

# Quarterly Newsletter of the Federal Planning Bureau

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

## HEADLINES BELGIAN ECONOMY

*In 2003, real economic growth in Belgium amounted to 1.1% thanks to the recovery registered in the second half of the year. World trade growth, which has been remarkably strong since the last few months of 2003, should weaken and the impact of the more expensive euro should make itself more profoundly felt. The pace of exports and GDP growth should then slacken a little by the end of this year. All in all, GDP at constant prices should grow by 2.0% in 2004.*

*Last year, solid domestic demand combined with disappointing exports led to a considerable negative contribution of net exports to GDP growth. Thanks to the strong recovery of exports and the weaker growth of domestic demand, that negative contribution should be transformed into a slightly positive contribution this year. Households will only reduce their savings rate when the situation on the labour market becomes noticeably brighter. However, the unemployment rate should only stabilize by the end of 2004, thereby preventing a further fall in the savings rate.*

*This year, a gradual increase in employment should be registered. By the end of the year, employment should be 16,500 units higher than the level at the end of last year. Due to the low starting point at the beginning of this year and the fact that the increase is taking place gradually, employment in annual average should exceed last year's level by only 7,000 units.*

*Headline inflation should increase by 1.5% in 2004, as compared with 1.6% last year. On the one hand, underlying inflation should drop significantly as a result of the past appreciation of the euro and the moderate evolution of unit labour costs. On the other hand, the downward impact of the abolition/reduction of radio and television license fees has been almost exhausted.*

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### *DTP & Web Publishing*

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Geert Bryon  
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### *Printed by*

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



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## A post-mortem analysis after ten years of Economic Budget

Since February 1994, the FPB has produced short-term economic forecasts twice a year<sup>1</sup>. These forecasts are referred to as 'Economic Budgets' and create the macroeconomic context for the drafting of the Federal Government's Revenue and Expenditure Budget. In this special topic, FPB short-term projections are subjected to a quality control in which the size, nature and source of forecasting errors will be considered.

The economic budget is released twice a year, once in the summer of year  $t-1$  for the preparation of the budget for year  $t$  and once in February of year  $t$  for the budgetary control of year  $t$ . The quarterly macroeconomic model Modtrim is used as a central tool in producing the economic budget. The model's results, however, are adjusted on the basis of experts' views and are adapted to take into account the latest business cycle-related information, taken for instance from leading indicators.

The economic budget supplies forecasts for a large range of economic variables. In this analysis, only two variables, namely real GDP growth and CPI inflation, will be examined. These are two global series that are important to users of the economic budget. One initial choice that must be made is to define what is considered as the outcome. In the case of inflation this is quite straightforward, since the monthly published CPI is never revised. GDP growth figures, however, are subject to significant revisions. To avoid a situation where unforeseeable factors in the national accounts (such as methodological changes) affect the analysis, outcomes are defined as the figures published in the first version of the national accounts of the year in question.

In addition to the problem of what should be chosen as outcomes, post-mortem analyses are generally beset by other problems. The unchanged policy hypothesis undeniably constitutes a drawback in terms of the accuracy of the forecasts, although the importance of this element for short-term GDP and inflation forecasts should not be exaggerated. The limited sample size should lead to a cautious interpretation of the results, which may be influenced by some outliers.

In this article, the accuracy of the FPB short-term economic forecasts will be assessed. It should be remembered that accuracy is only one aspect of quality. Other important features of quality are coherence and completeness. A full quality assessment should take all these aspects simultaneously into account.

### Is the size of FPB forecast errors acceptable?

The most intuitive indicator to use in evaluating the size of forecast errors is the mean absolute error (MAE), which yields the average difference between forecasts and actual figures in percentage points (see table 1). The MAEs of the first round forecasts, which are not negligible, demonstrate the limits of a forecasting exercise. A look at the declining profile of the MAEs shows that the additional information that becomes available between the first and the second forecasting round significantly increases the accuracy of the projections, thus proving the usefulness of the February updates of the economic budget.

Projections made by international organisations are used to some extent as exogenous inputs for FPB forecasts. Since the economic budget is released a few months later than EC and OECD forecasts, forecast errors in the economic budget should be somewhat smaller, due to the integration of more recent and more detailed information. The results reported in table 1 generally confirm this expectation.

**Table 1 - Key forecast error statistics**

|                  | Economic growth |         | CPI inflation |         |
|------------------|-----------------|---------|---------------|---------|
|                  | round 1         | round 2 | round 1       | round 2 |
| MAE: FPB         | 1.0             | 0.7     | 0.6           | 0.4     |
| EC               | 1.1             | 0.9     | 0.7           | 0.6     |
| OECD             | 1.1             | 0.9     | 0.5           | 0.4     |
| Theil 1          | 0.67            | 0.52    | 0.77          | 0.80    |
| Theil 2          | 1.23            | 0.90    | 0.83          | 0.7     |
| Theil 3          | 1.16            | 0.85    | 0.88          | 1.43    |
| Breakdown of MSE |                 |         |               |         |
| BP               | 9.4%            | 0.4%    | 0.0%          | 0.1%    |
| VP               | 41.4%           | 8.8%    | 52.6%         | 27.1%   |
| CP               | 49.2%           | 90.8%   | 47.4%         | 72.8%   |

Another way to evaluate the accuracy of the FPB's projections is to compare them with naive forecasts. Three kinds of naive forecasts have been examined: a random walk (Theil 1), a 10-year moving average growth rate forecast (Theil 2) and an ARIMA projection (Theil 3). Theil coefficients are calculated as the ratio between the root mean square error of the reference forecasts and the naive forecasts. Table 1 shows that naive forecasts are usually less accurate than the economic budget. Theil coefficients exceed unity in some cases (Theil2 and Theil3 for GDP growth during the first round and Theil3 for CPI inflation during the second round). This is, however, not systematically the case over the whole sample, but only for very recent years. Theil coefficients fall below unity if these specific years are removed from the sample period. In conclusion, our findings confirm the commonly accepted view that over

1. Initially under its own name and from 1995 onwards under the responsibility of the INR-ICN.

a 4 to 6-quarter horizon, structural model based forecasts outperform naive forecasts.

On the basis of the above criteria, it can be said that FPB forecast errors are well within acceptable territory. Moreover, GDP forecast errors should be put in perspective by comparing them to the revisions in the outcomes. The mean absolute revision of GDP growth over the 1993-2002 period was 0.5%-point, which is half of the first round forecast error.

### Do FPB forecasts suffer from systematic errors?

The size of the forecast errors is one thing, but the nature of the errors is at least equally important. One interesting way to check whether systematic forecast errors can be found, is to decompose the mean square error (MSE) into three components: (i) the bias proportion (BP) measures which part of the error is due to systematic over- or underestimation; (ii) the variance proportion (VP) provides the part of the error owing to the misforecasting of the systematic component of the variability of outcomes and (iii) the covariance proportion (CP) is the part of the errors arising from other, unsystematic factors.

Table 1 shows that the BP is negligible in all forecasting rounds, which means that FPB forecasts can be considered to be unbiased<sup>1</sup>. The VP of first round forecasts, however, is quite large. This should not come as a surprise, since the available business cycle-related information at that moment does not provide any clear indications for the year ahead. First round forecasts are therefore commonly based on a plausible trend scenario. In all cases, the CP represents the highest proportion, leading to the conclusion that the nature of the forecast errors is mainly non-systematic and due to the fact that economic variables are stochastic.

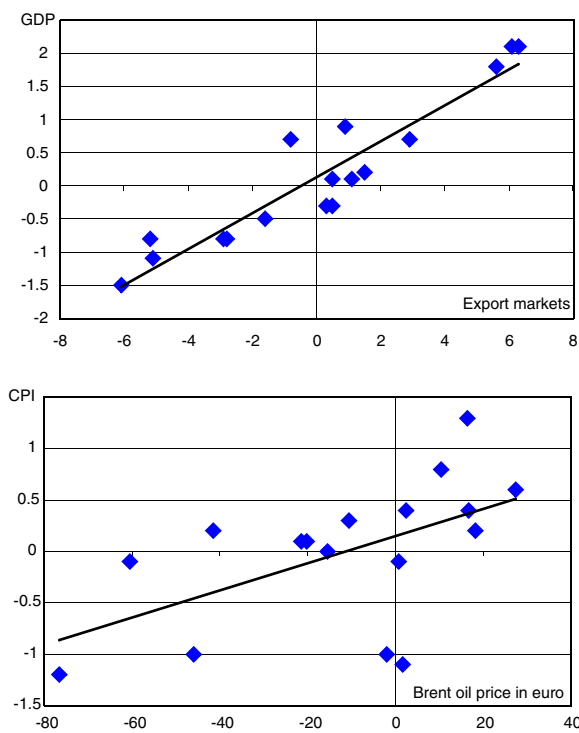
### What are the sources of the forecast errors?

The central tool for producing the economic budget is the Modtrim model. Even a perfect model will not generate accurate forecasts if it is supplied with incorrect exogenous assumptions. The question examined here is whether and to what extent the observed forecast errors are due to false exogenous assumptions.

The development of foreign export markets is one crucial exogenous variable used in forecasting Belgian GDP. The export market hypothesis is typically based on weighted (reflecting the geographical orientation of Belgian exports) import growth figures taken from the most recent short-term forecasts from international organisations (EC, OECD, IMF). With regard to consumer price inflation forecasts, the oil price assumption ex-

pressed in domestic currency is an important determinant. In the case of both the Brent oil price and exchange rates, technical assumptions are made based on future market prices.

**Graph 1 - Forecasts and exogenous assumptions  
(growth rate errors in percentage points)**



The graphs above show that there is a clear relationship between the errors made in the external assumptions on the one hand and GDP and CPI forecast errors on the other. The relationship is very apparent in the first graph as export market growth is a very dominant factor in explaining economic growth for a small, open economy like Belgium. In the second graph, the scatter points are somewhat more dispersed around the line, illustrating that, in addition to surprises relating to the oil price, other factors, such as indirect tax measures and unforeseen fluctuations in food prices contributed significantly to errors in inflation forecasts.

One can try to examine what our GDP forecast would have been if the correct export market figure had been known at the moment when the forecasting exercise took place. To calculate this in a simplified manner, GDP forecasts were adjusted based on the error in the export market figure and the estimated elasticity<sup>2</sup> between GDP and export markets. Correcting GDP forecasts in this way and comparing them again to actual figures, the mean absolute forecast errors are reduced on average by more than 50%, in both the first and second round forecasts and for almost all individual years.

1. This is confirmed by other measures, such as the average forecast error that is not significantly different from zero.

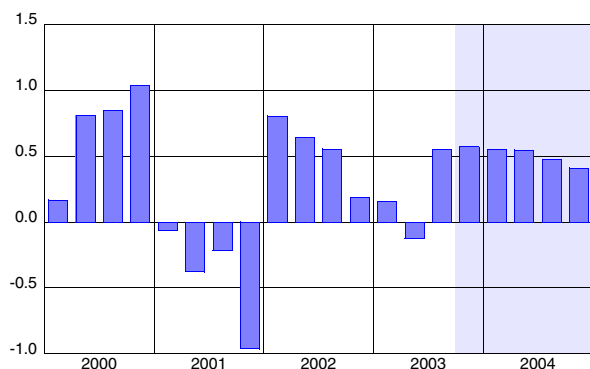
2. This elasticity was derived from a model simulation with Modtrim, in response to a shock on the export markets. The average value of the elasticity over the first four quarters after the shock is 0.19.

## Economic forecasts 2004

The FPB has prepared macroeconomic forecasts for the Institute of National Accounts (INR/ICN). These forecasts have been submitted to the Federal Government. The forecasts will serve as the basis for the budgetary control of the year 2004. Compared to the forecasts of September last year (initial budget 2004), the 2004 GDP growth estimate at constant prices was adjusted slightly upward (from 1.8% to 2.0%). Domestic employment should increase by 7,000 units on average and consumer price inflation should end up at 1.5%.

In 2003, economic growth in Belgium amounted to 1.1% (GDP at constant prices). After quarter-on-quarter growth rates of 0.2% and -0.1% during the two first quarters, growth recovered during the second half of the year (quarter-on-quarter growth rates of about 0.5%). In the first half of 2004, GDP should keep growing at the same pace. During the year, world trade growth, which has been remarkably strong since the last few months of 2003, should weaken and the impact of the more expensive euro should, after some delay, make itself more profoundly felt. For that reason, the pace of exports and GDP growth should slacken a little by the end of the year. All in all, GDP at constant prices should grow by 2.0% in 2004.

**Graph 1 - Quarterly GDP at constant prices**  
*qoq growth rates, seasonally adjusted and corrected for calendar effects*

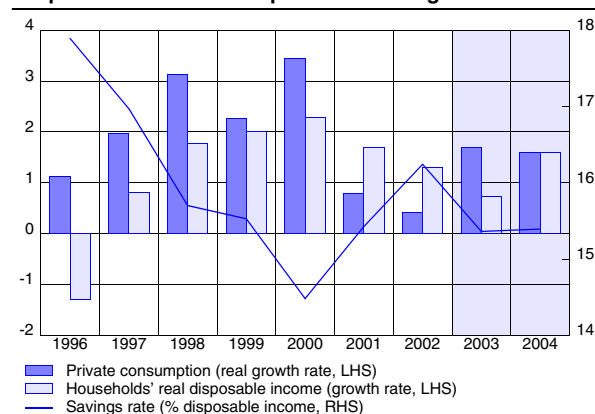


### Economic growth in 2004 driven by exports

In spite of an upturn during the year, the exports volume only grew by 1.6% in 2003. With growth of 4.9%, exports should constitute the driving force behind the recovery in final demand this year. Export dynamics, however, should show a slight setback in the course of the year and the loss of market share resulting from the more expensive euro should turn out slightly higher than last year.

Last year, real private consumption growth (1.7%) was considerably higher than the increase in households' real disposable income (0.7%), thus leading to a significant reduction in their savings rate (from 16.2% in 2002 to 15.4% in 2003). The (remarkable) rise in private consumption followed two years in which consumers kept a tight hand on their purse-strings and it should therefore, to some extent, be considered as postponed demand. The improvement in the stock market climate since spring of last year also contributed to the renewed consumption dynamics. At present it is generally assumed that households will only further reduce their savings rate when the situation on the labour market becomes noticeably brighter. During the next few months, however, the unemployment rate should still increase slightly and then stabilize by the end of the year, thereby preventing a further fall in the savings rate. The household savings rate should therefore remain at about the same level as last year. As a consequence, private consumption should see the same level of growth as households' real disposable income (1.6%).

