard on 1 January 2009. That is the most important target

date for public services, since from then on all the Federal Public Services (FPS) and Federal Planning Services (FPP) will use only the new credit transfer form. In principle, all electronic credit transfers (incoming and outgoing) will also be executed in the European format. As the calendar year does not coincide with the tax year, a second target date was decided, namely 1 September 2008. Since that date, tax statements relating to motor vehicle duty and notices of personal income tax have been accompanied by a European credit transfer form. Around 500,000 payment notices relating to motor vehicle duty have been sent out each month since September 2008. At the end of 2008, new European credit transfer forms were attached to 3,350,000 requests for payment.

Via this government initiative, taxpayers have in fact been asked to effect payment according to the new European format. In practice, citizens who – following the final calculation of their income tax – have a tax liability may pay the amount due by using the new European credit transfer form attached to the notice of income tax. Citizens entitled to a refund will see their account credited via a European credit transfer effected by the government. The Federal Public Service Finance (FPS FIN) was the first to migrate to SEPA and was fully prepared for that transition on 1 January 2009. Many other Federal Public Services also made the transition on that date.

### 4.2 Internal organisation in the federal administration

The federal government took the lead in the migration to SEPA and created a Steering Committee comprising members representative of all the Federal Public Services directly concerned with the SEPA migration.

The first progress report presented an overall view of the organisational structure of this Steering Committee. As a "horizontal" Federal Public Service with a mission to promote and support the establishment of management systems in public services, FPS Budget and Management Control played a key role.

All the Federal Public Services are more or less ready to migrate to SEPA.

On the initiative of the European Commission (EC), a survey of public services in the EU countries was conducted in order to produce a progress report on the SEPA migration. In Belgium, that survey was carried out in October 2008 in 37 Federal Public Services (FPS) and Public Planning Services (PPS). This showed that the federal government is conducting the migration speedily and

on time. Around 10 p.c. of all public services had already begun to process or send out European credit transfers in 2008. This concerns not only the use of paper credit transfers, but also the use of new XML standards for the processing of electronic credit transfers.

All the other public services conducted the launch on 1 January 2009 or soon after. Almost all the public services have developed a communication strategy or are in the process of doing so. One of the most widely used means of communication is a leaflet describing all the new features of the credit transfer form. About half of the public services will enclose this standard SEPA leaflet when sending out the first invoice accompanied by a European credit transfer.

The total number of SEPA transactions in 2008 is not known, but the public services with the largest transaction volumes were ready to migrate to SEPA on 1 January 2009.

One of the most visible stages in the process whereby public authorities are migrating to SEPA is the switch by FPS FIN. The latter's target group comprises all citizens, and the majority of the credit transfers issued and received by the State are executed by FPS FIN. This service drew up a detailed work plan for its migration scenario. A central management committee, responsible for the SEPA launch and communication, was set up in June 2007. Separate working parties were also established in the various entities by members of the management committee. The public services did not report any significant operating problems at the time of the switch.

#### 4.3 Federal government communication

FPS FIN played a pioneering role in communication and was the only one to conduct a national campaign by sending out a SEPA leaflet to every citizen.

As a Public Service in contact with every citizen, FPS FIN had to give priority to communication. The strategy was prepared on both an internal and an external basis.

In regard to the internal strategy, an initial awareness campaign was first conducted among middle management, with the result that all personnel were informed, in particular by the addition of a SEPA heading on the intranet site. More specific training was then arranged for contact centre personnel responsible for answering questions from businesses and the public, and a list of frequently asked questions was compiled.

A substantial effort was also made in regard to external communication. At the beginning of 2008, the State launched the first and biggest SEPA communication campaign. Around 8 million SEPA leaflets were issued: since April 2008, a SEPA brochure has been enclosed with every tax statement sent to citizens. Notices were also printed and displayed on public service premises. Finally, a SEPA heading was inserted on the FPS FIN website, containing all relevant information on SEPA, links to other sites dealing with SEPA, an extended list of frequently asked questions (FAQ), and a procedure for converting a national bank account number into its IBAN number (<http://minfin.fgov.be/portail2/fr/sepa/index.htm>). This site is often consulted.

The experience of the federal government shows that the use of the European credit transfer causes few problems, except in a small number of cases where citizens encounter difficulties with the IBAN.

When the first credit transfer forms had been sent out, the FPS FIN contact centre recorded a large number of phone calls concerning SEPA, but after a few days the volume of calls quickly subsided and is now small in relation to the number of forms sent out.

#### 4.4 Introduction of the European credit transfer by other public authorities

The other public services are preparing or initiating the introduction of the SEPA credit transfer, and at regional level some of them are already operational, and have been processing European credit transfers for several months. The authorities of the French and Flemish Communities have been ready since 1 January 2009, and the Brussels Capital Region since 1 February 2009. The government of the Walloon Region is continuing to implement the SEPA project and has also added information on its intranet site. The Ministry of the Budget and Finance of the Flemish Region and that of the French Community have inserted an item on SEPA on their respective websites (<http://fin.vlaanderen.be/sepa> and <http://www.sepa.cfwb.be>).

#### 4.5 Legislative work

The timetable for transposition of the payment services directive has been drawn up and the government will set up a new legal framework incorporating the provisions of the current laws on payments and payment services in an overall system.

The transposition into Belgian law of Titles I, III and IV of the payment services directive was prepared by FPS Economy, SMEs, Self-employed and Energy (FPS ECO), as part of its task of creating the conditions for the competitive, sustainable and balanced operation of the market in goods and services in Belgium. The transposition of Title II of the Directive, dealing with access to the activities of payment institutions and their prudential supervision, is being arranged by the Banking, Finance and Insurance Commission (CBFA). Two different draft laws will therefore be submitted to the legislature.

