

# 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

*After an exceptional year in 2000, world trade growth deteriorated sharply in 2001. The collapse of world trade can be explained by the synchronized slackening of the three main economic powers (United States, Japan, and the European Union). The attacks of 11 September and their economic and political impact have, of course, amplified the downturn. The end of destocking and the hesitant recovery, which, according to certain indicators, may be starting in the United States during the first semester of this year, should allow world trade to regain positive growth rates, although a stronger recovery should not be expected before the second half of 2002.*

*The Belgian economy was severely affected by the slowdown in world trade. On annual average, GDP should have grown by about 1.0% in 2001. In 2002 GDP should record an almost identical average annual increase, i.e. 0.9%. The composition and dynamics should, however, be quite different. After a first quarter marked by the impact of the bankruptcy of SABENA, real GDP should grow at positive qoq rates in a range between 0.5 and 1%. The economic upturn should only have a positive impact on employment by the end of the year. This year, consumer price inflation should fall below 2%. It seems that lower imported inflation is finally beginning to be passed on to the underlying inflation.*

*Our forecast is counting on a gradual recovery in world trade, which should regain its full dynamics by the end of the year. We assume that the positive impact on economic recovery will mainly be observed in 2003. A strong recovery earlier this year would of course have a positive impact on growth in Europe and in Belgium as long as it does not give rise to an increase in oil prices.*

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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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## The business cycle in Belgium and the euro area: a comparison

In this special topic we analyse the similarities and differences between the Belgian and euro area business cycles over the last two decades. First we will compare the amplitude of GDP cycles and the contributions of the various elements towards the global final demand cycle. Next we will examine whether any empirical evidence can be found for the often cited 'leading character' of the Belgian business cycle vis-à-vis the euro area cycle.

To evaluate the properties of these business cycles<sup>1</sup> we have extracted the cyclical component from GDP and its elements<sup>2</sup>. This means that the series has been corrected for seasonal and incidental factors and for the trend. Cyclical components can be interpreted in the same way as an output gap. For example, when the cyclical component of private consumption has a value of 1, this means that private consumption is 1% higher than its trend value at that moment.

### Amplitude

To evaluate the amplitude of the cyclical component of GDP in Belgium and the euro area, their standard deviations were calculated over different samples. The bigger these standard deviations, the wider the range within which the cyclical component is varying. Table 1 shows that the amplitude of the business cycles is generally smaller in the euro area than in Belgium. This is mainly explained by the fact that the GDP cycle in the euro area is an aggregate of a number of national cycles which do not have exactly the same evolution and turning points. Aggregation of the national cycles to obtain the euro area business cycle smooths out these differences.

**Table 1 - Standard deviation of the cyclical component of GDP in Belgium and the euro area**

	1981-2000	1981-1990	1991-2000
GDP Belgium	0.90	0.77	1.02
GDP euro area	0.74	0.42	0.94

### Contributions of expenditure elements

In this context, the contribution of an element towards final demand must be understood as the extent to which each element contributes to the cyclicity of final demand<sup>3</sup>. We can divide this contribution into three parts.

1. Note that quarterly national accounts were used for this purpose.
2. Note that 'element' is used to refer to the different uses of goods and services, such as consumption, investment and exports, while we use 'component' to talk about the trend, the cycle, the seasonal and the irregular component of a variable.
3. The final demand was used to calculate the contributions, because imports contribute in a negative way to the GDP. This would have made it difficult to interpret the contribution of imports.

The first part is the weight of the element in final demand. The greater its weight, the higher the contribution of that element towards final demand. The second part of the contribution is the standard deviation of the cyclical component of the relevant element relative to the standard deviation of the final demand cycle. The more volatile the element in comparison with final demand, the greater its contribution towards the final demand cycle will be. The third factor that determines the contribution is the correlation between the cycle for the element and the final demand cycle. The greater this correlation, the higher the contribution. It is clear that all three factors must be high to obtain a large contribution.

**Table 2 - Contributions of expenditure elements to the cycle of final demand (1991-2000)**

	Belgium	Euro area
Private consumption	0.18	0.19
Government consumption	0.04	-0.03
Gross fixed capital formation	0.13	0.28
Inventory changes	0.05	0.13
Exports of goods and services	0.60	0.42
Final demand	1.00	1.00

Private consumption contributes approximately 20% towards the final demand cycle both in Belgium and the euro area. The quite large contribution from private consumption is due to the high weighting of this element in final demand and its high correlation with final demand, contrary to its relative standard deviation which is quite low in comparison with the other elements. The small contribution from government consumption is mainly the consequence of the small correlation with the final demand cycle. Government consumption (as well as public investment) seems to develop almost independently of the global business cycle.

Some significant differences can also be pointed out between Belgium and the euro area. Exports of goods and services contribute much more to final demand in Belgium than in the euro zone, which can be explained by the more open character of the Belgian economy. In a complementary way, the contributions of inventory changes and gross fixed capital formation are much higher in the euro area than in Belgium. This is a consequence of the weighting of these elements in and their correlation with final demand, which is higher for the euro area than for Belgium.

### Timing

It is often said that the Belgian business cycle leads the euro area cycle due to the fact that Belgian exports consist mainly of intermediate goods, which should be in-

fluenced by the business cycle at an earlier stage than final goods.

To check whether the data support these claims, the correlations between the GDP cycles of Belgium and the euro area and the correlations between the cycles of the various elements are shown in table 3. The first thing that should be mentioned is the close correlation between the business cycles in Belgium and the euro area. This correlation is higher than between the euro area and some of its members which have a higher share of euro area GDP<sup>1</sup>.

**Table 3 - Correlation between the cycles in Belgium and the euro zone (1981-2000 for GDP, 1991-2000 for the elements of GDP)**

	-3	-2	-1	0	+1	+2	+3
GDP	0.60	0.75	0.87	0.93	0.91	0.82	0.66
Private consumption	0.48	0.60	0.71	0.79	0.81	0.74	0.60
Gross fixed capital formation	0.39	0.57	0.70	0.76	0.78	0.76	0.70
Exports	0.07	0.44	0.73	0.88	0.85	0.66	0.33

Note: A positive number in the first row indicates that we are testing whether the Belgian cycle leads the euro area cycle, while a negative number implies that we are testing whether the Belgian cycle is subject to a lag.

The fact that the correlations decline only at a slow pace -or even rise- when we move from column "0" to the right side of table 3, indicates that the Belgian cycles do lead those of the euro zone. The correlations do not support the view that this leading character is due exclusively to the nature of Belgian exports.

It would be dangerous to draw conclusions from these correlations alone. When seeking to determine whether a variable is leading another one, it is important to focus on the turning points of the two variables. Correlations are not ideal in this respect because they consider the whole cycle. To avoid this problem, the so-called "randomization test for matched pairs", which focuses solely on turning points, was carried out for GDP and export cycles for Belgium and the euro area. Another advantage of this test is that it allows us to determine by how many quarters the Belgian economy leads that of the euro area.

**Table 4 - Lead profile of Belgian exports and GDP**

Confidence level to reject the null hypothesis	0	1
GDP	96.9	12.5
Exports	55.6	0.0

Table 4 allows us to conclude that the Belgian business cycle leads that of the euro zone by one quarter since we can reject the null hypothesis (the Belgian GDP cycle does not lead the euro area cycle) with a confidence level of 96.9%. Once again, however, it is not confirmed

1. The correlation between the German and the euro area cycle is only 0.69. This correlation is 0.87 for Italy, which is also somewhat lower than for Belgium (0.93).

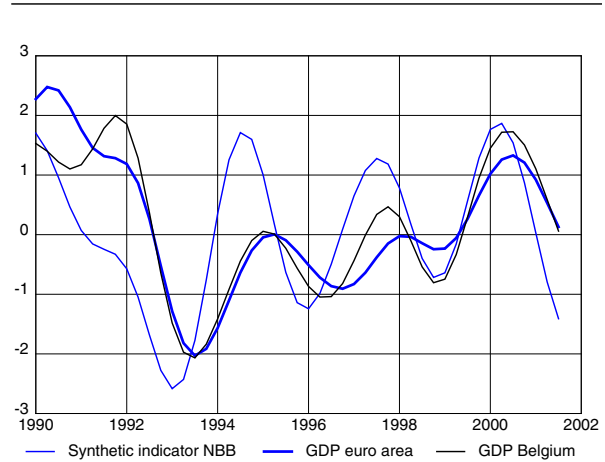
that this phenomenon can be explained by the structure of Belgian exports. A possible explanation could be that the Belgian final demand cycle leads that of the euro area because domestic demand in Belgium is more sensitive to exports as compared with the euro area as a whole.

### Business cycle indicators

Since we know that the Belgian economic cycle is strongly correlated with that of the euro area and leads it, the synthetic business cycle indicator of the National Bank of Belgium (NBB) could be of interest since this indicator is available more quickly. The NBB indicator is a qualitative indicator which is based on a business survey. Just like other qualitative indicators, the NBB business cycle indicator performs well when it comes to predicting the turning-points of the business cycle, but the amplitude of the GDP cycles is quite different in comparison with the amplitude of the indicator.

An inspection of graph 1<sup>2</sup> confirms that the Belgian business cycle leads that of the euro area. It is also clear, however, that the synthetic indicator of the NBB leads the Belgian cycle. The formal tests point to the same conclusion as the visual inspection of the graph. They reveal that the synthetic indicator has a lead of one quarter with respect to the Belgian business cycle.

**Graph 1 - Normalized cyclical component of the Belgian and the euroland GDP, and the business cycle indicator of the NBB (1990Q1-2001Q3)**



When we add up these leads, we can conclude that the NBB's synthetic indicator leads the GDP cycle for the euro area by two quarters. These conclusions explain why the Belgian economy and its indicators are of great interest when seeking to forecast turning-points in the euro area GDP cycle.

2. Note that these cycles were normalised because business cycle indicators typically have a much larger amplitude than the business cycles themselves. The normalisation process assures that all the cyclical components have a comparable amplitude (on average over the period concerned).

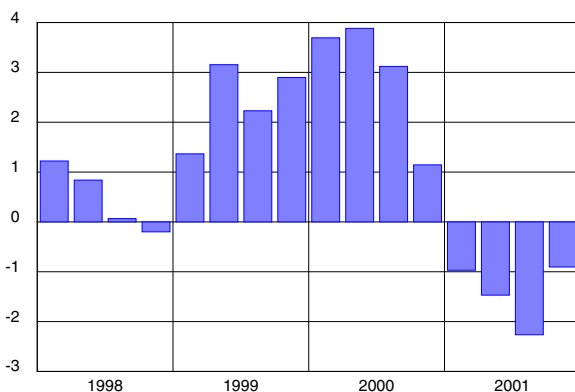
The FPB has prepared economic forecasts for the Institute of National Accounts (INA). After approval by the Board of Directors and the Scientific Committee of the INA, these forecasts serve as the basis for the federal budgetary control of receipts and expenditures in 2002.

Limited economic growth in 2001 and 2002

After an exceptional year in 2000, world trade growth deteriorated sharply in 2001 and recorded negative qoq growth rates throughout the year. The collapse of world trade can be explained by the synchronized slackening of the three main economic powers (United States, Japan, and the European Union), the first two of which even entered a recession during the summer of 2001. The attacks of 11 September and their economic and political impact have amplified the downturn. In the countries of the euro area, the fall in exports, which began in the first quarter of 2001, was swiftly followed by decreasing investment and significant destocking.

The end of destocking and the hesitant recovery, which, according to certain indicators, may be starting in the United States during the first semester of this year, should allow world trade to regain positive growth rates, although a stronger recovery should not be expected before the second half of 2002. Under these conditions the growth of world trade should remain below an annual average of 2% in 2002, after a growth of more than 11% in 2000 and less than 1% last year.