**Graph 2 - Private consumption and savings rate**



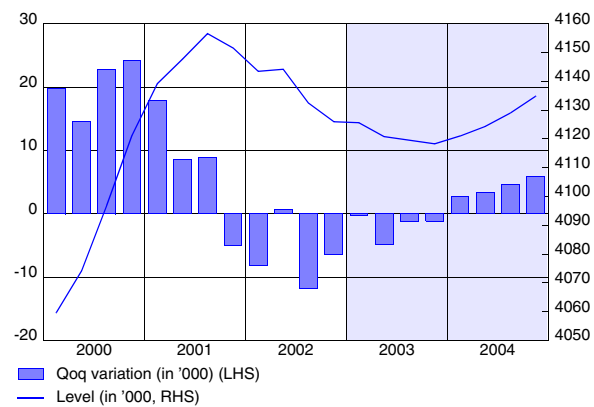
Last year, business investment recovered from the lows seen in 2002. Stimulated by the recovery in business profitability, permanently low interest rates and better demand prospects, real business investment growth should reach 3% this year. After two years of decline, housing investment also resumed positive growth (1.3%) last year. Meanwhile, surveys among architects on the evolution of housing projects indicate that this upward trend will continue this year. In 2004, housing investment should increase by 2.7%. Finally, in view of the local elections in 2006, public investment should also gain momentum (1.8%). All in all, real gross fixed capital formation growth should amount to 2.8% this year, which is higher than the average growth during the last three years but still a long way from the remarkable growth rates recorded during the period 1997-2000.

Last year, solid domestic demand combined with disappointing exports led to a considerable negative contribution (-1.2%) of net exports to GDP growth. Thanks to the strong recovery of exports and the weaker growth of domestic demand, that negative contribution should be transformed into a slightly positive contribution this year (0.2%).

**Gradual increase in employment**

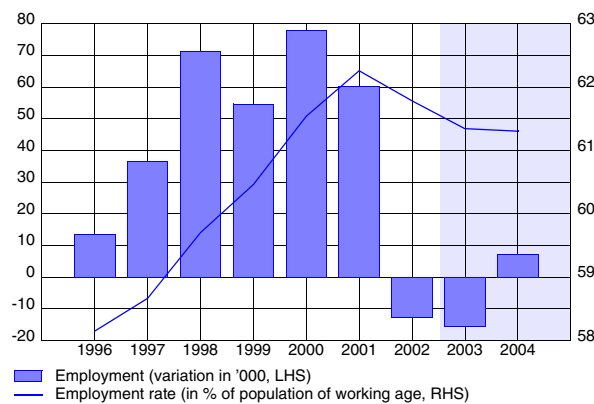
Since the last quarter of 2001 domestic employment has been on a downward path; in net terms 38,000 jobs were lost. In 2004, a gradual increase in employment should be registered. By the end of the year, employment should be 16,500 units higher than the level at the end of last year.

**Graph 3 - Quarterly development of domestic employment seasonally adjusted**



Due to the low starting point at the beginning of this year and the fact that the increase is taking place gradually, employment in annual average should exceed last year's level by only 7,000 units.

**Graph 4 - Evolution of employment and employment rate annual averages**

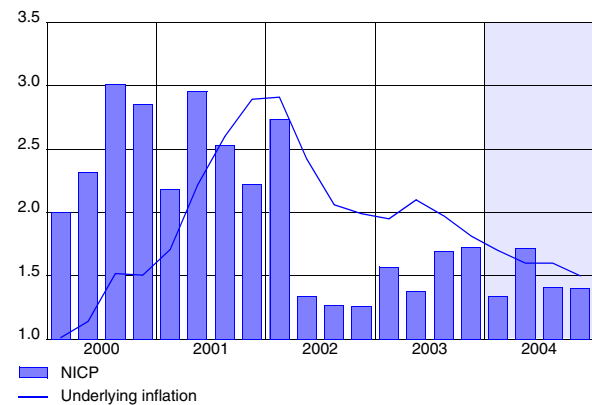


This year the employment rate (ratio of employment to the population of working age) should stabilize at 61.3%, after declining for two years. After a considerable rise during the past two years, the unemployment rate should still show a slight increase this year.

**Slight fall in consumer price inflation**

This year, headline inflation, measured as the yoy growth rate in the national consumer price index, should increase by 1.5%, as compared with 1.6% last year. This slightly lower figure is the result of two opposite developments. On the one hand, underlying inflation, representing the fundamental trend of consumer prices, should drop significantly (from 2.0% in 2003 to 1.6% this year) as a result of the past appreciation of the euro and the moderate evolution of unit labour costs. In January 2004, underlying inflation amounted to 1.75% (year-on-year increase). On the other hand, the downward impact of the abolition/reduction of radio and television license fees has been almost exhausted. In 2004, the health index should rise by 1.4%, after an increase of 1.5% in 2003.

**Graph 5 - Quarterly development of inflation yoy growth rates**



The pivotal index level was crossed in May 2003. As a result, social benefits were adjusted by 2% to the higher cost of living in June 2003. This also happened to public wages in July 2003. The monthly forecasts for the health index indicate that the pivotal index level - currently standing at 113.87 - should not be exceeded in 2004.

“Economische begroting 2004”, “Budget économique 2004”, INR/ICN, February 2004.

## Economic forecasts for Belgium by the Federal Planning Bureau

Changes in volume (unless otherwise specified) (cut-off date of forecasts: February 18, 2004)

|   | 2001   | 2002   | 2003   | 2004   |
|---|--------|--------|--------|--------|
| Private consumption   | 0.8    | 0.4    | 1.7    | 1.6    |
| Public consumption  | 2.7    | 1.9    | 2.3    | 1.6    |
| Gross fixed capital formation                                 | 0.3    | -2.5   | 2.0    | 2.8    |
| Final national demand   | 0.4    | 0.8    | 2.4    | 1.8    |
| Exports of goods and services                                 | 1.3    | 1.0    | 1.6    | 4.9    |
| Imports of goods and services                                 | 1.1    | 1.2    | 3.1    | 4.8    |
| Net-exports (contribution to growth)                          | 0.2    | -0.1   | -1.2   | 0.2    |
| Gross Domestic Product  | 0.6    | 0.7    | 1.1    | 2.0    |
| p.m. Gross Domestic Product - in current prices (bn euro)     | 253.80 | 260.01 | 268.15 | 278.15 |
| National consumer price index                                 | 2.5    | 1.6    | 1.6    | 1.5    |
| Consumer prices: health index                                 | 2.7    | 1.8    | 1.5    | 1.4    |
| Real disposable income households                             | 1.7    | 1.3    | 0.7    | 1.6    |
| Household savings ratio (as % of disposable income)           | 15.4   | 16.2   | 15.4   | 15.4   |
| Domestic employment (change in '000, yearly average)          | 60.4   | -12.4  | -15.3  | 7.0    |
| Unemployment (Eurostat standardised rate, yearly average) [1] | 6.7    | 7.3    | 8.0    | 8.2    |
| Current account balance (BoP definition, as % of GDP)         | 3.8    | 5.4    | 4.1    | 4.4    |
| Short term interbank interest rate (3 m.)                     | 4.2    | 3.3    | 2.3    | 2.1    |
| Long term interest rate (10 y.)                               | 5.1    | 5.0    | 4.1    | 4.3    |

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

## Economic forecasts for Belgium by different institutions

|                                   | GDP-growth |      | Inflation |      | Government balance |       | Date of update |
|-----------------------------------|------------|------|-----------|------|--------------------|-------|----------------|
|                                   | 2003       | 2004 | 2003      | 2004 | 2003               | 2004  |                |
| Federal Planning Bureau           | 1.1        | 2.0  | 1.6       | 1.5  | .                  | .     | 2/04           |
| INR/ICN                           | 1.1        | 2.0  | 1.6       | 1.5  | .                  | .     | 2/04           |
| National Bank of Belgium          | 1.1        | .    | 1.6       | .    | 0.2                | .     | 2/04           |
| European Commission               | 0.8        | 1.8  | 1.5       | 1.6  | 0.2                | -0.4  | 10/03          |
| OECD                              | 0.7        | 1.9  | 1.5       | 1.4  | 0.2                | 0.0   | 11/03          |
| IMF                               | 0.8        | 1.9  | 1.4       | 1.4  | -0.5               | -0.2  | 9/03           |
| ING                               | 1.0        | 2.2  | 1.6       | 1.5  | 0.2                | -0.2  | 1/04           |
| Fortis Bank                       | 0.8        | 1.9  | 1.7       | 1.6  | 0.3                | 0.0   | 2/04           |
| Dexia                             | 1.0        | 2.0  | 1.6       | 1.5  | .                  | .     | 2/04           |
| KBC Bank                          | 1.1        | 2.2  | 1.6       | 1.4  | 0.2                | -0.1  | 12/03          |
| Morgan Stanley                    | 1.1        | 2.0  | 1.6       | 2.0  | 0.3                | -0.5  | 2/04           |
| Petercam                          | 1.1        | 2.0  | 1.5       | 1.2  | -0.5               | -0.5  | 2/04           |
| IRES                              | 1.0        | 2.7  | 1.6       | 1.5  | 0.3                | 0.2   | 1/04           |
| DULBEA                            | 0.5        | 1.8  | 1.25      | 1.0  | -0.75              | -0.75 | 9/03           |
| Consensus Belgian Prime News      | 1.0        | 2.0  | 1.6       | 1.5  | 0.2                | 0.0   | 1/04           |
| Consensus Economics               | 0.8        | 1.6  | 1.6       | 1.5  | .                  | .     | 2/04           |
| Consensus The Economist           | 1.0        | 1.9  | 1.5       | 1.4  | .                  | .     | 2/04           |
| Consensus Wirtschaftsinstitute    | 0.9        | 1.9  | 1.5       | 1.4  | .                  | .     | 10/03          |
| <b>Averages</b>                   |            |      |           |      |                    |       |                |
| All institutions                  | 0.9        | 2.0  | 1.5       | 1.5  | 0.0                | -0.2  |                |
| International public institutions | 0.8        | 1.9  | 1.5       | 1.5  | 0.0                | -0.2  |                |
| Credit institutions               | 1.0        | 2.0  | 1.6       | 1.5  | 0.1                | -0.2  |                |

Collaborating institutions for The Economist: ABN Amro, Deutsche Bank, EIU, Goldman Sachs, HSBC Securities, KBC Bank, Merrill Lynch, J.P. Morgan Chase, Morgan Stanley, Nordea, Decision Economics, BNP Paribas, Royal Bank of Canada, Schroder Salomon Smith Barney, Scotiabank, UBS Warburg.

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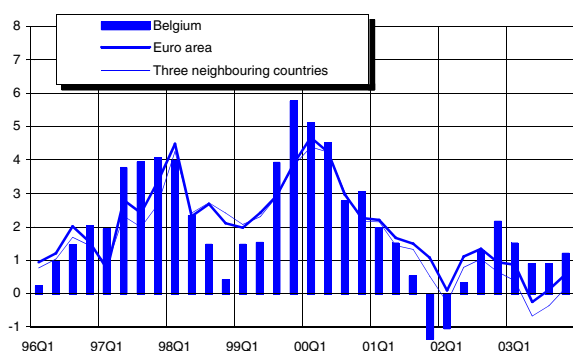
General economic activity

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

|               |      |      | YoY growth rates, in % |      |      |      |      | QoQ growth rates, in % |      |      |      |      |
|---------------|------|------|------------------------|------|------|------|------|------------------------|------|------|------|------|
|               | 02   | 03   | 02Q4                   | 03Q1 | 03Q2 | 03Q3 | 03Q4 | 02Q4                   | 03Q1 | 03Q2 | 03Q3 | 03Q4 |
| Germany       | 0.2  | -0.1 | 0.3                    | 0.4  | -0.7 | -0.2 | 0.2  | 0.0                    | -0.2 | -0.2 | 0.2  | 0.2  |
| France        | 1.2  | 0.2  | 1.3                    | 0.7  | -0.4 | -0.2 | 0.6  | -0.3                   | 0.0  | -0.4 | 0.4  | 0.4  |
| Netherlands   | 0.2  | -0.8 | 0.1                    | -0.2 | -1.2 | -1.2 | -0.5 | -0.4                   | -0.3 | -0.5 | 0.0  | 0.3  |
| Belgium       | 0.7  | 1.1  | 2.2                    | 1.5  | 0.9  | 0.9  | 1.2  | 0.2                    | 0.2  | -0.1 | 0.5  | 0.6  |
| Euro area     | 0.9  | 0.4  | 0.9                    | 0.9  | -0.2 | 0.1  | 0.6  | 0.0                    | 0.0  | -0.1 | 0.4  | 0.3  |
| United States | 2.2  | 3.1  | 2.8                    | 2.1  | 2.4  | 3.6  | 4.3  | 0.3                    | 0.5  | 0.8  | 2.0  | 1.0  |
| Japan         | -0.4 | 2.7  | 1.7                    | 2.8  | 2.3  | 2.0  | 3.6  | -0.1                   | 0.6  | 0.8  | 0.6  | 1.7  |

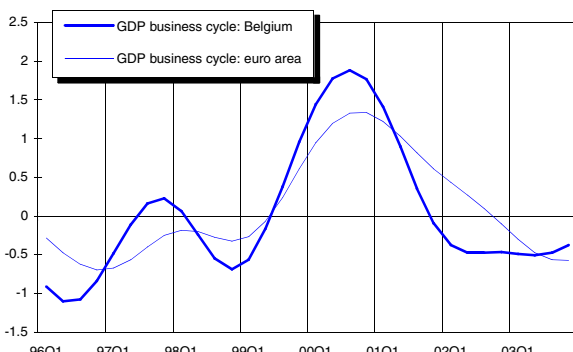
Source: INR/ICN, National sources, Eurostat

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



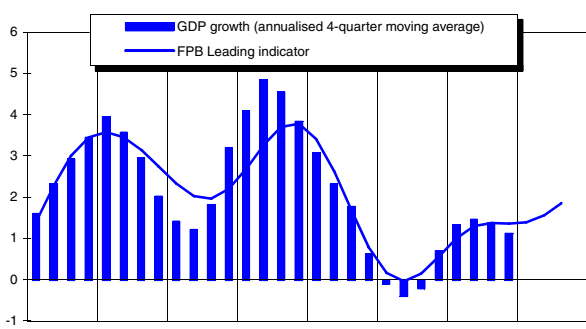
Source: INR/ICN, National sources, Eurostat

**Graph 2 - GDP business cycle**



Source: INR/ICN, Eurostat, FPB

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



Source: INR/ICN, FPB

The significant recovery of the US economy contributed greatly towards the improvement in the world economy in the second half of 2003. Despite the appreciation of their currencies, exports played a crucial role in the recovery in Japan and in the euro area. In the United States, vigorous GDP growth in 2003Q3 was, to a large extent, the result of the culmination of two years of unprecedented impulses from monetary and fiscal policy. It was also due to the fact that households immediately spent approximately all the tax relief they received during the summer.