The draft law produced by FPS ECO will incorporate the provisions of the current legislation wherever possible (electronic payments, value dates, etc.). A transposition timetable was drawn up and these two Belgian laws will enter into force on 1 November 2009.

## 5. Businesses

Now that the government has introduced the European credit transfer form, attention is focusing mainly on businesses with a large volume of credit transfers. A timetable has been drawn up for launching the sending out of invoices accompanied by European credit transfer forms.

After the public sector, it is now the turn of large firms to send out their invoices accompanied by European credit transfer forms.

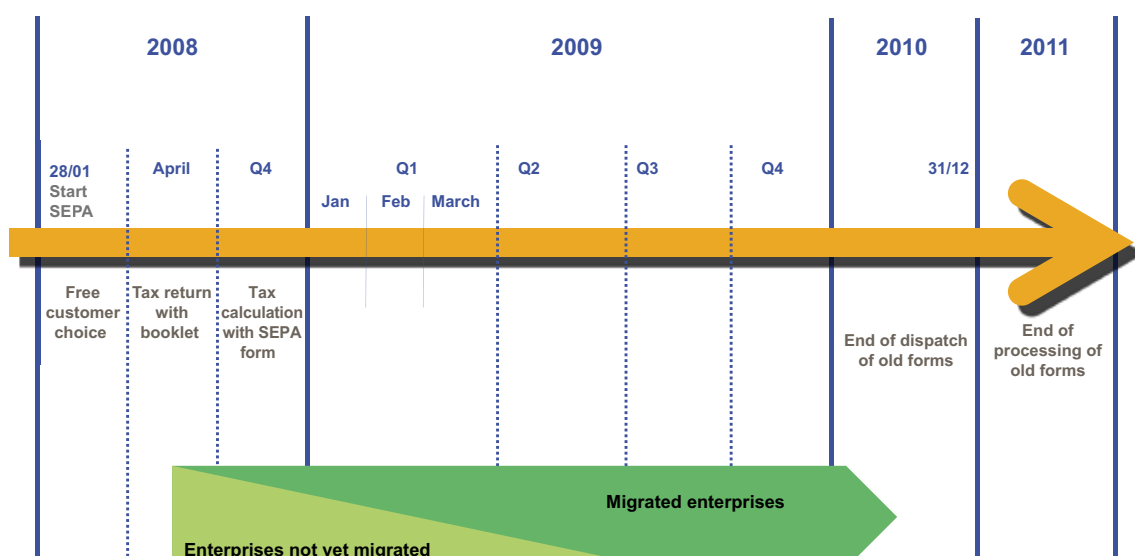
Although only a small proportion of citizens complete the credit transfer form and forward it to their banks, a larger group use it as the model for submitting the credit transfer via the electronic channels provided by banks. A coordinated approach ensures a transparent and smooth migration, with the benefit of the experience gained by the public services. The timetable below shows the dates for launching the use of the European credit transfer by large firms issuing invoices.

In line with the government's initiative, large Belgian firms will start sending out invoices accompanied by European credit transfer forms on a large scale.

The timetable shows that most "big billers" will respond and start using the SEPA format shortly after the public authorities. At the end of 2008, a series of large firms had already begun sending out European credit transfers. Most of them will be ready to do so by mid 2009. This migration, relatively rapid compared to that seen in other countries, and coinciding with completion the migration of payments originated by public authorities, should in principle lead to a considerable rise in the percentage of SEPA payments during the first half of 2009.

A standard leaflet explaining the European credit transfer will be used by at least half of large firms, in order to help their customers to use the European credit transfer.

CHART 4 MIGRATION TIMETABLE FOR LARGE FIRMS ISSUING INVOICES IN BELGIUM



This means that every citizen is bound to receive a leaflet on several occasions, and the migration to the European credit transfer should therefore not encounter too many problems.

After the big billers, other companies will also have to migrate to the European credit transfer.

After the large firms, tens of thousands of other businesses will make the transition. To ensure a structured, uniform approach, the National Bank of Belgium (NBB) has produced a standard leaflet proposing a phased migration plan for businesses. The experience gained by public authorities and large firms in their launch phase will be very useful here.

## 6. Consumers

As payment service users, consumers will automatically be aware of the changes resulting from SEPA, since they will use the non-cash European payment instruments in parallel with the euro, the European currency. Since the benefits of SEPA are primarily macroeconomic, and the positive effects will only be felt in practice in the medium and long term, it is vital for consumers that the SEPA migration should go without a hitch, as SEPA changes citizens' banking practices without offering any immediate benefits.

Up to now, consumers have had little involvement in the SEPA project. They themselves decide when to switch to the European payment instruments, and will therefore be informed when they start to use them. Thus, consumers will be informed about SEPA when they initiate a European credit transfer via the internet. A leaflet showing the new form will be attached to each European credit transfer.

While consumers' representatives were expecting a national information campaign about SEPA and the changes implied for the consumer, they find that every bank is circulating its own information, considerably impairing clarity and hence consumers' understanding.

Consumers who are accustomed to electronic means of payment (self-banking, e-banking) will have little or no difficulty in switching to the European credit transfers.

It is important that consumers should realise that the "European credit transfer" is not for use solely in cross-border transactions but also as the norm for domestic credit transfers in Belgium.

## 7. Communication

In Belgium, communication relating to SEPA is issued in "cascade" form: key players in the payment services market start supplying information for their users, who pass it on in turn to other, smaller users.

As shown by table 3, the banking federation initiated communication to individual banks, which then passed on the information to their largest customers, such as the State and large firms. Administrative authorities and then large firms in their turn circulated the information to citizens and other businesses.