**Graph 2 - World trade: imports of goods qoq growth rates in volume, seasonally adjusted**

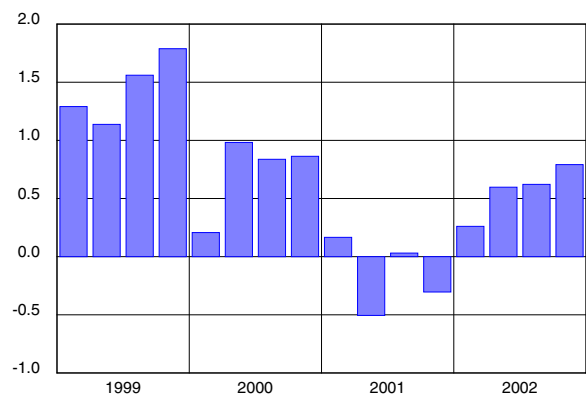


The Belgian economy was severely affected by the slowdown in world trade. Whereas yoy GDP growth still reached 3% during 2001Q1, it will probably turn out to be negative by the end of the year. As in the rest of the euro area, this deterioration was initiated by the fall in exports, rapidly followed by declining business investment and significant destocking. On annual average,

GDP should have grown by about 1.0% in 2001.

In 2002 GDP should record an almost identical average annual increase, i.e. 0.9%. The composition and dynamics should, however, be quite different. Real household disposable income should grow by 2.0% because of wage and social benefit indexation rates in excess of inflation, the further abolition of the additional crisis tax and the reductions granted within the framework of personal income tax reform. Private consumption expenditure should, however, grow less rapidly (+0.9%) as it should be affected by the negative effects of higher unemployment and the fall in financial wealth of households during the course of last year. As a result the savings ratio should increase sharply this year from 14.6% to 15.5%. As the survey of architects seems to indicate, housing investment should decline this year and record only a weak average annual growth (+ 0.5%).

**Graph 3 - Quarterly GDP at constant prices qoq growth rates seasonally adjusted, corrected for working days**



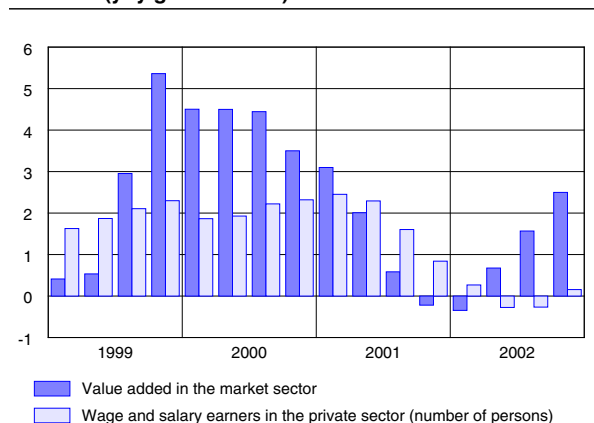
Business investment should give rise to faster economic growth as from the second half of this year, but, given the deterioration of corporate profitability in recent years, this effect should be only moderate. Average annual business investment should increase by merely 0.6% in 2002. Destocking should gradually become blurred, so that stockbuilding should contribute positively to growth in 2002 (+ 0.5%). After a first quarter marked by the impact of the bankruptcy of SABENA, exports should gradually rally from the second quarter onwards, stimulated by the recovery in world trade and reach a year-on-year growth of almost 5% by the end of the year. On annual average, however, export growth should not exceed 1.4%. The recovery of domestic and foreign demand should generate an increase of about 2% in imports of goods and services. The balance of current transactions should therefore, in spite of slightly better terms of trade, not exceed 4.7% of GDP in 2002 as compared with 5.1% in 2001.

### The evolution of the economic activity has a delayed effect on employment

The slowdown in economic activity, measured on the basis of year-on-year growth of the value added of the private sector, started during the fourth quarter of 2000. The effects on employment only emerged during the second quarter of last year. On annual average, total domestic employment should have increased by about 45,000 people in 2001, i.e. a growth of 1.1%. Hence, labour productivity per hour in the private sector should only have increased by 0.7% in 2001.

In 2002 the economic upturn should only have a positive impact on employment by the end of the year. Under these circumstances, domestic employment should, on average, decrease by 2000 units.

**Graph 4 - Value added and employment in the private sector (yoy growth rates)**



As a consequence, the employment rate (defined as the labour force as a percentage of the population of working age) should fall in 2002 and reach 59.3% on June 30 as compared to 59.6% the year before. The annual average number of unemployed, according to the definition of the Ministry of Employment<sup>1</sup>, should amount to 492,500 as compared with 469,500 in 2001.

### Inflation below 2% in 2002

Inflation, as measured by the national consumer price index, has cooled down during the last few months. In the last quarter of 2001 it amounted to 2.2%, which represents a fall of 1 percentage point from the peak in May 2001. On the other hand, underlying inflation rose until November before decreasing as from the end of the year. It seems that lower imported inflation is finally beginning to be passed on to the underlying inflation. The

1. These figures take into account modifications made by FOREM (as from November 2001) and ORBEM (as from January 2002) – both regional employment agencies – in their registration method of job searchers.

downward trend should continue in 2002 and underlying inflation should thus come down from about 3% in January to 2% in December.

The abolition of the radio and TV licence fee in the Flemish and Brussels-Capital Regions is another factor that will influence inflation forecasts for 2002. According to the chosen working hypothesis, the licence fee will be withdrawn from the price index in two steps: 50% in April and 50% in October. In comparison with the situation where the fee is maintained at its December 2001 level, the price index will fall by 0.3 percentage points in April and again by the same amount in October. This will reduce the average annual growth rate of the national consumer price index in 2002 by 0.29 percentage points (and the average annual growth rate of the health index by 0.32 percentage points).

All in all, the consumer price index should rise this year by 1.6%, as compared with 2.5% last year and the health price index, which excludes petrol and diesel prices, should increase slightly faster - i.e. by 1.8% - after a 2.7% rise in 2001. The private consumption deflator (which does not take into account the TV licence fee) should grow by 1.9% this year. The pivotal index for public wages was reached in January 2002. Social benefits and public wages will therefore be adjusted in line with the cost of living through a rise of 2%, which will be granted in February and March of this year respectively. According to our monthly health index forecasts, the pivotal index for public wages and social benefits (currently 111.64) should not be passed again this year.

### Uncertainties associated with the world economic recovery in 2002

In comparison with the forecasts made in November in the wake of the attacks of 11 September, the world military and political situation seems less worrying. Moreover, the economic situation in the US seems to be stabilising, and some indicators are tending to confirm a recovery for next spring. In the euro area, where stronger growth should not be expected before the second semester, there is not yet any tangible evidence of an economic upswing. It seems that Japan will not be able to break the deflationary spiral and should be in recession again in 2002.

Our forecast is counting on a gradual recovery in world trade, which should regain its full dynamics by the end of the year. We assume that the positive impact on economic recovery will mainly be observed in 2003. A strong recovery earlier this year would of course have a positive impact on growth in Europe and in Belgium as long as it does not give rise to an increase in oil prices.

## Economic forecasts for Belgium by the Federal Planning Bureau

Changes in volume (unless otherwise specified) (data in ESA-95)

	1999	2000	2001	2002
Private consumption	2.1	3.8	1.7	0.9
Public consumption	3.2	2.5	2.1	0.9
Gross fixed capital formation	3.3	2.6	0.3	0.2
Final national demand	2.2	3.8	0.4	1.3
Exports of goods and services	5.0	9.7	-0.4	1.4
Imports of goods and services	4.1	9.7	-1.3	2.0
Net-exports (contribution to growth)	0.9	0.5	0.6	-0.3
Gross Domestic Product	3.0	4.0	1.0	0.9
p.m. Gross Domestic Product - in current prices (bn euro)	235.54	248.34	257.28	265.45
National consumer price index	1.1	2.5	2.5	1.6
Consumer prices: health index	0.9	1.9	2.7	1.8
Real disposable income households	2.5	2.0	1.6	2.0
Household savings ratio (as % of disposable income)	16.1	14.7	14.6	15.5
Domestic employment (change in '000, yearly average)	54.5	60.2	44.7	-2.0
Unemployment (Eurostat standardised rate, yearly average) [1]	8.8	7.0	6.3	6.7
Current account balance (BoP definition, as % of GDP)	5.1	4.4	5.1	4.7
Short term interbank interest rate (3 m.)	2.9	4.4	4.2	3.5
Long term interest rate (10 y.)	4.8	5.6	5.1	5.2

[1] This yearly series takes into account more recent NIS/INS information than the Eurostat-series given in table 6. Other unemployment definitions can be found on page 14.

## Economic forecasts for Belgium by different institutions

	GDP-growth		Inflation		Government balance		Date of update
	2001	2002	2001	2002	2001	2002	
Federal Planning Bureau	1.0	0.9	2.5	1.6	.	.	2/02
INR/ICN	1.0	0.9	2.5	1.6	.	.	2/02
National Bank of Belgium	1.0	.	2.5	.	0.2	.	2/02
European Commission	1.3	1.3	2.4	1.4	0.0	-0.2	11/01
OECD	1.1	1.4	2.4	1.2	0.0	0.0	11/01
IMF	1.2	0.7	.	.	0.0	-0.9	12/01
BBL	1.1	1.0	2.5	1.6	0.2	-0.2	2/02
Fortis Bank	1.0	0.7	2.5	1.0	0.0	-0.7	1/02
Dexia	1.1	1.2	2.5	1.9	.	.	2/02
KBC Bank	1.0	1.2	2.5	1.2	-0.2	-0.4	1/02
Morgan Stanley	1.0	1.0	2.5	1.7	0.3	-0.1	2/02
Petercam	1.0	0.75	2.5	1.6	0.2	-0.75	2/02
IRES	1.3	0.6	2.5	1.2	0.2	-0.2	1/02
DULBEA	1.0	0.75	2.5	1.25	0.2	-0.4	1/02
Consensus Belgian Prime News	1.2	1.0	2.5	1.5	0.0	-0.3	1-02
Consensus The Economist	1.1	1.0	2.5	1.5	.	.	2/02
Consensus Wirtschaftsinstitute	1.4	2.0	2.4	1.6	-0.1	-0.2	11/01
<b>Averages</b>							
All institutions	1.1	1.0	2.5	1.5	0.1	-0.4	
International public institutions	1.2	1.1	2.4	1.3	0.0	-0.4	
Credit institutions	1.0	1.0	2.5	1.5	0.1	-0.4	

Collaborating institutions for The Economist: ABN Amro, Deutsche Bank, EIU, Goldman Sachs, HSBC Securities, KBC Bank, Merrill Lynch, J.P. Morgan, Morgan Stanley, Nordbanken, Primark Decision Economics, Royal Bank of Canada, Salomon Smith Barney, Scotiabank, Shinsei Bank, UBS Warburg  
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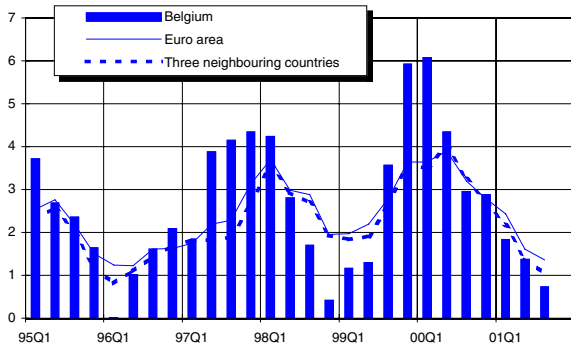
General economic activity