Since the impulses from the policies of the American authorities are fading, qoq GDP growth in the US halved in 2003Q4 (1% as compared with 2% in 2003Q3). The Japanese economy, on the other hand, has grown by 1.7% during 2003Q4, reaching its fastest expansion for more than 13 years. According to the Eurostat flash estimate, economic activity in the euro area increased by a modest 0.3% in 2003Q4.

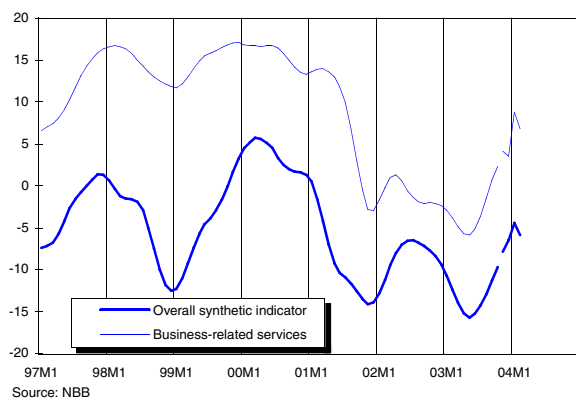
In Belgium, economic activity recovered markedly in the second half of 2003, while growth was slightly positive in Germany and only showed the first rise in over a year in 2003Q4 in the Netherlands. Consequently, for the fifth consecutive quarter, the Belgian economy outperformed the average GDP growth of its three main neighbouring countries and that of the euro area. The Belgian cycle was distinguished by the robustness of its domestic demand.

It appears that the trough of the Belgian cycle was reached in the second quarter of 2003, while the turnaround in the euro area cycle can only be situated at the end of 2003.

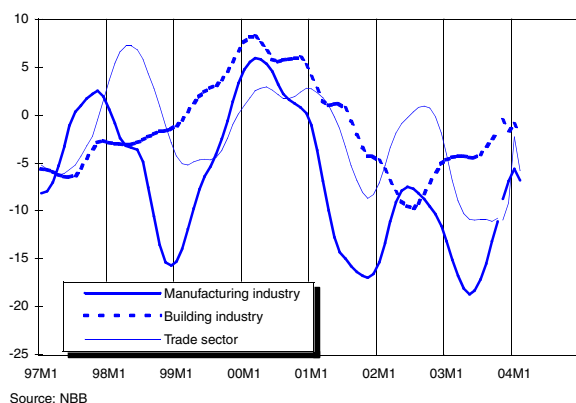
Most data point to a continuation of the economic improvement in both the euro area and Belgium. The FPB leading indicator for Belgium also shows that, during the first semester of 2004, Belgian GDP should increase at the same pace as in the second half of 2003. Despite a tiny deceleration during the second half of 2004, GDP growth should be 2% this year as against 1.1% last year.



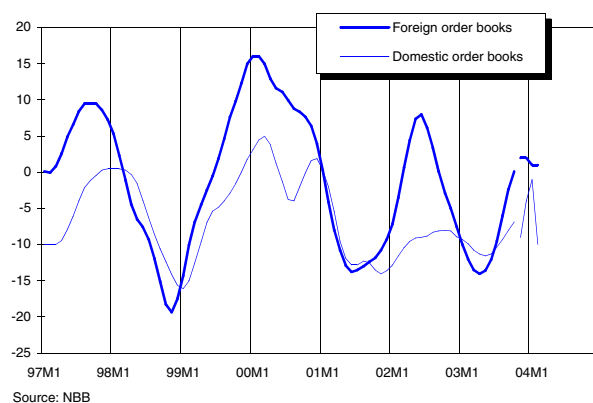
**Graph 4 - Business cycle: global evolution**



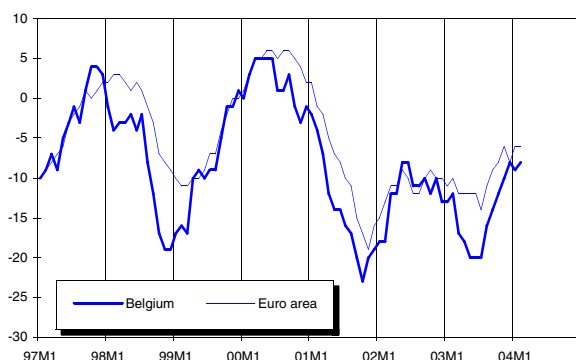
**Graph 5 - Business cycle: sectoral evolution**



**Graph 6 - Manufacturing industry: order books**



**Graph 7 - Industrial confidence: international comparison**



The high volatility of business survey indicators for the Belgian economy in Spring 2003 was a forerunner of a turning-point in the business climate by mid-2003. The seasonally adjusted and smoothed synthetic indicator, which had been following a downward trend since the middle of 2002, reached its low in May 2003. The steady rise recorded since then has already brought the overall indicator above its previous high seen in mid-2002.

After recovering sharply during the preceding months, the overall gross synthetic indicator shows a slight decline in February in all branches. Month on month declines of this magnitude in the gross indicator are not unusual in business cycle upturns, but repeated similar signs should lead to questioning of the strength of the recovery.

The business cycle upturn from the middle of 2003 onwards was most marked in *manufacturing industry* and in the *business-related services sector*, the two sectors that were most seriously hit during the previous downturn. The deterioration in manufacturing industry was mainly due to collapsing exports, while corporate demand for financial and business services has been dramatically reduced as companies have sought to improve profitability and restore balance sheets. The ongoing upturn in manufacturing industry reflects the recovery in exports (as illustrated for example in graph 6 by the indicator of foreign order books), while the improvement in the business-related services sector suggests that the process of corporate adjustment is coming to an end. As has already been observed in the past, the turning point in industrial confidence has been reached somewhat earlier in Belgium than in the euro area (graph 7).

The effects of the previous business cycle downturn were felt somewhat later in the *trade sector*, as the smoothed trade sector indicator remained on an upward path for the majority of 2002 and only began to fall three months later than in manufacturing industry. Trade sector indicators have been rather stable during the second and third quarters of 2003. Only in the last few months of 2003 was a clear improvement seen. This means that the upturn in the trade sector will follow the manufacturing sector with a certain time-lag.

From the beginning of 2002 onwards, the business cycle in the *building industry* has been somewhat at odds with the other branches of the economy: the brief recovery in the first half of 2002 did not appear in the building industry, while an upturn did emerge from the summer of 2002 onwards, at a time when the rest of the economy was beginning its downturn. That upturn has now lasted for more than one and a half years. Recently, however, the business climate in the construction sector has shown some signs of saturation.

## Private consumption

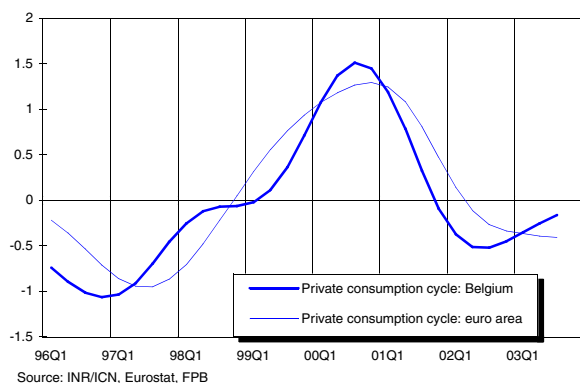
**Table 2 - Private consumption indicators**

|                                   | 02   | 03    | 03Q1  | 03Q2  | 03Q3 | 03Q4  | 03M9 | 03M10 | 03M11 | 03M12 | 04M1 | 04M2 |
|-----------------------------------|------|-------|-------|-------|------|-------|------|-------|-------|-------|------|------|
| Turnover (VAT) - retail trade [1] | 17.7 | -7.1  | 11.3  | 3.4   | 3.7  | -30.2 | 5.5  | 16.0  | 8.6   | -57.1 | .    | .    |
| New car registrations [1]         | -4.3 | -1.9  | -12.1 | -7.8  | 5.9  | 18.6  | 8.1  | 12.2  | 10.1  | 44.7  | -6.3 | 14.2 |
| Consumer confidence indicator [2] | -2.7 | -10.8 | -14.3 | -11.0 | -9.3 | -8.3  | -5.0 | -13.0 | -5.0  | -7.0  | -5.0 | -4.0 |

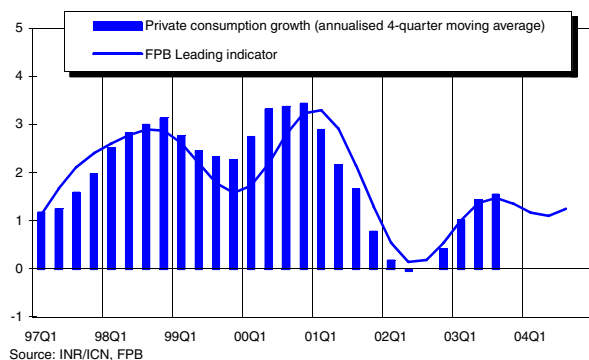
[1] Change (%) compared to same period previous year; [2] Qualitative data

Source: NIS/INS, Eurostat, Febiac, FPB

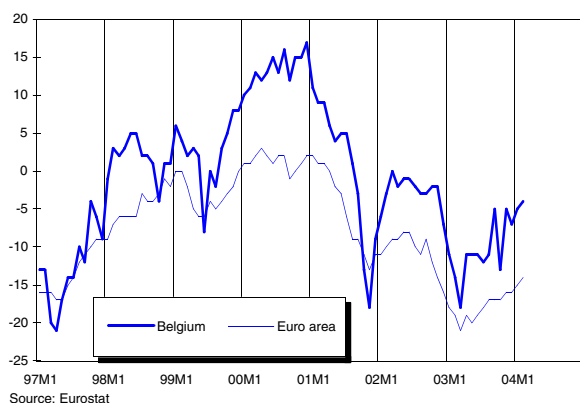
**Graph 8 - Private consumption cycle**



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



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



The downward phase in the private consumption cycle started in the fourth quarter of 2000 in Belgium and one quarter later in the euro area. While the upturn in the Belgian private consumption cycle began in the last quarter of 2002, the euro area cycle only started to bottom out by then and still has not shown any signs of recovery. However, as euro area consumer confidence improved since spring last year, the euro area cycle should be approaching its trough.

Belgian private consumption held up remarkably well during the first three quarters of 2003, and should have increased by 1.6% over the whole year. This strength was surprising since it was not supported by soft indicators. In fact, after the gradual decline during the course of 2002, consumer confidence plummeted in early 2003 due to the military conflict in Iraq. Even after a rise in April, consumer confidence remained quite subdued until August. Hard data, on the other hand, painted a less pessimistic picture. Retail trade figures recorded very strong yoy growth rates during the first quarter of 2003, and after a small deceleration in the following two quarters, yoy increases rose again by the end of the year (due to a statistical problem, the 03M12 figure should be ignored). In the first half of last year, car sales were lower as compared with the same period a year earlier, but recovered strongly during the second half of 2003. These figures show that consumers were less reluctant to spend than consumer confidence indicates, a fact which can also be seen from the decline in the savings rate from 16.2% in 2002 to 15.4% in 2003.

The bumpy profile of consumer confidence during recent months was caused by the announcement of massive lay-offs at the Ford factory in Genk. The reaction to this event in October was clearly exaggerated and did not affect confidence during the months that followed. In February consumer confidence reached its highest level in more than a year. Nonetheless, private consumption growth is not expected to increase any further this year, as is also indicated by the FPB's leading indicator. QoQ growth rates are expected to remain around 0.4% as the very moderate recovery in the labour market should hold consumers back from spending a larger proportion of their disposable income.