The communication strategy centred on a diversified approach per target group, varying the emphasis of the content accordingly.

Table 3 offers an overview of the main communication activities. It sets out the various communication channels used by players passing on information to the various target groups.

For the purpose of communication, a standard leaflet developed by the banking sector can be freely personalised by each player. It was used by the public services and the banking sector and is available free of charge at [www.sepabelgium.be](http://www.sepabelgium.be)<sup>(1)</sup>. On the occasion of their first communication with citizens, the public authorities sent out this folder together with the personal income tax returns, in order to provide information on the new credit transfer form. Around 8 million copies of this leaflet were circulated.

Most large firms issuing credit transfers announced that they will use this leaflet when attaching a European credit transfer to an invoice for the first time. Citizens will therefore receive it several times from several firms. This repetition should help citizens to become familiar with the European credit transfer.

The banks devise their own individual communication strategy, taking account of their customers and staff. This communication may take multiple forms (publications, brochures, websites), appropriate to the various target groups. There are no plans for developing a general communication campaign coordinated at the level of the banking sector as a whole, partly because it was decided that consumers would be informed when making their first payment. Any communication not associated with this specific "moment of transition" is regarded as less effective.

(1) <http://www.sepabelgium.be/fr/node/135>

TABLE 3 SEPA COMMUNICATION ACTIVITIES BY COMMUNICATOR AND BY TARGET GROUP

Target group \ Communicator	Individual banks	Public authorities	Businesses	Consumers
Febelfin	SEPA Workshops CEC Workshop Directives on extranet	SCT leaflet <a href="http://www.sepabelgium.be/">www.sepabelgium.be/</a>	Press release SCT leaflet SCT brochure SDD brochure <a href="http://www.sepabelgium.be/">www.sepabelgium.be/</a>	Press release SCT leaflet <a href="http://www.sepabelgium.be">www.sepabelgium.be</a>
Individual banks		Brochures designed for customers	Brochures designed for customers	"on-the-spot"
NBB		Steering Committee, SEPA WG Bilateral contacts	Press release Steering Committee, SEPA WG Bilateral contacts with "big billers"	Press release
Public authorities			Press release <a href="http://minfin.fgov.be/portail2/fr/sepa/index.htm">http://minfin.fgov.be/portail2/fr/sepa/index.htm</a> <a href="http://fin.vlaanderen.be/sepa">http://fin.vlaanderen.be/sepa</a> <a href="http://www.sepa.cfwb.be">www.sepa.cfwb.be</a>	Press release SCT leaflet <a href="http://www.sepa.cfwb.be">www.sepa.cfwb.be</a>

In communication aimed at the general public, SEPA payment instruments are referred to as "European" payment instruments.

One of the most significant forms of communication, albeit indirect, was the renaming of the "SEPA" payment instruments as "European" payment instruments. Thus, the SEPA Credit Transfer was presented to Belgian citizens as the "European credit transfer", and subsequently, the SEPA Direct Debit was announced as the "European direct debit". Use of the adjective "European" is expected to make it easier for the public to accept and understand the change. Other general communication with the public was organised in the form of press releases drafted by the Federal State and the NBB, among others.

## 8. Conclusions

### 8.1 The European credit transfer

The introduction of the European credit transfer can be regarded as a resounding success in Belgium.

The first European credit transfers came into use over a very short period without any operating problems. Regarding volumes, the conversion was effected very rapidly in the case of cross-border payments, which logically gained more advantages from the European standard, while the conversion of domestic payments took place much more slowly.

All banks conform to the SEPA standard, and every customer has at least one channel for submitting European credit transfers to his bank. Most banks offer several such channels.

At the end of 2010, European electronic credit transfers should have reached a critical mass in Belgium, and paper credit transfers will from then on only be processed in the European format.

By way of example, the State was among the very first to introduce the European credit transfer in Belgium.

Since September 2008, public authorities have enclosed a European credit transfer with requests for payment sent to citizens, and since 1 January 2009 the Federal State has also used the European standard in its credit transfers for

the execution of outgoing payments. Thus, the State is setting a perfect example, as requested.

Large firms, principally public utilities, will quickly follow at the beginning of 2009, attaching a new paper credit transfer form to each request for payment which they send out.

Next it will be the turn of all other businesses to plan their migration to the European credit transfer, so that their contribution as issuers of payment instructions, in addition to those of public authorities and large firms, boosts the volume of European credit transfers to a critical mass.

For that purpose, a draft standard phased plan was devised on the basis of the experience gained. This plan can be used to facilitate the migration to the European credit transfer for all businesses and institutions, by analogy with the State.

## 8.2 The European direct debit

The launch of the European direct debit is scheduled for 1 November 2009. Its success will depend on a whole range of factors, such as transposition into the national law of all European countries, adoption by the market, and the time needed for implementation.

Most Belgian banks intend to participate in the EPC's European direct debit schemes, but those schemes will not be installed on the technical platform of the CEC, the Belgian payment system.

In order to start on 1 November 2009, it is necessary to speed up not only the process of transposition into national law of the directive on payment services in the single market, but also the preparations in banks and businesses.

## 8.3 The European payment card

Given the points still to be negotiated in regard to payment cards, namely the currently inadequate standardisation process and new initiatives for a European payment card, and taking account of the uncertainty over multilateral interchange fees, no fundamental changes are expected where payment cards are concerned.

SEPA was also launched for payment cards in Belgium but only at technical level. At present, there is no commercially viable alternative available, so in practice there has been no change in the case of payment cards.