**Table 1 - GDP: change compared to the same period in the previous year, in %**

			YoY growth rates, in %					QoQ growth rates, in %				
	99	00	00Q3	00Q4	01Q1	01Q2	01Q3	00Q3	00Q4	01Q1	01Q2	01Q3
Germany	1.7	3.2	3.2	2.5	1.8	0.6	0.4	0.1	0.2	0.4	0.0	-0.1
France	3.0	3.5	3.4	3.2	2.9	2.2	2.0	0.7	0.9	0.4	0.2	0.5
Netherlands	3.7	3.5	3.1	2.2	1.5	1.6	1.0	0.6	0.5	-0.1	0.3	0.1
Belgium	3.0	4.0	3.0	2.9	1.8	1.4	0.7	0.8	0.9	0.2	-0.5	0.0
Euro area	2.6	3.4	3.2	2.8	2.4	1.6	1.4	0.4	0.6	0.6	0.1	0.1
United States	4.1	4.1	4.4	2.8	2.5	1.2	0.8	0.3	0.5	0.3	0.1	-0.1
Japan	0.7	2.4	1.0	1.9	1.2	-0.4	-0.5	-0.7	0.3	1.0	-1.2	-0.5

Source: INR/ICN, National sources, Eurostat

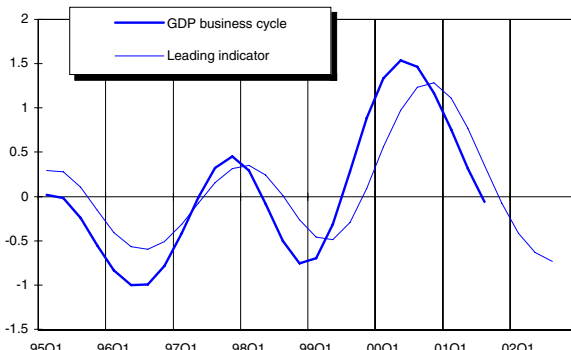
**Graph 1 - GDP-growth (t/t-4), in %**



Source: INR/ICN, National sources, Eurostat

During the third quarter of 2001 both the US and the euro area economies stagnated on a quarterly basis and yoy growth dropped slightly for both areas. Initially the trough of the cycle had been expected to be somewhere between the second and the third quarter, but following the shock of the terrorist attacks in September forecasts of recovery had to be revised, not only for the US economy but also for the euro area. Business and consumer confidence fell severely and the return to growth was postponed until 2002.

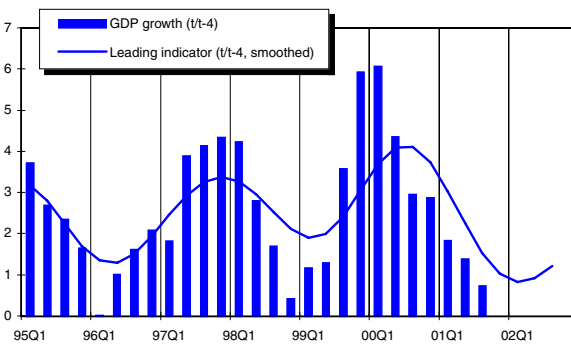
**Graph 2 - GDP business cycle and leading indicator**



Source: INR/ICN, FPB

The situation in Japan in 2001 was even worse than in the US or the euro area. After a very marked negative growth rate in the second quarter, the data for the third quarter is not indicating any improvement. Due to insufficient domestic and foreign demand, both 2001 and 2002 should be years of recession for Japan.

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



Source: INR/ICN, FPB

After a very bad second quarter qoq GDP growth in Belgium is still zero during the third quarter, while yoy growth has been declining ever since the second half of 2000. According to the leading indicator the turning point for yoy GDP growth should be seen during the first quarter of 2002. Moreover, the leading indicator of the cyclical component of GDP also seems to be moving towards a trough, although it has not yet reached on the graph. Finally, the industrial confidence indicator for Belgium has already passed its minimum in October and is now on an upward trend.

Among Belgium's neighbours, France performed best during the third quarter of 2001 with a rather surprising qoq growth rate of 0.5%, mainly due to sustained growth in private consumption. Germany's economy, on the other hand, is growing at rates below the average as a result of a weak final demand.



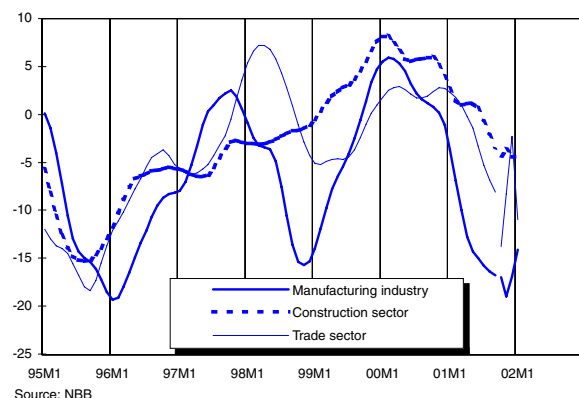
**Table 2 - Monthly business surveys [1]**

	00	01	01Q1	01Q2	01Q3	01Q4	01M8	01M9	01M10	01M11	01M12	02M1
Synthetic indicator	3.8	-10.5	-3.9	-10.7	-13.3	-14.2	-12.1	-17.0	-14.6	-15.1	-12.8	-12.2
Manufacturing industry	3.5	-14.1	-6.5	-15.5	-16.8	-17.6	-15.4	-21.1	-17.0	-19.0	-16.9	-14.1
Construction sector	6.5	-1.5	0.0	0.8	-2.6	-4.1	-4.1	-5.3	-4.3	-3.7	-4.4	-4.4
Trade sector	2.7	-2.9	4.2	0.1	-7.7	-8.1	-4.8	-9.7	-13.8	-8.3	-2.3	-11.0

[1] Qualitative data

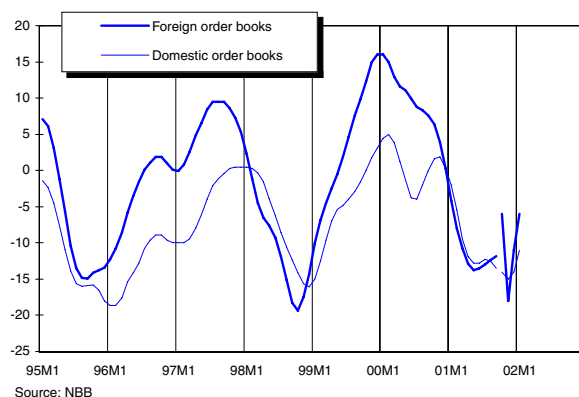
Source: NBB, FPB

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



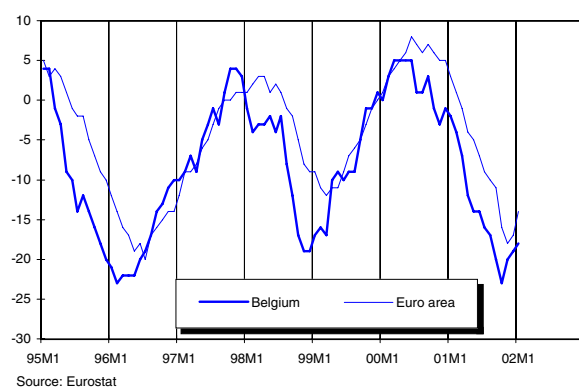
The NBB synthetic indicator leads general economic activity and therefore its profile makes it possible to draw conclusions on the future evolution of the Belgian economy. The economy had been on the decline almost continuously since August 2000 and cautious signs of recovery were smashed in September 2001 by another sharp fall. Since then, however, an upturn has taken place and the indicator has returned to the level it had reached in August this year. Indeed, growth expectations are better now than they were in the autumn and the fall may have been partly due to overshooting.

**Graph 5 - Manufacturing industry: order books**



The manufacturing sector has been affected particularly severely by the recent economic downturn. Its indicator, which is more volatile than those of the other sectors, fell sharply between the fourth quarter of 2000 and the second quarter of 2001. It is still oscillating around a value of about -17 without a clear upward trend, proving that the manufacturing sector is still not in very good shape. This can be at least partly explained by the weakness of export markets, which mainly influence the manufacturing industry.

**Graph 6 - Industrial confidence: international comparison**



The lack of positive signals for the sector is confirmed by the situation of foreign order books, which have not improved decisively in recent months. Domestic order books for the manufacturing sector, on the other hand, have, after a dramatic fall in September, recovered since October, which provides a glimmer of hope.

Trade and construction have resisted better than manufacturing, but these indicators have also lost some ground. While the indicator for the construction industry has been stagnating during the last months of 2001, the one for trade has shown very strong signs of recovery during the same period. The trade sector does indeed depend mainly on domestic demand, which is expected to improve gradually in 2002.

Private consumption

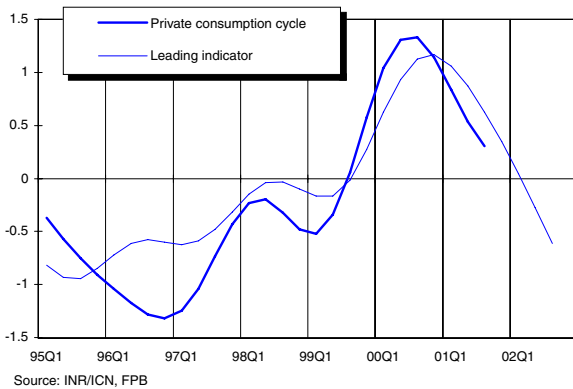
**Table 3 - Private consumption indicators**

	00	01	01Q1	01Q2	01Q3	01Q4	01M8	01M9	01M10	01M11	01M12	02M1
Turnover (VAT) - retail trade [1]	8.9	.	6.6	7.2	4.8	.	5.0	1.3	2.8	0.9	.	.
New car registrations [1]	5.2	-5.1	-13.9	-7.6	5.1	4.8	5.9	-2.9	6.5	2.5	5.0	-2.6
Consumer confidence indicator [2]	13.5	0.6	9.7	5.0	1.0	-13.3	1.0	-3.0	-13.0	-18.0	-9.0	-6.0

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

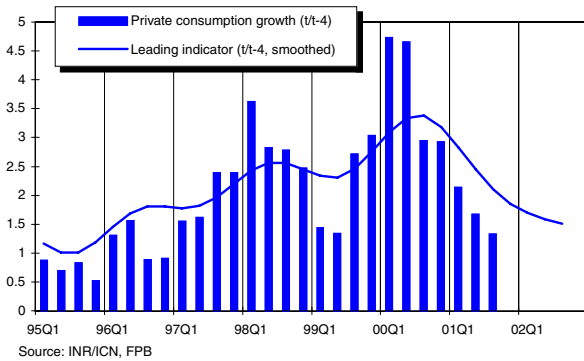
Source: NIS/INS, Eurostat, Febiac, FPB

**Graph 7 - Private consumption cycle and leading indicator**



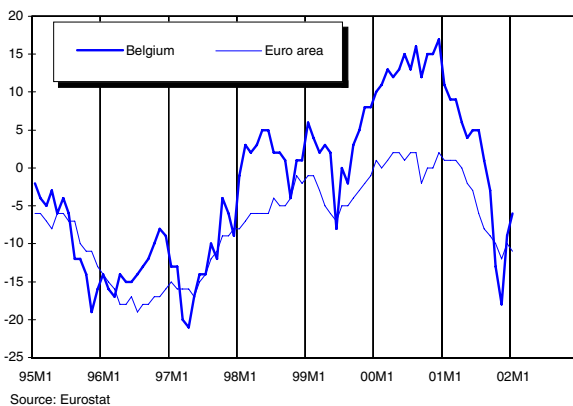
Source: INR/ICN, FPB

**Graph 8 - Private consumption growth and leading indicator**



Source: INR/ICN, FPB

**Graph 9 - Consumer confidence: international comparison**



Source: Eurostat

The private consumption cycle follows the GDP cycle fairly closely. Private consumption had already reached its maximum during the third quarter of 2000 and has been declining ever since. Nonetheless, it has been the only real driving force behind GDP growth in 2001 owing to a sustained expansion of disposable income, i.e. household purchasing power. Indeed, pay rises negotiated before the downturn, continuing job creation, a favourable evolution of inflation in the second half of the year and indexation rates in excess of CPI inflation have all contributed to sustained growth in real disposable income in 2001, thereby cushioning the shock to private consumption.