## Business investment

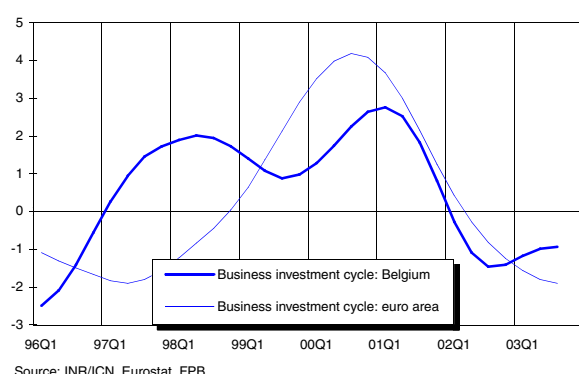
**Table 3 - Business investment indicators**

|                                      | 02    | 03   | 04   | 03Q1 | 03Q2 | 03Q3 | 03Q4 | 03M8 | 03M9 | 03M10 | 03M11 | 03M12 |
|--------------------------------------|-------|------|------|------|------|------|------|------|------|-------|-------|-------|
| Investment (VAT) [1]                 |       |      |      |      |      |      |      |      |      |       |       |       |
| Industrial companies                 | -5.4  | 1.4  | .    | -3.5 | 0.0  | 5.1  | 2.8  | 2.7  | 8.6  | 3.3   | -21.4 | 15.5  |
| Non-industrial companies             | -3.2  | -1.0 | .    | -0.5 | 10.2 | -3.8 | -7.7 | 0.6  | 2.0  | -12.4 | -29.6 | 15.0  |
| Total companies                      | -3.7  | -0.4 | .    | -1.4 | 6.5  | -0.6 | -4.4 | 1.3  | 4.7  | -6.8  | -27.6 | 14.2  |
| Investment survey [1]                | -13.0 | -7.3 | -4.6 |      |      |      |      |      |      |       |       |       |
| Capacity utilisation rate (s.a.) (%) | 79.9  | 78.8 | .    | 78.6 | 77.7 | 79.0 | 79.5 |      |      |       |       |       |

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

Source: NIS/INS, NBB, FPB

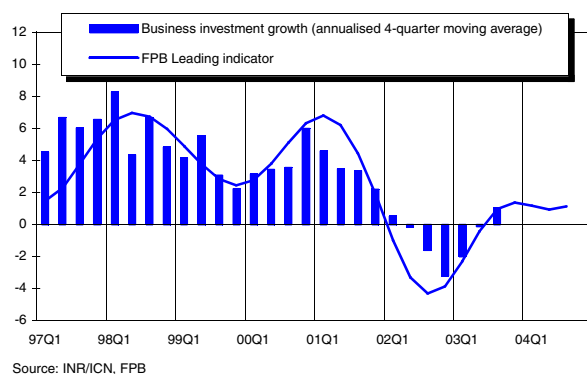
**Graph 11 - Business investment cycle**



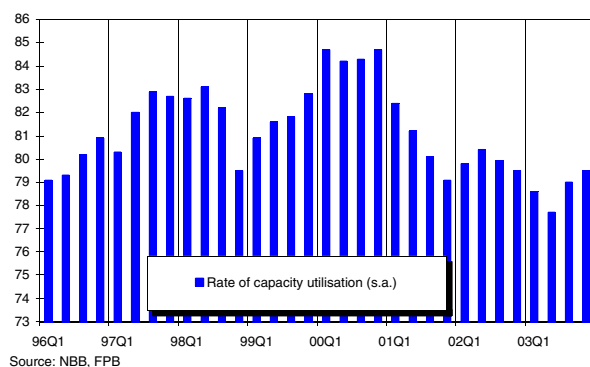
The downturn in business investment in the euro area started two quarters earlier than in Belgium and had not yet come to an end in 2003Q3, while it had done so three quarters earlier in Belgium. As a consequence, Belgian investment was almost 1% below its trend value in 2003Q3, while this gap amounted to approximately 2% in the euro area.

The current upturn in Belgian business investment from 2002Q4 onwards should result in an increase of 2.5% in 2003, after a substantial decline of 3.2% in 2002. This outcome is mainly due to the restoration of profit margins, improved demand prospects and low interest rates. However, the investment upswing has not been very solid up to now as the gains from the first two quarters of last year were washed away during the third quarter when business investment declined by 4.6% qoq. The same hesitation was also seen in VAT-based investment statistics. For both industrial and non-industrial companies, yoy investment growth rates were clearly higher in 2003 than during the first nine months of 2002, but from time to time the picture is disturbed by a plunge in the growth rates. As this was obviously the case in November 2003, investment growth during the fourth quarter will probably not be able to make up for the losses of 2003Q3.

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



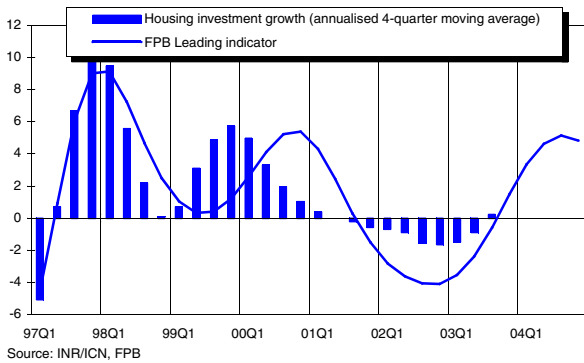
**Graph 13 - Capacity utilisation in manufacturing industry**



Capacity utilisation rates reached a low in the second quarter of last year and have risen again since then due to the recovery in economic activity. Utilisation rates are nevertheless still at a low level. The FPB leading indicator points to a stabilisation of investment growth in 2004, while the investment survey carried out by the NBB in November 2003 revealed that entrepreneurs in the manufacturing industry are planning to invest less this year than last year (-4.6%), although it should be noted that this decrease is mainly due to a peculiarity in the automobile sector. Those figures indicate that the current expansion of business investment is certainly not the kind of boom that was seen during the 1997-2000 period. This is confirmed in our latest projection in which corporate investment is forecast to increase by 3% this year.

## Housing investment

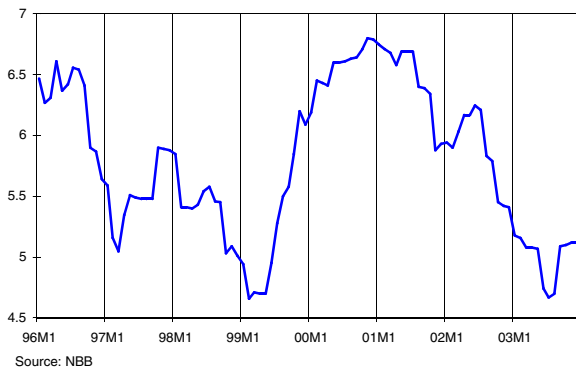
**Graph 14 - Housing investment growth and leading indicator**



After two years of negative real growth, housing investment has begun to rise again since the beginning of 2003, which should have brought the average annual increase to 1.3% last year. This evolution contrasted somewhat with the continuing fall in employment and the weak real disposable income growth, but the upsurge of housing investment should also be seen in the light of building and renovation projects that were postponed due to the gloomy and uncertain economic situation in 2001 and 2002.

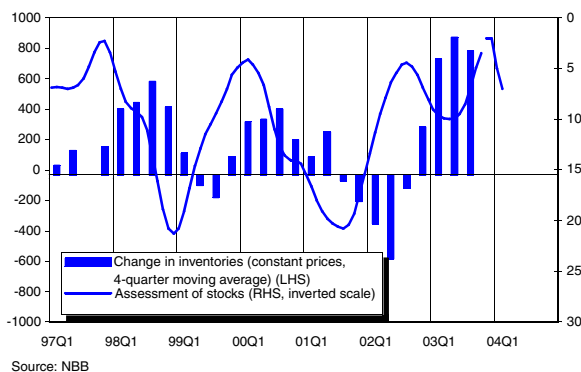
The FPB leading indicator correctly predicted the turning point in housing investment growth at the turn of the year 2002-2003 and continues its progression throughout 2004. The results of the surveys among architects, which usually have a lead of about one year due to the time that passes between decision-making and the start of a building project, were on a moderately upward path throughout 2003. Some indicators taken from the business survey in the building industry, which have a shorter lead, are pointing to an acceleration in housing investment growth during the first half of this year. Moreover, the mortgage rate fell quite substantially since 2001, leading to a progressive increase in mortgage applications for building and renovation projects that continued in 2003. All in all, it is expected that housing investment will continue on its upward path, leading to a growth rate of 2.7% this year.

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



## Stock building

**Graph 16 - Appreciation of stocks**



After three quarters of destocking, the level of stocks increased progressively from 2002Q3 until 2003Q3. Consequently, stocks have had a significant positive impact on GDP growth during the last two years. As the number of entrepreneurs considering their stocks to be excessive rose somewhat from the second half of 2002 onwards, part of the rebuilding process was probably unintentional.

As GDP growth has picked up since mid-2003, the number of entrepreneurs with an excessive level of stocks fell during the second half of last year. At the same time, the pace of stock rebuilding slowed down somewhat. Since the increase in stocks this year should be more or less in line with what was seen last year, changes in stocks should be neutral for economic growth in 2004.

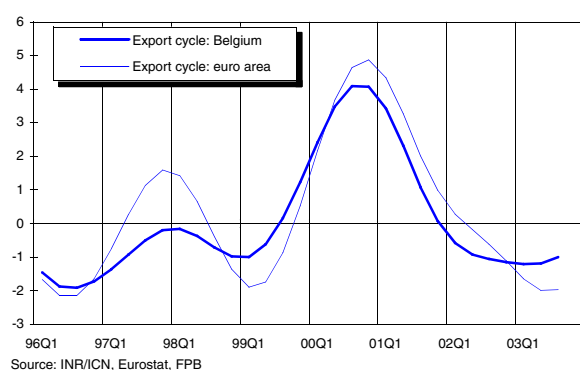
## Foreign Trade

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

|                      | 01  | 02   | 02Q4 | 03Q1 | 03Q2 | 03Q3 | 03M6 | 03M7 | 03M8 | 03M9 | 03M10 | 03M11 |
|----------------------|-----|------|------|------|------|------|------|------|------|------|-------|-------|
| Exports - value [1]  | 4.2 | 7.5  | 10.5 | 0.5  | -1.6 | -1.7 | 0.7  | -3.3 | -5.4 | 2.6  | -6.3  | -3.5  |
| Imports - value [1]  | 3.8 | 5.1  | 11.4 | 1.0  | -3.1 | -1.4 | -1.8 | 0.4  | -4.9 | 0.0  | 0.5   | -1.4  |
| Exports - volume [1] | 2.0 | 8.6  | 10.7 | 1.8  | 1.8  | 2.2  | 2.3  | 2.5  | -1.9 | 5.0  | -0.4  | -2.1  |
| Imports - volume [1] | 1.5 | 7.6  | 11.1 | 3.0  | 1.2  | 2.2  | 1.1  | 6.2  | -1.7 | 2.0  | 6.9   | -2.0  |
| Exports - price [1]  | 2.2 | -0.9 | -0.1 | -1.2 | -3.3 | -3.9 | -1.6 | -5.8 | -3.7 | -2.4 | -6.0  | -1.6  |
| Imports - price [1]  | 2.4 | -2.4 | 0.2  | -1.9 | -4.2 | -3.5 | -2.9 | -5.4 | -3.4 | -1.8 | -6.0  | 0.6   |

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

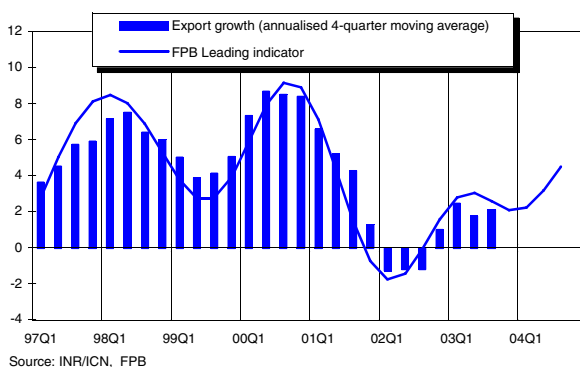
**Graph 17 - Export cycle**



The Belgian export cycle began to bottom out in the first half of last year, but has not yet registered any significant recovery. In the euro area, the turnaround of the export cycle has only taken place in 2003Q3.

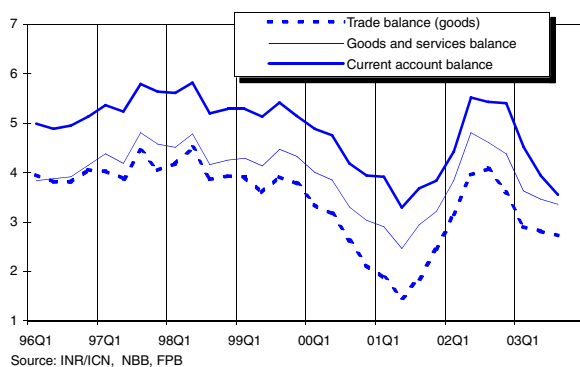
These turning points, coming after more than two years of uninterrupted downward trends and despite the appreciation of the euro exchange rate, are based mainly on the vigorous expansion in world trade from mid-2003 onwards. Most regions contributed to this recovery, though the pace was particularly strong in emerging Asia and in the United States. Although Belgian exports have recently performed better outside than within the euro area, it is worth noting that trade volumes inside the euro area have also recovered.

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



Most leading indicators for Belgian exports have strongly improved in the last few months, suggesting that exports should continue to develop favourably in the near future. According to the FPB leading indicator, Belgian exports could still register strong and significant growth rates during the first half of 2004. They should however slow slightly in the second half of the year, since the rise in our exports markets should decelerate below its trend growth rate and Belgian exports should be dampened by the deterioration in price competitiveness.

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



Trade statistics reflect the already significant deflationary impact of euro exchange rates on trade prices in the second half of last year. During that period, export prices fell for exports outside the euro area while exports prices within the area remained virtually unchanged.

Despite the improvement in the terms of trade, the Belgian current account surplus expressed as a percentage of GDP declined significantly in 2003. This development not only reflects the relatively robust domestic demand compared to weak exports (which can be seen from the decline in the goods and services balance), but also the decline in the net income received from abroad. The latter development largely mirrors the reduction in income from foreign investments as expressed in euro.