## 8.4 Communication

As there was previously no definite strategy, structured communication about SEPA took various forms, differentiated according to the target group, with the emphasis on various aspects of the content in each case. One of the most important means of communication so far has been the distribution of a leaflet describing the form taken by the new European credit transfer. The Federal State made the biggest communication effort, e.g. by means of a leaflet circulated to all Belgian citizens. Subsequently, businesses will also enclose this leaflet with invoices which they send out accompanied by a European credit transfer form.

Banks conducted a number of communication campaigns depending on the type of customer. For the general public, they decided that communication would take place when the customer himself made the transition.

For communication with the general public, the SEPA payment instruments were called "European payment instruments".

## Summaries of articles

### Economic projections for Belgium – Spring 2009

Since the previous forecasts were published in February 2009, the downturn in activity and international trade in late 2008 and early 2009 has proved to be even sharper than initially expected. An unprecedentedly deep recession has spread across the various economic regions of the world, requiring resolute action in the monetary and fiscal sphere. There are signs which suggest some stabilisation of both financial market conditions and business and consumer confidence. Nonetheless, the adjustments to be made to employment, investment and the position of financial institutions are likely to hamper the economic recovery.

The sharp cyclical downturn in the euro area at the end of 2008 and the beginning of 2009 had a major impact on economic activity in Belgium. In particular, both industrial production and foreign trade in goods plummeted from October 2008. According to the national accounts data, real GDP was down by 1.7 p.c. in the fourth quarter of 2008, falling by a further 1.6 p.c. in the first quarter of 2009, the deepest recession since the Second World War. The decline in activity should decelerate sharply from the second quarter of 2009, and give way to a modest recovery in 2010. Thus, having grown by 1 p.c. in 2008, GDP is set to contract by 3.5 p.c. on average in 2009 and by 0.2 p.c. in 2010.

In the face of the abrupt contraction in activity, firms reacted for example by reducing agency work and greatly increasing their use of temporary lay-offs. Such systems offer a provisional buffer against the effect on employment of fluctuations in production. However, taking account of the deep and sustained decline in activity, the number of persons employed is likely to decline progressively. As an annual average, net job losses are forecast at 36,000 and 80,000 persons respectively in 2009 and 2010. The unemployment rate is set to rise from 7 p.c. in 2008 to 9.2 p.c. in 2010, reaching 9.7 p.c. by the end of 2010.

In 2009, all the main expenditure categories – domestic demand, change in stocks and net exports – are set to be seriously affected, directly or indirectly, by the recession in global demand and the repercussions of the global financial crisis; in 2010, their contribution to the change in GDP is forecast to be broadly neutral. Exports of goods and services are projected to record a very marked fall in 2009, following the collapse of foreign demand. They are likely to continue falling slightly in 2010. In the absence of support from domestic demand, the profile of imports is expected to mirror that of exports. Following the curb on growth in 2008 resulting from the stagnation of real disposable income in a context of rising inflation, private consumption is set to fall in 2009, mainly owing to the plunge in share prices and the deterioration in economic conditions and the labour market outlook, both these factors contributing to an increase in the savings rate. In the context of the decline in their capacity utilisation rate, gloomy forecasts for demand, the high cost of external



financing and the reduction in the financial resources generated by their own activity, businesses are likely to cut their investment in 2009 and 2010, following more than four years of sustained vigour. Investment in housing is also set to fall in 2009 and 2010, continuing the slowdown which began in 2007.

Having peaked at 5.9 p.c. in July 2008, inflation in Belgium eased rapidly and should continue to fall in the short term, becoming negative for a time. This situation, likely to last only a few months, is due mainly to base effects connected with the record prices of petroleum products during the summer of 2008. Once these base effects have faded away, inflation is expected to return to positive figures at the end of 2009, though remaining low up to the end of the projection period, owing to the rapid attenuation of pressure from import prices and wages. In all, as an annual average, inflation is expected to reach 0.1 p.c. in 2009 and 1.3 p.c. in 2010, having stood at 4.5 p.c. in 2008. The health index is projected to rise by 0.8 p.c. in 2009 and 1.1 p.c. in 2010.

Reflecting both the fall in labour productivity, following the cyclical weakness, and the still sustained rise in hourly labour costs, unit labour costs in the private sector rose by 3.9 p.c. in 2008 and are likely to rise by a further 2.9 p.c. in 2009, as a result of high indexation which follows from the surge in inflation in 2008. In 2010, they should remain more or less steady. This deceleration between 2009 and 2010 is due partly to the cyclical recovery in labour productivity. Also, the growth of hourly labour costs is set to fall from 3.5 p.c. in 2008 to 2.3 p.c. in 2009 and 0.4 p.c. in 2010. The deterioration in labour market conditions is expected to result in wage growth moderation.

According to the provisional figures published by the NAI in March 2009, Belgium's public finances recorded a deficit of 1.2 p.c. of GDP in 2008. In the macroeconomic context depicted above and in the light of the measures approved by the federal government and the regional governments, e.g. in connection with the recovery plans, that deficit is expected to reach 5.5 p.c. of GDP in 2009 and 6 p.c. in 2010, if policy remains unchanged.

After having declined continuously since 1993, to reach 84 p.c. in 2007, the ratio of public debt to GDP began rising again in 2008, mainly as a result of the capital injections and loans granted to financial institutions. In 2009 and 2010, the general government debt is expected to record a further sharp rise to 97.4 and 103 p.c. of GDP respectively.

JEL Codes: E17, E27, E37, E66

Key words: Belgium, macroeconomic projections, Eurosystem

### [The National Bank of Belgium's new business barometer](#)

The business survey indicator is one of the most valuable statistics that the Bank publishes every month. Its reputation is due to the reliability it has demonstrated over several decades in reflecting the pattern of economic activity in the country and in the euro area every month.