The forecasts for 2002 are much gloomier, with yoy growth of less than 1%. The leading indicator for the private consumption cycle does not yet seem to be tending towards a turning point. The leading indicator for the growth of private consumption, however, does appear to be nearing its bottom. These developments and forecasts are confirmed by the fall in the growth rate of retail trade turnover since the summer.

But there are positive signs as well. Consumer confidence reached a turning point in November and its level is far less negative in January than two months earlier. This should speed up the recovery of private consumption in the course of this year. The consumer confidence indicator for Belgium had been dropping sharply since early 2001. The fall in the indicator for the euro area, which has also passed its minimum, has been less severe. Moreover, car registrations in Belgium are expected to rise during the spring following the Brussels motor show in January. Indeed households usually delay car purchases until after the motor show.

## Business investment

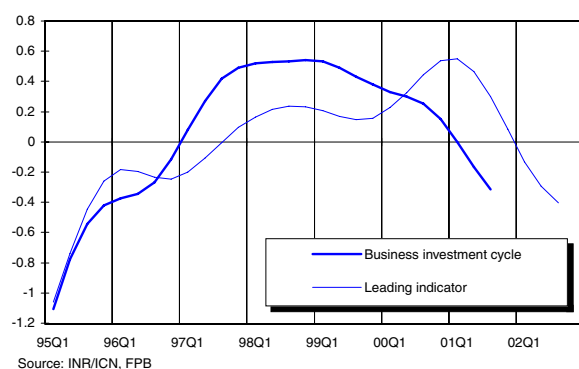
**Table 4 - Business investment indicators**

	00	01	02	01Q1	01Q2	01Q3	01Q4	01M7	01M8	01M9	01M10	01M11
Investment (VAT) [1]												
Industrial companies	3.3	.	.	2.5	-0.7	3.4	.	15.3	9.4	-10.5	-2.1	2.4
Non-industrial companies	8.5	.	.	6.1	3.6	2.9	.	4.7	-0.5	4.4	4.2	28.2
Total companies	6.6	.	.	4.8	2.2	3.1	.	8.5	3.2	-1.7	2.1	18.8
Investment survey [1]	2.8	1.2	0.5									
Capacity utilisation rate (s.a.) (%)	84.5	80.7	.	82.4	81.2	80.1	79.1					

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

Source: NIS/INS, NBB, FPB

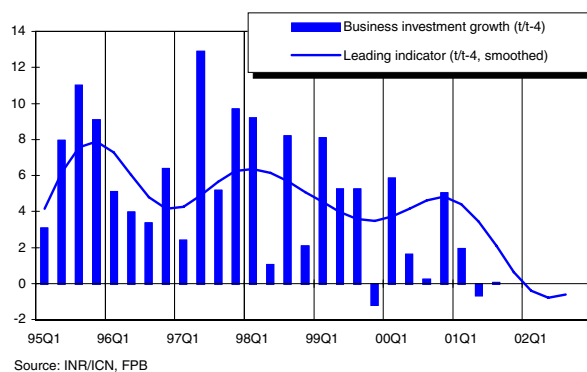
**Graph 10 - Business investment cycle and leading indicator**



The business investment cycle showed almost no signs of weakening during the downturns in the global business cycle in 1995 and 1998. Accordingly, business investment grew at an average growth rate of 5.5% during the second half of the 1990s after a fall in investment during the first half of the 1990s. The investment rate at constant prices (real business investment as a percentage of real GDP) increased from 12.1% in 1994 to 14.2% in 1999.

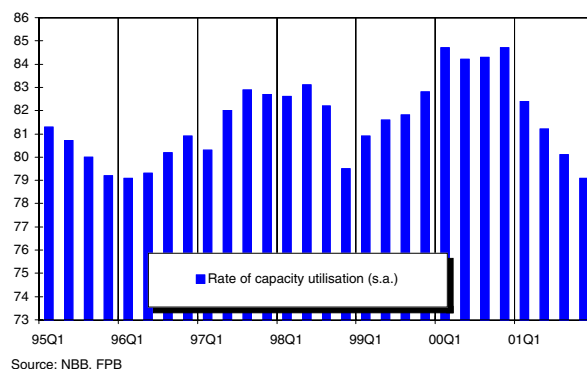
Contrary to the two previous cycles, the business investment cycle has really been hit during the most recent economic downturn. Simultaneously with the downturn in the global business cycle, the business investment cycle points to a serious weakening from the second half of 2000 onwards. An acceleration of business investment is not expected until the final months of 2002.

**Graph 11 - Business investment growth and leading indicator**



The deteriorating business investment climate during the course of 2001 coincides with a sharp decline in the rate of capacity utilisation in the manufacturing industry (from 84.7% in the first quarter of 2001 to 79.1% in the fourth quarter). The level reached at the end of 2001 is the lowest for the past six years.

**Graph 12 - Capacity utilisation in manufacturing industry**

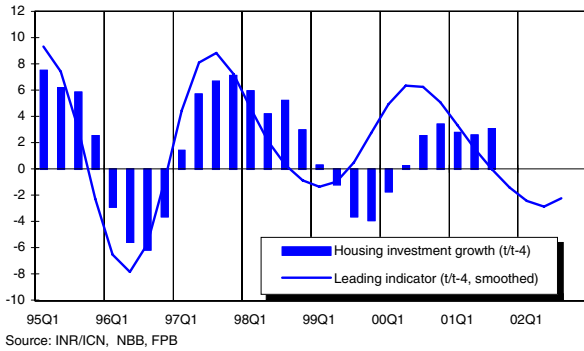


The results from the November 2001 survey carried out in manufacturing industry also point to very weak growth (0.5% in nominal terms) in investment projects in 2002.

The decline in business profitability (e.g. as measured by the gross operating surplus of corporations as a percentage of value added) during the last two years is yet another factor that accounts the weakening of business investment growth in 2001 and the slow pace of recovery that is expected in the second half of this year.

## Housing investment

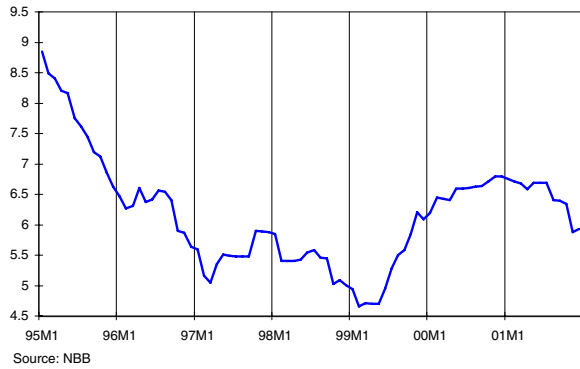
**Graph 13 - Housing investment growth and leading indicator**



The global downturn in the GDP cycle that started in the second half of 2000 has so far not affected investment in housing. From the third quarter of 2000 until the third quarter of 2001, yoy growth rates of investment in housing at constant prices fluctuated around 3%. During the second and third quarters of 2001 housing investment actually grew by more than 1% qoq (i.e. more than 4% annualised).

According to a number of indicators (including the survey of architects) which are reflected in the FPB's leading indicator profile, housing investment should slow down significantly during most of 2002.

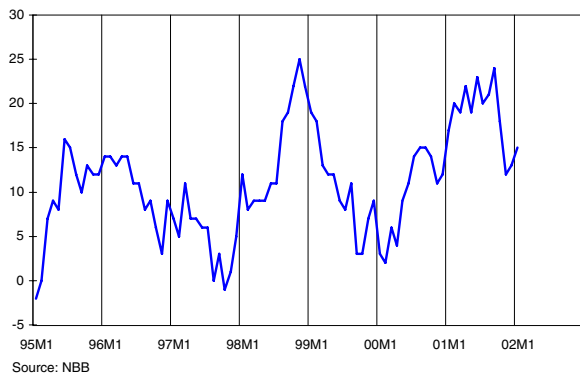
**Graph 14 - Mortgage rate (in%)**



As the upturn in the business cycle becomes clearer and especially as the labour market situation begins to improve, and assuming that mortgage rates do not rise substantially, the housing investment cycle could begin to recover by the end of 2002. This upturn will come too late, however, to contribute much towards the average growth rate of housing investment in 2002.

## Stockbuilding

**Graph 15 - Appreciation of stocks**



The slowdown in the business cycle that started in the last months of 2000 was partly triggered by substantial destocking on the part of firms, as was also the case in other European countries. Consequently, the yoy contribution of stockbuilding towards economic growth was negative from the last quarter of 2000 until the last quarter of 2001. All in all, stocks made a large negative contribution of -1% to Belgian GDP growth in 2001.

Looking at graph 15, it seems clear that the number of entrepreneurs who consider their stocks to be excessive fell dramatically during the last months of last year. This leads to the conclusion that the de-stocking that has adversely affected growth in 2001 should come to an end, implying a positive contribution from stockbuilding on average in 2002.

## Foreign Trade

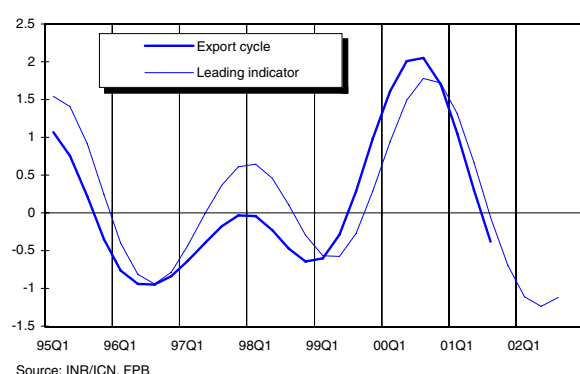
**Table 5 - Belgium - Trade statistics (goods, intra/extrastat)**

	99	00	00Q4	01Q1	01Q2	01Q3	01M6	01M7	01M8	01M9	01M10	01M11
Exports - value [1]	4.5	21.3	20.6	11.7	5.8	1.2	10.0	8.2	3.3	-6.5	-5.8	-6.8
Imports - value [1]	4.5	24.3	22.5	12.8	7.5	-1.3	8.9	6.5	-3.4	-6.1	-6.5	-12.6
Exports - volume [1]	5.0	10.4	8.4	6.0	0.8	0.2	4.5	4.5	2.2	-5.1	-2.8	-4.8
Imports - volume [1]	3.2	10.4	8.1	5.4	1.5	-3.2	1.5	0.8	-4.9	-5.3	-2.3	-8.0
Exports - price [1]	-0.6	9.9	11.2	5.4	5.0	1.0	5.2	3.6	1.1	-1.5	-3.1	-2.1
Imports - price [1]	1.2	12.6	13.2	7.1	6.0	2.1	7.3	5.6	1.6	-0.8	-4.3	-5.0