## Labour market

**Table 5 - Labour market indicators**

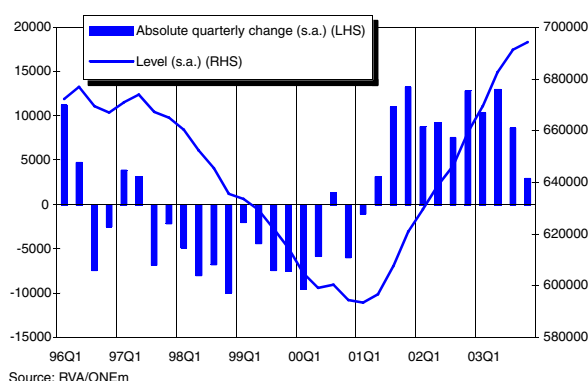
|                                   | 02    | 03    | 03Q1  | 03Q2  | 03Q3  | 03Q4  | 03M8  | 03M9  | 03M10 | 03M11 | 03M12 | 04M1  |
|-----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Unemployment [1][2]               | 643.8 | 684.6 | 669.6 | 682.6 | 691.2 | 694.2 | 690.6 | 693.7 | 692.3 | 693.6 | 696.7 | 699.4 |
| Unemployment rate [2][3]          | 13.3  | 14.1  | 13.8  | 14.1  | 14.2  | 14.3  | 14.2  | 14.3  | 14.2  | 14.3  | 14.3  | 14.4  |
| Unemployment rate-Eurostat [3][4] | 7.3   | 8.1   | 7.8   | 8.0   | 8.2   | 8.3   | 8.2   | 8.2   | 8.3   | 8.3   | 8.3   | 8.4   |

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

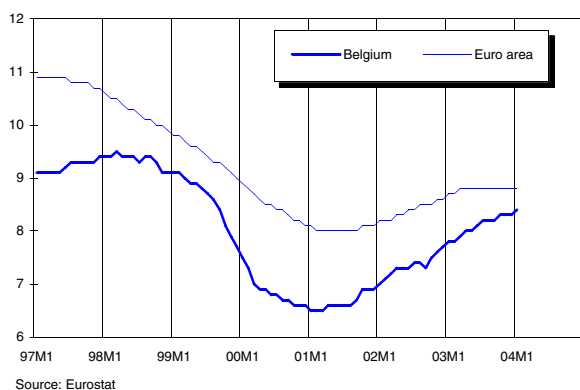
[4] Recent figures are based on administrative data and may be subject to revision

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

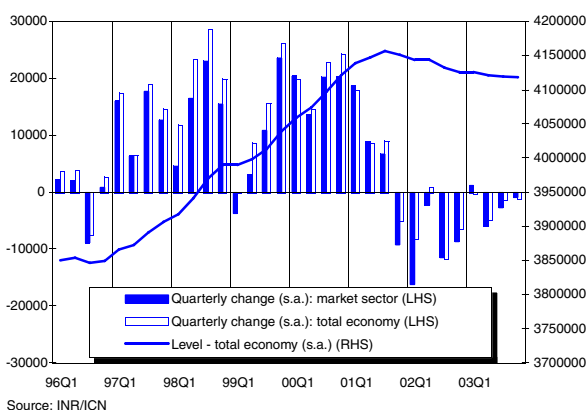
**Graph 20 - Evolution of unemployment (incl. older)**



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



**Graph 22 - Evolution of domestic employment**



At present first-hand administrative information on the evolution of employment last year is entirely lacking, due to a revision of the data-collecting process by social security bodies. Provisional estimates from the quarterly national accounts indicate that, on a quarter-to-quarter, seasonally adjusted basis, private sector employment remained more or less stable during the first quarter of 2003 but dropped again during the second quarter (decrease by 0.2 %). These estimates are in line with the observed evolution of (broad administrative) unemployment during the first half of the year.

Due to structural sociological factors, the labour force is still tending to grow substantially. Three consecutive years of poor economic growth do, however, seem to have slowed down this trend slightly during the past year. Significantly, the number of new entries into the subsidized early retirement scheme has risen sharply. The total number of persons within this scheme rose by 3,600 in the course of last year, reversing a six year long downward tendency.

In view of the observed evolution of unemployment during the second half of the year (clearly diminishing quarter-to-quarter increases) and taking into account the adverse cyclical impact on the labour force, it may be inferred that the rate at which jobs are lost has slowed during the third quarter and that the level of employment has almost stabilized during the fourth quarter. In that case domestic employment would have shrunk by 0.4% last year, giving rise to a further fall in the employment rate (national accounts concept) from 61.8% to 61.3%.

Even when it is taken into account that - due to cyclical influences - the number of hours worked per head fell more in 2002 than in 2003, this evolution of employment still implies something of an acceleration in yearly productivity growth. Hourly productivity growth would have grown by 2.1% in 2003 (against 1.7% in 2002), despite extremely moderate real hourly wage increases during last year.

Prices

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

|                                | 02   | 03   | 03Q1 | 03Q2 | 03Q3 | 03Q4 | 03M9 | 03M10 | 03M11 | 03M12 | 04M1 | 04M2 |
|--------------------------------|------|------|------|------|------|------|------|-------|-------|-------|------|------|
| Consumer prices: all items     | 1.64 | 1.59 | 1.57 | 1.38 | 1.69 | 1.73 | 1.80 | 1.58  | 1.86  | 1.74  | 1.59 | 1.26 |
| Food prices                    | 2.20 | 2.04 | 0.96 | 1.94 | 3.02 | 2.24 | 3.42 | 2.28  | 2.26  | 2.16  | 2.14 | 1.71 |
| Non food prices                | 0.60 | 1.18 | 2.27 | 0.60 | 0.96 | 0.91 | 0.95 | 0.55  | 1.16  | 1.02  | 0.67 | 0.06 |
| Services                       | 2.66 | 1.75 | 0.85 | 1.95 | 1.71 | 2.50 | 1.77 | 2.50  | 2.55  | 2.45  | 2.49 | 2.53 |
| Rent                           | 2.46 | 2.22 | 2.34 | 2.28 | 2.18 | 2.07 | 2.22 | 2.15  | 2.09  | 1.97  | 1.91 | 2.08 |
| Health index                   | 1.78 | 1.45 | 1.20 | 1.39 | 1.59 | 1.63 | 1.67 | 1.56  | 1.72  | 1.60  | 1.56 | 1.31 |
| Brent oil price in USD (level) | 25.0 | 28.8 | 31.4 | 26.1 | 28.4 | 29.4 | 27.1 | 29.6  | 28.8  | 29.8  | 31.1 | 30.9 |

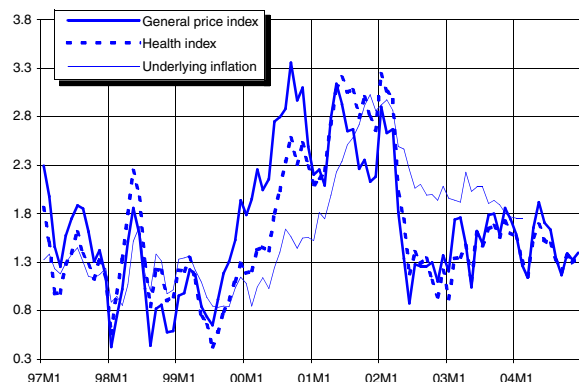
Source: FPS Economy, Datastream

**Table 7 - Monthly inflation forecasts**

|                               | 03M1   | 03M2   | 03M3   | 03M4   | 03M5   | 03M6   | 03M7   | 03M8   | 03M9   | 03M10  | 03M11  | 03M12  |
|-------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Consumer prices: all items    | 111.55 | 112.32 | 112.64 | 112.36 | 112.04 | 112.37 | 112.59 | 112.89 | 113.22 | 112.85 | 113.06 | 112.99 |
| Consumer prices: health index | 110.94 | 111.56 | 111.82 | 111.73 | 111.57 | 111.85 | 112.06 | 112.20 | 112.47 | 112.15 | 112.36 | 112.32 |
| Moving average health index   | 110.60 | 110.88 | 111.22 | 111.51 | 111.67 | 111.74 | 111.80 | 111.92 | 112.15 | 112.22 | 112.30 | 112.33 |
|                               | 04M1   | 04M2   | 04M3   | 04M4   | 04M5   | 04M6   | 04M7   | 04M8   | 04M9   | 04M10  | 04M11  | 04M12  |
| Consumer prices: all items    | 113.32 | 113.74 | 113.92 | 114.22 | 114.19 | 114.29 | 114.43 | 114.39 | 114.54 | 114.42 | 114.56 | 114.57 |
| Consumer prices: health index | 112.67 | 113.02 | 113.11 | 113.47 | 113.45 | 113.57 | 113.73 | 113.68 | 113.82 | 113.68 | 113.82 | 113.83 |
| Moving average health index   | 112.38 | 112.59 | 112.78 | 113.07 | 113.26 | 113.40 | 113.56 | 113.61 | 113.70 | 113.73 | 113.75 | 113.79 |

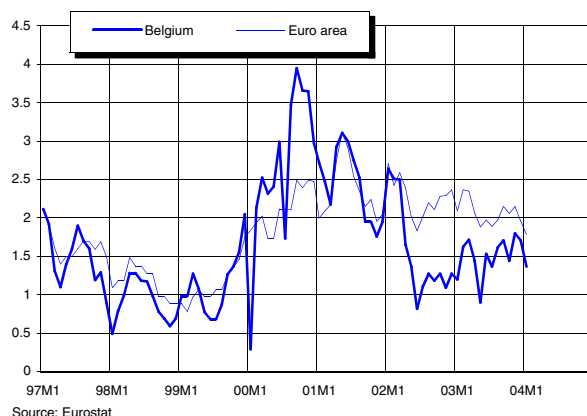
Source: Observations (up to 04M2): FPS Economy; forecasts: FPB

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



Source: FPS Economy, from 04M3 on: forecasts FPB

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



Source: Eurostat

In spite of significant fluctuations in NICP inflation, underlying inflation has remained stable, in a narrow band around 2% yoy, for five quarters (from mid-2002 to the third quarter of 2003). During the last quarter of 2003 the expected deceleration in underlying inflation (to 1.8% yoy) materialised. Underlying inflation should fall further during the course of 2004 (to 1.5% yoy at the end of the year), particularly because low import prices (due to the past appreciation of the euro) have not yet entirely been passed on to consumer prices and because unit labour costs increases should remain limited.

Last year, the abolition/reduction of the radio and television license fees had a downward impact (of 0.3%-point) on headline inflation, but this effect diminished during the course of the year (from 0.5%-point during the first quarter to only 0.1%-point during the last quarter). This feature also explains part of the convergence of Belgian and euro area harmonised inflation rates during the past year (see graph 24). The effect will disappear completely from the last quarter of 2004 onwards.

All in all, average CPI inflation should be 1.5% this year, compared to 1.6% in 2003. According to our monthly forecasts for the 'health index', the pivotal index for public wages and social benefits (currently 113.87) should not be exceeded in 2004.

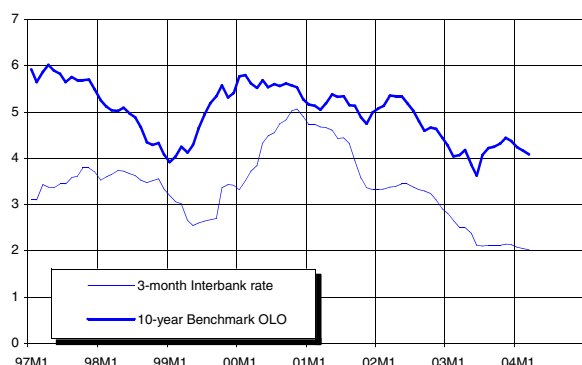
Interest rates

Table 8 - Interest rates

|   | 02   | 03    | 03Q1  | 03Q2  | 03Q3  | 03Q4  | 03M9  | 03M10 | 03M11 | 03M12 | 04M1 | 04M2 |
|---|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|
| <b>Short-term money market rates (3 months)</b>   |      |       |       |       |       |       |       |       |       |       |      |      |
| Belgium   | 3.29 | 2.31  | 2.66  | 2.34  | 2.11  | 2.13  | 2.12  | 2.12  | 2.14  | 2.13  | 2.07 | 2.04 |
| Euro area (Euribor)                               | 3.32 | 2.33  | 2.68  | 2.36  | 2.14  | 2.15  | 2.15  | 2.14  | 2.16  | 2.15  | 2.09 | 2.07 |
| United States                                     | 1.73 | 1.15  | 1.26  | 1.17  | 1.07  | 1.10  | 1.08  | 1.10  | 1.11  | 1.10  | 1.06 | 1.05 |
| Japan   | 0.02 | -0.03 | -0.01 | -0.01 | -0.05 | -0.04 | -0.04 | -0.05 | -0.06 | -0.02 | 0.02 | 0.02 |
| <b>Long-term government bond rates (10 years)</b> |      |       |       |       |       |       |       |       |       |       |      |      |
| Belgium   | 4.97 | 4.14  | 4.13  | 3.89  | 4.18  | 4.37  | 4.24  | 4.31  | 4.44  | 4.37  | 4.24 | 4.17 |
| Germany   | 4.81 | 4.09  | 4.07  | 3.97  | 4.06  | 4.26  | 4.20  | 4.00  | 4.34  | 4.45  | 4.26 | 4.22 |
| Euro area   | 4.90 | 4.13  | 4.11  | 3.93  | 4.15  | 4.34  | 4.23  | 4.28  | 4.41  | 4.34  | 4.22 | 4.16 |
| United States                                     | 4.59 | 3.99  | 3.90  | 3.60  | 4.19  | 4.27  | 4.27  | 4.26  | 4.28  | 4.26  | 4.13 | 4.06 |
| Japan   | 1.24 | 0.99  | 0.79  | 0.59  | 1.23  | 1.36  | 1.51  | 1.39  | 1.38  | 1.32  | 1.33 | 1.24 |

Source: NBB, ECB

Graph 25 - Interest rate levels in Belgium, %

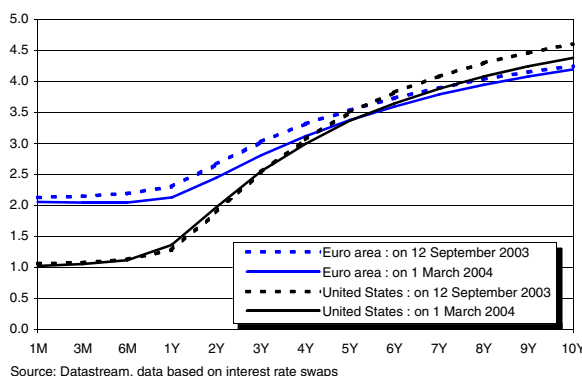


Source: NBB

Despite the ongoing economic recovery in the euro area and the vigorous expansion in the US during the second half of last year, the FED and the ECB have both decided to leave their main refinancing rate unchanged at the low levels they reached after their last reductions in June 2003 (respectively 1% and 2%).

In these two areas, negative output gaps combined with low inflation rates are helping central banks to delay any increase in short-term interest rates that might endanger the current economic recovery. Indeed, in the US, the improvement in the labour market is only timid, particularly when compared to previous upturns. In the euro area, the upturn in the labour market has not yet materialized. Moreover, the ECB does not consider short-term interest rates to be the appropriate instrument to counteract the appreciation of the euro exchange rate vis-à-vis the dollar. As a result, money market interest rates fell slightly in the euro area in the first two months of the current year. This is revealed by some flattening of the euro yield curve for maturities up to twelve months.