The indicator is compiled on the basis of the responses to the monthly business survey that the Bank has arranged with enterprises in Belgium since 1954. Almost twenty years after the last methodological revision of the indicator in 1990, the Bank decided that it was now desirable to review its method of calculation again.

This article presents the key characteristics of the business survey indicator, its practical applications and the new method of calculation applied since April 2009. This methodological revision gradually became necessary owing to the extension of the survey in 1994 to business-related services, the results of which were not included in the general business survey indicator until this methodological change. The old business survey indicator had also exhibited some undesirable short-term fluctuations.

The methodological changes have been kept to a minimum and only concern the calculation of the synthetic curves, with an amended selection of questions that are included in the synthetic curves for each industry and by incorporating the business-related services curve into the overall synthetic business indicator. These changes aim to strengthen the correlation between the indicator and GDP growth, to reduce the undesirable short-term volatility and to maintain its early response.

JEL Codes: C22, C43, C61, C83, E32

Key words: business cycle, business survey, leading indicator, correlation, GDP

### Public employment in Belgium

The article is intended to contribute to the debate on public employment in Belgium by analysing the most coherent possible set of statistics on its development and characteristics.

According to the national accounts definition, the general government sector employed just over 800,000 workers in 2007. The sector's main employers are the Communities and Regions and local authorities, while the federal government and social security together account for only one-fifth. If the concept used is broader than general government, and includes heavily subsidised jobs (health, social work and service vouchers), public enterprises and market intermunicipal associations, there could be 1.4 million persons in public employment.

Over the long term, the variations in public employment correspond to the major fluctuations in budgetary policy. Employment in the general government sector expanded particularly strongly during the 1970s. Following a period of virtual stabilisation from 1982 onwards, employment in the sector increased again between 1997 and 2007. The analysis reveals that this expansion was not uniform across the branches of activity. During the recent period, employment has declined in defence and in some federal government departments, such as FPS Finance. Conversely, growth has been particularly marked in transport and in administration, especially where those services come under the local authorities or some federal departments such as justice.

All sub-sectors have shared in the employment growth recorded since 1995. Local authorities account for over 60 p.c. of that growth, and the Communities and Regions almost 30 p.c., the remaining 10 p.c. being due to increased employment at federal level, including social security. A more detailed analysis therefore focused on developments in the administration branch of activity at the level of both the local authorities and the Communities and Regions. Among other things, this showed that local authority recruitment did not relate to civil service functions but concerned social work (crèches, the CPAS/OCMW re employment programmes, etc.), the police and cultural and sports positions.

Regarding the characteristics of public employment, an ever diminishing proportion of staff has civil servant status, and women are increasingly in the majority. Moreover, the standard of skills of public sector personnel is constantly improving. A more detailed study of the age pyramids showed that, taking account of current retirement and pre-retirement patterns, departures should be staggered without reaching disproportionate levels in the next five to ten years. However, the numbers leaving are expected to be greater in some branches, departments and institutions.

JEL Codes: H11, H83, J26, J45

Key words: public employment, general government sector, Belgium

## The Belgian migration towards the Single Euro Payments Area (SEPA)

The main aim of SEPA (Single European Payment Area) is to promote financial integration in Europe, more particularly in the field of cashless payment services and payment systems. It is intended to enable all economic players (businesses, consumers and public authorities) to effect payments anywhere in the SEPA zone (the 27 EU countries plus Iceland, Liechtenstein, Norway and Switzerland) as easily, securely and efficiently as domestic payments. It must also be possible to execute these payments in accordance with a single regulatory framework within which all players have the same rights and obligations. To that end, the European Parliament and the Council adopted a directive on payment services in the internal market, which has to be transposed into national law by 1 November 2009.

The SEPA migration is a process whereby the current national payment instruments are gradually replaced by standardised European instruments. More precisely, European instruments have been developed for credit transfers and direct debits, while a general framework has been set up for payment cards. The development of standards for these payment instruments and the organisation of the migration to SEPA were largely decided by the banking sector. For that purpose, interbank consultation bodies were set up at national and European level, and special structures were created to encourage societal dialogue concerning SEPA and its implementation. In Belgium, the organisational structures behind the SEPA migration are the "Steering Committee on the future of means of payment" and the SEPA interbank Forum.

SEPA is being created in phases. The signal for the operational launch was given just over a year ago: since 28 January 2008 it has been possible to use the European transfer to effect payments anywhere in the SEPA area. The banking sector set the launch date for the European direct debit at European level: it will coincide with the date on which the payment services directive has to be transposed into national law, namely 1 November 2009. The success of the launch of the European direct debit on that date will depend mainly on a number of legal aspects, its adoption by the market, and the time taken to implement it in banks and businesses. The SEPA Card Framework is ready and has applied since 1 January 2008, but that has had little or no practical impact on the Belgian market in bank cards. Although the original plan for switching to a new payment card scheme in a single operation was abandoned, the Belgian market is technically ready for the introduction of new card payment schemes.

JEL Codes: G10, G20, G21, G28

Key words: SEPA (Single European Payment Area), payments instruments, financial integration, Payment Services Directive, banking standards

# Abstracts of the working papers series

151. Financial factors in economic fluctuations, by L. J. Christiano, R. Motto, M. Rostagno, October 2008

To be published.