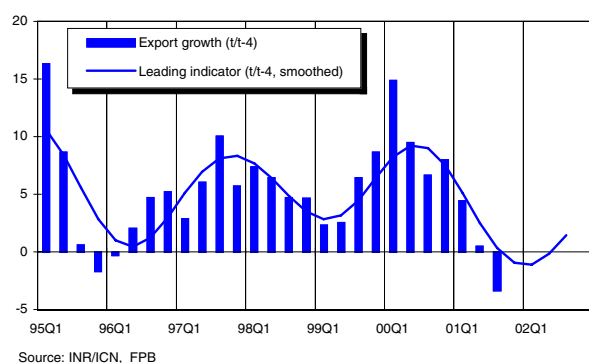
[1] Change (%) compared to same period previous year

Source: INR/ICN, FPB

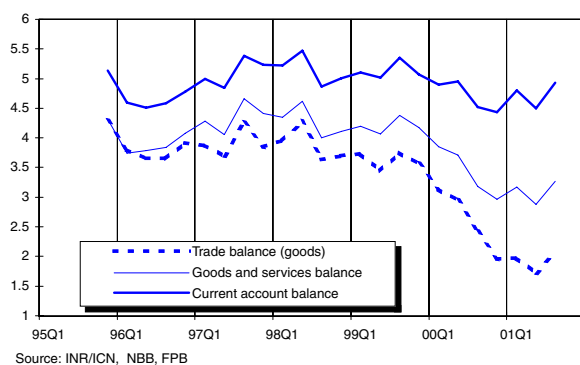
**Graph 16 - Export cycle and leading indicator**



**Graph 17 - Export growth and leading indicator**



**Graph 18 - Belgium foreign balances (4 quarters cumul,% of GDP)**



While world economic growth has slowed down from more than 4% in 2000 to 2% in 2001, world trade growth actually came to a halt last year, plummeting in September. Belgian export markets have been dragged downwards by this adverse international environment. After a record growth of almost 12% in 2000, export markets for Belgium have even been shrinking on a yoy basis during the third quarter of 2001 and are expected to continue doing so until the second quarter of 2002.

Last year export levels followed declining potential export markets and export growth has been slowing throughout the year. The overall growth rate for 2001 should be slightly negative. First signs of recovery are, however, emerging as shown by the leading indicator which shows that export growth has bottomed out at the turn of the year. An upturn in export growth is indeed a positive sign for the economy as a whole.

The slowdown of final (both internal and external) demand has led to a reversal of import growth: a marked expansion of about 10% in 2000 has given way to a decrease in 2001, which is even larger than for exports. The contribution of net exports to growth was therefore still positive in 2001.

Under the influence of the global economic slowdown and a weakening oil price – which has dropped by a third since May -, world prices have been falling throughout 2001. Moreover, the effective exchange rate for Belgium has appreciated during the course of last year. As a result Belgium's terms of trade seem to have recovered and are remaining constant in 2001 after relatively large losses in 1999 and 2000. Together with the positive contribution of real net exports this has led to an upturn in the current account, which returned to levels close to 5% of GDP during 2001 as compared with 4.4% in 2000.

## Labour market

**Table 6 - Labour market indicators**

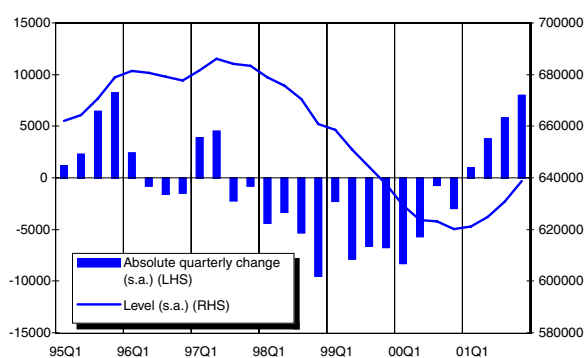
	00	01	01Q1	01Q2	01Q3	01Q4	01M8	01M9	01M10	01M11	01M12	02M1
Unemployment (excl. older) [1]	474.4	469.7	458.4	436.8	502.2	481.6	509.7	512.9	502.8	471.0	471.1	476.0
Unemployment (incl. older) [1]	624.1	629.1	615.1	595.6	662.4	643.3	669.8	673.3	664.1	632.8	633.0	638.7
Unemployment rate-FMTA/MfET[2]	10.8	10.7	10.5	10.0	11.5	11.0	11.6	11.7	11.5	10.8	10.8	10.9
Unemployment rate-Eurostat [3]	7.0	6.9	6.8	6.9	6.8	7.0	6.8	6.9	7.0	7.0	6.9	.

[1] Level in thousands; [2] In % of labour force of June 1999, not seasonally adjusted

[3] Seasonally adjusted, in % of labour force (Eurostat standard); recent figures of unemployment rate are based on administrative data and can be revised

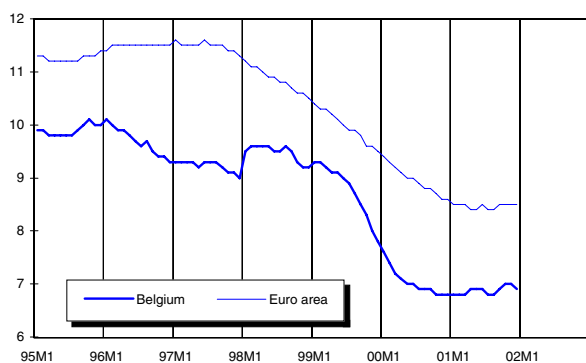
Source: RVA/ONEm, FMTA/MfET, Eurostat, FPB (unemployment figures are subject to changes in registration as from November 2001)

**Graph 19 - Evolution of unemployment (incl. older)**



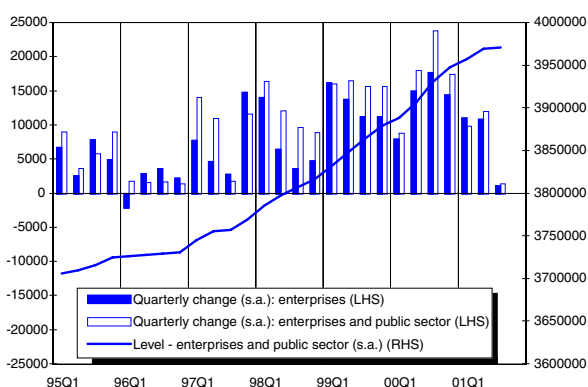
Source: RVA/ONEm, FPB

**Graph 20 - Harmonised unemployment rates (% of labour force)**



Source: Eurostat

**Graph 21 - Evolution of domestic employment**



Source: INR/ICN, FPB

Broad unemployment (including “older unemployed” people) accelerated yet again during the fourth quarter and increased (on a seasonally adjusted basis) by over 8000 persons as compared with the previous quarter. It should be added that official unemployment figures have recently been suffering from a number of statistical flaws occasioned by administrative changes in the way unemployed people are registered. Consequently, official unemployment figures have tended slightly to exaggerate the “real” increase in unemployment during the first three quarters of 2001. For the fourth quarter, however, quite the opposite is true holds. When stripped from all disturbing influences, the “real” increase in broad unemployment should be put at 13,000 people on average. These figures, of course, already largely incorporate the direct effect on unemployment of the closing down of Sabena in November.

Head-count figures still indicate respectable average quarter-on-quarter increases for salaried employment in the private sector during the first and the second quarter of 2001 (0.5% growth in each of these two quarters). During the third quarter, however, job growth almost came to a standstill, whereas - taking the unemployment figures into account - employment would actually have decreased during the fourth quarter. Negative figures for employment growth have not been seen since mid-1994, but are a logical consequence of the sharp decline in GDP growth throughout last year. Still, overall employment growth during 2001 (estimated at 1.1%) is standing up surprisingly well against the buoyant 1.6% increase during 2000. The main reason is that the reaction of employment to changes in activity is subject to a lag: productivity per head may have increased by as little as 0.2% in the private sector of the economy during last year. Since the weakening in the demand for labour has partly been absorbed by a decrease in the average number of hours worked, hourly productivity growth has been somewhat higher (estimated at 0.7%). Although growth in value added should start to pick up again from the first quarter onwards, the sharp decline in GDP growth during last year will still have adverse effects on employment growth well into the current year, making it very unlikely that overall employment growth in 2002 will be significantly positive.

## Prices

**Table 7 - Inflation rates: change compared to the same period in the previous year, in%**

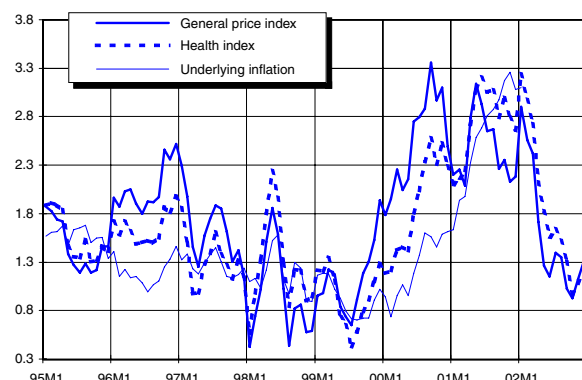
	00	01	01Q1	01Q2	01Q3	01Q4	01M8	01M9	01M10	01M11	01M12	02M1
Consumer prices: all items	2.55	2.47	2.18	2.95	2.53	2.22	2.67	2.26	2.35	2.13	2.18	2.90
Food prices	0.86	4.23	2.71	4.55	4.67	4.97	4.96	4.86	5.65	4.72	4.54	5.92
Non food prices	3.87	1.71	2.31	2.89	1.62	0.07	1.90	0.90	0.27	-0.19	0.15	1.04
Services	2.01	2.46	1.66	2.07	2.50	3.58	2.32	2.58	3.24	3.87	3.62	3.68
Rent	1.45	1.91	1.78	1.87	1.88	2.09	1.92	1.90	2.09	2.08	2.10	2.24
Health index	1.88	2.74	2.17	3.01	2.97	2.82	3.07	2.79	3.00	2.80	2.66	3.24
Brent oil price in USD (level)	28.4	24.4	25.8	27.3	25.3	19.3	25.7	25.5	20.5	18.9	18.5	19.5

Source: MEZ/MAE

**Table 8 - Monthly inflation forecasts**

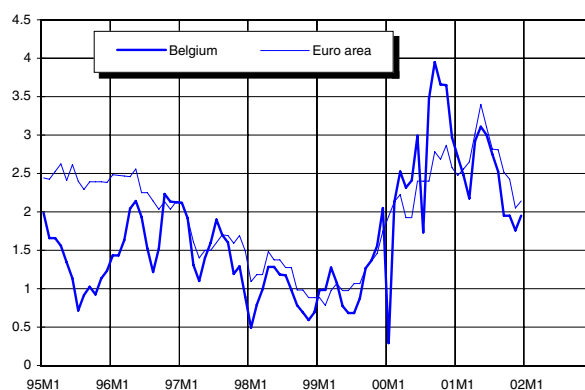
	01M1	01M2	01M3	01M4	01M5	01M6	01M7	01M8	01M9	01M10	01M11	01M12
Consumer prices: all items	107.11	107.57	107.81	108.75	109.43	109.62	109.54	109.53	109.84	109.67	109.79	109.56
Consumer prices: health index	106.48	106.83	107.14	107.94	108.46	108.81	108.92	108.99	109.16	109.21	109.43	109.23
Moving average health index	106.34	106.54	106.71	107.10	107.59	108.09	108.53	108.80	108.97	109.07	109.20	109.26
	02M1	02M2	02M3	02M4	02M5	02M6	02M7	02M8	02M9	02M10	02M11	02M12
Consumer prices: all items	110.22	110.32	110.42	110.61	110.81	110.88	111.07	111.01	110.97	110.69	111.02	110.98
Consumer prices: health index	109.93	110.01	110.06	110.23	110.44	110.51	110.70	110.65	110.58	110.27	110.61	110.56
Moving average health index	109.45	109.65	109.81	110.06	110.19	110.31	110.47	110.58	110.61	110.55	110.53	110.51

Source: Observations (up to 02M01): MEZ/MAE; forecasts: FPB

**Graph 22 - Monthly inflation evolution in% (t/t-12)**

Source: MEZ/MAE, from 02M2 on: forecasts FPB

Headline inflation, as measured by the yoy change in the national CPI, reached a maximum of 3.1% in May 2001 and has followed a clear downward trend since then, falling to 2.2% on average over the last quarter of the year. Contrary to this fall in headline inflation, underlying inflation was still pointing upwards during the greater part of the year, doubling from 1.6% (yoy) in January to 3.3% yoy in November 2001. It seems that lower imported inflation (a consequence, inter alia, of the decrease in energy prices) is finally passed on to underlying inflation, as it fell from the peak level of 3.3% in November last year to 3.1% in January 2002. Underlying inflation is expected to come down further in the course of the year, to about 2% during the last quarter of 2002.