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



Source: Datastream, data based on interest rate swaps

In the latest quarters, euro long-term interest rates used to move in tandem with US government bonds. During the summer of 2003, long-term interest rates have risen in both regions. This rise, largely due to shifts in portfolios linked to the recovery in the equity markets, was halted in September 2003 for US bond yields and in November 2003 for euro area bond yields. As a result, euro long-term interest rates once again exceeded US long-term rates from October 2003.

Since then, government bond yields in both areas have been declining slightly, reflecting expectations that the strengthening in monetary policy will come later than previously anticipated by investors on the financial markets.



## Exchange rates

Table 9 - Bilateral exchange rates

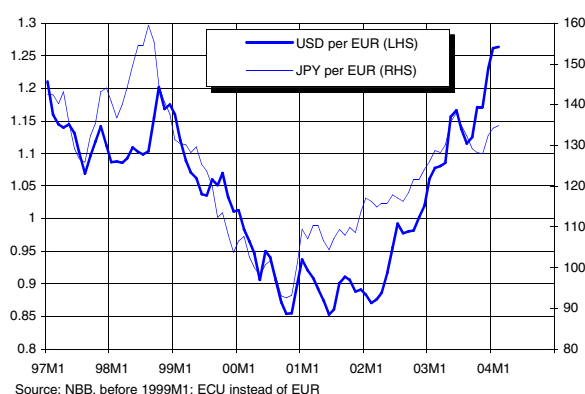
|             | 02     | 03     | 03Q1   | 03Q2   | 03Q3   | 03Q4   | 03M9   | 03M10  | 03M11  | 03M12  | 04M1   | 04M2   |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| BEF per USD | 42.67  | 35.64  | 37.58  | 35.49  | 35.82  | 33.87  | 35.86  | 34.44  | 34.43  | 32.79  | 31.96  | 31.92  |
| USD per EUR | 0.945  | 1.132  | 1.074  | 1.137  | 1.126  | 1.191  | 1.125  | 1.171  | 1.172  | 1.230  | 1.262  | 1.264  |
| UKP per EUR | 0.629  | 0.692  | 0.670  | 0.702  | 0.699  | 0.698  | 0.698  | 0.698  | 0.693  | 0.702  | 0.693  | 0.677  |
| JPY per EUR | 118.12 | 131.03 | 127.69 | 134.67 | 132.21 | 129.54 | 129.24 | 128.20 | 127.88 | 132.54 | 134.22 | 134.79 |

Table 10 - Nominal effective exchange rates (1990=100)

|                 | 02    | 03    | 03Q1  | 03Q2  | 03Q3  | 03Q4  | 03M8  | 03M9  | 03M10 | 03M11 | 03M12 | 04M1  |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Euro            | 82.1  | 91.5  | 88.5  | 92.5  | 91.8  | 93.3  | 91.5  | 91.2  | 92.5  | 92.4  | 95.0  | 95.9  |
| Growth rate [1] | 3.0   | 11.4  | 4.7   | 4.5   | -0.8  | 1.6   | -1.1  | -0.4  | 1.4   | -0.1  | 2.8   | 1.0   |
| US dollar       | 119.9 | 107.5 | 111.8 | 108.1 | 107.7 | 102.2 | 108.7 | 106.8 | 103.1 | 102.9 | 100.7 | 98.9  |
| Growth rate [1] | -1.1  | -10.4 | -4.0  | -3.4  | -0.4  | -5.1  | 1.1   | -1.7  | -3.4  | -0.3  | -2.1  | -1.8  |
| Japanese yen    | 140.2 | 140.1 | 139.7 | 137.0 | 138.3 | 145.3 | 137.4 | 141.2 | 145.3 | 145.7 | 144.9 | 144.9 |
| Growth rate [1] | -5.2  | -0.1  | 0.0   | -1.9  | 0.9   | 5.1   | 0.8   | 2.8   | 2.9   | 0.3   | -0.6  | 0.0   |

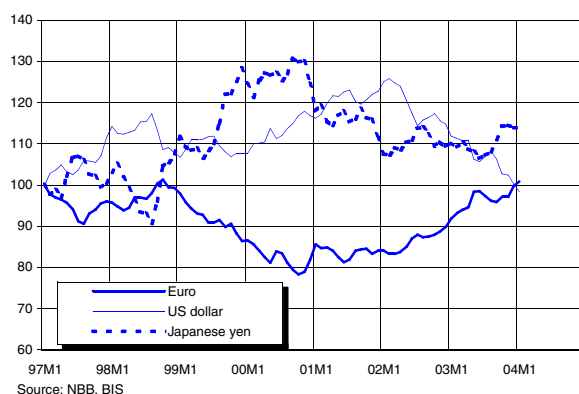
[1] Change (%) compared to previous period  
Source: BIS, NBB

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



The US dollar has continued to depreciate against the euro during the last two quarters of 2003. This downward move, however, did slow down in the two first months of 2004. The positive outlook for the US economy and some decline in the US trade deficit supported the US dollar against the euro from mid-January onwards. The US dollar has also benefited from interventions in the financial markets by the Japanese central bank to prevent the yen from appreciating, as well as from large purchases of US Treasury bonds by Asian central banks wishing to avoid their currencies strengthening against the US currency. The financial markets do not expect any significant move in the US dollar exchange rate in the coming months.

Graph 28 - Nominal effective exchange rates (Jan. 97=100)



Contrary to the evolution of the euro vis-à-vis the dollar, the euro lost some strength against the Japanese yen and UK sterling during the second half of 2003, although it regained some of its losses in December. From the beginning of 2004 onwards, more optimism about Japanese economic prospects led to a halt in the renewed appreciation of the euro against the Japanese yen. During the same period, the most striking exchange rate evolution is the rapid appreciation of the UK sterling against the euro, since robust economic growth in the UK and the recent rise of interest rates by the Bank of England have supported the pound.

As a consequence of these developments, the nominal effective euro exchange rate went up by 11.4% for the whole year 2003 as compared to the preceding year, but by only 2.2% in the second half of 2003 as compared to the first half. In January 2004, the nominal effective euro exchange rate was still around 5% above its average level in 2003.

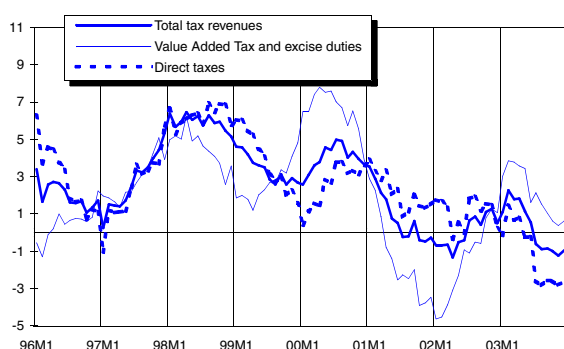
## Tax indicators

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

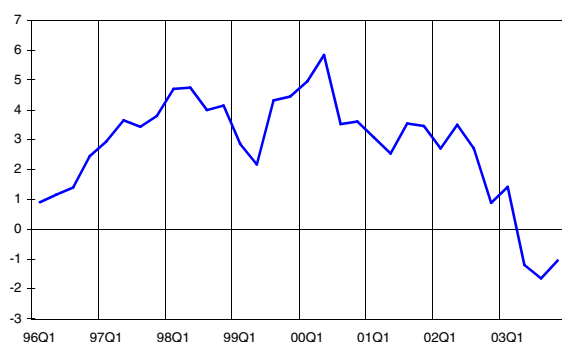
|                                      | 02   | 03   | 03Q1 | 03Q2 | 03Q3 | 03Q4 | 03M7  | 03M8 | 03M9 | 03M10 | 03M11 | 03M12 |
|--------------------------------------|------|------|------|------|------|------|-------|------|------|-------|-------|-------|
| Total [2], of which:                 | 2.2  | 0.6  | 4.9  | -1.9 | 0.1  | 0.7  | -2.5  | 3.3  | 1.6  | 0.9   | 0.4   | 0.6   |
| Direct taxes, of which:              | 1.8  | -1.1 | 2.7  | -2.5 | -2.4 | -1.2 | -8.2  | 6.1  | 3.0  | 1.3   | -3.3  | -2.2  |
| Withholding earned income tax (PAYE) | 2.5  | 0.5  | 2.9  | -2.0 | 0.2  | 1.5  | -16.4 | 24.3 | 13.3 | 2.3   | 2.0   | 0.4   |
| Prepayments                          | -6.4 | -0.8 | .    | 3.2  | -7.7 | -1.8 | -10.0 | .    | .    | -0.6  | .     | -3.1  |
| Value Added Tax and excise duties    | 2.7  | 2.2  | 8.6  | -2.0 | 2.0  | 1.9  | 7.3   | -0.4 | -3.3 | -0.4  | 4.0   | 2.2   |

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

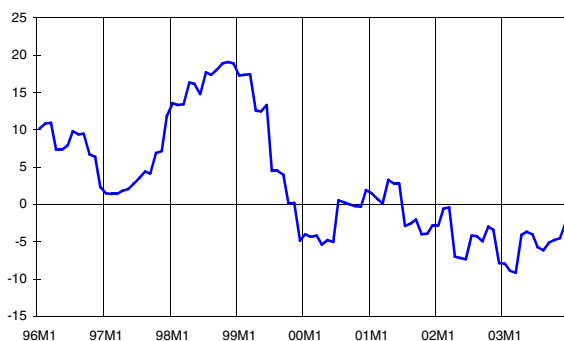
**Graph 29 - Real tax revenues (3)**



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



**Graph 31 - Real prepayments (3)**



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

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

The nominal growth rate of total tax revenues in 2003 (+0.6%) was lower than in 2002 and 2001 (+2.2%). In real terms, growth rates as low as those had not been observed since the beginning of the 1980's.

In 2003, direct tax revenues continued to decelerate: after nominal growth rates of 4.1% in 2001 and 1.8% in 2002, a negative growth rate (-1.1%) was observed in 2003. This was due both to PAYE revenue, only about 0.5% higher in 2003 than in 2002, and to advance payments (0.8% lower than in 2002).

On a yoy 4-quarter moving average basis, PAYE revenue (mainly on wages) has decelerated in real terms since mid-2002. This evolution reflects the fall in employment and additional reductions in the rates of withholding earned income tax, in the context of the fiscal reform decided in 2001. While wage rate increases in 2002 had partially offset the effect of the decrease in total employment and tax cuts, this was no longer the case in 2003.

The fall in prepayments in 2003 was smaller than the year before. In December 2003, however, (December is the last quarterly due date for advance payments), the decrease was 3.1% as compared with December 2002. Prepayments by businesses are less affected than prepayments by self-employed people (which are affected by the personal income tax reform). Taxes on dividends and interest earnings grew negatively in 2003 as they did in 2002; the latter are affected by the fall in average interest rates and shifts within financial portfolios towards untaxed or differently taxed assets.

Based on a 12-month moving average, the growth rate in indirect taxes (VAT and excise duties) had recovered by the end of 2002 and is currently showing moderately positive growth (2.2% over the 12 months of 2003, in nominal terms, as compared to 2002). The rise in VAT revenues (about 2%) is a little weaker than that of its tax base, due to the increase in VAT reimbursements related to exports. Growth in excise duty revenues was slightly higher (about 3% in 2003), due to increases in duties on tobacco and energy products.

## Administrative burdens in Belgium in 2002

In response to the Council of Ministers and in collaboration with the 'Dienst voor Administratieve Vereenvoudiging/Agence pour la Simplification Administrative' (DAV/ASA), the FPB has estimated the cost of the administrative burdens facing companies and self-employed persons in 2002. The estimation of these administrative burdens is based on a national survey and uses the same methodology as the one in the previous survey carried out for the year 2000. Businesses are invited to make their own assessment of the administrative burden imposed by three areas of legislation: burdens caused by environmental legislation, employment legislation and tax legislation. The Planning Paper is devoted to an analysis of the results of the 2002 survey and a comparison with the results of the 2000 survey.

The administrative burdens, based on the responses from companies, are estimated to amount to EUR 6.3 billion or 2.4% of GDP and the estimate based on the responses from self-employed persons amounted to EUR 2.7 billion or 1.0% of GDP. In comparison with the results of the same survey in 2000, the relative share of administrative burdens expressed as a percentage of GDP, is declining slightly for companies but rising slightly for self-employed persons. It is worth noticing that these estimates give an order of magnitude for the administrative burdens but not the exact amount, in view of the statistical confidence interval surrounding the results.

Employment legislation is perceived as creating the greatest share of the total estimated administrative burdens on companies. Between the two areas of legislation (environmental and tax legislation) that were analysed for self-employed persons, the administrative burdens are highest in the area of tax legislation. Environmental legislation caused the smallest share of the burden for both companies and self-employed persons.

In both 2000 and 2002, small companies (with less than ten employees) face the highest administrative burdens expressed as a percentage of turnover and per employee. These small companies appear to be bearing even higher burdens than self-employed persons, although the average administrative costs of self-employed persons have risen considerably during the last two years.

In addition to this quantitative analysis, the survey also has a qualitative part in which the business sentiments were studied on issues relating to administrative burdens. The majority of self-employed persons and companies expressed the feeling that administrative burdens have become greater during the last two years, whatever the area of legislation considered. This feeling does; however, appear to be less strong among compa-

nies in the case of burdens due to environmental legislation and among self-employed persons in the case of burdens due to tax legislation.

Companies and self-employed persons are both generally more satisfied with their contacts with the administration than with the quality of legislation. For all areas of legislation, companies and self-employed people are relatively satisfied with the public information accompanying the legislation. Lack of flexibility is the most criticized aspect of the legislation. This lack of flexibility refers to the complex nature of the legislation not allowing it to cover all situations. The quality of contacts with the administration during the period 2000 to 2002 has improved in the area of taxation, according to companies and self-employed persons. Conversely, the quality of contacts with administration in relation to environmental affairs has declined.

For companies and self-employed persons, the priority in the process of administrative simplification is the improvement of legislation, independently of activity, region or firm size. One exception is the construction sector, which attaches more importance to the improvement of information delivered by administrative services.

Electronic applications to simplify administrative procedures are better known as the size of companies increases. Electronic applications to provide information are not well known among self-employed persons while those to simplify transactions are generally better known. The percentage of users of the various applications depends on the sector and the application under consideration.