152. Rent-sharing under different bargaining regimes: Evidence from linked employer-employee data, by M. Rusinek, F. Rycx, December 2008

In many European countries, the majority of workers have their wage rates determined directly by industry-level agreements. For some workers, industry agreements are supplemented by firm-specific agreements. Yet, the relative importance of individual company and industry agreements (in other words, the degree of centralisation) differs drastically across industries. The authors use unique linked employer-employee data from a 2003 survey in Belgium to examine how these bargaining features affect the extent of rent-sharing. Their results show that there is substantially more rent-sharing in decentralised than in centralised industries, even when controlling for the endogeneity of profits, for heterogeneity among workers and firms and for differences in characteristics between bargaining regimes. Moreover, in centralised industries, rent-sharing is found only for workers that are covered by a company agreement. The findings finally suggest that, within decentralised industries, both firm-specific and industry-wide bargaining generate rent-sharing to the same extent.

153. Forecast with judgment and models, by F. Monti, December 2008

The paper proposes a simple and model-consistent method for combining forecasts generated by structural micro founded models and judgmental forecasts. The method also enables the judgmental forecasts to be interpreted through the lens of the model. The author illustrates the proposed methodology with a real-time forecasting exercise, using a simple neo Keynesian dynamic stochastic general equilibrium model and prediction from the Survey of Professional Forecasters.

154. Institutional features of wage bargaining in 23 European countries, the US and Japan, by Ph. Du Caju, E. Gautier, D. Momferatou, M. Ward-Warmedinger, December 2008

The paper presents information on wage-bargaining institutions, collected for 23 European countries, plus the US and Japan using a standardised questionnaire. The data provide information from the years 1995 and 2006, for four sectors of activity and the aggregate economy. The main findings include a high degree of regulation in wage-setting in most countries. Although union membership is limited in many of them, union coverage is high and almost all countries also have some form of national minimum wage. Most countries negotiate wages on several levels, the sectoral level still being the most dominant, with an increasingly important role for bargaining at the individual firm level. The average length of collective bargaining agreements is found to lie between one and three years. Most agreements are strongly driven by developments in prices and eleven of the countries surveyed have some form of indexation mechanism which affects wages. Cluster analysis identifies three country groupings of wage-setting institutions.

155. Fiscal sustainability and policy implications for the euro area, by F. Balassone, J. Cunha, G. Langenus, B. Mancke, J. Pavot, D. Prammer, P. Tommasino, January 2009

The authors examine the sustainability of euro area public finances against the backdrop of population ageing. They critically assess the widely used projections of the Working Group on Ageing Populations (AWG) of the EU's Economic Policy Committee and argue that ageing costs may be higher than projected in the AWG reference scenario. Taking into account adjusted headline estimates for ageing costs, largely based upon the sensitivity analysis carried out by the AWG, they consider alternative indicators to quantify sustainability gaps for euro area countries. With respect to the policy implications, they assess the appropriateness of different budgetary strategies to restore fiscal sustainability taking into account intergenerational equity. A stylised analysis based upon the lifetime contribution to the government's primary balance of different generations suggests that an important degree of pre-funding of the ageing costs is necessary to avoid shifting the burden of adjustment in a disproportionate way to future generations. For many euro area countries this implies that the medium-term targets defined in the context of the revised stability and growth pact would ideally need to be revised upwards to significant surpluses.

156. Understanding sectoral differences in downward real wage rigidity: workforce composition, institutions, technology and competition, by Ph. Du Caju, C. Fuss, L. Wint, February 2009

The paper examines whether differences in wage rigidity across sectors can be explained by differences in workforce composition, competition, technology and wage-bargaining institutions. The authors adopt the measure of downward real wage rigidity (DRWR) developed by Dickens and Goette (2006), and rely on a large administrative matched employer-employee dataset for Belgium over the period 1990-2002. Firstly, results indicate that DRWR is significantly higher for white-collar workers and lower for older workers and for workers with higher earnings and bonuses. Secondly, beyond labour force composition effects, sectoral differences in DRWR are related to competition, firm size, technology and wage-bargaining institutions. Wages are more rigid in more competitive sectors, in labour-intensive sectors, and in sectors with predominant centralised wage setting at the sector level as opposed to firm-level wage agreements.

157. Sequential bargaining in a New Keynesian model with frictional unemployment and staggered wage negotiation, by G. de Walque, O. Pierrard, H. Sneessens, R. Wouters, February 2009

The paper presents a model with frictional unemployment and staggered wage bargaining where hours worked are negotiated for each period. The workers' bargaining power in the working time negotiations affects both unemployment volatility and inflation persistence. The closer to zero this parameter, (i) the more firms tend to adjust on the intensive margin, reducing employment volatility, (ii) the lower the effective workers' bargaining power for wages and (iii) the more important the hourly wage in determining the marginal cost. This set-up produces realistic labour market figures together with inflation persistence. Distinguishing the probability to bargain the wage rate for existing and new jobs, the authors show that the intensive margin helps reduce the new entrants' wage rigidity required to match observed unemployment volatility.

158. Economic Importance of Air Transport and Airport Activities in Belgium, by F. Kupfer, F. Lagneaux, March 2009

The study is a publication issued by the Microeconomic Analysis service of the National Bank of Belgium, in partnership with the Department of Transport and Regional Economics of the University of Antwerp (UA).

It is the outcome of a first research project on the Belgian airport and air transport sector. The former relates to the economic activities within the airports of Antwerp, Brussels, Charleroi, Kortrijk, Liège and Ostend, while the latter concentrates on the air transport business as a whole. In the past few years, the logistics business has come to play a significant part in income creation in Belgium, whose economy is to a large extent driven by services. Air transport and airports in particular are driving forces in this context, not only in terms of business generated within the air transport cluster, but also in terms of airports' attractiveness.