**Graph 23 - Harmonised inflation rates in% (t/t-12)**

Source: Eurostat

Furthermore, the monthly forecasts in table 8 are based on the hypothesis that the abolition of the radio and television licence fee in the Flemish and Brussels Regions will be taken into account in the CPI in two steps: half of the effect in April and the other half in October. This implies a drop of 0.3 percentage points in the index figure in April and another fall of 0.3 percentage points in October.

The pivotal index for the public sector was reached in January 2002. Social benefits will consequently be adjusted (by 2%) for price changes in February 2002 and public wages in March 2002. According to our monthly forecasts for the "health price index", the pivotal index for public wages and social benefits (currently 111.64) should not be exceeded before the end of this year.

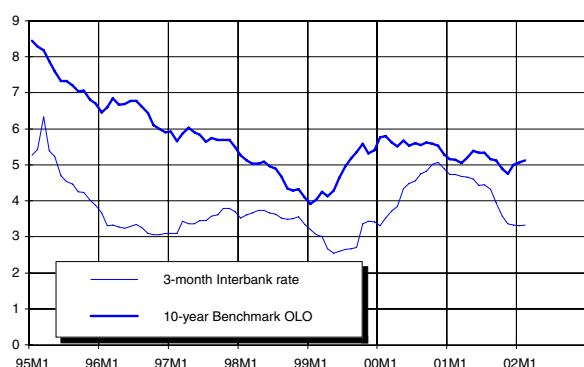
Interest rates

Table 9 - Interest rates

	00	01	01Q1	01Q2	01Q3	01Q4	01M8	01M9	01M10	01M11	01M12	02M1
<b>Short-term money market rates (3 months)</b>												
Belgium	4.36	4.23	4.71	4.56	4.24	3.42	4.32	3.94	3.57	3.36	3.32	3.32
Euro area (Euribor)	4.39	4.26	4.75	4.60	4.27	3.44	4.35	3.98	3.60	3.39	3.34	3.34
United States	6.46	3.69	5.26	4.10	3.34	2.06	3.48	2.89	2.31	2.03	1.83	1.74
Japan	0.25	0.12	0.33	0.05	0.05	0.04	0.05	0.04	0.03	0.04	0.05	0.06
<b>Long-term government bond rates (10 years)</b>												
Belgium	5.59	5.12	5.12	5.30	5.21	4.87	5.15	5.13	4.89	4.74	5.00	5.07
Germany	5.27	4.79	4.79	4.93	4.92	4.53	4.89	4.78	4.78	4.30	4.51	4.94
Euro area	5.43	4.99	4.95	5.16	5.07	4.77	5.01	5.00	4.78	4.62	4.90	4.98
United States	6.03	5.01	5.05	5.26	4.97	4.74	4.96	4.74	4.55	4.62	5.06	5.00
Japan	1.77	1.32	1.35	1.27	1.34	1.34	1.35	1.37	1.36	1.33	1.33	1.42

Source: NBB, ECB

Graph 24 - Interest rate levels in Belgium, in%

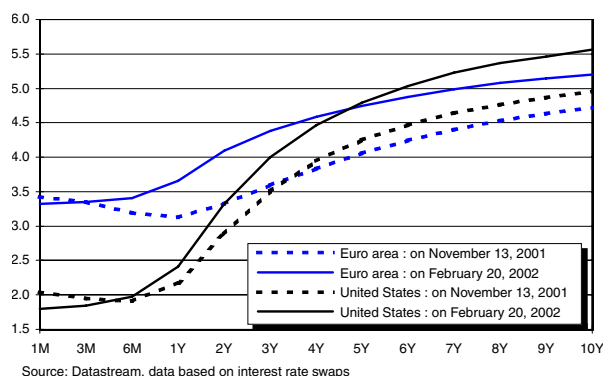


Source: NBB

Central bankers obviously consider the current interest rates to be in line with the current economic situation. The ECB has kept its main refinancing rate unchanged since the 9th of November at 3.25%. This quite tight monetary stance, given the circumstances, is mainly a consequence of the high annual growth rate of the monetary aggregate M3 (not taking non-residents into account), which amounted to 8% in December. This is almost twice the reference value defined by the ECB in its first pillar. The Federal Reserve slowed the pace of cuts in the federal funds rate. It has cut the rate only once by 0.25 basis points since mid November. The central rate is now 1.75%, which is the lowest level since the 1960s.

In line with the 'no policy change' attitude of monetary policy makers, money market interest rates remained at more or less the same level during the past few months. The only difference from the situation in November is that the market is not expecting the Fed and the ECB to cut their rates again in the near future, which is explained by the prospect of an economic upturn.

Graph 25 - Yield curves for the euro area and the US



Source: Datastream, data based on interest rate swaps

Contrary to the stable money markets, there has been more movement in the capital markets. Since market participants are now more optimistic about the future development of the economy, long-term interest rates have risen by 45 basis points in the United States and by 20 basis points in the euro area. Selling of long-term bonds, which has pushed their yields upwards, took place because higher yields on shares are expected and the expectation of further interest rate cuts by the central banks has disappeared.

Mainly due to the upturn in long-term bond yields, the yield curves in the US and the euro area have turned more positive.



## Exchange rates

**Table 10 - Bilateral exchange rates**

	00	01	01Q1	01Q2	01Q3	01Q4	01M8	01M9	01M10	01M11	01M12	02M1
BEF per USD	43.65	45.05	43.73	46.20	45.28	45.07	44.78	44.27	44.52	45.42	45.28	45.66
USD per EUR	0.924	0.895	0.923	0.873	0.891	0.895	0.901	0.911	0.906	0.888	0.891	0.883
UKP per EUR	0.609	0.622	0.632	0.614	0.619	0.620	0.627	0.623	0.624	0.619	0.618	0.616
JPY per EUR	99.58	108.73	108.92	107.06	108.17	110.77	109.31	108.04	109.92	108.68	113.71	117.13

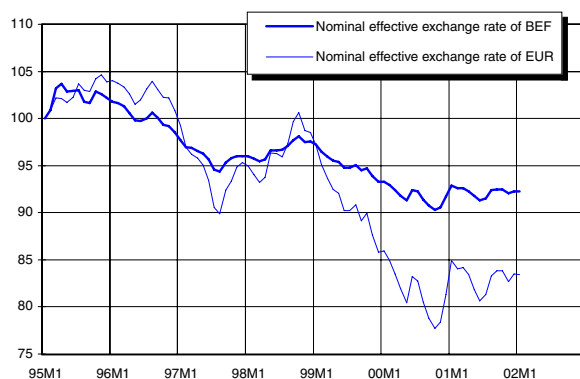
**Table 11 - Nominal effective exchange rates (Jan. 95 =100)**

	00	01	02	01Q1	01Q2	01Q3	01Q4	01M9	01M10	01M11	01M12	02M1
Effective exchange rate BEF	91.8	92.2		92.7	91.8	92.1	92.3	92.4	92.4	92.0	92.3	92.2
Growth rate [1]	-3.5	0.5		2.0	-0.9	0.4	0.1	0.1	0.0	-0.4	0.2	0.0
Id. with constant rate till year end			0.0									
Effective exchange rate EUR	81.6	83.1		84.4	82.0	82.8	83.3	83.8	83.9	82.7	83.5	83.4
Growth rate [1]	-10.5	1.8		6.6	-2.9	1.0	0.7	0.7	0.1	-1.4	1.0	-0.1

[1] Change (%) compared to previous period

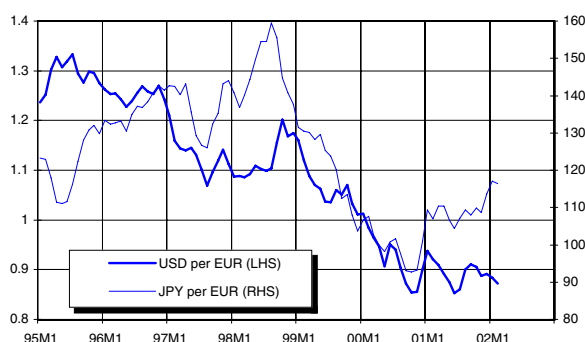
Source: NBB, BIS, FPB

**Graph 26 - Effective exchange rates (Jan. 95=100)**



Source: NBB, BIS, FPB

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



Source: NBB, before 1999M1: ECU instead of EUR

The euro depreciated by about 3% against the dollar between September 2001 and January 2002. This depreciation obliterated a part of the gains made by the euro in 2001Q3. The appreciation of the dollar can be explained by the fact that most investors see the US as the driving force behind a world recovery, which implies that the upturn will take place earlier in the US than in the euro area. The effect on the euro-dollar exchange rate has probably been limited because there was also some good news coming from the euro area since most of the leading indicators suggest that the upturn is on its way.

The Japanese yen has fallen against both the dollar and the euro and is now at its lowest level for more than two years, due to the weak foreign exchange policy of the Japanese authorities and the terrible economic situation. Japan is in a recession, which is showing no signs of coming to an end in the near future and the assets of Japanese banks include too much bad debt. Policymakers at first welcomed the depreciation of the yen – which was considered as being in line with the fundamentals – because they expect that this may help Japan out of the current recession. Recently, however, the authorities announced that a further drastic depreciation will not be necessary. They are probably afraid that weakening the currency too aggressively could spur foreign investors to sell all their Japanese assets.

The serious decline of the euro against the dollar in November caused a fall of 1.4% in the effective exchange rate. Thanks to the fall of the Japanese yen and the stabilisation of the euro against the dollar, the effective exchange rate rose again in December. The effective exchange rate of the BEF has evolved in a similar way, but the movements are less pronounced.