Finally, several projects involving structural changes were presented to companies and self-employed persons. The introduction of electronic payments is the best-known project. Small and medium-sized companies mostly support the introduction of a unique identification number, while large companies favour the introduction of electronic payments more.

*"De administratieve lasten in België voor het jaar 2002", "Les charges administratives en Belgique pour l'année 2002", A. Joos, C. Kegels, Planning Paper 94.*

## Methodologies to describe, analyse and assess the implementation of Sustainable Development.

Three Working Papers review the methodological activities that have been needed to fulfil the three ambitious functions of the Federal Reports on Sustainable Development, as well as ongoing development of these areas of work. Under the Belgian law of 5 May 1997 on the *Co-ordination of Federal Policy on Sustainable Development Policy*, the Federal Planning Bureau is responsible for producing these Federal Reports biannually.

These reports are prepared by the transdisciplinary Task Force on Sustainable Development. The three main functions assigned to them by this law are:

- the review of the existing situation regarding sustainable development in relation to international developments;
- the (ex post) evaluation of the federal government's policy in the area of sustainable development;
- the (ex ante) evaluation of current trends and expected developments based on relevant assumptions in relation to alternative policy measures.

All these functions concern the description, analysis and assessment of the implementation of sustainable development commitments. Belgium, among other countries, committed itself at the Rio conference in 1992 to carry out this kind of exercise on a regular basis. Efforts to implement the law of 5 May 1997 as effectively as possible must therefore also be seen in an international context. Two Federal Reports have now been issued. The following three Working Papers respectively focus on these three functions.

### Future prospects for Sustainable Development

This WP presents methodological issues and ongoing developments of work on foresight, or (ex ante) evaluation of current trends and expected developments, based on pertinent assumptions concerning alternative policy measures.

It focuses mainly on the various approaches which could (not) be, and have been, adopted to fulfill this third ambitious function of the Federal Reports on Sustainable Development. It also looks at what the third report will contribute to this field.

Chapter 1 describes various techniques for integrated future foresight: trend extrapolation and computer modelling, risk analysis, scanning and participatory approaches, and scenario analysis. It lists the requirements for scenarios that can take complexity into account and still remain useful to policy makers.

Subsequently, chapter 2 reviews 12 future foresight approaches from the scientific literature. These are mainly carried out on a European scale. Most of them deal explicitly with sustainable development and closely related questions. This *state of the art* in the area of sustainable development foresight includes an appraisal of elements that could be useful in the third Federal Report on Sustainable Development.

Chapter 3 of the Working Paper describes the methodologies that were used for scenario building in the first two Federal Reports on Sustainable Development. The starting-point here is the existence of several types of scientific uncertainty concerning the evolution of environmental, social, economic and institutional systems

and the ways in which these different systems interact. Moreover, a series of uncertainties regarding future collective action (including government policy) also results from differences of perspective in relation to present developments and future risks.

Uncertainty involves risks, which are perceived differently in society depending on one's perception of society's resilience, the environment's absorption capacity, the possibility of working out technological solutions in time and so on. These differing perceptions of risks may be schematised in what is called a "perspectives grounding action".

The scenarios of trends and expected developments proposed in the first two Federal Reports on Sustainable Development were both based on these "perspectives grounding actions". In the second report, however, this way of thinking has been worked out in much more detail, following a "10 step" approach explained in the Working Paper.

Chapter 4 anticipates some of the requirements for the elaboration of a third report, the Federal Report on Sustainable Development. It proposes to use participatory techniques, e.g. to identify risk perceptions on the basis of active participation of various stakeholders. The goal is to take both complexity and reality into account more effectively, while enhancing the relevance and usefulness of these reports for all policymakers.

*"Toekomstverkenning voor een duurzame ontwikkeling",  
T. Bernheim, Working Paper 1-04, February 2004.*

## Indicators for Sustainable Development

This WP presents methodological issues and ongoing developments in the work on indicators intended to describe, analyse and assess situations in relation to international developments. Its main focus is on the various frameworks adopted by different international and Belgian Federal institutions to organize the information contained in these indicators.

This review and international comparison are firmly rooted in the concrete experiences of members of the Task Force. Some of them have played an active part in these developments at various international levels (UN, OECD, UE), during the past decade. At the Belgian Federal level, this working paper explains in particular the methodological framework adopted in the Federal Reports on Sustainable Development. It also accounts for other progress made in relation to sustainable development indicators in Belgium in the process of implementing the law of 5 May 1997 on the *Co-ordination of the Federal policy on Sustainable Development*.

Chapter 1 proposes a definition of various terms linked to the concept of an indicator as well as a definition of the concept of an “indicator for sustainable development”. It describes three methodological frameworks which link together the indicators from a common underlying perspective: the framework DPSIR (which links Driving force to Pressure, State, Impact and Response), the triangle (which links together the social, economic and environment components of development) and the tetrahedron (which adds a fourth institutional component to the triangle).

Chapter 2 then presents the main results of international work programs on indicators for sustainable develop-

ment: the work program of the UN Commission on sustainable development and the OECD work programs. At the level of the EU, it describes the work done on structural indicators by Council Working Groups to feed the decision-making process, as well as the work on indicators for sustainable development done by the Eurostat Task Force.

Chapter 3 describes the uses of indicators for sustainable development in Belgium for the two first Federal Reports on Sustainable Development and the First Federal Plan for sustainable development. This chapter explains how the indicators have been presented and selected in these three documents. Chapter 3 also presents the comments made by the public on the indicators proposed in the Draft Plan for Sustainable Development during the public consultation procedure in relation to this document. Finally it describes the work done on indicators within the Interdepartmental Committee for Sustainable development.

Finally, Chapter 4 proposes some conclusions on improving the use of indicators in subsequent Federal Reports on Sustainable Development. They tend to improve the links between the three core parts of the report (existing situation, policy implementation and foresight). They also aim at refining the methodological framework used to present and select indicators, while keeping the thread of these presentations in the successive reports.

*“Indicateurs pour un développement durable: aspects méthodologiques et développements en cours”, N. Zuinen, Working Paper 4-04, February 2004.*

## Evaluation of Sustainable Development Policy

This WP presents methodological issues and ongoing developments in work on the (ex post) evaluation of the federal Government’s policy in the field of sustainable development. It focuses mainly on the various approaches which could (not) be, and which have been, adopted to fulfill this second ambitious function of the Federal Reports on Sustainable Development. It also looks at what the third report will contribute to this field.

Chapter 1 begins with a description of the requirements and the uncertainties that shape policy evaluation, including international efforts to monitor and evaluate sustainable development policies. Political requirements can be found not only in the aforementioned law of 5 May 1997 but also in other political documents, such as a resolution from the Belgian parliament and the Belgian Governmental Declaration of 2003.

After this theoretical introduction on uncertainties, the paper looks at the kind of questions and uncertainties that policy-makers and researchers can respond to in the area of policy evaluation. It underlines that not all these questions are relevant within a sustainable development context. It also stresses that the scientific tools available can only address relevant policy questions to a limited extent. Finally, an attempt is made to formalize a clear approach to various types of researcher bias.

Chapters 2 and 3 critically review the foundations and methodologies used in policy evaluation in the first two editions of the Federal Report on Sustainable Development. Since federal policy on sustainable development is very extensive, the first question addressed by both reports was the selection of policy domains to evaluate. The paper indicates how these choices were made. Next, it explains which methodologies and data were used to

deal with these areas of policy. The selection and content of evaluation criteria for sustainable development policy are then discussed. This part of the paper ends with lessons learned from the policy evaluations in the two first Federal Reports on the implementation of sustainable development.

Finally, chapter 4 deals with opportunities, limitations and lessons for the policy evaluation to be carried out for the forthcoming third Federal Report on Sustainable Development (end 2004). For the first time, a Federal Report will have the opportunity to make such an evaluation over a significant number of years covered by a Federal Plan for Sustainable Development.

Like the first two reports, the third Federal Report on Sustainable Development will have a transparent, transdisciplinary and pluralist scientific character. The main objective of its policy evaluation will be to unveil mechanisms or processes that lead to failure or success in sustainable development policy-making. This will require a discussion of the evaluation criteria that have been used until now. Policy evaluation will also be more strongly underpinned by indicators as more of them become available.

*“Beleidsevaluatie inzake duurzame ontwikkeling”,  
P. Dresselaers, Working Paper 6-04, February 2004.*

## A new version of the macrosectoral model HERMES

This Working Paper describes the latest developments in the macroeconomic model HERMES. This new development mainly concerns the disaggregation of the transport and communications branch.

In this working paper we present the third official version of the HERMES macroeconomic model.<sup>1</sup> The first version was built during the 1982-1986 period. In the meantime, the model has been updated and developed on a regular basis<sup>2</sup>. HERMES is suitable for the FPB's medium-term forecasts and variants at a national level. The model follows the tradition of econometric model building based on the analysis of annual time-series. The disaggregated character of the model makes it possible to describe structural shifts between sectors and to visualize the effects of measures or external shocks on the different branches.

Unlike traditional macroeconomic models, hermes also includes a detailed energy module in order to identify the economic flows of different forms of energy in terms of value and quantity, including their greenhouse gas content.

In the new version of HERMES, 16 economic branches are identified (instead of 13 branches in the previous version). The modification of the model consists in the disaggregation of the Transport and Communication branch into 4 sub-branches in the main model<sup>3</sup> (rail transport; urban and road transport; water and air transport; auxiliary transport activities and communication).

The private consumption allocation module has also been modified in order to have a better understanding of the demand for transport services.

This new model should make it possible to describe in detail the behaviour of different kinds of transport activities and how they evolve in the medium term. Effects of measures relating to transport should be also examined.

These developments have been made to support the “Activities in support of the federal mobility and transport policy”, agreement concluded with the Federal Public Service “Mobility and Transport”.

Besides an overview of the additional disaggregations, the working paper also presents a baseline scenario produced using the new version of the model. We also present three variants to illustrate the dynamic properties of the model. A first variant tests the effects of an oil price shock. A second one shows the effects of an increase in excise duties on energy. In both cases energy price increases lead to less fuel consumption and an increased demand for transport services. The real value added of rail transport increases slightly, whereas all other branches - even the less energy-intensive ones - are negatively affected by lower economic activity. As final domestic energy demand falls, CO<sub>2</sub> emissions are reduced in comparison with their baseline level. Finally, the economic impact of additional investments in rail transport is analysed. This measure has a positive impact on households' demand for rail transport services. All branches gain from the increased economic activity and additional purchasing power.

1. Harmonized European Research for Macrosectoral and Energy Systems.
2. For a description of all improvements made to the original version of Hermes until 2000, see: “A description of the Hermes II model for Belgium”, Working Paper 5-00, July 2000.
3. The number of branches can be set at six in a specific module.

*“Une nouvelle version du modèle HERMES”, “Een nieuwe versie van het HERMES-model”, F. Bossier, I. Bracke, S. Gilis, F. Vanhorebeek, Working Paper 5-04, February 2004.*

## The contribution of ICT to economic growth by branch

The aim of this paper has been to assess the contribution of information and communications technology (ICT) to economic performance at branch level in Belgium during the 1991-2000 period. Both output and labour productivity growth have been used as performance indicators. Computer hardware and communications equipment are the two ICT assets that have been integrated into the analysis. The method used is the growth accounting approach used in the framework of neoclassical growth theory to study the sources of economic growth.

During the past three years, the Federal Planning Bureau has been studying the impact of ICT in Belgium (see G. Dekkers & C. Kegels (Eds.), *ICT in Belgium: Social and Economic Impact*, Kluwer 2003, available in French and Dutch). The growth decomposition methodology has been used at the macroeconomic level (see C. Kegels, M. van Overbeke & W. van Zandweghe, *ICT Contribution to Economic Performance in Belgium*, WP 8-02, September 2002).

Section 1 introduces and discusses some questions concerning the modelling of the impact of ICT on economic performance at the sector level in a small open economy like Belgium. It points out that it is ICT utilisation rather than ICT production that matters whenever the aim is to measure the impact of ICT on growth. It also states that the neoclassical framework used in the paper to measure the impact of ICT capital on growth has certain limitations. For example, it cannot take into account externalities related to the utilisation of ICT. Finally, reasons for the growth decomposition analysis being carried out at the sectoral rather than the aggregate level are set out. Since both output/productivity growth and ICT intensity vary to a large extent between industries, a possible link between these variables might be lost if data at the aggregate level were used in the analysis.

Section 2 introduces the growth accounting methodology used in this paper in order to decompose sector output and labour productivity growth into its components, as well as the data used for the implementation of the growth decomposition analysis, especially data

used for the construction of ICT capital stock series at the branch level for the period 1990-2000. The assumptions made for the construction of ICT capital stock series per branch are also carefully explained.

Section 3 presents and discusses the results of the decomposition analysis at the seven-branches level (findings at a more disaggregated sector level, i.e. for 31 sectors, have also been made available). The findings point to an important contribution of ICT capital to output and labour productivity growth within branches. Although this contribution is seldom the most important one – except in the case of the transport and communications industry – the contribution of ICT capital to growth is always positive and increases from 1991-1995 to 1996-2000. In general, it is greater than the contribution from non-ICT capital stock.

Section 4 gives an initial introduction to a number of indicators that measure the intensity of ICT use in an industry. Combining these indicators with branch data for Belgium for the year 1995, which are the only data available, certain industries that intensively use ICT capital goods and others that do not are identified. If ICT use is to exert a positive impact on economic performance, its contribution is expected to be stronger in ICT-intensive industries than in non-intensive ones. Indeed this expectation is true of the ICT-intensive branch as a whole and also for ICT-intensive manufacturing and services industries.

The study shows that ICT does exert a significant and positive impact on economic performance across the branches. If industry data were available covering a longer time span, econometric techniques could be used to obtain estimates of the contribution of ICT to growth.

*“Assessing the contribution of ICT to sectoral economic growth in Belgium: A growth accounting analysis (1991-2000)”*,

*T. Pamukçu, Working Paper 7-04, February 2004.*

## Internal migration in Belgium: who, why and where?

Within the framework of Liveable Cities, the Federal Planning Bureau has undertaken a joint effort together with the Belgian Federal Science Policy Office to scrutinize the geographical evolution and the main determinants of the localization of Belgian population and households. Following the first paper, a descriptive study of population and household residential patterns, this paper studies motives for internal migration from and to Belgian municipalities in general and cities in particular. The following research questions are tackled. Could peri-urbanisation be stopped in the period 1998-2000? What determinants play a role in internal migration movements? What options do cities have in order to obtain a positive internal net migration rate?