On world scale an overall growth of cargo and passengers could be observed in the last ten years. However, the air transport sector has undergone a major crisis during the 2001-2003 period, when passenger traffic numbers first fell sharply and then stagnated. Only after 2003 this activity has picked up again and this until the third quarter of 2008. Cargo traffic on its part recovered already in 2002. In Belgium, a similar evolution can be observed. It should be stressed however that between 1997 and 2007 cargo volumes grew much faster than passenger traffic did. The rankings of European airports underline the importance of cargo traffic for Belgium: In 2006 Brussels, Liège and Ostend-Bruges respectively occupy ranks 6, 8, and 20 in the European cargo airport top 20, while for passenger airports, Brussels can only be found at the end of the top 20.

In this study, a sectoral approach has been followed by focusing, for every airport, on two major economic activity components: the air transport cluster on the one hand and other airport-related sectors on the other hand. In that respect, annual accounts data from the Central Balance Sheet Office were used for the calculation of direct effects, the social balance sheet analysis and the study of financial ratios. Due to an inevitable time lag in the data provision, the analysis was limited to 2006. Like in other sectoral studies published by the Bank, indirect effects have also been estimated on the basis of data from the National Accounts Institute.

In 2006, the total activities under review – direct and indirect, inside and outside airports – accounted for roughly 6.2 billion euro, i.e. 2 p.c. of Belgium's GDP and domestic employment. Considering the direct effects only, these percentages both amounted to 0.8 p.c. The three major airports, i.e. Brussels, Charleroi and Liège, alone account for 95.2 p.c. of the direct value added generated by the six airports under review. They represent 0.5 p.c. of Belgian GDP and, taking account of the indirect effects, 1.1 p.c. of the national income.

Furthermore, it has to be pointed out that most Belgian airports are specialised. While the airports of Liège and Ostend focus on air cargo, Charleroi Airport deals mostly with low-cost passenger transport. Moreover, the smaller regional airports like Antwerp and Kortrijk focus on business travel.

159. [Rigid labour compensation and flexible employment? Firm-level evidence with regard to productivity for Belgium](#), by C. Fuss, L. Wintr, March 2009

Using firm-level data for Belgium over the period 1997-2005, the authors evaluate the elasticity of firms' labour and real average labour compensation to microeconomic total factor productivity (TFP). Results may be summarised as follows. First, the elasticity of average labour compensation to firm-level TFP is very low contrary to that of labour, consistent with real wage rigidity. Second, while the elasticity of average labour compensation to idiosyncratic firm-level TFP is close to zero, the elasticity with respect to aggregate sector-level TFP is high. The authors argue that average labour compensation adjustment mainly occur at the sector level through sectoral collective bargaining, which leaves little room for firm-level adjustment to firm-specific shocks. Third, there is evidence of a positive relationship between hours and idiosyncratic TFP, as well as aggregate TFP within the year.

160. [The Belgian iron and steel industry in the international context](#), by F. Lagneaux, D. Vivet, March 2009

The paper provides a survey of the main developments in the iron and steel industry over the last few decades. The first chapter covers the changing conditions on international markets and identifies the main challenges facing the companies in this sector. These include the boom in China, the increasing prices of steel and raw materials, the wave of mergers and acquisitions as well as the implementation of environmental regulations, in particular the Kyoto Protocol. Against the backdrop of the worsening global economic crisis, market conditions for steel are also set to change markedly, at least in the medium term. The second chapter provides an assessment of the Belgian iron and steel sector's economic impact, in terms of direct value added, employment and investment. The chapter also includes an evaluation of the indirect effects of the sector, both upstream and downstream.

161. [Trade, wages and productivity](#), by K. Behrens, G. Mion, Y. Murata, J. Südekum, March 2009

The paper develops a new general equilibrium model of trade with heterogeneous firms, variable demand elasticities and endogenously determined wages. Trade integration favours wage convergence, boosts competition, and forces the least efficient firms to leave the market, thereby affecting aggregate productivity. Since wage and productivity responses are endogenous, this model is well suited to studying the impact of trade integration on aggregate productivity and factor prices. Using Canada-US interregional trade data, the authors first estimate a system of theory-based gravity equations under the general equilibrium constraints generated by the model. Doing so allows them to measure 'border effects' and to decompose them into a 'pure' border effect, relative and absolute wage effects, and a selection effect. Using the estimated parameter values, they then quantify the impact of removing the Canada-US border on wages, productivity, mark-ups, the share of exporters, the mass of varieties produced and consumed, and thus welfare. Finally, they provide a similar quantification with respect to regional population changes.

162. Labour flows in Belgium, by P. Heuse, Y. Saks, April 2009

The paper describes job flows in Belgium using micro data at the firm level collected through the annual social balance sheets that companies have to file with the National Bank of Belgium. The coverage of the study is very broad: all industries and commercial services are included. The paper contributes to the previous literature by studying a long period from 1998 to 2006, covering both upturns and downturns in the Belgian economy. Furthermore, data from the social balance sheets make it possible to take into account the heterogeneity of the workforce, on top of the heterogeneity of firms themselves: job flows are broken down by socio-professional status and type of employment contract.

163. The young Lamfalussy: an empirical and policy-oriented growth theorist, by I. Maes, April 2009

Alexandre Lamfalussy has been highly influential in the process of European monetary and financial integration. The paper analyses the work of the “Young Lamfalussy” (from the mid 1950s to the mid 1960s). Lamfalussy started his career as an academic, focusing on growth theory and Belgian and European growth patterns in the post-war period. His work is still influential in recent literature on Europe’s post-war economic growth. It fits nicely into the Keynesian tradition: Lamfalussy’s analytical frameworks were often inspired by Keynesian models; in his analysis, he emphasised vicious and virtuous circles in the economy and, in his policy conclusions, he was a clear partisan of more planning. However, certain elements, typical also of Lamfalussy’s later work, were already present, not least a strong European conviction and an eclectic approach towards economics, blending economic theory and empirical data beautifully to elucidate crucial policy problems.