**Tax indicators**

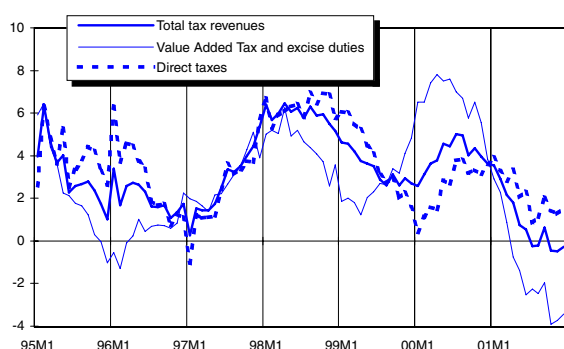
**Table 12 - Tax revenues (1)**

	00	01	01Q1	01Q2	01Q3	01Q4	01M7	01M8	01M9	01M10	01M11	01M12
Total [2], of which:	6.3	2.2	0.9	3.1	3.7	1.1	-0.4	5.6	9.9	-4.3	2.3	5.0
Direct taxes, of which:	6.2	4.0	1.9	6.8	3.5	3.1	-3.5	11.0	13.7	-2.0	2.8	7.5
Withholding earned income tax (PAYE)	5.6	4.8	5.3	5.8	7.2	0.8	5.0	8.1	10.2	3.7	6.3	-5.2
Prepayments	4.4	-0.3	.	9.0	-13.0	-0.5	-15.5	.	.	-12.3	.	11.6
Value Added Tax and excise duties	6.5	-1.0	-2.1	-4.1	3.9	-1.8	5.1	0.9	5.9	-9.8	2.1	2.1

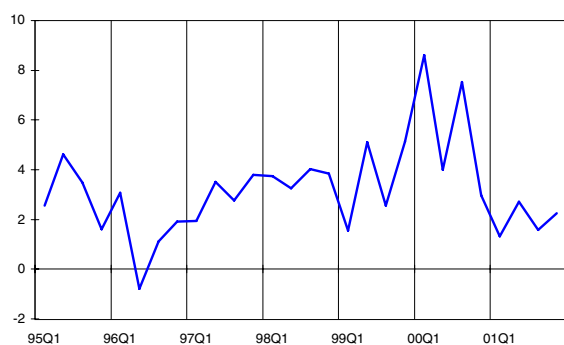
[1] Change (%) compared to same period previous year; [2] Total received by federal government, excl. of death-duties

Source: MvF/MdF, FPB

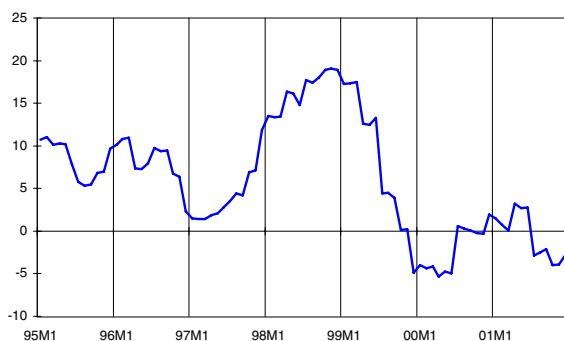
**Graph 28 - Real tax revenues (3)**



**Graph 29 - Real withholding earned income tax (PAYE) (4)**



**Graph 30 - 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 rate of total taxation revenue growth in 2001 (+2.2%) was markedly lower than in 2000 (+6.3%) and 1999 (3.9%). In real terms, a growth rate as low as the one seen in 2001 had not been observed since the beginning of the 1980s. This reflects the severe deceleration in economic activity that occurred from mid-2000 onwards. Total direct and indirect taxes were both affected.

After experiencing negative quarterly growth rates during the first half of 2001, indirect taxes seemed to recover slightly during the third quarter but declined again in the last quarter of 2001. As a result the annual nominal growth rate of indirect taxation revenues was negative in 2001 (-1%), after growth rates of 6.5% in 2000 and 6.1% in 1999. The evolution of indirect tax revenues largely reflects the global deceleration of consumption, less dynamic car sales, lower energy prices and the slow progress of activity in the construction sector in 2001 as compared with 2000. In 2001, VAT (-1.5%) did worse than excise duties (0.6%). Provisional figures for VAT in January 2002 are still falling.

After a increase in 2000 (a nominal growth rate of 4.4% as compared with 1999), prepayments declined in 2001 (-0.3%), mainly in July and October (second and third quarterly due dates for advanced payments), both from self-employed workers (-1,1%) and companies (-0,1%). Profit forecasts fell in 2001, following the slowdown in aggregate demand. Taxes on dividends also fell in nominal terms in 2001. Taxes on interest earnings, however, grew appreciably, despite a slight decrease in average interest rates in 2001. This may be due to a shift within financial portfolios towards more fixed income assets, as a consequence of the stock exchange downturn from 2000 onwards.

Revenue from PAYE (mainly on wages) has still grown at a sustained pace in 2001 (4.8% nominal growth rate), although it was curbed by the slowdown in the evolution of job creation in comparison with 2000.

## Estimation of the economic effects of the bankruptcy of NV Sabena SA

This working paper estimates the economic consequences of the disappearance of Belgium's national airline, NV Sabena SA. The production-induced effects are calculated using the input-output model. The total effects are estimated using the HERMES macro-sectoral model.

Many hypotheses had to be made in order to measure the consequences of such a bankruptcy, both on the supply side and on the demand side.

The production loss caused by the disappearance of NV Sabena SA depends to a huge extent on the future of DAT. Three scenarios are considered. The first one supposes that the bankruptcy of NV Sabena SA induces the bankruptcy of DAT. This is the "disaster" scenario. It seems that this scenario has been avoided thanks to the waiver of a part of its claims by the coordination centre (SIC) and the creation of Air Holding Ltd. In the two other scenarios it is supposed that DAT will survive and will, either alone or jointly with other aircraft carriers, recover a lesser or greater part of the activity abandoned by NV Sabena SA.

We suppose that Belgian customers will continue to travel as they did before the bankruptcy and will turn to other companies established either in Belgium or abroad. On the other hand it is supposed that the bankruptcy of NV Sabena SA will involve the almost complete disappearance of the transfer passengers. Hence it is exports of air transport services that will bear the brunt of the bankruptcy and will eventually affect final demand.

Two instruments of the Federal Planning Bureau have been used to measure this impact. Firstly the input-output model has made it possible to measure the effect of a reduction of the air transport sector on the level of the activity in all other sectors of the economy. Since the reduction in the air transport activity also has macro-economic consequences in terms of income, investment, prices etc., this first analysis is supplemented by a macro-sectoral approach using the HERMES model.

The impact of the bankruptcy of NV Sabena SA on the value added of the air transport sector and all other upstream sectors has been evaluated using the input-output model. The size of this impact depends on the prices used to compute value added. At constant 1995 prices, the indirect effects are almost equivalent to the direct effects. In GDP terms the impact as measured by the input-output table at 1995 prices fluctuates from 0.72% in the "disaster" scenario to 0.45% in the optimistic scenario, the effect in the intermediate scenario being 0.55%.

At current prices the direct impact is less because the price of value added of air transport services has been seriously reduced during the period from 1995 to 2000. In terms of GDP the total impact in current prices falls to 0.49% in the "disaster" scenario, 0.37% in the medium scenario and 0.30% in the optimistic one.

Finally we took into account all the macro-economic effects caused by the bankruptcy of NV Sabena SA using the HERMES macro-sectoral model. Among the three scenarios analysed by the IO approach it is the intermediate one which was chosen as most realistic and therefore suitable to be entered into the HERMES model.

Taking into account the income effects and the accompanying measures taken by the government, the overall effect at constant prices was finally estimated at 0.65% of GDP. 17000 jobs would be lost (compared to a direct loss of 6700 jobs) and the foreign trade surplus would fall by EUR 528 million. Public finances would also be affected because the deficit would increase by EUR 830 million (0.32% of GDP).

*"Evaluatie des effets économiques de la faillite de la Sabena SA-Schatting van de economische effecten van het faillissement van Sabena NV", Working Paper 3-02, L. Avonds, F. Bossier, A. Gilot, B. Van den Cruyce, F. Vanhorebeek, February 2002.*

## ICT production and diffusion in Belgium

The aim of this working paper is to provide a clear and succinct view of the relative development of ICT in Belgium by analysing both the production and the diffusion of ICT in our economy<sup>1</sup> and to highlight the main weaknesses and strengths of the Belgian economy in this area.

Information and communication technology (ICT) has become a significant economic activity in most industrialized countries as well as an important engine of innovation and change in the rest of the economy. It has been recognized as one of the key factors boosting productivity growth and hence business sector competitiveness. Various initiatives have recently been adopted at regional, national and European levels in order to respond

1. The definition of ICT covers ICT manufacturing, telecommunication services and IT services

quickly to the new challenges of ICT use and diffusion in Europe. A growing number of indicators are now available in order to assess the position of each country or region in terms of ICT development and to guide policy decisions in this area.

This working paper focuses on the production and diffusion of ICT in Belgium. Has Belgian economic activity benefited from the boom in the ICT sector to the same extent as other industrialized countries? What kind of development can be expected in the future? These are the main questions addressed by the analysis of the Belgian ICT production sector.

As in other countries, the ICT production sector has been quite dynamic during the second half of the 1990s but on the whole its importance in terms of value added or employment remains small in Belgium as compared with leading countries. The future of ICT development is contingent on a number of elements which may differ depending on whether ICT products are more oriented towards international markets or towards local demand. For some of these elements Belgium is in a relatively good position, particularly as regards the sources of financing, while others (e.g. R&D capacity, labour qualifications and in some cases market structures) may impede the more rapid development of the sector.

The position of the Belgian ICT sector on international and local markets is therefore not expected to change radically in the near future and the growth trend should

continue mainly to follow the evolution of local demand.

The second part of the report analyses the diffusion of ICT in Belgium in comparison with the other European countries and the United States. This diffusion is closely linked to the availability of efficient and cheap information and telecommunication infrastructures. The use of the worldwide web, however, mainly depends on its potential applications, with one interesting application being e-commerce.

Belgium seems to occupy an intermediary position in Europe as a country with both a satisfactory infrastructure and a good business environment but also with some lags in the use of the opportunities provided by the internet. Several interconnected factors determine the speed at which a new technology is adopted in an economy. Belgium is now at a crucial stage concerning ICT diffusion as both infrastructure quality and connection prices are becoming more competitive compared to the situation of our main European partners. The challenge now is to maintain the pace of telecommunications market liberalization in order to catch up with the European leaders. Another long-term challenge is the upgrading of our education system in order to be able to mobilize a qualified labour force with ICT skills.

*“ICT production and diffusion in Belgium - A comparative analysis”, Working Paper 01-02, G. De Vil, Ch. Kegels, M. van Overbeke, February 2002*

## Reducing CO<sub>2</sub> emissions in Belgium using fiscal and non-fiscal instruments.

This paper concerns the impact on the economy and on CO<sub>2</sub> emissions of various fiscal and non-fiscal measures.

The results will be used in particular for the Third Belgian National Communication to the UNFCCC<sup>1</sup>.

The study consists of three parts.

- The first part contains an estimate of the medium-term evolution of CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O emissions by 2012 (estimate based on a business as usual scenario). This projection is based on the latest macroeconomic forecasts from the Federal Planning Bureau<sup>2</sup>, extended to cover the 2007-2012 period.
- In the second part, the study presents the consequences for the Belgian economy of the introduction of a tax on CO<sub>2</sub> emissions in two ways: a CO<sub>2</sub> tax of 14.1 euro per ton of CO<sub>2</sub> over a whole year and a tax amounting to 32.1 euro. This tax is introduced gradu-

ally from 2002 to 2010. We have selected the hypothesis whereby the yield of this tax is used to finance a reduction in some compulsory levies.

- The third part treats the possible contribution of non-fiscal measures<sup>3</sup> towards the fight against climate change. These measures especially concern a wide range of technologies which make it possible to reduce CO<sub>2</sub> emissions (such as effective lighting or super-insulating glazing) which are available on the Belgian market and are profitable according to the price conditions in the scenarios used, but are not spontaneously used by enterprises and households for many reasons (lack of information or knowledge among investors, other investments considered to be more urgent, lack of motivation or know-how among economic agents etc.) even when a CO<sub>2</sub> tax is introduced.

The results of the study show that Belgium still needs to

1. UNFCCC = United Nations Framework Convention on Climate Change.  
2. Perspectives économiques 2001-2006 of April 2001.