Internal migration data at the municipal level was used in this study. The period under investigation is the period from 1998 to 2000.

The net migration rate seems to be influenced most by employment and amenities. Municipalities with low unemployment, high job growth and/or high amenity levels will have higher internal net migration rates. Amenities were measured using an amenity index composed of municipal medical, societal and social care, sports, recreation, hotels, restaurants and pubs, public transport, services with window functions, governmental services, culture, education and retail. This index was found to have a positive impact in attracting citizens to a municipality or its immediate surroundings. Finally, settlement patterns and demographic variables are proven to have a non-negligible effect on internal net migration rates.

The general population sample was then divided into four age categories, all belonging to the 'working' age groups: 18-24, 25-34, 35-49 and 50-64 years. Significant differences in residential migration motives could be detected. This leads us to conclude that the four groups attach a different importance to the determinants, resulting in differing residential patterns.

On a regional level, we found that the language barrier not only forms an obstacle to interregional migration, but also dictates other values of migration determinants.

Finally, we found that Belgian peri-urbanisation could not be halted. Peripheral municipalities still have (higher) positive migration rates, leading to an ongoing pressure on the 'rurban' and rural communes while the exodus from the cities could not be reversed (although it seems to have slowed down).

As this peri-urbanisation trend has a high societal cost in terms of congestion, spatial segregation of population subgroups, duplication of municipal infrastructures, air pollution, urban noise and transformation of scarce recreation and rural land into spatially inefficient residential zones, we are pleading for a reconcentration of the private dwelling function within the urban region. In our view, only a highly interwoven interaction between the residential and economic functions can accomplish this. From this perspective, a number of policy recommendations are put forward. The supply of appropriate and affordable housing, green spaces, child-friendly neighbourhoods, awareness campaigns for specific target groups, coordinated and effective actions, a well thought-out urban mobility plan and a revision of the fiscal system are a few of the proposed initiatives.

*"Interne migraties in België: wie, waarom en naar welke gemeenten? En waarom niet naar steden?",  
Danielle Devogelaer, Working Paper 8-04, March 2004.*



## Conference “Long-Term Energy Outlook for Belgium and Investment in Electricity Production Capacity”

On Wednesday April the 7th the Federal Planning Bureau will be holding a conference on the long-term energy outlook for Belgium on the occasion of the publication of Planning Paper 95, which addresses this subject. The FPB publication also analyses the impact of alternative scenarios focusing on renewable energy sources, nuclear energy and the modal switch in transport.

At the conference, political representatives, representatives of the energy sector and of specialised organisations will be asked to speak in order to discuss different aspects of the issue of investments in electricity generation.

The seminar will take place on April 7 at the “Résidence Palace”. It will begin at 9.30 a.m. and end at 1.00 p.m. It is possible to sign up through the Federal Planning Bureau’s website [www.plan.be](http://www.plan.be).

Seminar fee: EUR 20

## Conference “Tales of the city”

On Thursday April the 22nd the Federal Planning Bureau will be holding a conference headlining the return of the city.

The relationship between urban trends, economic activities and the localisation of citizens will be looked at in two ways:

- recent trends in Belgium and
- the impact of the relationship on the basis of some case studies.

In order to discuss these themes, the conference will host representatives from research institutes, local and federal politicians, leaders of public bodies responsible for town and country planning, and members of the private real estate sector.

The conference will be aimed at actors in the field, institutional actors and pluridisciplinary academic representatives, to facilitate the exchange of different points of view. At the end of the day, these will be presented to the political decision-makers during a round-table discussion.

The seminar will be held at the “Bibliothèque Solvay” starting at 9.30 a.m. and closing at 5.00 p.m. The registration fee, which includes participation and lunch, is EUR 50.

The full programme and the registration procedure can be found on the FPB website at [www.plan.be](http://www.plan.be).

## Other Recent Publications

**Economic forecasts 2004**, February 2004  
(available in Dutch and French)

**Working Paper 03-03**, November 2003.  
“A user’s guide to economic instruments and international climate change policy: What role can they play in a Belgian climate change strategy?”,  
W. van Ierland.

**Working Paper 10-03**, July 2003  
“The AGIR project: Ageing, Health and Retirement in Europe. Bio-demographic aspects of ageing: Data for Belgium”, J. Mestdagh, M. Lambrecht

**Working Paper 11-03**, July 2003  
“The AGIR project: Ageing, Health and Retirement in Europe. Use of health care and nursing care by the elderly: Data for Belgium”,  
J. Mestdagh, M. Lambrecht.

**Working Paper 16-03**, September 2003  
“Effets de certains subsides temporaires à l’embauche: une analyse micro-économique des plans plus et du plan avantage à l’embauche”,  
M. López-Novella.

**Working Paper 17-03**, October 2003  
“De opmaak van de economische begroting: een handleiding”, “Tout savoir sur la confection du budget économique”, L. Dobbelaere, B. Hertveldt, E. Hespel, I. Lebrun,

**Working Paper 18-03**, October 2003  
“Quelques applications à l’aide du tableau entrées-sorties 1995”, L. Avonds, V. Deguel, A. Gilot.

**Working Paper 19-03**, October 2003  
“Een poging tot vergelijking van de Input-Outputtabellen van 1990 en 1995”, L. Avonds .

**Working Paper 20-03**, November 2003  
“Een economische analyse van de productie en distributie van alcoholische dranken”, “Une analyse économique de la production et de la distribution de boissons alcoolisées”, L. Avonds, B. Van den Cruyce.

**Working Paper 21-03**, November 2003  
“Dynamique géographique de l’emploi en Belgique. Déterminants et impact des TIC”, J. Decrop.

**Working Paper 22-03**, December 2003  
“Filialen van Belgische ondernemingen in het buitenland: De BELMOFI-databank”,  
A. Joos, H. Spinnewyn

## Research in progress

### The NEMESIS model

In collaboration with a network of European research institutions, the FPB is developing an international macro-sectoral econometric model. Present developemnts include an extension to new geographical areas (US, Japan) and an upgrade of the modelling of public finances. A new baseline and variants concerning energy, environment and R&D policies are being prepared.  
*contact: fb@plan.be*

### Reforms in network industries

The FPB analyses the economic impact of reforms in network industries in Belgium. The aim is to get a better understanding of the main economic mechanisms at play, to benchmark the Belgian situation with other European countries and to quantify the economic impact of the reforms.  
*contact: jvdl@plan.be*

### The NIME model

The NIME model is the macro-econometric world model of the FPB. On-going research includes a new specification for the natural rate of unemployment, labour supply, and gross capital formation, and the introduction of a separate block for the EU accession countries. Future studies will focus on the impact of labour market policies and on medium term scenarios for the Belgian international economic environment.  
*contact: em@plan.be, pvb@plan.be*

### Input-Output

The FPB prepares Input-Output tables for 2000. These are compiled using the Economic System of Accounts ESA95 and will be methodologically comparable to the tables for 1995. The Institute for National Accounts will transmit the data to Eurostat. The tables should be available in a 60 commodity disaggregation by June 2004.  
*contact: ag@plan.be*

## Recent history of major economic policy measures

- February 2004** The federal Council of Ministers speeds up the transposition of European directives into Belgian law. The transposition of at least half of 59 directives falling within the competence of the federal government is scheduled to take place before the end of March. The remainder will follow soon afterwards.
- January 2004** A number of measures and general orientations are announced by the federal government, aimed primarily at promoting economic growth and employment in the long term. The measures refer notably to encouraging research and development, improving controls of the willingness to work among unemployed people, better social protection for self-employed (higher minimum pension, extension of the public health insurance scheme to cover "small risks" etc.), and stronger tax incentives for the use of restaurant services in Belgium.
- To avoid any detrimental effect on the competitiveness of Belgian industry, the government has decided to put a limit on the charges paid by industry for the transport of electricity.
- The new European rules that extend the minimum rate system to energy taxes for coal, gas and electricity, which had previously only been applied to mineral oils, were transposed into Belgian law. The directive (ref. 2003/96/CE) is part of a set of new rules designed to harmonise tax regimes within the internal market.
- Some significant measures were taken to shift traffic from road to rail. For passenger traffic, commuters are offered free season tickets. Public employees will be the first to benefit and employees of private companies will follow in 2005. The costs will be covered by employers and the federal government. For freight traffic, domestic container services will be subsidised.
- In view of the non-transposition of six European directives on telecommunications into Belgian law, the market regulator BIPT had to publish new rules designed to govern the market in a way that complies with the European directives. These new rules mainly relate to the replacement of the existing authorisation procedure by a simpler procedure of notification for new operators of fixed or mobile telephony or telecommunication networks.
- December 2003** It is decided to split up the national railway company (NMBS/SNCB). A holding structure will be created, with two major companies within it: a network management and a train operating company.
- As a significant step towards administrative simplification, a collaboration agreement is concluded between the federal government, the regional governments and the various communities. This agreement addresses the way the different levels of administration work together, to reduce administrative burdens.
- November 2003** The new Stability Program confirms the budgetary targets set by the Belgian authorities: the budget (for public administrations as a whole) should be in balance next year and in surplus in 2007 (0.3% of GDP).
- October 2003** The European Commission has taken a major step in the modernisation of EU competition policy by inviting Member States and all interested parties to comment on a new Regulation adopted by the EU Council. This regulation will come into force in May 2004. It is a thorough overhaul of the implementation of the anti-trust rules, and will have far-reaching effects on the way the national competition authorities work.
- The 2004 federal budget contains measures implementing different policy initiatives from the July 2003 government agreement. They mainly involve the timing and the mechanism involved in the new reductions in social security contributions (SSC), different tax measures and decisions relating to new expenditure in health care insurance.
- A package of additional employer SSC reductions has been announced, amounting to 0.4bn euro in 2004 and 0.8bn euro in 2005. Some of these will be delivered by modifying the technical parameters for structural SSC, while other initiatives will target specific labour categories: at the very low-wage end, at the very high-wage end on top of the structural reduction in employer SSCs, and young poorly skilled first-time job-seekers. The previously planned and budgeted streamlined system of employer SSC reduction programmes will take effect from 2004 onwards.
- Employment should also benefit from a number of other measures (extension of the service voucher system, etc.).
- The government intends to reinforce the fight against tax evasion and to ensure an improvement in the collection of taxes. Moreover, the government is planning to introduce a special temporary tax aimed at legalizing financial assets held abroad which have illegally escaped taxation until now. These measures account for about 1.1bn euro in the 2004 budget. Besides other one-shot measures, measures accounting for about 0.4bn euro include significantly higher increased energy and tobacco taxation and increases in certain financial asset-related taxes.
- The increase in health care public expenditure (4.5% in real terms in 2004) is aimed at meeting the growing needs of the sector (mainly financing of hospitals and health care workers). There are also some new, smaller measures targeting specific categories of (young) sick people and specific diseases (chronic diseases etc.).
- Thanks to a financial transfer from Belgacom (3.6bn euro in 2003 and 1.4bn euro in 2004) in exchange for the take-over of its pension charges by the State, the government expects the budget to be in surplus in 2003 (0.2% of GDP) and in balance in 2004.
- September 2003** The federal and regional governments reach an agreement on the prefinancing of railway infrastructure. This means that the regions are given some flexibility in stating their priorities in the execution of the 2002-2014 investment plan.
- August 2003** The European Commission considers that a 300 euro million capitalisation for the postal incumbent (De Post/La Poste) does not constitute unwarranted state aid, because the company still finances parts of its public service obligations from its own funds.

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

Abbreviations for names of institutions used in this publication

|                |   |
|----------------|---|
| BIS            | Bank for International Settlements  |
| CPB            | Netherlands Bureau for Economic Policy Analysis                                   |
| CRB/CCE        | Centrale Raad voor het Bedrijfsleven / Conseil Central de l'Economie              |
| DULBEA         | Département d'Economie Appliquée de l'Université Libre de Bruxelles               |
| EC             | European Commission   |
| ECB            | European Central Bank   |
| EU             | European Union  |
| FEBIAC         | Fédération Belge des Industries de l'Automobile et du Cycle "réunies"             |
| FPB            | Federal Planning Bureau   |
| FPS Economy    | Federal Public Service Economy, S.M.E.s, Self-employed and Energy                 |
| FPS Employment | Federal Public Service Employment, Labour and Social Dialogue                     |
| FPS Finance    | Federal Public Service Finance  |
| IMF            | International Monetary Fund   |
| INR/ICN        | Instituut voor de Nationale Rekeningen / Institut des Comptes Nationaux           |
| IRES           | Université Catholique de Louvain - Institut de Recherches Economiques et Sociales |
| NBB            | National Bank of Belgium  |
| NIS/INS        | Nationaal Instituut voor de Statistiek / Institut National de Statistique         |
| OECD           | Organisation for Economic Cooperation and Development                             |
| RSZ/ONSS       | Rijksdienst voor Sociale Zekerheid / Office national de la Sécurité Sociale       |
| RVA/ONEm       | Rijksdienst voor Arbeidsvoorziening / Office National de l'Emploi                 |

Other Abbreviations

|        |   |
|--------|---|
| BEF    | Belgian franc   |
| BoP    | Balance of Payments   |
| CPI    | Consumer Price Index  |
| ECU    | European Currency Unit  |
| EMU    | Economic and Monetary Union   |
| EUR    | Euro  |
| JPY    | Japanese yen  |
| LHS    | Left-hand scale   |
| OLO    | Obligations linéaires / Lineaire obligaties                                     |
| qoq    | Quarter-on-quarter, present quarter compared to previous quarter of s.a. series |
| RHS    | Right-hand scale  |
| s.a.   | Seasonally adjusted   |
| t/t-4  | Present quarter compared to the corresponding quarter of the previous year      |
| t/t-12 | Present month compared to the corresponding month of the previous year          |
| UKP    | United Kingdom pound  |
| USD    | United States dollar  |
| VAT    | Value Added Tax   |
| yoy    | Year-on-year, i.e. t/t-4 (for quarters) or t/t-12 (for months)                  |