164. Inflation dynamics with labour market matching: assessing alternative specifications, by K. Christoffel, J. Costain, G. de Walque, K. Kuester, T. Linzert, S. Millard, O. Pierrard, May 2009

The paper reviews recent approaches to modeling the labour market, and assesses their implications for inflation dynamics through both their effect on marginal cost and on price-setting behaviour. In a search and matching environment, the authors consider the following modeling setups: right-to-manage bargaining vs. efficient bargaining, wage stickiness in new and existing matches, interactions at the firm level between price and wage-setting, alternative forms of hiring frictions, search on-the-job and endogenous job separation. They find that most specifications imply too little real rigidity and, so, too volatile inflation. Models with wage stickiness and right-to-manage bargaining or with firm-specific labour emerge as the most promising candidates.





## Conventional signs

–	the datum does not exist or is meaningless
e	estimate by the Bank
n.	not available
p.c.	per cent
p.m.	pro memoria

# List of abbreviations

## Countries

BE	Belgium
DE	Germany
IE	Ireland
EL	Greece
ES	Spain
FR	France
IT	Italy
CY	Cyprus
LU	Luxembourg
MT	Malta
NL	Netherlands
AT	Austria
PT	Portugal
SI	Slovenia
FI	Finland
BG	Bulgaria
CZ	Czech Republic
DK	Denmark
EE	Estonia
LV	Latvia
LT	Lithuania
HU	Hungary
PL	Poland
RO	Romania
SK	Slovakia
SE	Sweden
UK	United Kingdom
EU15	European Union excluding the countries which joined in 2004 and 2007
EU26	European Union excluding the United Kingdom
US	United States

## Others

B2B	Business-to-business
BIC	Bank Identifier Code
BNRC	Belgian National Railway Company
BRF	Belgisches Rundfunk- und Fernsehzentrum der Deutschsprachigen Gemeinschaft (German-speaking Community Radio and Television Network)
CBFA	Commissie voor het Bank-, Financie- en Assurantiewezen, Commission bancaire, financière et des assurances (Banking, Finance and Insurance Commission)
CEC	Centre for Exchange and Clearing
Cocof	French Community Commission
Cocom	Joint Community Commission
CPAS/OCMW	Public Social Welfare Centre
CPB	Centraal Planbureau – The Netherlands
CT	Credit Transfer
DESTATIS	Statistisches Bundesamt Deutschland
DGSEI	Directorate General for Statistics and Economic Information Belgium (FPS Economy, SMEs, Self-employed and Energy)
EAPS	Euro Alliance of Payment Schemes
EBA	Euro Banking Association
EC	European Commission
ECB	European Central Bank
ECO	Economy, SMEs, Self-Employed and Energy
EDP	Excessive Deficit Procedure
EEA	European Economic Area
Eonia	Euro Overnight Index Average
EPC	European Payments Council
ERP	Enterprise Resource Planning
ESA	European System of Accounts
EU	European Union
Euribor	Euro Interbank Offered Rate
FAQ	Frequently asked questions
FEB/VBO	Federation of Enterprises in Belgium
FEBELFIN	Belgian Finance Federation
FEDERGON	Federation of partners for employment
FIN	Finances
FPB	Federal Planning Bureau
FPS	Federal Public Service
G20	Group of Twenty
GDP	Gross domestic product
HICP	Harmonised index of consumer prices
HWWI	Hamburgisches Welt-Wirtschafts-Institut
IBAN	International Bank Account Number
IFO	Institut für Wirtschaftsforschung
IMF	International Monetary Fund
ISO	International Organization for Standardization

## LIST OF ABBREVIATIONS

Libor	London Interbank Offered Rate
MBP	Multilateral Balancing Payment
MIF	Multilateral Interchange Fee
MSCI	Morgan Stanley Capital International
NAI	National Accounts Institute
NBB	National Bank of Belgium
NBER	National Bureau of Economic Research
NEO	National Employment Office
INAMI/RIZIV	National Institute for Health and Disability Insurance
NSSO	National Social Security Office
NSSO-PLA	National Social Security Office for Provincial and Local Administrations
OECD	Organisation for Economic Cooperation and Development
OIS	Overnight Index Swap
OLS	Ordinary Least Squares
PE-ACH	Pan-European Automated Clearing House
PPS	Public Planning Services
R&D	Research and development
RTBF	Radiotélévision belge de la Communauté française (French-speaking Community Radio and Television Network)
SCT	SEPA Credit Transfert
SDD	SEPA Direct Debit
SDPSP/PDOS	Service des pensions du secteur public/Pensioendienst voor de overheidssector (Federal Office for Public Sector Pensions)
SEPA	Single Euro Payments Area
SMEs	Small and Medium Enterprises
STIB/MIVB	Société des transports intercommunaux de Bruxelles (Brussels public transport network)
TEC	Transport en commun (Walloon public transport network)
TFP	Total factor productivity
VAT	Value Added Tax
VGCC	Flemish Community Commission
VRT	Vlaamse Radio- en Televisieomroep (Flemish Radio and Television Network)
WG	Working group
XML	Extensible Markup Language

National Bank of Belgium  
Limited liability company  
RLP Brussels – Company number: 0203.201.340  
Registered office: boulevard de Berlaimont 14 – BE-1000 Brussels  
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Publisher

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© Illustrations: Philippe Debeerst  
National Bank of Belgium

Cover and layout: NBB TS – Prepress & Image

Published in June 2009