3. This part of the study was realized in collaboration with the company ECONOTEC.

make a great effort to fulfil its commitments as far as the cut in CO<sub>2</sub> emissions is concerned. The Belgian target set in the Kyoto Protocol (a reduction in emissions of 7.5% by 2008-2012 compared with 1990) implies that CO<sub>2</sub> emissions need to be reduced by about 25 megatonnes of CO<sub>2</sub> relative to the level reached in 2012 (125.2 megatonnes) in the base projection. The target is set at 99.5 megatonnes.

In the scenario with a maximum tax of 14.1 euro/tonne CO<sub>2</sub>, the cut in CO<sub>2</sub> emissions is noticeable but remains insufficient to reach the Kyoto target. The implementation of such a tax would make it possible to reduce CO<sub>2</sub> emissions by almost 7 megatonnes to 118.4 megatonnes by 2012. This is still 10% higher than the 1990 level.

A higher level of taxation, 32.1 euro/tonne CO<sub>2</sub>, would imply a larger cut in emissions (about 12.5 megatonnes) but will not make it possible to achieve the target that

has been set. In 2012 the resulting emission level will still be 5% higher than the one measured in 1990.

It is therefore necessary to take other measures to reinforce the impact of this tax. Combining fiscal measures (maximum CO<sub>2</sub> tax of 14.1 euro/CO<sub>2</sub> tonne) and non-fiscal measures would make it possible to achieve a total reduction in CO<sub>2</sub> emissions of 13.7 megatonnes by 2010 as long as all non-fiscal measures are implemented: this implies that there is no obstacle to their implementation.

The CO<sub>2</sub> emission target would thus be neared without being achieved because in this case the emission level would be around 109 megatonnes.

*"Evaluation of the impact of fiscal and non fiscal measures on CO<sub>2</sub> emissions", Working Paper 09-01, F. Bossier, I. Bracke, I. Callens, H. de Beer de Laer, F. Vanhorebeek, W. Van Ierland, Econotec (chapter 3), December 2001*

## The administrative burden in Belgium in the year 2000

In this planning paper, the FPB has estimated the administrative compliance costs that Belgian enterprises and self-employed people experienced during the year 2000.

The total cost of the administrative burden covers all the time and resources spent by companies or self-employed people on compliance with fiscal, environmental or employment regulations (the latter applying only to companies).

The estimate of administrative compliance costs is based on a national survey sent to a representative sample of enterprises and self-employed people. Based on their own statements, the total administrative compliance costs for enterprises are estimated at 6.3 billion euro or 2.6% of GDP. For self-employed people these costs are estimated at 2.3 billion euro or 0.9% of GDP.

In comparison with the other types of enterprise, small enterprises (1 to 9 employees), seem to experience the highest administrative costs, measured both as a percentage of turnover and per employee. Small enterprises also have higher administrative costs than self-employed people. The majority of enterprises and self-employed people expect a reduction in the administrative burden if they were able to exchange information with public administrations by electronic means.

In addition to the quantitative dimension, this survey also includes an important qualitative part. Both enterprises and self-employed people are generally more satisfied with their contacts with the administrations than with the regulations themselves. Enterprises and

self-employed people are relatively satisfied with the publicity given to the regulations and with the fact that the regulations are communicated in good time. Both seem to be more critical about the lack of flexibility in the regulations, which is an obstacle to adapting them to each particular situation. The opinions of enterprises and the self-employed people on the quality of contacts with the administration also converge. Most self-employed people, like enterprises, are satisfied with the information provided by the administration, since it corresponds to their needs and is provided within a reasonable time. Their most important criticisms have to do with the fact that the information provided by the administration may be different depending on which contact person is asked or relate to the lack of justification for an administrative decision.

Enterprises and self-employed people were also asked what they consider to be a priority in terms of broad guidelines for shaping the process of administrative simplification and in terms of specific administrative simplification measures. The improvement of regulations comes up as a priority in the process of administrative simplification for both enterprises and self-employed people. The provision of simplified forms, clear and easy to complete or pre-completed by the administration, is clearly the priority in terms of specific administrative simplification measures for both enterprises and self-employed people.

*"Les charges administratives en Belgique pour l'année 2000", "De administratieve lasten in België voor het jaar 2000", Planning Paper 92, G. De Vil, Ch. Kegels, January 2002.*

## Other Recent Publications

[Economic Forecasts 2002](#), February 2002,  
(available in Dutch and in French).

[Medium Term Economic Outlook 2001 - 2006](#), April 2001,  
(available in Dutch and in French).

[Working Paper 06-01](#), December 2001,  
"Directe investeringen in het buitenland (DIB). De investeringsstroom vanuit en naar België.",  
P. Vandenhove.

[Working Paper 07-01](#), December 2001,  
"Some Economic Implications of Eastern EU Enlargement for Belgium",  
M. Lambrecht, D. Simonis.

[Working Paper 08-01](#), December 2001,  
"General and selective wage cost reduction policies in a model with heterogeneous labour",  
P. Stockman.

## Research in progress

### The MODTRIM II model

The 'Short term forecasts and business cycle analysis' team has recently built a quarterly model for the Belgian economy. Although this new model is still being tested, some of its results have already been used in recent forecasts. The simulation properties of the model will be analysed during the coming months through the use of exogenous shocks and policy measures.

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### The NIME model: an updated version

In recent months the database of the NIME model has been updated. This update included an extension of the sample size to 2000 and a redefinition of the country blocks, reflecting the fact that Greece has become a new member of the euro area. The behavioural equations used in the model were re-estimated on the basis of the new data. The NIME model has been used for several applications, including an update of the Belgian international economic environment and an analysis of automatic fiscal stabilisers in the euro area.

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### Long-term sustainability of public pensions

The FPB is investigating the impact of ageing populations in Belgium on public pension expenditure in particular and on social security and public finances in general, using a new version of the MALTESE model. Projections are produced according to different scenarios and compared with international results (EC, OECD) in order to allow for international comparability.

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### The NEMESIS model

In collaboration with a network of European research institutions, the FPB is developing a regional macro-sectoral econometric model for Europe, whose baseline should be available soon. This aims

at providing tools for decision-making in the fields of energy, the environment and economic policy.  
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### Impact of ICT in Belgium.

As a follow-up of its study on ICT diffusion in the Belgian economy, the FPB studies the effects of ICT on the Belgian economy. This project has six components: macro-economic impact, micro-economic impact, digital divide and dualisation, ICT and the localisation of economic activities, e-government, and Internet and indirect taxation.

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### Cities and regions

The aim of the research is to get an insight in the specialisation and dynamism of cities and regions in Belgium. Structural changes in the sectoral composition of the Belgian economy is taken into account. On a regional level, the Belgian regions are compared with some other major European regions. On a city and town level, a study on the factors determining the location of economic activities and the location of households is undertaken.

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### Labour market analyses

Three areas are currently being investigated in the field of labour market analysis: 1. the impact of labour turnover on the evolution of wages, 2. the impact of three special employment programmes aimed at specific groups, 3. the development of a macro-econometric model of a segmented labour market including wage setting, labour supply and demand, and matching.

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## Recent history of major economic policy measures

February 2002

The 28 February marks the end of the dual circulation period of the euro and the national currencies. From 1 March the euro is the only legal tender currency in the 12 euro-zone member states.

The ILO launched the World Commission on the Social Dimension of Globalisation. This Commission will address the social dimension of globalisation in order to better understand the linkages between globalisation, trade liberalisation and social development and will examine, in particular, the issue of core labour standards.

January 2002

Following the positive opinion expressed by the Commission for Electricity and Gas Regulation (CREG), the Secretary of State for Energy has delivered a 20-year concession contract to the firm C-Power for the settlement of a park of 50 windturbines in the North Sea, reaching a capacity of 115 MW.

The World Trade Organisation confirmed that the Foreign Sales Corporation Replacement Act, brought in by the US in response to condemnation by a WTO Panel in August 2001 of its original FSC export subsidy system, is also incompatible with WTO rules. Both the WTO Panel and Appellate Body have stated in clear terms that the US must end this WTO-incompatible practice.

The European Union's new tariff arrangements for developing countries from 1 January updates the Generalised Scheme of Tariff Preferences (GSP). The new GSP regulation will cover the years 2002 to 2004. Product coverage has been widened, or preferential margins improved, or both. The new regulation fully incorporates the 'Everything But Arms' arrangements. While the general GSP arrangements maintain duty free access for all non-sensitive products, they grant a flat rate reduction of 3.5 percentage points on the duty rates of all other products included in the scheme.

Euro notes began to be distributed in all participating states on 1 January at 00.00. No major logistical problems were reported. Public reaction was positive throughout the countries of the euro area.

December 2001

The European Council agreed to modify the EU import regime for bananas in order for the US and Ecuador definitively to lift sanctions against the EU.

The Electricity and Gas Control Committee has adopted two recommendations describing tariff measurements to reduce the prices of electricity and gas for certain categories of customers in 2002 for electricity and in 2002 and 2003 for gas.

The American central bank, the FED, decides to lower its central rate, i.e. the federal funds rate, by 25 base points to 1.75%.

November 2001

In view of the scission of the transport and supply activities of natural gas by the Distrigaz SA company (see further) the Council of Ministers has adopted the draft act concerning the specific shares in favour of the State (Golden Shares) in these sectors. Under this act the Belgian State will have a specific share in both companies.

The federal government approves the new stability programme of Belgium for the period 2002-2005. The budgetary equilibrium would thus be maintained in 2001 and 2002. On the medium term, the government maintains the targets of the stability programme of the previous year, namely a budget surplus of 0.5% of GDP in 2003, of 0.6% in 2004 and of 0.7% in 2005.

The special general assembly of the shareholders of Distrigas SA has approved the scission of the company into two separate companies: the first one, named Fluxys, will include all activities with respect to the transport and storage of natural gas and also the activities at the GNL-terminal in Zeebrugge; the second one, Distrigaz, will combine all functions with respect to the transit and trade of natural gas. For each share of Distrigaz SA each shareholder will receive a share in both new companies.

Electrabel and Germany's energy group RWE have signed a contract to build a combined cycle gas-fired power plant in Antwerp for the German pharmaceutical group BASF AG. The commissioning of the plant is scheduled for 2004.

Powernext, the first French power exchange is to come into operation on 27 November 2001. Powernext's shareholding is composed of Euronext (34%), HGRT, a holding grouping the French, Belgian and Dutch transport system operators (17%), and a set of banking companies (Parisbas and Société Générale) and energy utilities (EDF, Electrabel, Endesa, Atel, TotalFinaElf) totalling the remaining 51%.

The WTO's Ministerial Conference in Doha approved the launch of a new world trade round, which will focus on development. The Ministerial Conference also made an important declaration on TRIPS and public health giving greater confidence that developing countries will be able to provide access to medicines for all.

At the United Nations Climate Conference held in Marrakech, 172 countries finalised the rulebook for the implementation of the Kyoto Protocol agreed upon in 1997. Under this agreement, industrialised countries committed themselves to reduce their total emissions of greenhouse gases. The finalisation of the implementation rules was requested by industrialised countries before engaging ratification by the signatories and entry into force of the Protocol.

The European Commission, in a letter signed by the Commissioner Loyola de Palacio, allows the bridging loan of 125 million euro to be used by DAT, which is a 100% subsidiary of Sabena.

Sabena is declared bankrupt by the Court in Brussels.

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"
FMTA/MfET	Federaal Ministerie van Tewerkstelling en Arbeid / Ministère fédéral de l'Emploi et du Travail
FPB	Federal Planning Bureau
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
MEZ/MAE	Ministerie van Economische Zaken / Ministère des Affaires Economiques
MvF/MdF	Ministerie van Financiën / Ministère des Finances
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)